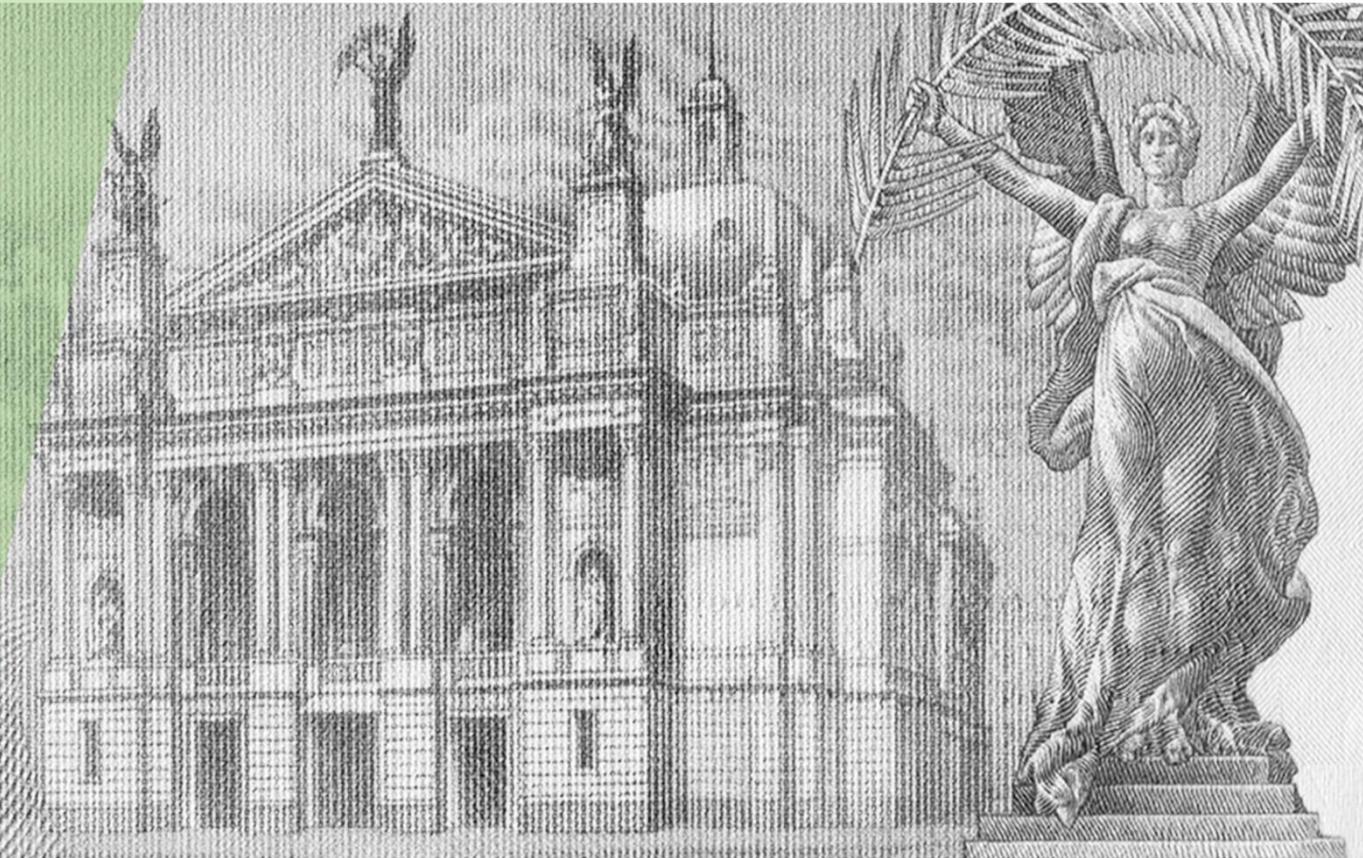




National Bank
of Ukraine

Inflation Report

July 2021



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 21 April 2021.

The forecasts of inflation and other macroeconomic variables were prepared by the Monetary Policy and Economic Analysis Department and approved by the NBU Board at its monetary policy meeting on 22 July 2021¹.

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 charts 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. 343-D *On Approval of the Inflation Report* dated 22 July 2021.

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Summary

As expected, inflation exceeded the 5% ± 1 pp target range in H1 2021, but the deviation was greater than had been forecast, due to both short-lived and fundamental factors

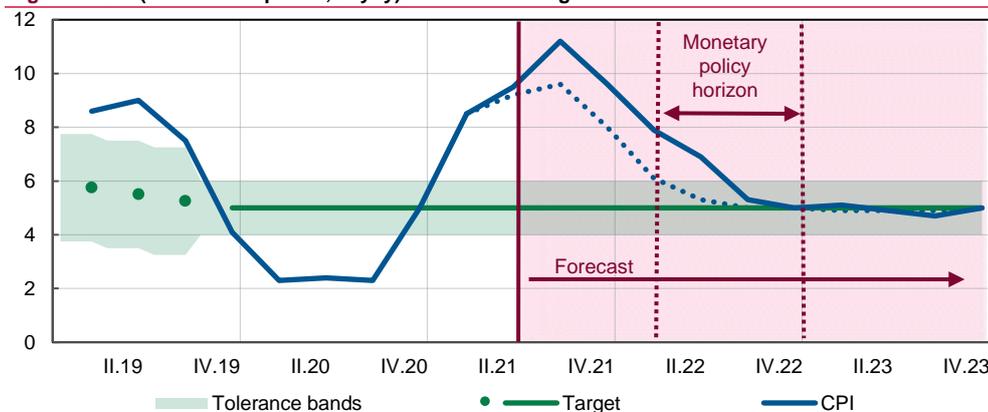
In June 2021, consumer inflation was flat from the previous month in annual terms, at 9.5%, but was higher than the NBU's April forecast of 9.2%. On the one hand, this was largely due to temporary increases in global prices for food and energy. On the other hand, underlying inflationary pressures have intensified noticeably. More specifically, core inflation sped up to 7.3% yoy in June, significantly higher than the April forecast of 6.8% yoy, propelled mainly by sustained robust consumer demand and higher production costs, including labor costs.

The economic recovery was also pushing up inflationary pressures, in particular underlying pressures. Real GDP growth in Q2 was to a great extent the result of the low comparison base. Meanwhile, seasonally adjusted indicators also showed that most sectors continued to rebound. More specifically, the industrial sector and the services sector have been recovering, while retail trade and freight turnover were growing further. Underlying inflationary pressures were somewhat curbed by a favorable FX market and stabilized inflation expectations.

Inflation will slightly exceed 10% in the near future, but will decelerate in late 2021 and return to its 5% target in H2 2022

In view of the rapid growth in global prices and the sustained recovery of demand, the NBU has raised its inflation forecast for end-2021 from 8% to 9.6%. After peaking in the autumn of 2021, inflation will start to decelerate due to the new harvest coming onto the market, the correction of global energy prices, and the waning effect of the low comparison base. The tighter monetary policy conducted by the NBU, in particular through raising the key policy rate and phasing-out anti-crisis monetary measures, will also help keep inflation expectations in check, while also gradually easing underlying inflationary pressures. As a result, inflation will slow to its 5% target in H2 2022, and will hover around that figure thereafter.

Figure 1². CPI (as of end of period, % yoy) and inflation targets



Source: SSSU, NBU calculations.

The NBU has left its forecast for real GDP growth unchanged – at about 4% in 2021 – 2023

Stronger consumer demand and favorable terms of trade will offset the losses the Ukrainian economy sustained because of the tighter quarantine imposed in winter and spring, and because of some other temporary factors. Therefore, the NBU has left its forecast for 2021 GDP growth unchanged, at 3.8%. After that, the Ukrainian economy will grow by around 4% per year. Growth will be fueled not only by high private consumption, but also by robust demand for Ukrainian exports and a rebound in companies' investment activity.

The current account will return to a slight deficit in 2021, which will widen markedly in the coming years, propelled by higher domestic demand and less favorable terms of trade

In 2021, the current account will record a deficit of 0.4% of GDP on the back of strengthening domestic demand, the resumption of foreign tourism, and the larger payments of dividends. These factors will be only partly offset by favorable terms of trade and the record-harvest of

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

grain. In 2022-2023, the current account deficit will widen noticeably, driven by ongoing growth in consumer demand and worsening terms of trade.

The key underlying assumption of the macroeconomic forecast is that Ukraine will continue to cooperate with the IMF

Long delays in the implementation of the IMF cooperation agreement pose risks to financing the state budget deficit, especially in the coming years. This could also worsen inflation and exchange rate expectations, forcing the central bank to tighten its monetary policy. Conversely, the implementation of the IMF cooperation program would enable Ukraine to raise the planned amount of official financing, while making it cheaper to borrow on the external and domestic markets. This would also help maintain Ukraine's international reserves at around USD 31 billion in 2021 – 2023.

The key risks to the macroeconomic forecast are the imposition of stricter quarantine measures in Ukraine and globally, and a longer and more pronounced than expected surge in global inflation

The Ukrainian economy could sustain new losses because of new coronavirus variants, such as the Delta variant, which are spreading rapidly across the world. The NBU estimates that the negative contribution to 2021 real GDP growth of all of the quarantine restrictions that were imposed in H1 2021 was 0.6 pp. In contrast to the quarantine restrictions that were in place in the spring of 2020, the latest restrictions did not have any curbing effect on inflation, mainly due to sustained robust consumer demand.

The probability of a longer and more pronounced surge in inflation globally is rising, driven by significant fiscal and monetary stimuli. This is creating risks of bringing higher imported inflation to Ukraine, and risks of major central banks moving faster to tighten their monetary policies. The latter development could dent investors' interest in the emerging markets, including Ukraine. Other pro-inflationary risks remain important, such as an escalation of the military conflict with Russia and a sharp deterioration in terms of trade.

The NBU has raised its key policy rate to 8%. Amid stronger underlying inflationary pressures, this was a necessary move to bring inflation back to its 5% target in 2022, and keep inflation expectations in check

Given the present balance of risks and the increase in underlying inflationary pressures, the NBU Board decided in July to raise the key policy rate to 8%. Overall, the key policy rate has increased by 2 pp since the start of the current year. With a view to strengthening anti-inflationary pressures arising from the increased key policy rate, the NBU has also started to phase out anti-crisis monetary measures, and changed the operational framework of its monetary policy and FX intervention parameters. More specifically, the central bank has set the minimum interest rate on refinancing loans maturing within 90 days and on those maturing within three years at no less than the key policy rate + 1 pp. It has also reduced the planned amounts of daily interventions to purchase FX on the interbank FX market from USD 20 million to USD 5 million. The NBU's forecast envisages that the key policy rate will be raised further, to 8.5%, and maintained at that level until Q2 2022, with a view to bringing inflation back to its 5% target in 2022, and keeping inflation expectations in check. If additional pro-inflationary risks materialize, the NBU stands ready to continue deploying monetary tools to return inflation to its target.

Part 1. External Environment

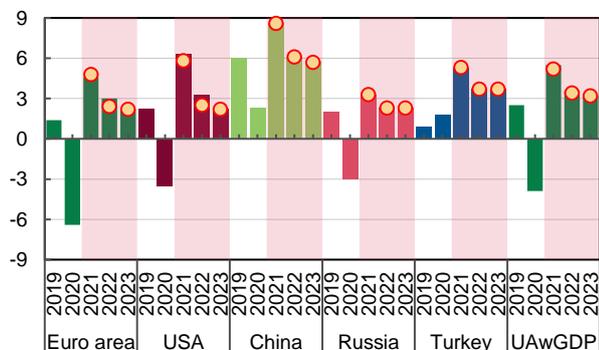
- The global economy will continue to grow thanks to the revival of trade and stimulus measures worldwide, with vaccination campaigns moving forward and quarantine restrictions being lifted. After rising sharply, global inflation will decelerate gradually.
- The external price environment in H1 2021 was significantly better for Ukraine than expected, but this positive factor will wane over the forecast horizon. Due to tighter controls over emissions across the globe, in the medium term prices for the majority of goods will be higher compared to previous years.
- Both the world's leading central banks and the central banks of emerging markets (EMs) are expected to gradually normalize their monetary policies. Under these conditions, investor interest in EM assets will depend on these countries' macrofinancial stability and their implementation of structural reforms.

Chart 1.1. Global PMI



Source: J.P.Morgan, IHS Markit.

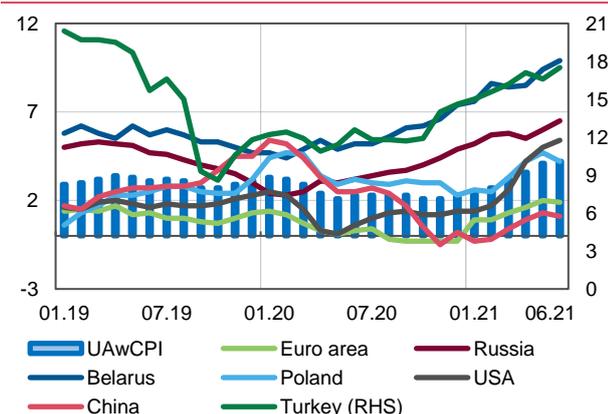
Chart 1.2. Real GDP of selected countries and Weighted Average of annual GDP growth of Ukraine's MTP countries (UAWGDP), % yoy



● - Previous forecast of NBU.

Source: National statistical offices, NBU staff estimates.

Chart 1.3. Consumer Price Indexes of selected Ukraine's MTP countries and Weighted Average of Ukraine's MTP countries' CPI (UAWCPI), % yoy



Source: National statistical agencies, NBU staff estimates.

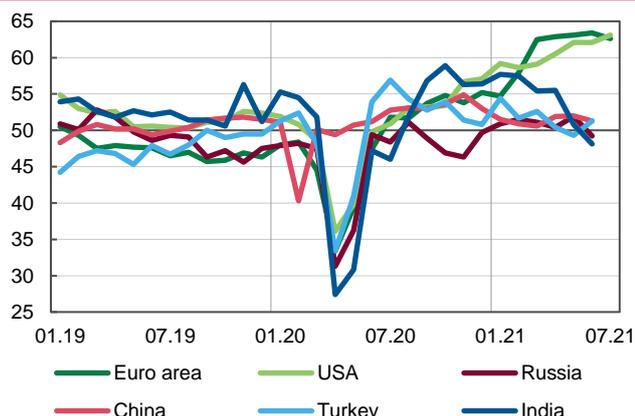
The global economy will recover steadily. After a sharp rise, inflation will decelerate gradually

The global economy grew in Q2, primarily on the back of large-scale stimuli and quarantine easing amid ongoing vaccination campaigns. This supported the rapid recovery in the services sector that started in April 2021, following swift growth in manufacturing, which started earlier. Business activity and new orders in the [service industry](#) have been rising at their fastest pace in the past 15 years, while the pickup in demand has supported job creation and businesses' optimism.

The faster growth in the [global industrial production was propped up](#) by a rapid recovery in [the global trade of goods](#). However, global supply chains were still disrupted and remained a drag on manufacturing growth, resulting in a backlog of unfulfilled orders. Consequently, demand continued to exceed supply, and average purchasing prices increased markedly. Consumer inflation also accelerated due to higher energy prices and significant production costs being passed through to selling prices. The depreciation of domestic currencies faced by some countries in previous periods and the last year's low statistical base were additional factors. Nevertheless, the majority of these factors are temporary – as also indicated by [a survey by Bank of America Merrill Lynch](#) – and inflation will slow in the coming years as they vanish.

The pace of recovery in the advanced economies and the EMs differs greatly. The more rapid recovery in the advanced economies, especially in [the United States](#), has been driven by the faster progress of their vaccination campaigns and the implementation of investment projects thanks to fiscal and monetary support. The USD 1.9 trillion of fiscal stimuli alone will contribute an additional (1.6 pp) to U.S. GDP growth in 2021. This is being accompanied by a strengthening of the labor market, which is seeing a rise in incomes and a decrease in unemployment, among other things. However, despite being on the decline, the unemployment rate in the United States remains at its highest in almost seven years and it will continue to exceed its pre-crisis level for a lengthy period, limiting the recovery in consumer demand. The growth in [household income](#) has been also slowing as additional social benefits for the period of the pandemic have been withdrawn. On the other hand, inflation increased sharply – primarily due to higher energy prices – and will

Chart 1.4. Manufacturing PMI of selected countries



Source: IHS Markit.

remain much above the average target of 2% by the end of this year. The waning of the effects of temporary factors and the Fed’s move to tighten monetary policy will curb the rise in inflation.

Forward-looking indicators show that the euro area’s economy returned to growth in Q2 on the back of an acceleration in the industrial sector and a recovery in the services sectors, while the June composite PMI was the highest in the past 15 years. An important factor behind these developments was an increase in domestic and foreign demand, although this was accompanied by further growth in prices. Inflation in May was the highest since 2000, but it slowed somewhat in June. Despite the decline in Q12021, growth in the euro area economy in 2021–2023 will be strong, as consumer demand will rise with the weakening of the pandemic, and because monetary and fiscal policies will be accommodative. Inflation will decline gradually and will remain below its target over the coming two years.

The economic recovery in EMs weakened in Q2 because of a worsening of the epidemic in some countries. The economic recovery will remain relatively stable further on, thanks to the growth in global trade and to government programs. At the same time, the weaker anchoring of inflation expectations amid high global prices will force EM central banks to tighten their monetary policy.

The global price environment, having improved greatly in H1 2021, will deteriorate gradually for Ukraine

Even despite strong demand, an acceleration in supply growth will gradually stabilize global prices for most commodity groups. However, due to tighter controls on emissions across the globe (as a result of more active implementation of the Paris Agreement), in the medium term prices for most goods will be higher compared to previous years.

In Q2 steel prices continued to increase rapidly due to serious shortages caused by the quickening global economic recovery and stricter environmental requirements, which are driving changes in manufacturing processes. Increasing global supply will lead to a gradual downward correction of prices, although the implementation of the emissions control plan – especially by China and the EU – will keep prices at a high level. For the same reason, demand for high-quality ore will also remain high. However, ore prices will decline gradually as Australia, Brazil, and China (through its African iron ore project) increase production.

Global prices for grains and oilseeds rose, being rather volatile due to high consumption by the industrial, animal feed, and food segments. Another negative factor was weaker harvests caused by unfavorable weather, particularly in Latin America. Going forward, despite strong global demand, prices for these commodity groups will decline thanks to expected bumper crops.

Global energy prices soared as the global economy recovered, the OPEC+ agreement was implemented, and inventories became scarce (as of end-June, Europe’s stocks of natural gas stood at a 10-year record low for this period). Crude oil prices will fluctuate at around USD 60–70 per barrel

Chart 1.5¹. External Commodity Price Index (ECPI), Dec 2004 = 1



Source: World bank, NBU staff estimates.

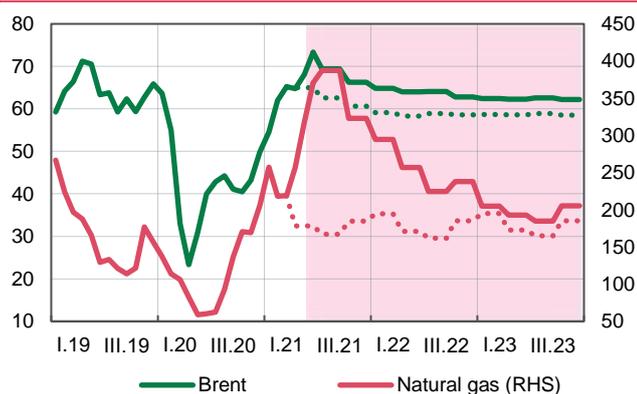
Chart 1.6. World price of ferrous metals and iron ore*, USD/MT, quarterly average



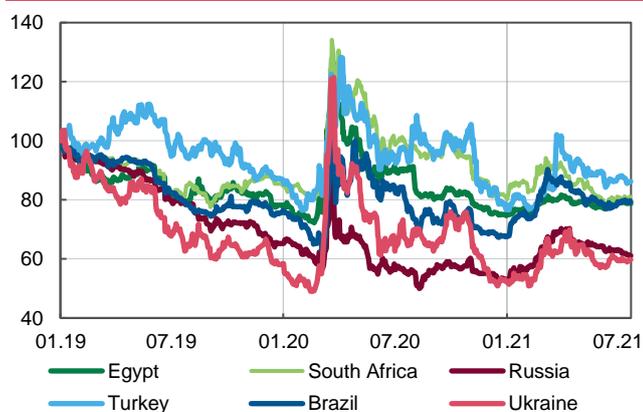
* Steel Billet Exp FOB Ukraine and China import Iron Ore Fines 62% FE spot (CFR Tianjin port).

Source: Refinitiv Datastream, NBU staff estimates.

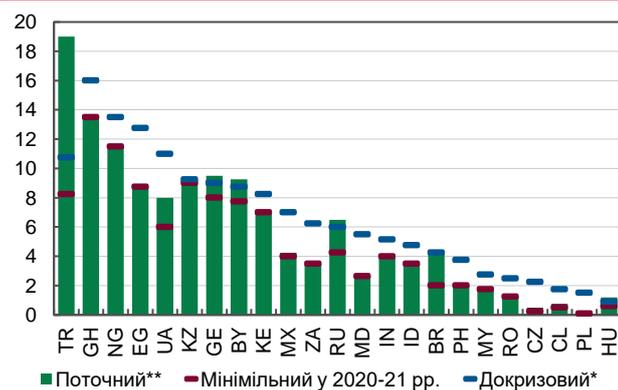
¹ Dotted line in charts refers to previous forecast unless otherwise stated.

Chart 1.7. World crude oil prices (USD/bbl) and German Hub natural gas prices (USD/kcm), quarterly average

Source: Refinitiv Datastream, NBU staff estimates.

Chart 1.8. JP Morgan EMBI+, 01 Jan 2019=100

Source: Bloomberg, as of 22.07.2021.

Chart 1.9. Level of the key policy rates in selected EM countries, %

* As of March 1, 2020.

** As of July 28, 2021..

Source: official web-pages of central banks.

over the forecast horizon – high demand will be met by large production volumes, especially in non-OPEC countries, and the expected resumption of supplies from Iran in accordance with its nuclear agreement. On the other hand, demand for the more eco-friendly product natural gas will increase significantly, keeping gas prices high, despite seasonal corrections.

Both advanced economies and EMs are expected to continue normalizing their monetary policy

Financial conditions have remained favorable for both advanced economies and EMs, supporting the recovery in the global economy. Growth in yields on the debt securities of leading countries, especially those of the United States, was offset for investors by high equity prices and narrower spreads on corporate bonds. Risk premiums declined gradually for EMs. As a result, after the shock capital outflow from risky assets in March 2021, inflows of portfolio capital to these countries resumed in April. The majority of EM currencies strengthened in Q2. On the other hand, investors' interest in EM assets weakened again in late June and in July due to robust macroeconomic data from the United States and expected changes in the Fed's monetary policy, which led the US dollar to strengthen against the basket of currencies.

A sharp rise in inflationary pressures, influenced not only by temporary factors but also by large-scale stimulus programs (read more in Box 1 *Quantitative Easing: A One-Way Ticket?* on page 9), is prompting monetary policy normalization. The ECB and the Bank of Japan are expected to reduce their purchases of securities next year. A growing number of Fed representatives are tending to signal the start of a tapering of quantitative easing (QE) this year, which coincides with the expectations of the NBU and [financial market participants](#). Although the stimuli are being phased out at a moderate pace, financial conditions will tighten for EMs in view of existing internal and external risks. There is also a possibility that the Fed will raise its rates earlier than forecast (in June 2021, FOMC members forecast two rate hikes in 2023). Among EU countries, the Czech Republic and Hungary have already started to increase their rates.

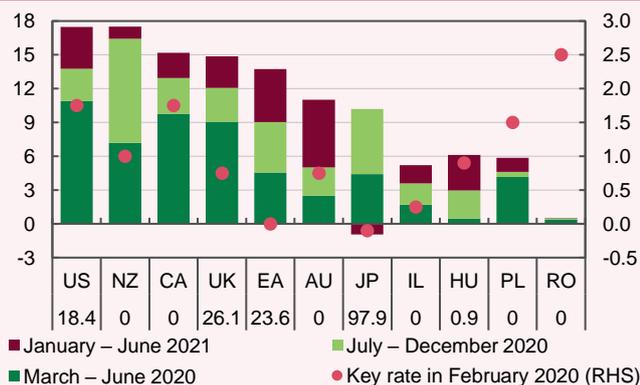
Given the expected tightening of global financial conditions, a shorter history of inflation targeting, and less firm expectations, the central banks of many EM countries have continued to normalize their monetary policies. Growth in interest rates will support investors' risk appetite. However, considering the large volume of global debt (the Institute of International Finance (IIF) estimates it to exceed 360% of GDP as of the end of Q1 2021), investors' interest will depend primarily on [macrofinancial stability](#) and the implementation of structural reform by EM countries.

Box 1. Quantitative Easing: A One-Way Ticket?

With interest rates close to zero, but there being a need to soften the effects of the crisis and support recovery, asset purchases have become an almost standard monetary policy instrument for central banks. However, using this tool incurs its own risks – primarily as it blurs the line between monetary and fiscal policies. Moreover, prolonged asset purchase programs may affect the functioning of financial markets, causing a decline in the liquidity of the government securities market, an excessive rise in risk appetite, and an increase in market sensitivity to changes in a central bank's (CB) position on the timings and volumes of repurchases. This can significantly complicate exits from these programs – especially if a CB accumulates large volumes of assets – and can disrupt financial markets due to capital outflows from EMs.

At the start of 2020, interest rates were close to their [effective lower bound](#) in many advanced economies and in some EMs. For this reason, security purchases (quantitative easing, QE) became important monetary policy instruments during the coronavirus crisis. That said, most countries have been using them for the first time. [The IMF estimates](#) that the world's QE programs totaled nearly USD 10 trillion, and the leading CBs are continuing to purchase assets this year as well. The large growth in the balance sheets of CBs has renewed debate over the risks to macrofinancial stability arising from the active use of QE.

Chart 1. Asset purchases*, % of 2020 GDP, and key policy rate, end-February 2020, %



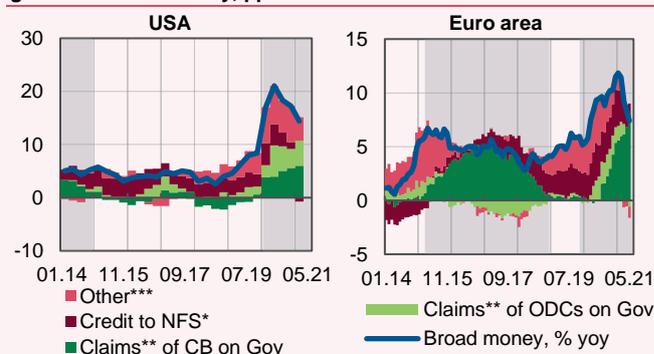
** The amount of assets held by the CB, purchased under QE in previous periods, in % of 2020 GDP as of February 2020, is shown under the country codes.

Source: official web-pages of central banks, NBU staff estimates.

(Hyper)inflation? As a CB's assets increase in response to QE, its liabilities also grow, especially excess reserves of banks. When QE was implemented for the first time, [economists feared](#) that it would lead to a significant [increase in money supply and thus result in inflation](#). However, despite common perceptions, the modern banking system does not conform to the money multiplier model, meaning no unconditional link exists between a change in reserves and lending volumes³. It is the liquidity of the nonbank sector, and not the monetary base, that central banks try to increase with the help of QE. In previous periods of asset purchases these transactions made the largest contribution to the annual growth of the money supply in the United States and the EU. During the pandemic, growth in the money supply was supported by not only CB transactions, but also by measures taken by governments. A temporary surge in businesses' demand for liquidity was met thanks to [loan guarantees](#): in the euro area, lending growth rates had already returned from 7% yoy in May 2020–February 2021 to 3% yoy (the pre-crisis

level) by April 2021. Governments' additional needs for financing – used to support households and businesses – were covered by issuing new securities. However, the risk of excessive inflation is limited due to the expected slowdown of growth in the money supply as a result of a gradual reduction of QE, against the backdrop of fiscal consolidation.

Chart 2. Contributions of selected components to year-over-year growth in broad money, pp.



* Credit to NFS - claims of depository corporations (DCs) on private nonfinancial sector. ** Net claims. *** Other includes foreign assets, claims on sectors other than NFS, other items (net).

Source: IMF IFS, ECB. QE periods are in grey.

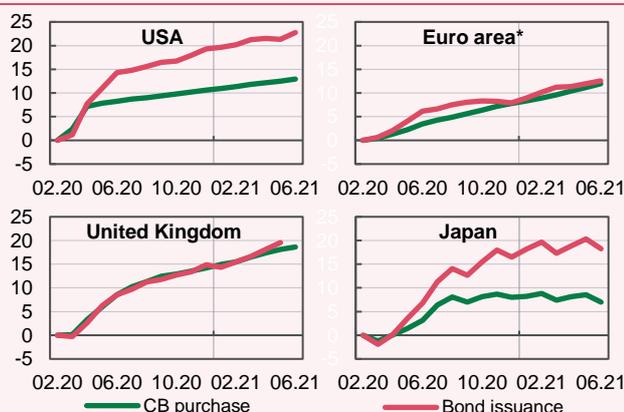
Illiquidity? One of the aims of QE is to increase the liquidity of the securities market through creating a buyer of last resort – the central bank. However, conducting these transactions over a long period, or concentrating on purchasing securities with a certain maturity, may lead to opposing effects. The negative impact of previous QEs on market liquidity, which was related to a decrease in the quantity of securities in circulation, was mostly short-term ([BIS, 2019](#)). However, research shows that a long-lasting adverse effect is possible when the share of bonds held by a CB becomes too large ([Han and Seneviratne, 2018](#)). As a result of QE 2020, the share of bonds held by the Fed, the ECB, and the Bank of England increased significantly, but security purchases were accompanied by a large increase in net issuance of government securities. In such a way, liquidity has not been affected as of today.

Fiscal Dominance? Low key rates and QE have made it easier for governments to finance unprecedented fiscal stimulus measures. However, monetary and fiscal policies have operated in parallel, rather than in a coordinated manner, reacting to the negative impact of quarantine restrictions on the economy in line with their own mandates. Nevertheless, a large increase in public debt – which grew in advanced economies by 15.4 pp [compared to the pre-pandemic forecast](#) – creates the risk of there being political

³Read more on how a modern banking system operates and how money is created in this publication by [the Bank of England \(2014\)](#).

pressure on CBs to reduce government needs for financing, which may reach 20%–24% of GDP in 2021.

Chart 3. Issuance of government bonds and CBs' purchases in 2020-21, cumulative since the beginning of February 2020, % of 2020 GDP



* Excluding supranational bonds.
Source: St. Louis Fed, SIFMA, Bank of England, DMO, ECB, Bank of Japan, IMF, NBU staff estimates.

In particular, interest rate hikes to bring inflation back to its target may be postponed in order to keep debt servicing expenses low. In addition, higher inflation will contribute to a decrease in the nominal debt. Another reason why a prolonged application of QE raises political risks is the concentration of a large portion of debt holdings with a central bank, which may lead to calls for it to be written off. This especially concerns EMs with weaker institutions. Furthermore, the CB's financial "assistance" loosens fiscal discipline and encourages governments to put off the implementation of necessary reforms. This is true even for the United States, which is expecting to again increase or suspend the limit on the maximum size of its public debt.

Chart 4. Outstanding government bonds by holders, % of 2020 GDP



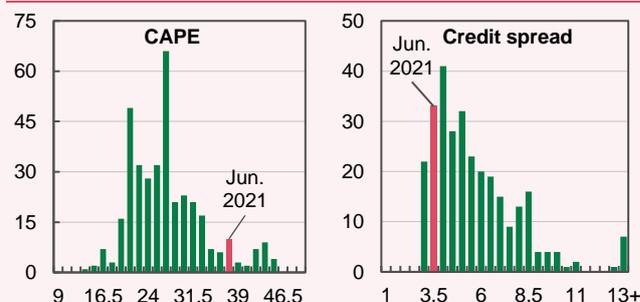
Source: St. Louis Fed, SIFMA, Bank of England, DMO, ECB, IMF, NBU staff estimates.

Insolvency? The accumulation of large volumes of market assets creates risks of financial losses for CBs if market conditions change. For example, the Bank of Japan faced [USD 18–27 billion](#) in unrealized losses because of an equity market collapse in March 2020. Although the technical insolvency of a CB does not threaten its liquidity as its liabilities can be repaid by issuing money, it does affect the

CBs' commitment to attaining its mandate due to the quasi-fiscal effects of such transactions, and also its independence (if a capital increase is needed by the government).

Greed? A QE-driven decrease in yields on safe assets stimulates investors' risk appetite. Moreover, long-lasting QE programs may encourage investors to take excessive risks as they search for yield, transform liquidity, and increase leverage. As before the pandemic, today several indicators point to high demand for risky assets. In June 2021, the cyclically adjusted price-to-earnings ratio (CAPE) for the S&P500 [reached 37](#), a level last seen in 1998 at the time of the dotcom bubble. The credit spreads of corporate bonds have reached their lowest level since 2007. A high appetite for risk is also reflected in sharp fluctuations of trading volumes and prices for some stocks⁴ and cryptocurrencies, and in an increase in the issue of shares by special purpose acquisition companies (SPACs)⁵. The continuation of QE is a signal to market participants that interest rates on safe assets will remain low, which encourages them to search for yield.

Chart 5. Distributions* of CAPE and non-investment grade corporate credit spreads



* CAPE – since January 1991, credit spread – since January 1997.
Source: R. Shiller's web-page, St. Louis Fed, NBU staff estimates.

A way out? The accumulation of large volumes of assets under QE will make it more difficult for CBs to close these programs, as on many markets this may cause a price correction. For example, the announcement by the Fed chair of a potential reduction in purchase volumes in 2013 sent yields on 10-year government securities of the United States up by 1.5 times over 3.5 months, and rates on 30-year mortgages up by 1.3 times, while making capital inflows to EMs highly volatile. A similar episode in 2021 underlined the sensitivity of markets to changes in the positions of leading CBs on QE. Managing expectations will therefore play an important role in preventing a sharp correction.

The materialization of most of these risks would also impact EMs through a tightening of financial conditions. At the same time, even the gradual suspension of net purchases by leading CBs, which is expected in 2022, will signal a monetary policy tightening. Taking into account the fact that economic growth in the United States will outpace that of EMs (excluding China) by [2.4](#), this may cause capital flight from the latter. Thus, the macroeconomic policy must be prudent in order to make these economies less vulnerable to a deterioration in external conditions.

⁴For example, the trading volumes of so-called meme stocks rose after they were hyped on social media.

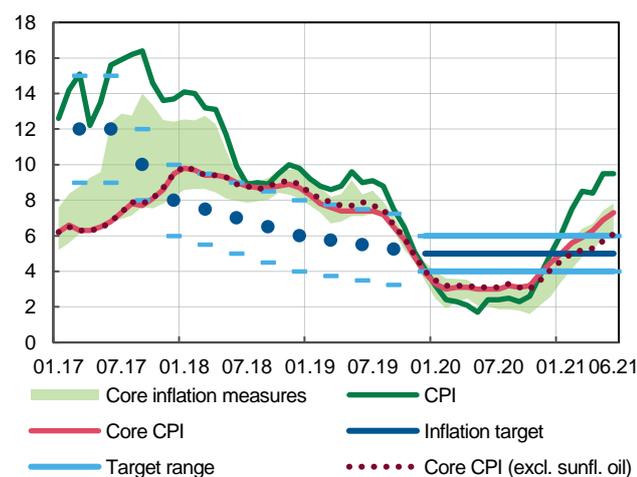
⁵A company with no commercial operations that is formed strictly to raise capital through an initial public offering (IPO) for the purpose of acquiring another company. In 2020, issues of SPAC shares accounted for [around half of the IPOs](#).

Part 2. Economy of Ukraine: Current Trends

2.1. Inflation Developments

- Consumer inflation accelerated in Q2 and went above the upper bound of its 5% ± 1 pp target range, as expected. It exceeded the NBU forecast, which was primarily due to increases in the highly volatile components of the consumer basket – in particular significant rises in the prices for natural gas and sunflower oil (amid growing global prices).
- Underlying inflationary pressures, as seen from the core inflation measure, also increased on the back of continued growth in consumer demand and rising production costs.
- Inflation expectations stabilized across the majority of respondent groups in recent months, which restrained inflationary pressures.

Figure 2.1.1. Underlying inflation trends*, % yoy



* Read more in the [January 2017 Inflation Report](#) (pages 20–21).
Source: NBU staff estimates.

Consumer inflation accelerated and exceeded the 5% ± 1 pp target range

In Q2 2021, consumer inflation accelerated to 9.5% yoy in June (up from 8.5% yoy in March), exceeding the upper bound of the 5% ± 1 pp target range as expected. At the same time, the actual growth rates of the CPI in Ukraine were above the forecast published in [the April 2021 Inflation Report](#).

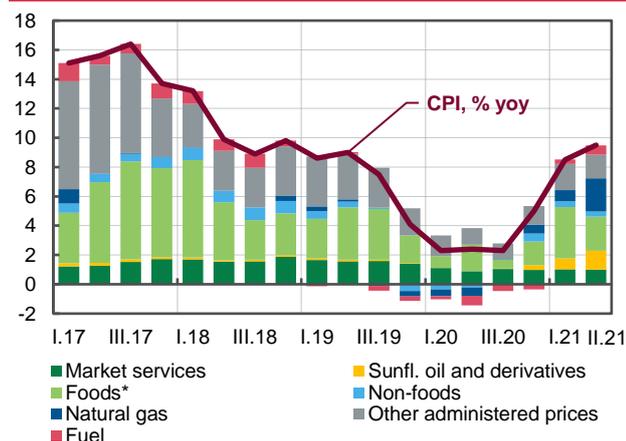
The increase in inflation is largely related to rises in the prices of natural gas, sunflower oil, and sunflower-oil-based products (margarine, spreads, and mayonnaise). The slower growth in global prices for sunflower oil seen in June has yet to impact domestic consumer prices. However, underlying pressures increased as well – excluding sunflower oil prices, core CPI also accelerated in June.

Production costs continued to put pressure on food price inflation. Despite the slower growth in food prices, the total index of production costs of agricultural products increased sharply. This was driven mainly by higher energy prices, rapid growth in wages, and the effects of the high prices of inputs in previous periods. Coupled with the difficult situation in domestic animal farming, this pushed up the growth in prices of animal farming products (meat and milk).

High global prices and a subsequent increase in production costs led to a rise in prices of other food products and thus in the prices of processed foods. The prices of bread, sugar, confectionery, dairy, and meat products grew rapidly. According to the findings of [the Business Outlook Survey](#), the cost of energy and inputs remains the most important pricing factor. The prices of alcoholic beverages also rose more quickly, driven mainly by higher beer prices.

On the other hand, the growth in raw food prices decelerated noticeably, to 5.1% yoy. In particular, prices for early vegetables declined thanks to an increase in imported and domestic supply. Although the harvest came to the market rather late due to cold weather, the increase in berry prices slowed at the end of the quarter. Thanks to sufficient supply, banana prices grew more slowly, and orange prices continued to drop. The lower inflation of raw food prices was also due to the disappearance of the low comparison base effect. In particular, the growth in egg prices slowed, and apple prices were lower than last year.

Figure 2.1.2. Contributions to the annual change in the CPI (eop), pp

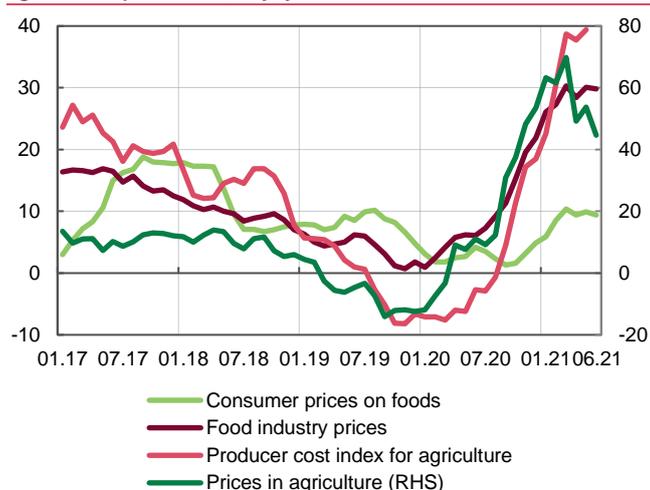


* Excluding sunflower oil and products of its processing (margarine, spreads, mayonnaise).
Source: SSSU, NBU staff estimates.

Underlying inflationary pressures rose, among other things due to stable consumption

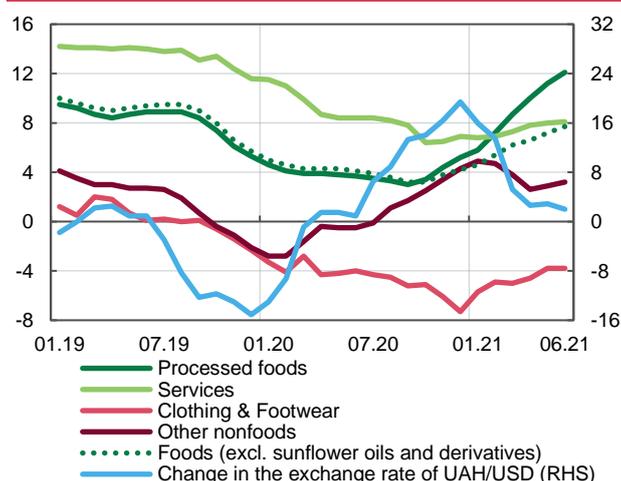
Core inflation accelerated to 7.3% yoy in June (up from

Figure 2.1.3. Food prices for consumers, in food industry and agricultural production, % yoy



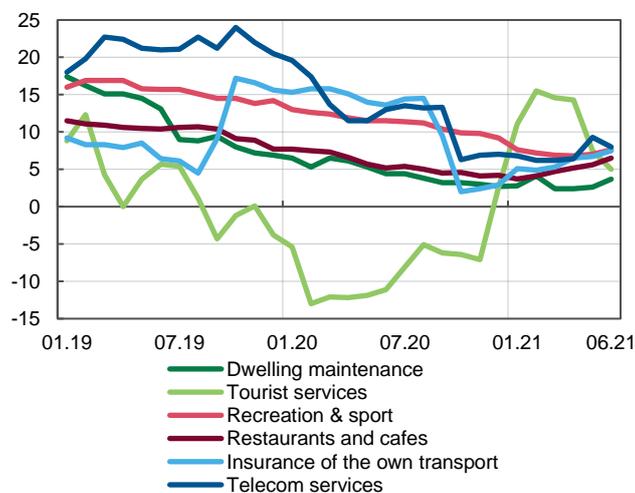
Source: SSSU, NBU staff estimates.

Figure 2.1.4. Components of core CPI, % yoy



Source: SSSU, NBU staff estimates.

Figure 2.1.5. Prices for selected services, % yoy



Source: SSSU.

5.9% yoy in March), which was slightly above the forecast published in [the April 2021 Inflation Report](#). The increase in underlying inflationary pressures is also shown by other measures, such as core CPI excluding sunflower oil and its derived products.

Further growth in inflation of services prices (to 8.1% yoy) is an important indicator of increased pressures. This was driven by both a rise in production costs, including labor costs, and increased consumer demand. As a result, prices grew more rapidly for the services of cafes and restaurants, cultural establishments, recreational facilities, medical institutions, personal vehicle insurance, telecommunication, and housing rentals. In contrast, the growth in prices for personal care services decelerated amid eased quarantine restrictions. The prices of tourist services also grew more slowly, due to, among other things, the suspension of passenger air travel between Russia and Turkey.

The growth in nonfood prices decelerated slightly (to 1.6% yoy). This can be explained by the waning of the effect of last year's hryvnia depreciation. In particular, the [Business Outlook Survey](#) showed that the impact of exchange rate changes on businesses' selling prices has continued to weaken. Moreover, businesses are more cautious about changing their prices amid the uncertainty caused by the coronavirus crisis (read more in [Box 2 Price-Setting Mechanisms of Ukrainian Enterprises](#) on page 14). As a result, the growth in prices for pharmaceuticals, cars, jewelry, and home appliances slowed. The rapid growth in retail trade volumes reflects the pressure coming from consumer demand. Thus, the fall in prices for clothing and footwear slowed, and prices for electronic devices and personal care products returned to growth.

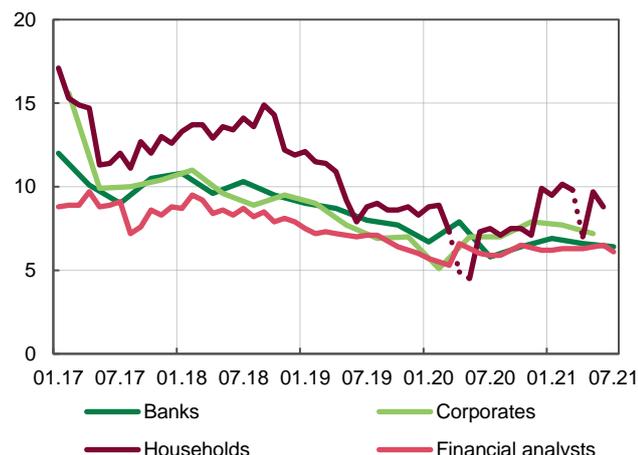
At the same time, underlying inflationary pressures were somewhat curbed by stabilized inflation expectations. Expectations improved at the end of the quarter as prices for some raw products declined and FX market conditions were benign.

The impact of rising global energy prices on inflation in Ukraine increased

Growth in natural gas prices for households surged (to 175.3% yoy) in the wake of rising global prices and because of a low base of comparison. At the same time, the introduction of annual contracts with fixed prices for households was a restraining factor. Prices for hot water supply and heating also grew slightly faster against a low comparison base.

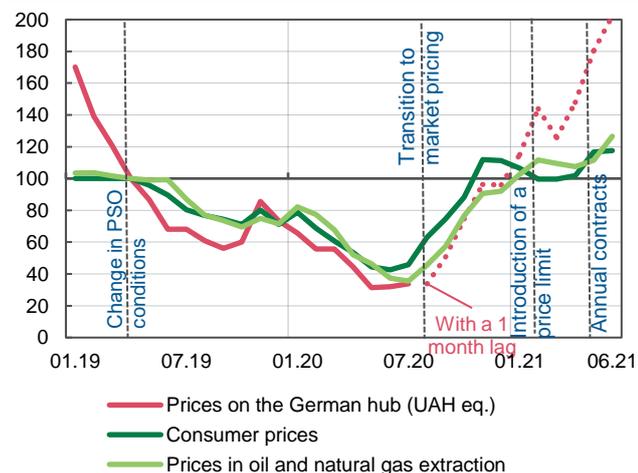
The same factors, together with sustained high demand from households, spurred growth in fuel prices (to 34.7% yoy). In addition, the disappearing low comparison base outweighed a certain effect from state price regulation in the form of a cap on the trade margins for A-95 petrol and diesel fuel. The increase in fuel prices and other production costs resulted in higher transportation prices. More specifically, public transport fares in several oblast centers, intercity bus and train tickets, and taxi services became more expensive.

Figure 2.1.6. 12-month-ahead inflation expectations*, %



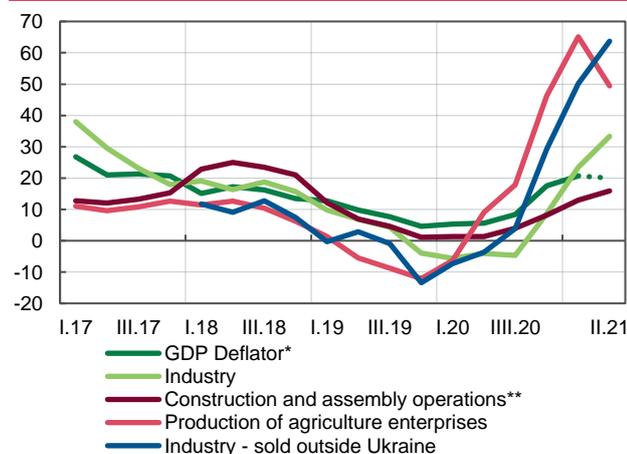
* The dotted line indicates a change in the method of survey for a telephone interview due to quarantine restrictions.
Source: NBU, GfK Ukraine, Info Sapiens.

Figure 2.1.7. Natural gas prices, 04.2019 = 100



Source: SSSU, Refinitiv Datastream, NBU staff estimates.

Figure 2.1.8. Other inflation measures, quarterly averages, % yoy



* Data for Q2 2021 represent the NBU staff estimates.

** Data for Q2 2021 cover two months.

Source: SSSU.

Higher energy prices also led to a jump in crude oil and natural gas prices. This supported price growth in the chemical industry and in the manufacturing of rubber and plastic products.

Electricity prices for non-household consumers increased at a faster pace, mainly driven by the effect of a low comparison base due to last year's lower energy prices. Moreover, prices were pushed up by increased electricity consumption by industrial producers and the transportation sector on the back of the economic recovery. [The higher ceiling on electricity prices introduced by the National Energy and Utilities Regulatory Commission](#) also contributed to the growth in electricity prices.

The GDP deflator remained high in Q2 2021 due to the sustained effect of pro-inflation factors in the majority of economic sectors

The inflation surge on global commodity markets was reflected in higher prices for Ukraine's core exports, particularly metal products. Higher global timber prices influenced product prices in the wood and printing industries. Prices of agricultural and food products grew more slowly, but remained high.

Inflationary pressures also increased in those industries that are mainly oriented toward the domestic market. Price growth thus accelerated in construction following an increase in the prices of construction materials. Prices of communication services for companies and organizations grew at a slightly faster pace. On the other hand, growth in the deflator was restrained by the lack of change in prices for railway cargo transportation.

Box 2. Price-Setting Mechanism of Ukrainian Enterprises

Pricing policy can significantly impact inflation dynamics. Understanding how businesses set their prices and adapt to changes in the economic environment makes it possible to assess the effect that monetary policy has on inflation. Prices set by businesses depend on production costs, the balance of supply and demand on the market, and other factors. However, prices do not usually react to changes (shocks) immediately. The Business Outlook Survey shows that in 2020 only around 40% of businesses fully compensated for increases in their expenses by raising their prices accordingly. The motivation to more quickly change prices usually increases during crises, which are often accompanied by currency depreciation. The results of a study based on data from online supermarkets, however, show that prices remained unchanged for longer in 2020, despite the depreciation pressure. The fact that the coronavirus crisis is not a typical crisis could explain the moderate inflation seen both during the strictest phase of the quarantine last year and at the time of the rapid economic recovery in H2 2020.

Businesses respond differently to changes in economic conditions: some are quick to change the prices of their products, while others react more slowly. There are a number of reasons for this. Each price review leads to additional expenses (so-called “menu costs”, which are the costs on printing and distributing new price lists). Having incomplete information, some companies may keep their prices unchanged because they are afraid to lose competitive advantages, while others freeze prices with the aim of increasing their market share. This effect is known as nominal price stickiness, and is the basis of the Neo-Keynesian macroeconomic theory (e.g., [Klenow & Kryvtsov, 2008](#), [Kehoe & Midrigan, 2015](#), [Nakamura & Steinsson, 2013](#)). As a result, monetary policy may deviate from being neutral, at least in the short term, and influence economic processes. Price stickiness is therefore an important parameter for assessing and modelling the response of the economy to monetary policy decisions.

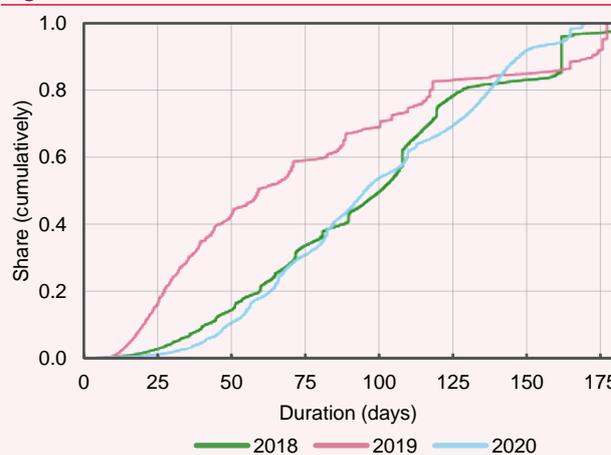
The degree of price stickiness is determined by the number of times a price changes during a year, or the average period between two consecutive price changes. In recent years research in this area, by providing new datasets on prices, has contributed to better understanding of the price-setting mechanism. By using data from retail businesses, [Klenow & Malin \(2010\)](#) found out that price duration in the United States was almost six months, and around a year in the euro area. According to [Cavallo \(2018\)](#), the duration of online prices is three months in the United States, and two to three months in Latin America. [Antonova \(2019\)](#) revealed that the average price duration in Ukraine was around two months.

During crises, which are often accompanied by currency depreciation, businesses are more motivated to change prices, which makes price duration decline. However, the pandemic was not a typical economic shock – restrictions imposed on some activities could have influenced businesses’ ability to change prices (read more in Box 2 *Specifics of Price Collection during Quarantine* on pages 14–15 of the [July 2020 Inflation Report](#)). The NBU estimates that the pass-through effect of the hryvnia depreciation was weaker than usual, and inflation remained below the target range throughout most of the year. This may have been driven in part by a change in the behavior of retailers, who did

not raise their prices in view of decreased consumer demand and the uncertainty over the further course of the pandemic.

This is proven by findings from the analysis of changes in price duration for 2018–2020, which was based on online supermarket data collected by means of web scraping⁶.

Figure 1. Price duration in 2018–2020



Source: NBU.

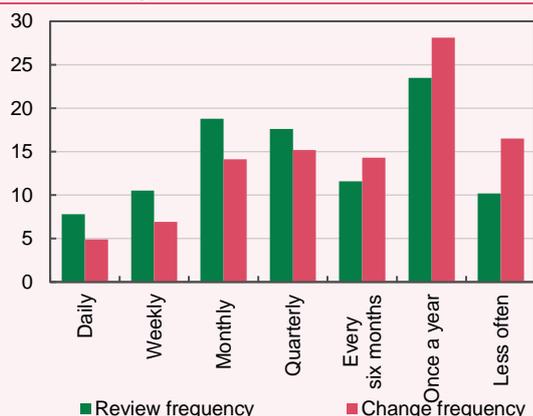
In Ukraine, retailers change the prices of more than half of the goods they sell less than once in three months. Prices changed somewhat less often in 2020 than in 2019 and 2018. This indicates an increase in price stickiness and the influence of factors not related to the exchange rate effect – in particular the impact of the coronavirus crisis⁷. This also explains the moderate inflation dynamics in 2020 – particularly in H2, when the economy started to recover.

In order to better understand the behavior mechanism within price-setting processes, in its [latest quarterly business outlook survey](#) the NBU asked respondents additional questions, in particular about the frequency of price reviews and actual changes in prices. As expected, businesses change their prices less often than they conduct price reviews. The median value of the period between price reviews is two to three months, whereas it is three to four months between price changes. These estimates were close to the values calculated using the data from online supermarkets.

⁶The data were cleaned up by excluding goods with data available for less than six months of the year, or for which prices had not changed for three years. In addition, the research only covered goods included in the CPI basket.

⁷Interestingly, prices changed more often in 2019, which can be explained by the opening of space to maneuver and offering of discounts due to the strengthening of the hryvnia.

Figure 2. Distribution of respondents' answers by frequency of review * and change ** of prices for a representative product, %



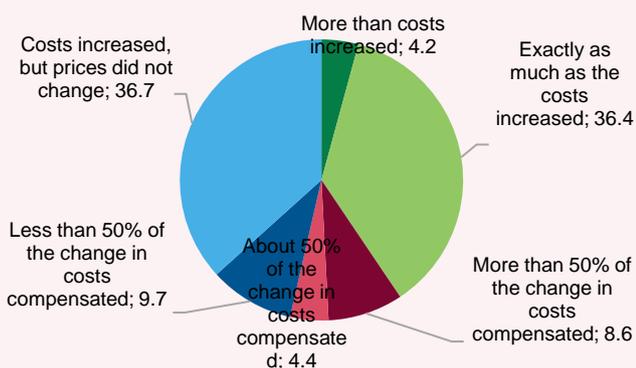
* Price review signifies an analysis of the current situation and the decision whether to change prices.

** Accordingly, the change in prices is the result of the decision to change the price.

Source: business survey, NBU staff estimates.

The survey revealed that almost 60% of companies either did not change their prices or increased them in 2020, but this did not fully compensate for the increase in their expenses.

Figure 3. The degree of pass-through of costs to price changes in 2020, %

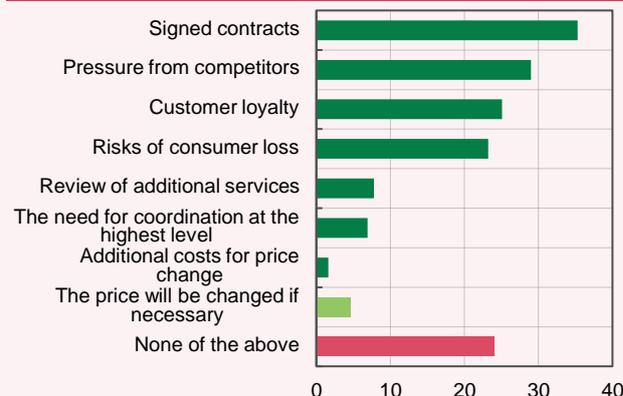


Source: NBU.

The survey also studied other behavioral aspects of companies' price-setting policies. Customer relations – both in the form of officially signed contracts and sellers' loyalty to customers – are the most important factors preventing businesses from making the decision to change prices. Assessing the consequences of price changes from the point of view of competition also plays a significant role. On the other hand, only a small share of respondent companies viewed the additional “menu costs” as an important factor. Half of the companies set equal prices for all of their customers. In the meantime, one in four companies differentiates its pricing policy depending on the customer category (by volumes of purchased goods, whether they have a loyalty card, the means of payment, and so on), one in six

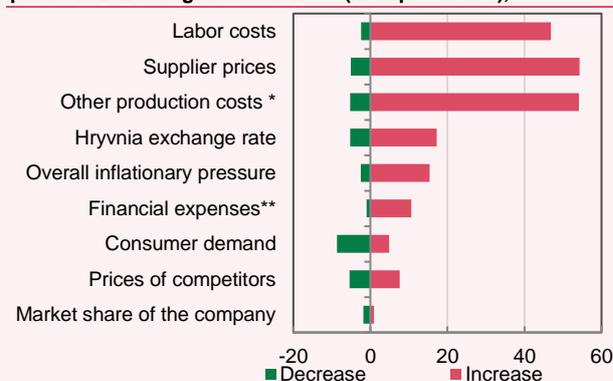
companies differentiate by the region of sales, and only 3% of businesses set different prices for online and offline sales.

Figure 4. Factors influencing the decision to change the price (multiple choice), %



Source: NBU.

Figure 5. The most influential factors in deciding to raise / lower prices in 2021 for goods / services (multiple choice), %



* The cost of energy resources, other goods and services that are included in production costs, rent, etc.

** Insurance, banking, credit rates, etc.

Source: NBU.

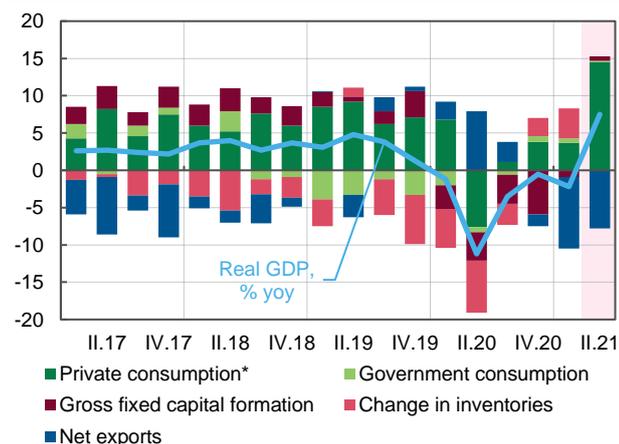
Production costs, including the costs of raw materials, energy, and labor, are the most important factor for price setting at the majority of companies. Companies pay less attention to general price trends and the condition of the foreign exchange market⁸, and demand factors play an insignificant role (although a decrease in demand would have a more sizeable impact on their decision to reduce prices than an increase in demand would have on the decision to raise prices). The asymmetry of responses to the strengthening or weakening of these factors was also expected – businesses respond more strongly to increases in costs than to decreases. In particular, this is consistent with research findings of [Faryna \(2016\)](#), which showed that the pass-through effect is stronger following a depreciation than in the case of an appreciation.

⁸This can be explained by the introduction of the inflation targeting regime, which is based on a floating exchange rate. During the 2020 crisis this helped prevent the kind of sharp depreciation characteristic of previous crisis periods. The inflation targeting regime also contributed to the stabilization of exchange rate expectations and to a decrease in their influence on price setting. Before inflation targeting was implemented, the highest assessments of the impact of exchange rate changes on companies' initial prices were observed during the exchange rate crises of 2008–2009 and 2014–2015 (60%–70% of companies reported this factor as being important). In the past two years, assessments have been fluctuating in the range of 40%–50%.

2.2. Demand and Output

- The economic recovery weakened in early 2021 due to temporary and systemic factors: stricter quarantine restrictions, worsened weather conditions, stronger competition on some foreign markets, and a difficult situation in animal farming. As in 2020, private consumption was the main economic growth driver.
- Ukraine's economy grew rapidly in Q2 2021. The statistical base made a significant contribution, but the recovery was further fueled by sustained consumer demand, a favorable external environment, increased budget spending, and a pickup in investment.

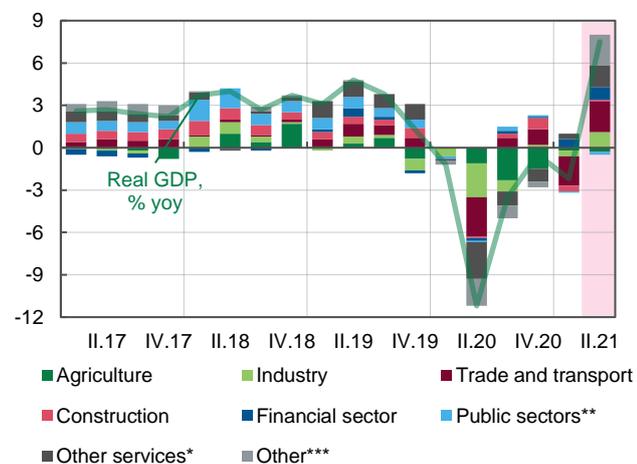
Figure 2.2.1. Contributions to annual GDP growth by final use, pp



* Including non-profit institutions serving households.

Source: SSSU, NBU staff estimates.

Figure 2.2.2. Contributions to annual GDP growth from GVAs of individual sectors, pp



* Other services include temporary accommodation and catering; information and telecommunications; real estate transactions; professional, scientific and technical activities; activities in the field of administrative and support services; arts, sports, entertainment and recreation; other types of services.

** Public sectors include public administration and defense; education; health care and social assistance.

*** Others include product taxes; subsidies on products.

Source: SSSU, NBU staff estimates.

⁹Estimates of the impact of quarantine restrictions remain unchanged for H1 2021, as the baseline scenario materialized: the red zone quarantine was in place in late March and in April, and restrictions were eased starting in May. Accordingly, the impact of quarantine restrictions on annual GDP in Q1 was estimated at -0.2 pp (-0.2 pp in January and -0.1 in March; the cumulative impact for the quarter is less than the sum of individual values due to rounding effects). The impact in Q2 was -0.4 pp. The total impact (including January and March) was around (-0.6)–(-0.7) pp.

¹⁰The NBU's estimates were based mainly on data for January–February 2021.

¹¹Imports of intermediate goods increased by 13% yoy in Q1 2021, and imports of capital goods grew by 21% yoy. These increases were partially reflected in a change in inventories.

¹²The face-to-face sectors include wholesale and retail trade, transportation, arts, sports activities, entertainment, and recreation.

The economy recovered slightly more slowly, mostly due to temporary factors

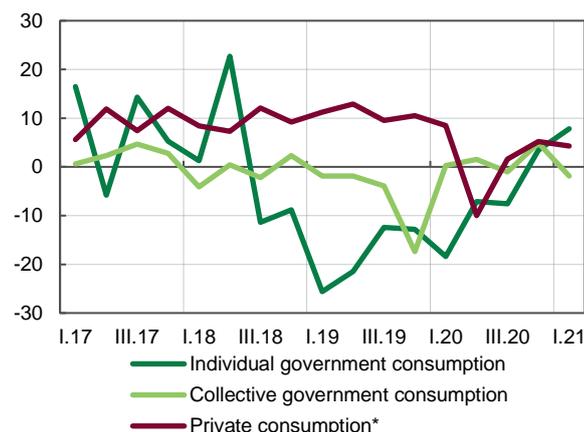
The economy recovered from the coronavirus crisis more slowly in Q1 2021 – the fall in real GDP deepened to 2.2% yoy. The slowdown was expected and was partially explained by the January lockdown and additional quarantine measures introduced at the end of the quarter⁹, along with worsened weather conditions, stronger competition on some foreign markets, and a difficult situation in animal farming.

The actual economic downturn proved to be slightly deeper than the NBU estimated in its [April 2021 Inflation Report](#). This was primarily due to the deterioration of a number of indicators of the real economy in March¹⁰ (whereas they were expected to improve against a low comparison base) and the slower recovery of the services sector.

The decline in GDP was primarily driven by a sizeable increase in the negative contribution of net exports (up to 9.6 pp). Further growth in consumer demand and business activity boosted imports of intermediate and capital goods¹¹. As a result, total imports grew by 3.7% yoy. At the same time, the decline in exports deepened to 17.4% yoy because of last year's lower harvests, increased competition on some markets (metal ore and metals products), and the continued decrease in natural gas transit.

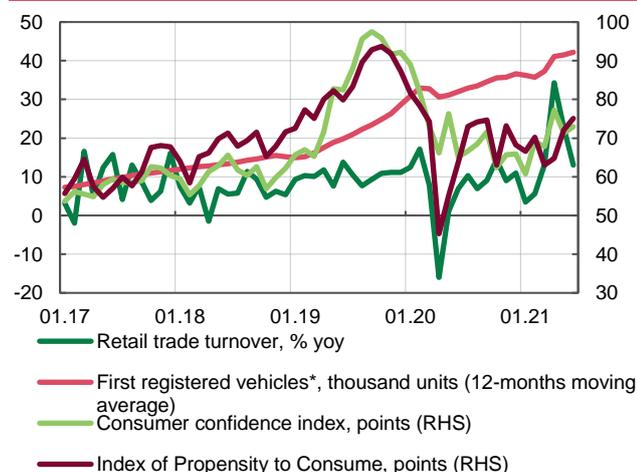
Output continued to fall across most sectors in Q1 2021. The drop in exports was a significant factor in the industrial slump, while the poor performance of livestock farming caused a fall in agriculture. A decrease in government spending on road infrastructure compared to last year, along with worsened weather conditions, caused construction performance to start to fall again. All of this affected the performance of wholesale trade and transportation.

Due to the tightening of quarantine restrictions, gross value added (GVA) continued to decline in face-to-face services sectors¹², including the hotel and restaurant businesses and administrative and support services (rent, hire, travel, etc.). However, the stable operation of the banking sector and sustained demand for IT and financial services contributed to

Figure 2.2.3. Final private and government consumption, % yoy

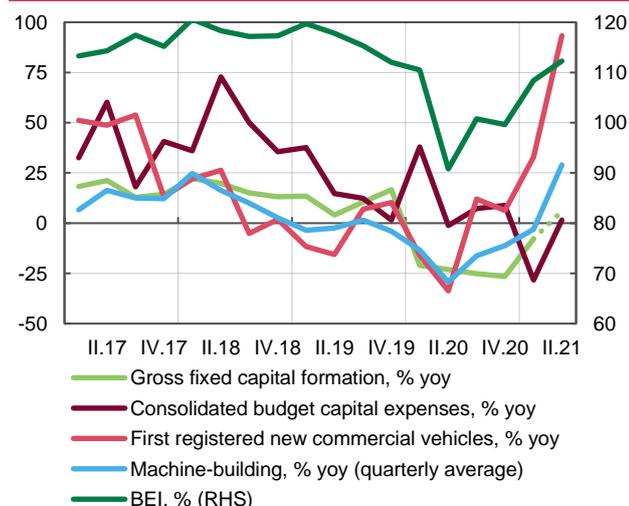
* Including non-profit institutions serving households.

Source: SSSU, NBU staff estimates.

Figure 2.2.4. Selected indicators of private consumption

* New and used ones, excluding cars imported with violation of customs regulations.

Source: SSSU, Info Sapiens, Ukravtoprom.

Figure 2.2.5. Selected indicators of investment demand

Source: SSSU, Treasury, NBU, Ukravtoprom.

¹³Including expenditures on defense, public order, the judiciary, environmental protection, utilities, research and development, etc.

¹⁴Including expenditures on goods and services for individual use, particularly in the areas of healthcare, spiritual and physical development, education, social security, social benefits, and social insurance.

¹⁵In Q1 growth resumed in capital investment in agriculture, transportation, and professional and academic activities. Investment in healthcare more than doubled. Some industrial sectors also started to invest again, including: coke production and crude oil processing, pharmaceuticals, machinery production (including the manufacturing of electrical equipment and cars), the production of rubber and plastic goods, and furniture manufacturing.

¹⁶The majority of sectors regained profitability (through an increase in profits and a major decline in losses).

rapid growth in the GVA of these sectors. Real estate transactions also picked up.

Private consumption grew rapidly

The main support for the economy came from household consumption. Households' final consumption expenditure rose by 4.4% yoy as household income continued to increase (read more in the *Labor Market and Household Income* section on page 19). At the same time, quarantine measures led to a slowdown in the growth of private consumption in Q1 2021 compared to Q4 2020.

The growth in final consumption expenditures of the general government also decelerated (to 3.2% yoy), reflecting the more restrained fiscal policy at the start of the year. Moderate growth in budget expenditures on general government functions¹³ led to a resumption in the fall of the collective consumption expenditures of the general government and the GVA of public administration and defense. On the other hand, social spending remained a priority (read more in the section *Fiscal Sector* on page 21), spurring growth in the individual consumption expenditures of the general government¹⁴. In particular, public spending on healthcare grew amid the increase in COVID-19 cases at the start of the year. The GVA of healthcare rose accordingly. Actual household consumption (their purchases of goods and services at their own expense and at the expense of budget financing) thus grew slightly faster.

High-frequency indicators show that demand remained stable in Q2 despite the global lockdown. The growth in retail trade and imports of consumer goods accelerated. Car sales remained at record highs. Consumer sentiment continued to improve. Air transportation and tourism picked up.

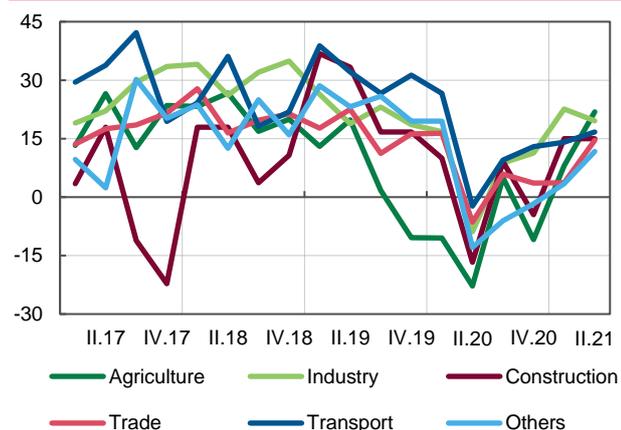
Investment activity is reviving gradually

Investment activity revived at individual companies¹⁵ on the back of improved financial performance¹⁶. However, gross fixed capital formation continued to decline in Q1, although at a significantly slower pace (7.8% yoy). Further decline was driven mainly by decreased investment in housing construction, nonresidential buildings (including commercial real estate), and engineering infrastructure.

The investment revival in Q2 was evidenced by improved business expectations, the performance of some machinery production subsectors, better financing of budget capital expenditures, and increased imports of investment goods.

Economic activity picked up in Q2, although the pickup was uneven across sectors, as shown by seasonally adjusted indicators

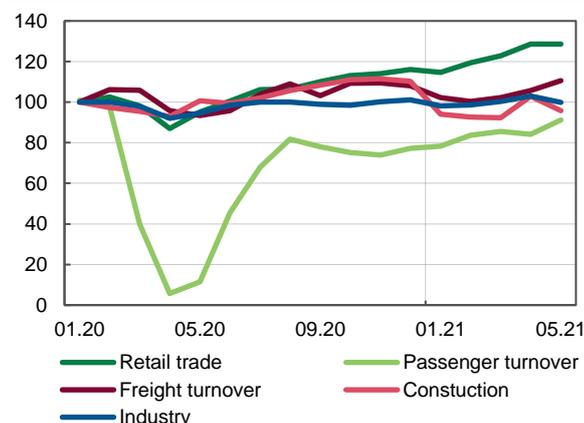
Figure 2.2.6. Balance of answers* about investment in equipment over the next 12 months, %



* Difference between answers "increase" and "decrease".

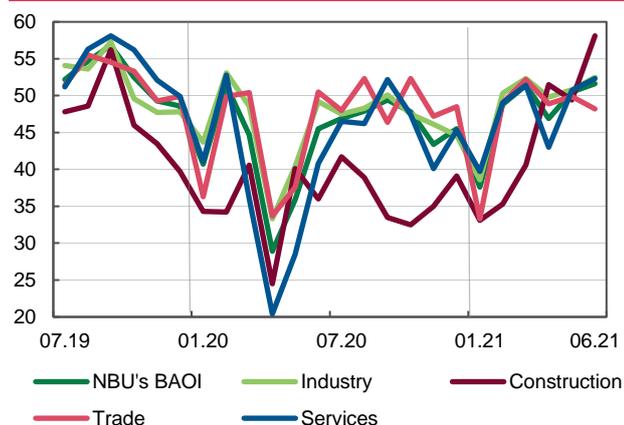
Source: NBU.

Figure 2.2.7. Output in selected sectors sa, index 01.2020=100%



Source: SSSU, NBU staff estimates.

Figure 2.2.8. NBU's business activity outlook index, p.



Source: NBU.

A low comparison base had a strong influence on annual indicators in Q2. Last year, it was in Q2 when the strictest quarantine restrictions were in place and the greatest decline in real GDP occurred. Restrictions were looser this year and were applied to individual oblasts. At the same time, households and businesses have mostly adapted to the quarantine conditions. Therefore, even seasonally adjusted indicators for existing sectors point to further economic recovery, although it is uneven across sectors. Retail trade and passenger turnover continued to increase. A favorable external environment, revived investment activity, higher budget expenditures, and robust consumer demand supported further recovery in some industrial sectors (machinery production and mining) and in construction. This also supported freight turnover.

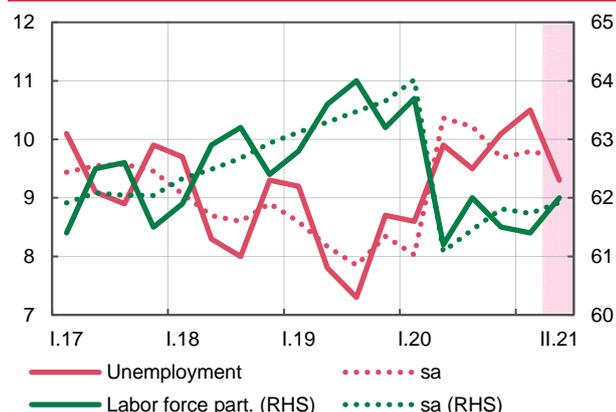
Services sectors also recovered strongly in Q2 as restrictions were eased for face-to-face activities, such as sports, culture, and recreation. Low prices for travel packages spurred growth in air transportation and the provision of tourist services. High demand for online services supported the financial and IT sectors. Real estate transactions continued to rise along with the growth in housing construction.

At the same time, the negative impact of last year's poor harvest continued to affect exports, the food industry, and agriculture (animal farming in particular, with its profitability dropping due to higher feed prices). Agriculture was also affected by the late start of the harvesting campaign. [According to current data](#), the harvest gathered in June was smaller than last year (although crop yields were much higher). As a result, the estimate for Q2 GDP growth was revised downward, to 7.5% yoy.

2.3. Labor Market and Household Income

- The recovery in employment slowed due to stricter quarantine measures and the weakening of business activity in Q1 2021.
- Labor market conditions are expected to improve in Q2. Nominal income growth will accelerate as economic activity revives.

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

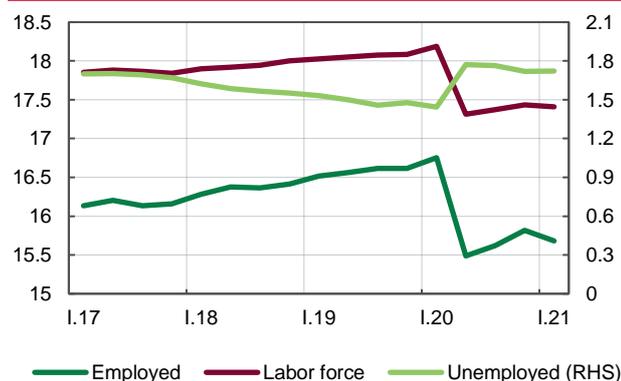


* У % до робочої сили віком 15–70 років.

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

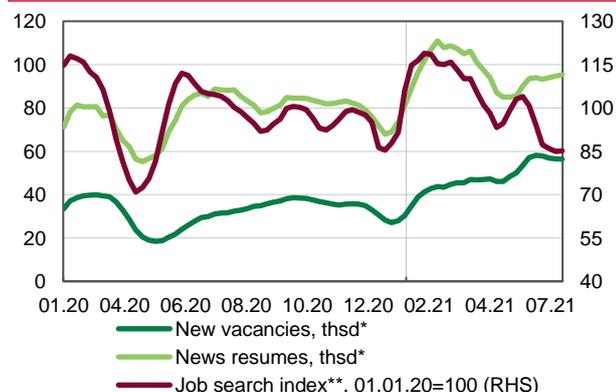
Source: SSSU, NBU staff estimates.

Figure 2.3.2. Selected labor market indicators, mn persons, sa



Source: SSSU, NBU staff estimates.

Figure 2.3.3. Labor supply and demand indicators (4-week moving average)



* Data from work.ua

** Includes job search queries in Ukrainian and Russian, index - first week 2020 = 100.0

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

Labor market conditions worsened temporarily in Q1

The spread of COVID-19 and resulting quarantine measures had a strong negative effect on the labor market. The new waves of COVID-19 in late 2020 and early 2021 were very strong, peaking at about 100,000 new cases per week. The government responded by imposing strict quarantine restrictions in January and from March through April. This had a negative impact on employment dynamics, as did the slump in a number of sectors in Q1 (in part due to adverse weather, which hindered construction and transport, as well as delaying the start of the sowing campaign).

As with last year, some of those who lost their jobs became economically inactive (opting out of the search for a job). Unlike last year, however, most individuals chose not to wait until the restrictions were relaxed and actively searched for jobs even as the spring lockdown continued. This was evident from the Google trends job search index and the growing number of resumes posted on job search sites. As a result, the seasonally adjusted unemployment rate increased compared to the previous quarter, though only slightly (to 9.8%). At the same time, with economic activity seeing seasonal weakness at the start of the year, unadjusted unemployment (10.5%) surpassed its crisis levels.

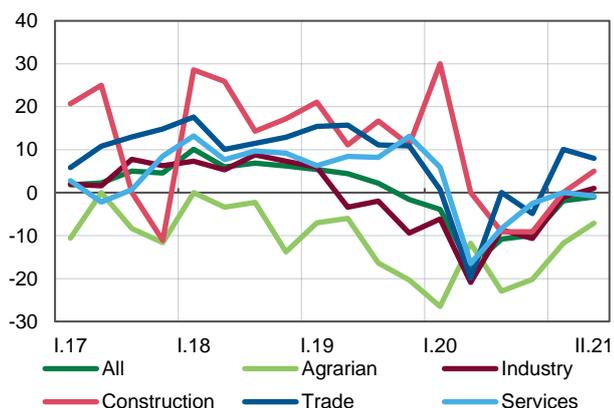
The change in the behavior of economic agents was driven by both a certain adaptation to the new conditions and a probable decrease in the financial safety margins of households, especially young families. Almost half of the drop in the employed population in Q1 2021 was due to lower employment among young people (ages 35 and younger, mostly women), according to SSSU data. However, a lot of them dropped out of the workforce in order to study.

The drop in employment among women aged 30–39 was probably due to the need to care for children and the elderly. Most of the unemployment in women who are not students or pensioners is attributable to their domestic and family responsibilities. Men, however, are unemployed because they have either abandoned efforts to find work or do not know where to look for it. Employment among people of pre-retirement age (50–70) also declined, probably due to the effects of the disease being more severe at this age.

Despite the quarantine, labor demand continued to rise, and the employment situation is expected to improve in Q2

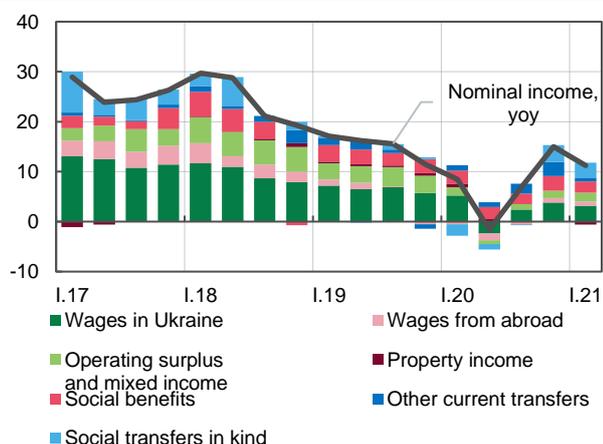
Even before the prevalence of COVID-19 subsided and restrictions eased in early May, the number of both job search requests and resumes posted began to grow. The number of vacancies has also been rising every month since the start of the year. The overall revival in economic activity also played

Figure 2.3.4. Expectations regarding the change in the number of workers in the next 12 month, by sector (balance of responses), pp



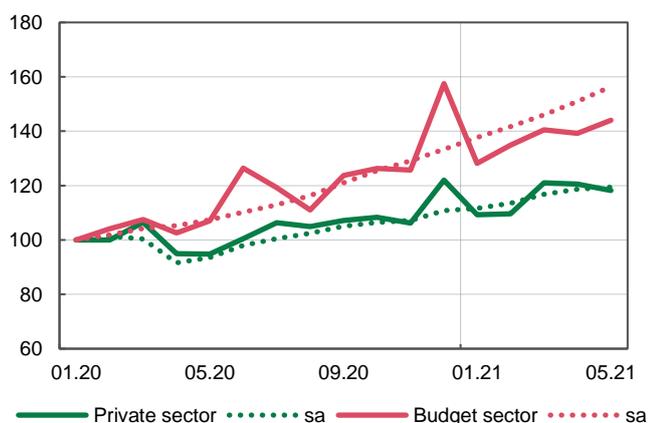
Source: NBU's business outlook survey.

Figure 2.3.5. Contributions to Annual Change in Nominal Household Income, pp



Source: SSSU, NBU staff estimates.

Figure 2.3.6. Wages in public and private sectors, index 01.20=100



Source: SSSU, NBU staff estimates.

an important role, although it was uneven by type of activity (for details, see the section Demand and Output on page 16). Specifically, companies in all sectors in Q2 said their recruitment expectations had improved, according to the [Business Outlook Survey](#). Reflecting sustained consumer demand and higher infrastructure spending, trade and construction companies, among others, were confident that they would increase their workforce. [Public programs on partial unemployment](#)¹⁷ in Q2 provided additional support to boost employment and household income.

Labor market conditions are expected to have improved in Q2 2021. However, with economic recovery being uneven across sectors, and some of the economically inactive individuals expected to resume searching for a job, the reduction in seasonally adjusted unemployment will be gradual.

Income growth picked up after slowing at the start of the year

In Q1 2021, household income growth decelerated (to 11% yoy in nominal terms and 1% yoy in real terms). This nominal deceleration was due to slower wage growth amid weakening economic activity and a drop in employment at the start of the year. In real terms, the deceleration was also driven by a significant acceleration of inflation. However, wage growth remained significant, outpacing the economic recovery. The increase in income was supported by social benefits. In a sign that small businesses were continuing to adapt to operating under quarantine, profits and mixed income increased, including those of sole proprietors, despite quarantine restrictions¹⁸.

Against the backdrop of a low comparison base effect in Q2 2020, better labor market conditions pushed nominal wages up quickly (by almost 30% yoy in April–May). However, this growth also reflected the recovery in economic activity, an increase in the minimum wage, a revision of wages in healthcare and education, and wage supplements for health workers. The increase in social benefits continued: an [annual indexation of pensions](#) (by 11%) took place on 1 March for more than two-thirds of all pensioners. As of April, pensions for working pensioners were recalculated. At the same time, the acceleration of inflation restrained real income growth.

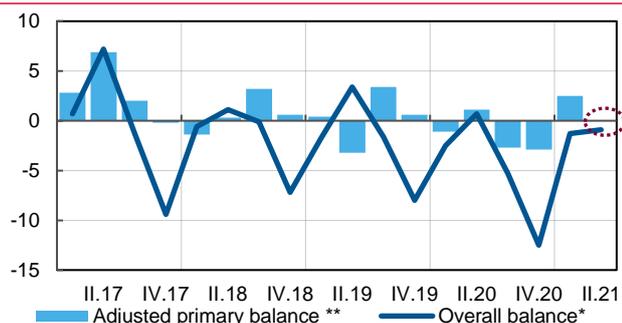
¹⁷Entrepreneurs and employees whose activities are suspended while their region of employment has a "red zone" designation were able to receive UAH 8,000 in [COVID-19 relief payments](#). As of 7 June, [almost 340,000 applications](#) for this assistance were filed, and more than UAH 2.7 billion in assistance was paid out.

¹⁸ After a slight seasonal decline in active sole proprietors in early 2021, the number of newly registered sole proprietors has since March exceeded the number of deregistered ones, also indicating an increase in employment in microenterprises.

2.4. Fiscal Sector

- Fiscal policy in Q2 eased, primarily due to faster growth in expenditures, including capital expenditures. On the one hand, this supported the economic recovery. On the other hand, it was a pro-inflationary factor.
- With the economy recovering and prices being high, tax revenues continued to rise. At the same time, budget revenue growth was restrained due to smaller transfers from the NBU and lower dividends from state-owned companies.
- The deficit was financed with external borrowing and hryvnia funds accumulated earlier. Public and publicly guaranteed debt remained almost unchanged in Q2, and it continued to shrink relative to GDP.

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

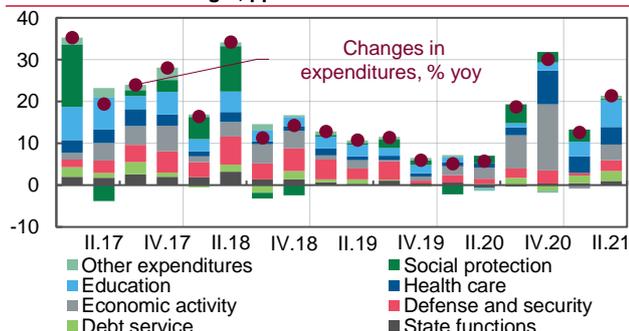


* Overall balance (% of GDP) is the consolidated budget balance, taking into account loans to the Pension Fund from the STA. ** Cyclically adjusted primary fiscal balance (CAPB) of the general government (% of potential GDP). CAPB is the difference between seasonally adjusted revenues, in the structure of which tax revenues are adjusted for cyclical changes in GDP, and seasonally adjusted primary expenditures. Source: STSU, NBU staff estimates.

Fiscal policy eased, supporting economic activity

In Q2, the consolidated budget recorded a deficit, which is quite unusual for this period in recent years. The virtually zero cyclically-adjusted primary balance indicated an easing of fiscal policy compared to the previous quarter. This is primarily due to increasing expenditures in almost all areas, including economic activities and capital projects. Revenues also contributed to the loosening of policy. Although quarantine restrictions eased and the economy recovered, some tax cuts for micro and small businesses that were introduced in late 2020 continued to apply.¹⁹ In addition, compared to the previous year, the share of redistribution of GDP through the revenue side shrank due to lower non-tax revenues. The easing of fiscal policy underpinned the economic recovery and the labor market, but at the same time it increased the pressure on domestic prices from consumer demand.

Figure 2.4.2. Contributions to annual changes in expenditures of the consolidated budget, pp

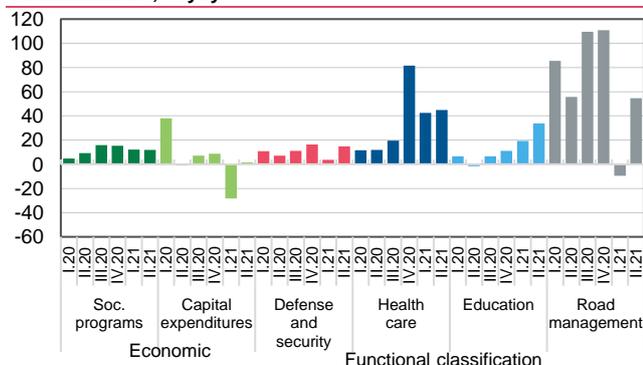


Source: STSU, NBU staff estimates.

Expenditure growth accelerated rapidly

Expenditures on healthcare remained a priority area, as expected. In particular, the growth in expenditures on medicines and anti-epidemic, sanitary, and preventive measures, including vaccination against COVID-19, accelerated. The funding for collective services, including for defense, public order and the judiciary, also improved. Expenditures on road infrastructure, both current repairs and a number of capital projects, increased. Spending on humanitarian purposes continued, in particular on education, environment, culture, and sports. Higher budget expenditures supported economic activity in the production of both goods and services.

Figure 2.4.3. Growth in consolidated budget expenditures by selected areas*, % yoy



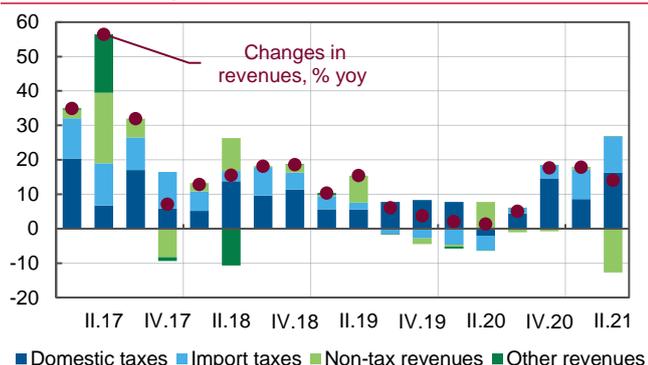
*Defense and security includes defense and public order, security and the judiciary. Social programs include wages and social care. Source: STSU, NBU staff estimates.

The government continued to deliver social support programs. In particular, one-off COVID-19 [relief paychecks](#) were provided to micro and small enterprises to make up for the losses they incurred because of the ban on their activities during quarantine. Households received higher subsidies for housing and communal services, and compensation for higher electricity prices. Expenditures on public sector wages continued to grow. All of this boosted private consumption and put more pressure on prices.

Debt-servicing expenditures increased due to significant domestic borrowing in late 2020 and early this year, which was accompanied by a certain rise in yields. At the same time, these expenditures were lower in volume than planned in the state budget, in particular due to a stronger hryvnia.

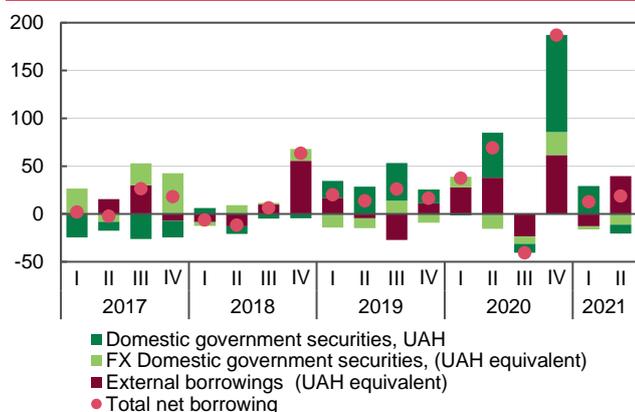
¹⁹The tax breaks included not levying the individual income tax on one-off benefits payable to those who have lost their income because of a ban on their activity, and exempting category I sole proprietors from the unified tax and the SSC for the period from 1 December 2020 to [31 May 2021](#), with the period of exemption added to their pensionable service record.

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



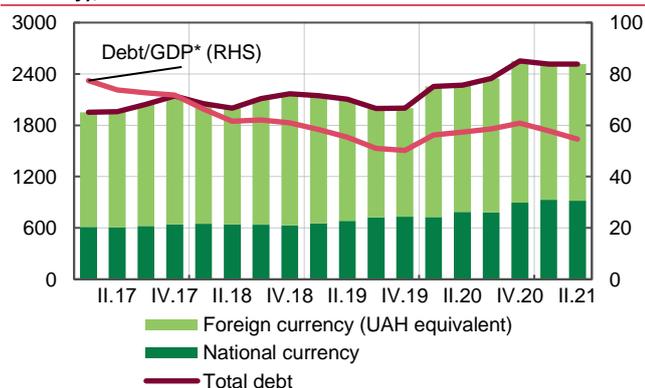
Source: STSU, NBU staff estimates.

Figure 2.4.5. State budget net borrowings*, UAH billion



* 2017 borrowings do not include government bonds issued to increase banks' authorized capital and correction, Q3 2020 borrowings do not include government bonds issued to increase banks' authorized capital and Ukraine's GDP-linked Securities, Q2 2021 - PRJSC Export Credit Agency.
Source: STSU, MFU, NBU staff estimates.

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



* GDP for 2021 - NBU estimates.

Source: MFU, SSSU, NBU staff estimates.

Tax revenues grew at an accelerated pace as the economy recovered and commodity prices remained elevated

The easing of quarantine restrictions and the adaptation of businesses to operating in the pandemic were important drivers of tax revenue growth. High commodity prices also contributed to increases in rental income and corporate income tax, and improved the financial performance of businesses. Personal income tax proceeds have been constantly growing, driven by wage increases. The strengthening of domestic demand contributed to high revenues from consumer taxes, such as VAT and excise taxes. The fall in tobacco production slowed the growth in excise tax proceeds from manufactured goods. However, this was offset by higher excise tax rates on e-cigarettes and their imports, which were significant. Revenues from other taxes on imports also increased.

Meanwhile, nontax proceeds shrank due to the NBU transferring a smaller amount of its profit to the budget and state-owned companies paying less in dividends. However, higher-than-expected tax revenues and lower-than-planned expenditures (in part thanks to saving on debt-servicing expenses) meant the need for borrowing was lower than the amount planned.

The deficit was primarily financed with external borrowing and previously accumulated hryvnia funds. Driven by economic growth, the debt-to-GDP ratio continued to decline

Demand for government securities in the domestic market weakened slightly during the quarter compared to previous periods. The rollover of principal amounts of domestic government debt securities denominated in foreign currency and hryvnias was 71% and 93%, respectively. In addition, official partners in Q2 provided external financing, and the government placed Eurobonds. The government's needs were also partially financed with hryvnia funds accumulated in accounts at the end of Q1.

Net borrowing remained modest, thanks to significant repayments. The marginal increase in net borrowing, compared to the previous quarter, was offset by the revaluation effect as the hryvnia strengthened. As a result, the amount of public and publicly guaranteed debt was little changed, and its ratio to GDP continued to decline (below 55%, by NBU estimates) thanks to the growth of the economy. The lower debt-to-GDP ratio sends a positive signal to foreign investors, but in terms of long-term sustainability it remains high.

Box 3. Medium-Term Budget Declaration: a Novelty for Ukraine, and Its Use Abroad

In a first for the Ukrainian government, at the end of May 2021 the cabinet approved the Budget Declaration for 2022–2024²⁰ (hereinafter the 2024 Budget Declaration), which the Verkhovna Rada [passed](#) on 15 July. A budget declaration is a basic strategic budget-planning document that identifies the medium-term goals of public policy, tools for achieving them, and budget performance indicators. It also does the groundwork for drafting the budget for next year. The passage of such a budget declaration is considered a global best practice in public finance management. However, this particular document contains a number of challenges. In particular, it is based on current legislation and does not take into account the latest initiatives, meaning that some of its quantitative performance indicators may lose relevance over time. Moreover, a significant number of its goals are not prioritized by year or specified in detail, potentially making them hard to implement.

Medium-term budget planning is recognized as a global best practice in public finance management and is widely applied by other countries. In Europe, it became widespread in the late 1980s and mid-1990s in response to sharp spending increases and widening fiscal deficits, as well as economic crises. In the early 2000s, medium-term planning was used by most EU member states, and after the 2008 financial crisis elements of it were already present in 132 countries.

Budget declarations can have different names and forms, but their key purpose is to align the requirements for the implementation of public development strategies with the available resources. The development and passage of this strategic document is a good signal for economic actors, as it will make it easier for them to predict the government's budget and economic policies.

The degree of participation of legislatures in medium-term budget planning differs significantly across countries. In Finland, for instance, the government merely informs the public and parliament of its medium-term fiscal objectives, while in Sweden the declaration is approved by parliament. In the UK, a debate is held before a draft budget resolution becomes a bill at the start of the financial year. Parliamentary involvement is important, as it establishes a political commitment to adhere to announced goals and performance indicators.

Ukrainian legislation does not clearly identify the fate of the budget declaration once it is received by the parliament: MPs can take it into consideration and/or provide their budget policy recommendations by 15 July, or make no decision at all²¹. Its passage by the Verkhovna Rada this year significantly enhances the declaration's importance as a strategic document, and demonstrates the seriousness of the commitment to adhere to its parameters.

Despite a general similarity in approaches, some elements of medium-term budget planning may differ significantly between countries. Specifically, the medium-term budgetary frameworks of EU member states differ in terms of political commitments, planning horizon, the coverage and level of detail, the formulation of objectives, transfer procedures, and compliance.

As a rule, budget declaration parameters are mandatory for the first year and indicative for the remaining years. The planning approach can be flexible – with goals being adjusted annually in line with economic developments or changes in fiscal policy, or fixed – when goals do not change throughout the planning horizon in the absence of force majeure. However, changes in the deficit ceiling or debt ceiling usually have to be justified, although in subsequent periods these metrics more often than not are indicative.

In Ukraine, the 2024 Budget Declaration is close to international standards. The budget declaration must be resubmitted by the government next year, but if it changes the indicators the government must make public its reasons for changing them²².

Apart from the traditional provisions (macroeconomic parameters, the key objectives of tax and budget policy, the ceiling of the state budget deficit, the size of public debt), the 2024 Budget Declaration contains:

- marginal indicators of expenditures and lending, public policy objectives for each chief administrator of budget funds, and performance indicators
- an assessment of fiscal risks
- fiscal space.

Fiscal space is a novelty for Ukraine. This is a kind of “policy reserve” that is usually intended to finance new initiatives if requests for [expenses](#) are received in the event of fiscal risks materializing, or if there is a need for unscheduled increases in certain expenditures. In Ukraine, however, the expected distribution of these expenses is known when the budget for the year ahead is prepared, meaning that fiscal space will actually not differ from ordinary expenditures.

Setting ceilings for expenses is also a common [practice](#). In the [Netherlands](#), for example, budget expenditure ceilings are fixed in real terms. This provides a solid foundation for budget management and the implementation of planned policy measures, notwithstanding revenue fluctuations. Meanwhile, Sweden has nominal ceilings for three-year periods, and it revises its target for the general government budget balance every other [election cycle](#). In Southeast Asia such caps on general expenditures are almost never used.

²⁰ A declaration for the medium term has been drawn up before. In particular, one was drafted in 2019, but it did not pass all stages of approval. In 2020, the government refrained from drafting such a declaration due to the uncertainty associated with the COVID-19 pandemic.

²¹ Under Article 152, paragraph 6 of the Budget Code, “If the Verkhovna Rada has not considered the issue of the Budget Declaration or has not made a decision on it within the period established by part 5 of this Article, the said issue shall not be given further consideration.”

²² Under Article 33 of the Budget Code: “The Cabinet of Ministers shall file the Budget Declaration with the Verkhovna Rada of Ukraine together with its financial and economic substantiation, including an explanation of any differences between it and the Budget Declaration approved in the previous budget period.”

More often, they are applied to administrative costs of ministries. However, when such restrictions are present, and complied with, it is possible to improve the predictability and efficiency of expenditures, and to strengthen budgetary discipline. This also contributes to a change in the way budget funds are spent. Effectively, there is a shift from simply financing budget institutions to making them providers of quality public services.

At the same time, the 2024 Budget Declaration contains a number of challenges that may make its effective implementation more difficult. In particular, the document is ponderous, and mostly descriptive. In addition, the declaration was developed on the basis of current legislation, without taking into account a new [draft law](#) stipulating a number of multiple-purpose tax initiatives that has already passed first reading. In particular, some of the proposed tax changes are likely to make it easier to meet the declared performance indicators (thanks to an increase in tax revenues²³). However, changes in the [approaches to identifying and calculating the subsistence level](#) could significantly inflate budget expenditures. Another challenge is the significant number of fiscal policy priorities, and their fragmentation. Specifically, 11 priorities have been identified, but no clear timeline for them has been set. This makes it unlikely that they will be implemented effectively, considering how multidirectional they are. Most priorities also need a more detailed description.

As for the quantitative indicators of the 2024 Budget Declaration: these are based on a consistent medium-term macroeconomic forecast with a somewhat optimistic view of economic growth in 2023–2024.

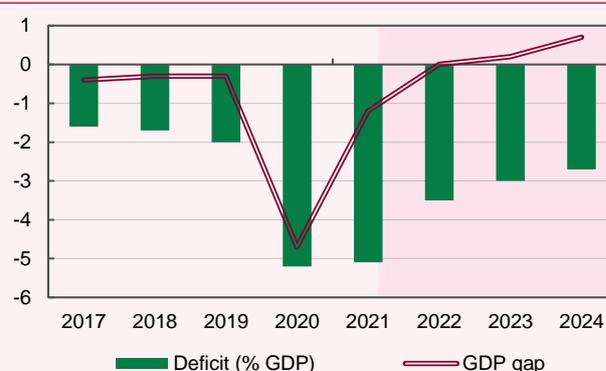
Table 1. The main macroeconomic parameters of Budget declaration

Indicator	2022	2023	2024
Nominal GDP, UAH billion	5368.7	5993.9	6651
Real GDP, %	3.8	4.7	5.0
Consumer price index, % (Dec /Dec)	6.2	5.3	5.0
Exports of goods and services (USD billion)	70.3	75.7	81.7
Imports of goods and services (USD billion)	78.9	86.3	93.8
Exchange rate, UAH/USD (average)	28.6	28.8	29.2
Nominal average wage, UAH	15258	17159	19063

Source: MFU, Ministry of economy.

The state budget deficit is expected to shrink to 2.7% of GDP and public and publicly guaranteed debt to 51% of GDP in 2024. These targets are a balanced step towards ensuring macrofinancial stability in a post-crisis economic recovery. However, given the projected economic development and budget deficit, especially in 2024, fiscal policy seems insufficiently countercyclical, making it difficult to provide additional fiscal space.

Figure 1. State budget deficit and GDP gap*



* GDP gap – [Ministry of economy estimate](#).

Source: STSU, MFU, Ministry of economy, NBU staff estimates.

Table 2. Main parameters of the state budget, UAH bn

Indicator	2020	2021	2022	2023	2024
Revenues, total	1076.0	1097.5	1219.6	1333.2	1451.6
% yoy	7.8	2.0	11.1	9.3	8.9
% GDP	25.7	22.8	22.7	22.2	21.8
Tax revenues	851.1	949.5	1064.5	1176.6	1295.0
% yoy	6.4	11.6	12.1	10.5	10.1
% GDP	20.3	19.7	19.8	19.6	19.5
Non-tax revenues	213.0	134.6	142.0	142.0	139.8
% yoy	14.0	-36.8	5.5	0.1	-1.6
% GDP	5.1	2.8	2.6	2.4	2.1
Expenditures	1288.1	1335.2	1394.2	1497.0	1614.1
% yoy	19.8	3.7	4.4	7.4	7.8
% GDP	30.7	27.8	26.0	25.0	24.3
Net lending	5.5	9.0	13.5	16.0	17.1
% GDP	0.1	0.2	0.3	0.3	0.3
Balance (- deficit)	-217.6	-246.6	-188.0	-179.8	-179.6
% GDP	-5.2	-5.1	-3.5	-3.0	-2.7

* Ministry of economy forecast for 2021 (including GDP) is in accordance with [the table](#) Main macro indicators of economic and social development of Ukraine in 2020 - 2024 according to the Budget Declaration for 2022 - 2024, 8-9 pages. With the approval of the law on [the state budget](#) for 2021, GDP was estimated at UAH 4505.9 billion and the deficit at 5.5% of GDP.

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

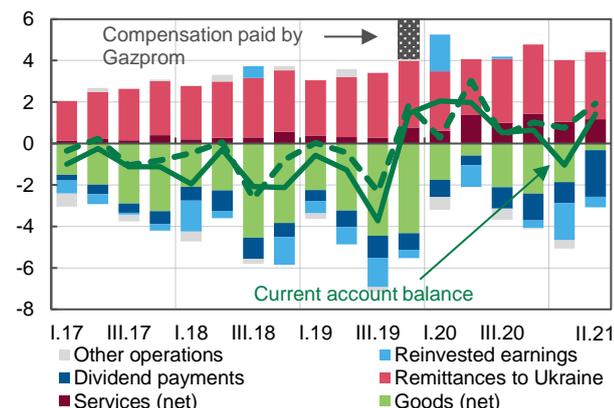
²³ The Parliament is considering a draft law introduced by the Government that offers amendments to the Tax Code and other legislative acts. The purpose of this bill is to balance budget revenues by improving the efficiency of the country's economic resources and eliminating gaps in current legislation. If passed, this draft law would enable an indexation of

tax rates, expand the tax base, and improve the administration of taxes and fees. The government has said that these changes will increase revenues by UAH 34 billion, starting in 2022.

2.5. Balance of Payments

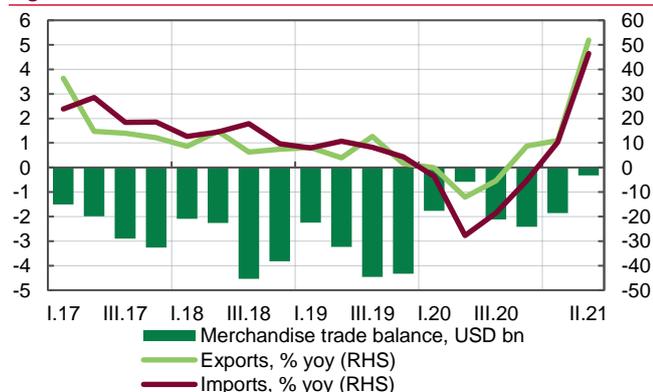
- Q2 saw a current account surplus on the back of a narrower merchandise trade deficit. That said, the surplus was smaller than a year ago, due to larger payments of dividends and the gradual revival in imports of services.
- Export growth accelerated, propped up by a rebounding global economy and, consequently, higher commodity prices. Meanwhile, growth in imports of goods was restrained by lower fuel purchases.
- Substantial borrowing by the government sector almost fully offset ongoing capital outflows from the private sector. Despite financial account outflows, the overall balance of payments posted a surplus, while international reserves rose to USD 28.4 billion.

Figure 2.5.1. Current account balance, USD bn



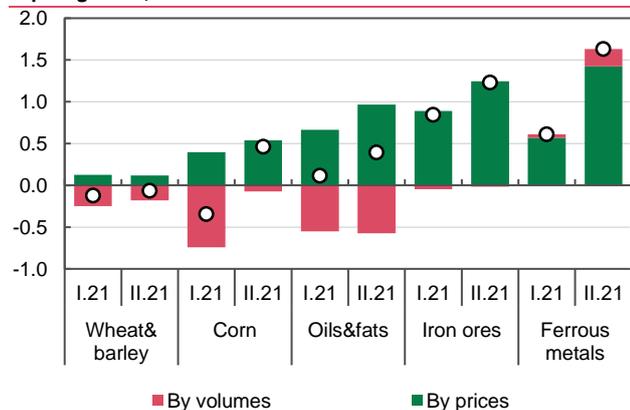
Dotted line – without reinvested earnings.
Source: NBU.

Figure 2.5.2. Merchandise trade



Source: NBU staff estimates.

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



* 68% of goods exports.
Source: SCSU, NBU staff estimates.

Although high prices remained the main factor behind export growth, reviving global demand also fueled the growth in export supplies of some goods

Exports rose at a faster pace in Q2, to 51.9% yoy, driven largely by higher prices for Ukraine’s main exports. At the same time, widening demand, especially from European countries, pushed up exports of some goods – mainly metals-and-mining products. More specifically, the growth in metallurgical exports sped up noticeably due to both higher prices and volumes on the back of [global steel shortages](#). With a benign price environment, iron ore exports in value terms have been reaching new highs for three quarters in a row. Compared to previous periods, Q2 2021 also saw an increase in the volume of these exports – widening demand from European metallurgical companies outweighed the decline in exports to China, caused, among other things, by stronger [competition from Brazil](#).

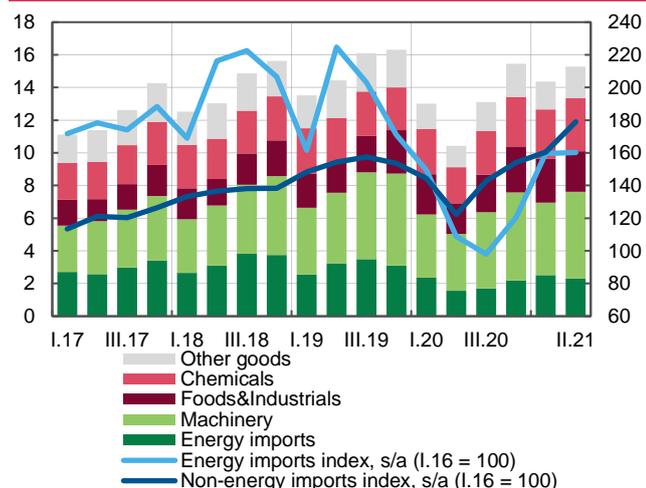
Food exports returned to growth. Large corn exports were supported by sustained demand from China. Meanwhile, exports of wheat grew on the previous quarter, due to [some importers refocusing from expensive corn to feed wheat](#). Meat exports also rose after the [EU lifted its ban on chicken meat exports](#). Meanwhile, weaker demand for sunflower oil resulting from exorbitant prices curbed the growth in sunflower oil [exports](#). Coupled with the effect of last year’s lower harvest, this dampened overall food export growth.

Faster growth in chemical exports was driven by higher prices, resulting from an increase in natural gas prices and sustained demand for fertilizers. Exports of ammonia and plastics expanded amid limited global supply, while refractory clay exports rose amid widening demand from the EU. The latter also pushed up exports of some industrial and electric equipment (such as refrigerated display cases, bearings, and electro-thermic appliances), as well as machinery exports.

Non-energy imports continued to rise, propelled by steady domestic demand, while energy import growth was restrained by lower energy purchases

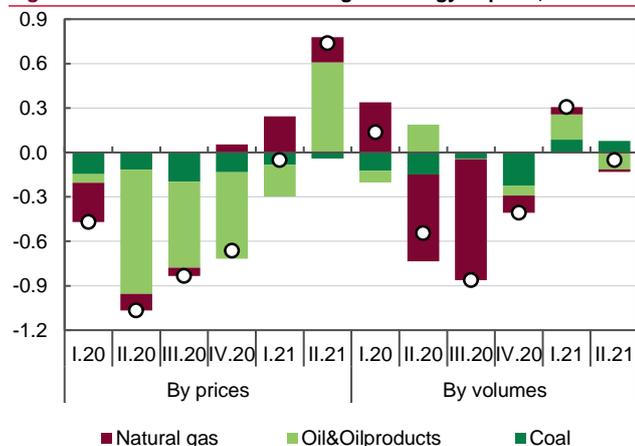
The rapid growth in imports of goods seen in Q2 (46.4% yoy) was largely due to last year’s low base effect. Despite the tighter quarantine imposed in April, non-energy imports grew, in both price and volume terms. Stronger financial results and improved business expectations encouraged companies to ramp up investment. In particular, purchases of agricultural machinery and industrial equipment grew markedly, while purchases of cars and trucks exceeded pre-crisis levels. That

Figure 2.5.4. Merchandise imports, USD bn



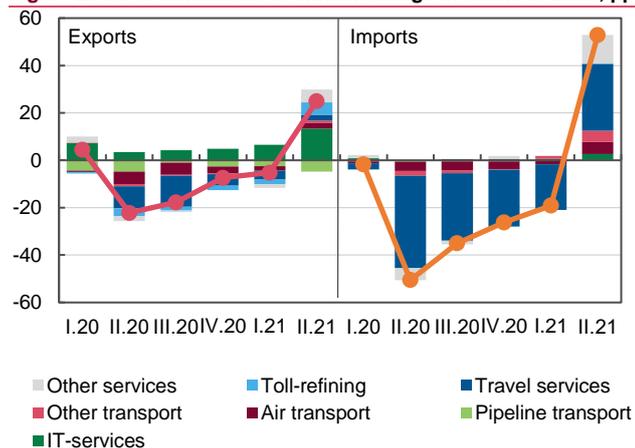
Source: NBU staff estimates.

Figure 2.5.5. Absolute annual change in energy imports, USD bn



Source: SCSU, NBU staff estimates.

Figure 2.5.6. Contributions to annual change in services trade, pp



Source: NBU staff estimates.

said, curtailed investment in alternative energy equipment remained a drag on the recovery of machinery imports. Chemical imports hit a high not seen since 2013. More specifically, purchases of pharmaceuticals (including COVID-19 vaccines) increased, while the growth in imports of plastics and fertilizers sped up due to significantly higher global prices for these products. Steady consumer demand supported strong imports of foods and industrial goods.

At the same time, the growth in imports of goods was curbed by the drop in purchases of energy products. More specifically, purchases of Belarus petroleum contracted due to [scheduled repairs at Mozyr Oil Refinery](#), while uncertainty around the Ukrainian section of the Samara-Western Direction pipeline led to a [drop in supplies of diesel fuel from Russia](#). In addition, natural gas purchases also dropped temporarily on the back of [high prices in European gas hubs](#). In spite of the ongoing growth in global energy prices, the overall value of energy imports declined compared to the previous quarter.

The surplus in the trade in services persisted despite the revival in imports of services, which, together with rising remittances, partly offset the increase in dividend payments

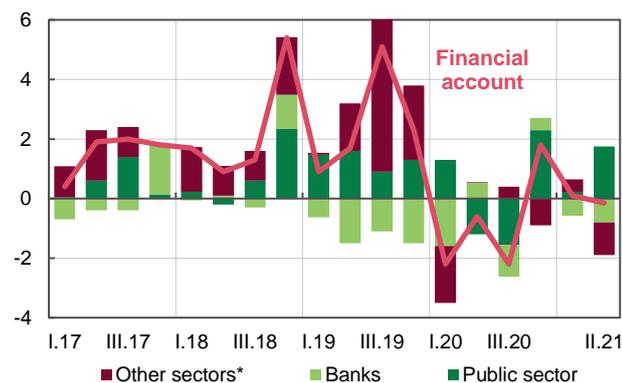
Imports of services continued to rebound in Q2 2021, buoyed by larger imports of travel services resulting from the gradual opening of borders for Ukrainian tourists. Exports of services also expanded in the face of the expected decline in earnings from gas transit. The growth was fueled by further increases in exports of IT services and the return to growth of exports of toll-refining services amid a revival of industrial production in the EU. As a result, the surplus in the trade in services remained large, although down slightly from the previous year. Furthermore, remittances were pushed up by the ongoing recovery of the economies that are the major recipients of Ukrainian labor migrants.

The above factors partly offset the record-high amounts of repatriated dividends resulting from companies' improved financial results amid extremely high global commodity prices. Reinvested earnings data for 2020 and Q1 2021 were revised due to the large profits earned by foreign-invested companies (read more in the Box "Reinvested Earnings: Data Revision Practices and the Impact on Balance of Payments Indicators" on page 28).

In the financial account, increased borrowing by the government sector almost fully offset ongoing capital outflows from the private sector

Q2 continued to witness capital outflows from the private sector. More specifically, the banking sector ramped up its external assets, including through the government's redemption of FX-denominated domestic government debt securities. An increase in nonresidents' trade credit indebtedness – mainly for the exports of goods – and a decrease in resident companies' trade credit indebtedness resulted, among other things, in large capital outflows from the real sector. In contrast to the substantial FDI inflows seen

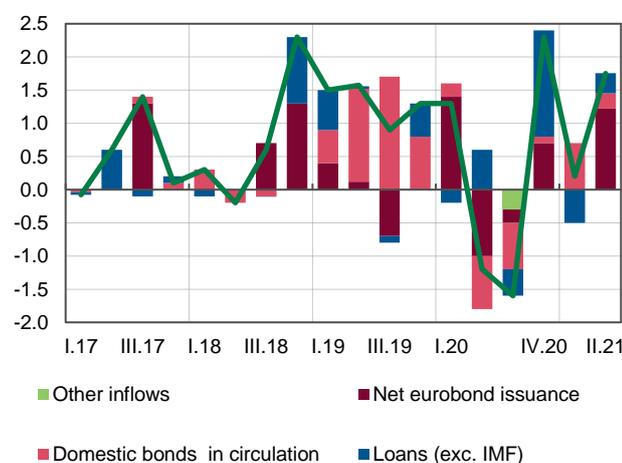
Figure 2.5.7. Financial account: net external liabilities, USD bn



* Including net errors and omissions.

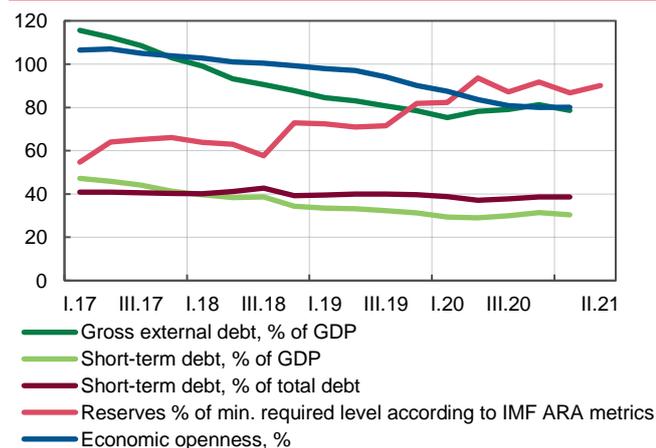
Source: NBU.

Figure 2.5.8. General government: net external liabilities, USD bn



Source: NBU.

Figure 2.5.9. Selected external sustainability indicators



Source: NBU staff calculations.

in early 2021, mainly in the form of reinvested earnings of companies with foreign capital, they were moderate in Q2. The reduction resulted, among other things, from significant dividend payments and, consequently, smaller reinvested earnings.

At the same time, the government sector saw an increase in capital inflows – net inflows hit USD 1.7 billion, mainly due to [Ukraine's tapping the international capital markets with Eurobond placements](#), the arrival of an [IBRD loan](#), and the revival of nonresidents' interest in domestic government debt securities. This interest was spurred by the easing of military tensions along Ukraine's borders and sustained attractive yields compared to peer countries.

The substantial current account surplus surpassed financial account outflows, resulting in an overall balance of payments surplus of USD 1.3 billion. As a result, gross international reserves increased to USD 28.4 billion.

Despite the worsening global financial market conditions seen in early 2021, Ukraine's external position remained resilient

The scheduled repayment of a large portion of external debt (USD 1.9 billion) in Q1, on the back of nominal GDP growth and a relatively stable hryvnia exchange rate, improved some relative indicators of Ukraine's external sustainability. More specifically, the ratios of gross and short-term debt to GDP dropped, while the adequacy of gross international reserves remained high.

External borrowing in Q2, coupled with more active domestic borrowing, increased international reserves, while also improving their adequacy. As of late June, reserves stood at over 90% of the required minimum according to the IMF's ARA metric.

That said, Ukraine's external financing needs remain high. With other central banks normalizing their monetary policies and more intense competition among borrowers on the global capital markets, attracting financing at favorable terms will require sustained macrofinancial stability, continued cooperation with international lenders, and structural reforms.

Box 4. Reinvested Earnings: Data Revision Practices and the Impact on Balance of Payments Indicators

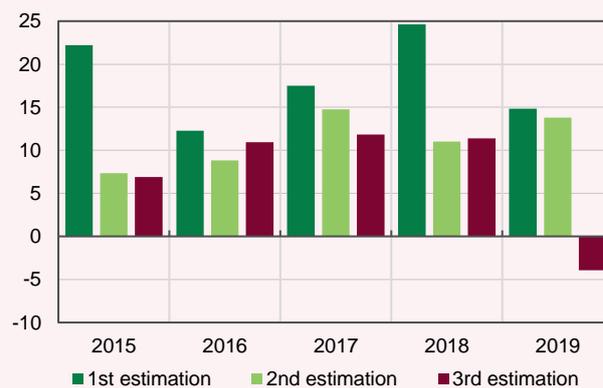
In June, the NBU revised its reinvested earnings data for 2020 and Q1 2021. This resulted in a decrease in the current account balance and a corresponding increase in the financial account balance. Data revision is a common practice in countries that provide flash estimates of statistical indicators. They are motivated by the specifics of the methodologies, the discrepancy between the terms for companies to submit financial statements and for central banks to compile the balance of payments, the high volatility of data – especially during crises – and the unusual nature of the current crisis. In Ukraine, the substantial revision was caused by companies showing significantly better financial results in late 2020 and early 2021 than had been expected earlier.

Data revision practices The [NBU has improved its methodology](#) for compiling the balance of payments by including in 2020 nonfinancial companies' reinvested earnings in FDI.²⁴ Reinvested earnings are defined as retained profits that companies with foreign direct investment do not distribute and instead use to increase their capital. Reinvested earnings are recorded as a double entry in the balance of payments: on the debit-side in the primary income account in the current account, and as a foreign direct investment component in the financial account. Changes in reinvested earnings have no impact on the overall balance of payments and, consequently, gross international reserves.

Depending on the amount and availability of data, each country chooses the most appropriate method for including reinvested earnings in FDI. The calculation of reinvested earnings is made more difficult by the fact that most countries compile balances of payments on a monthly basis, while companies submit their financial statements on a quarterly or even annual basis, and with a large time lag. The method selected must be in line with international standards, and is discussed with international organizations. Some countries break down reinvested earnings evenly over the months of a quarter ([the Czech Republic](#)). Others use a method whereby they extrapolate reinvested earnings using last year's figure. These estimates can be revised when new annual reporting becomes available. An interesting example is [Finland](#), which compiles the balance of payments on a monthly basis, without taking into account reinvested earnings. Reinvested earnings are included in statistics only after annual reporting is submitted. Some countries (such as Ukraine and Hungary) measure balance of payments components on a monthly basis by analyzing data for previous periods and using expert judgments of companies' current economic standings.

It comes as no surprise that regardless of the approach used, data are revised and updated when companies' statistics, ITRS information, mirror statistics and other information become available. What is more, final results can differ significantly not only in terms of amounts, but also in terms of timing and whether a transaction could reverse its sign. Data can also be revised due to changes in methodology. Revisions are carried out in compliance with all methodological requirements. They improve the reliability of data, while also boosting confidence in it.

Figure 1. Statistics of revisions to reinvested earnings, GBP billion



Source: UK Office for National Statistics.

Factors affecting reinvested earnings. The existence of various approaches to measuring reinvested earnings is due not only to a lack of timely data on companies' financial results, but also to the high volatility of the indicators that affect reinvested earnings. A study conducted by [Lundan](#) (2006) identifies three groups of such factors:

- factors encouraging reinvestment are the fast pace of economic and income growth and a favorable investment climate
- factors encouraging the repatriation of earnings are the exchange rate and corporate tax rates
- factors related to agency considerations include a country's institutional capacity and political instability.

What is more, [various studies](#) show that reinvested earnings can also be affected by other factors, such as the quality of labor, competitive advantage, government consumption, the impact/consequences of decisions taken by multinational corporations, and so on.

The above factors can be very volatile. This is especially true of emerging markets, as these economies are highly open, commodity-based, and have political instability and economic uncertainty. Furthermore, economic crises, which are often accompanied by structural changes, can also cause turbulence and worsen the predictability of indicators. As a result, estimates made on the basis of historical data can contain significant discrepancies.

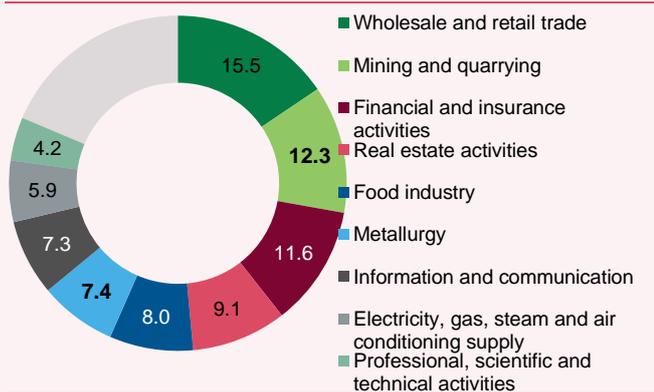
The reasons behind the revision of data in Ukraine. Ukraine makes flash estimates of reinvested earnings on the

²⁴Read more in Box 4 "Companies' Reinvested Earnings: Impact on the Balance of Payments" in the [July 2020 Inflation Report](#) on pages 27-28 and in the material "[Changes in the Methodology for Compiling the Balance of Payments in Ukraine: Including Companies' Reinvested Earnings in FDI.](#)"

basis of forecast indicators for economic activity and average figures for companies' profitability in previous periods. This method is in line with international practice and produces good results in times of macroeconomic stability. However, it generates significant discrepancies during crises, especially when a crisis is non-typical, as in the case of the 2020 crisis. The latter resulted from unpredictable external factors, rather than being caused by economic or financial imbalances. Economic activity plummeted worldwide on the back of quarantine measures and global uncertainty about how the pandemic would unfold. That said, the recovery in H2 was also reasonably fast, albeit uneven across countries. This, together with existing disruptions in supply chains and supply constraints, pushed up global commodity prices markedly in late 2020 and early 2021.

Terms of trade are rarely used to forecast reinvested earnings because the direction and strength of their correlation with FDI remain unclear according to studies. Nevertheless, precisely this indicator played a key role in the revision of statistical estimates for reinvested earnings. The unexpected surge in global prices for Ukraine's main export goods generated large profits for export-oriented companies.

Figure 2. FDI stocks: Equity excluding not undistributed investments as of 2020, %



Source: NBU.

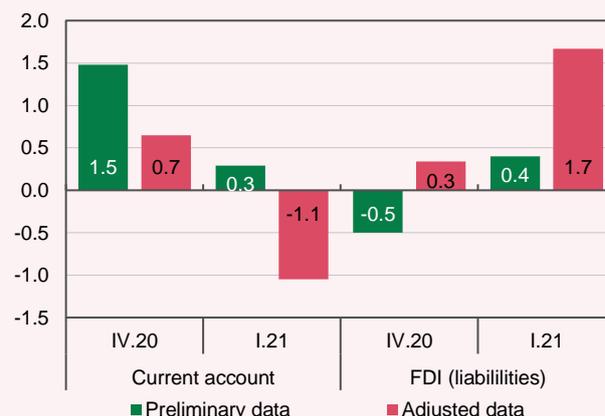
Global prices for iron ore and ferrous metals hit a ten-year high in early 2021. Despite declining export volumes and

stronger competition on the global markets, the value of these exports grew by 1.5 times yoy in Q1 2021. In addition, higher prices also pushed up the profits of wholesale trade, financial activity and transportation companies, which support the trading activity of exporters. Given a large proportion of companies with foreign direct investment in these sectors, this produced unexpectedly large amounts of reinvested earnings in late 2020 and early 2021.

It should be noted that higher global prices for grain and sunflower oil did not have any noticeable impact on the financial results of food industry companies because of last year's poorer harvest and some one-off factors (the limitations on chicken imports imposed by the EU and larger Russian exports before the introduction of export duties).

The impact of the revision on BOP data. Reinvested earnings have been revised upwards (by USD 0.8 billion for Q4 2020 and USD 1.3 billion for Q1 2021) on the back of significant profits earned by mining and metals companies and related industries. This led to a small downward revision to the current account balance, while increasing FDI inflows accordingly, and thus had no effect on the overall balance of payments.

Figure 3. Revisions to balance of payments data, USD billion

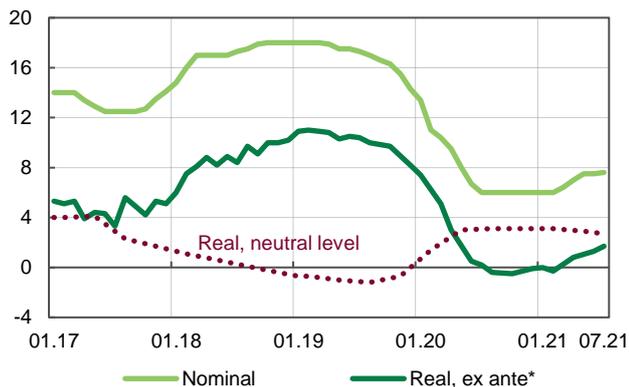


Source: NBU.

2.6. Monetary Conditions and Financial Markets

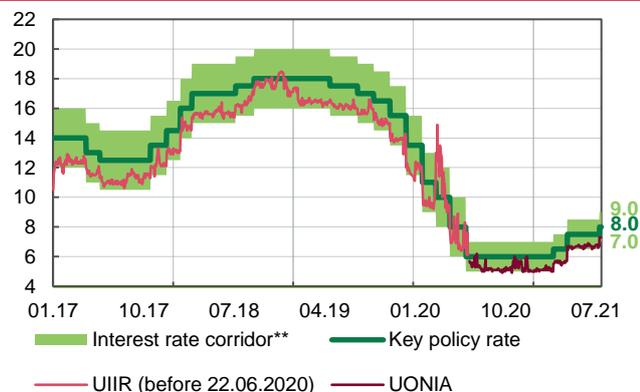
- The NBU tightened its monetary policy further by raising the key policy rate to 8%, phasing out anti-crisis monetary measures, and taking other measures to ease inflationary pressures.
- The banks are gradually increasing interest rates on some hryvnia products in response to the key policy rate hike. After rising in late April, yields on hryvnia domestic government debt securities remained practically unchanged due to higher demand for these securities.
- The hryvnia strengthened: in Q2 2021 supply mostly exceed demand on the FX market on the back of a benign external price environment, and the revival of nonresidents' interest in hryvnia domestic government debt securities.

Figure 2.6.1. Key Policy Rates, average, %



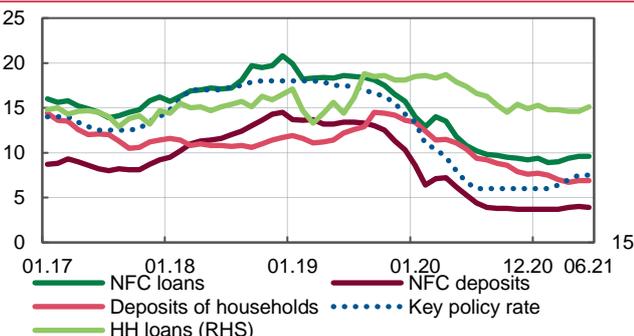
* Deflated by 12-month ahead inflation expectations of financial analysts (median).
Source: NBU staff estimates.

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



* As of 27.07.2021.
** Upper bound – interest rate on overnight loans, lower bound – overnight CDs.
Source: NBU.

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



Source: NBU.

Monetary policy was tightened in response to stronger inflationary pressures and the need to keep inflation expectations in check

In 2021, the NBU started a monetary policy tightening cycle by raising its key policy rate by a total of 2 pp, to 8% per annum. In particular, in July the [key policy rate](#) was increased by 0.5 pp. The real key policy rate also increased, gradually approaching its neutral level.

With a view to boosting the effect of a higher key policy rate, in July the NBU started to [phase out](#) anti-crisis monetary measures. In addition, on 23 July the NBU [raised the interest rate on refinancing loans](#) maturing within 90 days and on those maturing within three years by setting the interest rate on these loans at the level of the key policy rate + 1 pp for quantitative tenders, and no less than this level for interest rate tenders. The central bank also [decreased](#) the regular FX purchase interventions on the interbank market from USD 20 million to USD 5 million per day.

These steps will help gradually ease underlying inflationary pressures, in particular through the interest rate and FX channels, while also improving inflation expectations.

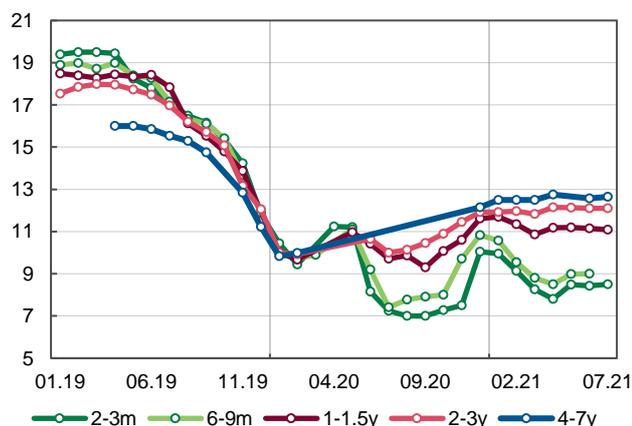
The key policy rate hikes have so far had no significant effect on market rates due to, among other things, high liquidity and differences in the way the transmission mechanism functions

Interest rates on the interbank market continued to correlate closely with the movements of the key policy rate. The sustained large liquidity surplus in the banking system kept the [UONIA](#) almost at the level of the lower bound of the NBU's interest rate corridor.

The main drivers of the liquidity growth in Q2 2021 were the NBU's FX interventions, government spending and refinancing loans. The rise in the demand for refinancing loans, mainly long-term ones, is attributed to expectations that the NBU would phase out the emergency measures it deployed to support the banks. The influence of these factors on liquidity was partially offset by the usual increase in cash outside the banking system ahead of the long May holidays and during tighter quarantine restrictions.

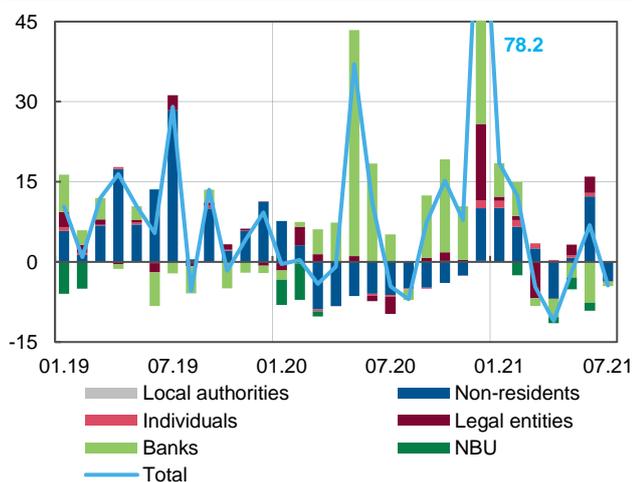
The gradual key policy rate increases by the NBU in the current year have not yet been fully transmitted to the banks' interest rates on loans and deposits. Interest rates on loans to nonfinancial corporations responded most noticeably, which is explained by their reasonably [strong and statistically](#)

Figure 2.6.4. The primary market yields on hryvnia domestic government debt securities, monthly weighted average*, % per annum



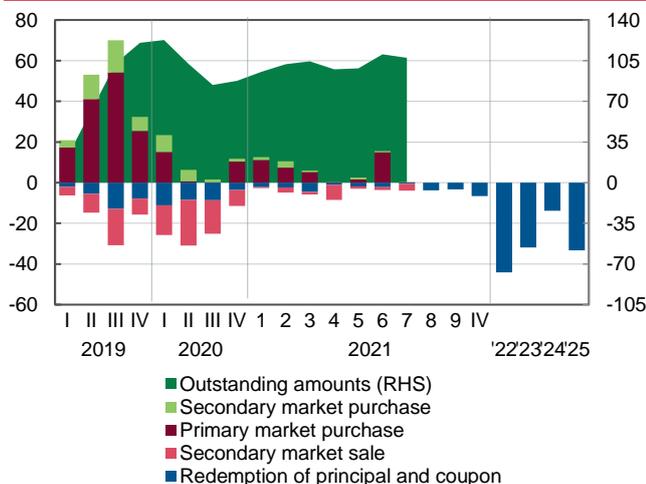
Source: NBU.

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



* As of 27.07.2021.
Source: NBU.

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



* As of 22.07.2021.
Source: NBU.

significant correlation with changes in the key policy rate. More specifically, the weighted average interest rate on loans with maturity of up to one year (the share of these loans accounts for about 80%) rose from 7.8% in March to 8.5% in June. The effect of the transmission mechanism on various financial instruments can differ under the influence of many factors. For instance, interest rates on household loans respond more slowly as these rates are significantly higher. The sluggishness of interest rates on deposits, especially demand ones, is caused by substantial inflows of these deposits to the banking system, which discourage the banks from raising interest rates. That said, the effect of the key policy rate transmission was apparent in that the fall in weighted average interest rates on time deposits for both households and nonfinancial corporations came to a halt.

The revival of foreign investors’ interest in hryvnia domestic government debt securities, and a large positive differential between the yields of these securities and the key policy rate, weakened the effect of the transmission mechanism

After rising in late April, yields on hryvnia domestic government debt securities have since remained practically unchanged. This was, among other things, the result of the revival of foreign investors’ interest in hryvnia securities. Attractive yields (among emerging markets) and eased tensions along Ukraine’s border with Russia helped encourage nonresidents to return to Ukraine’s government borrowing market. This enabled the government to borrow a substantial amount of funds in June, without having to increase the cost of borrowing.

The sustained positive differential (on average 4 pp) between the yield of hryvnia domestic government debt securities and the key policy rate helped maintain the attractiveness of securities, while also weakening the effect of the transmission mechanism.

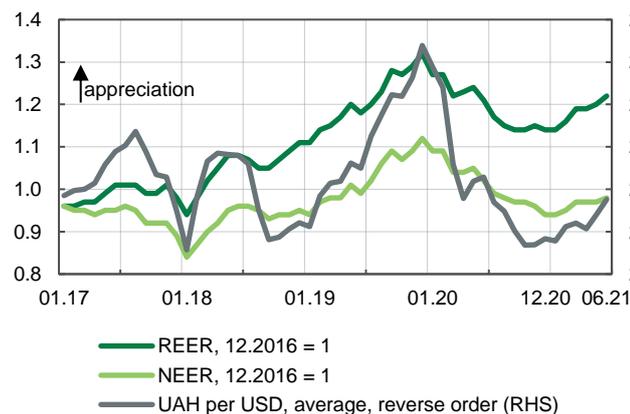
The excess of FX supply over demand helped strengthen the hryvnia and allowed the NBU to continue to replenish its international reserves

The hryvnia began to strengthen again in late April on the back of eased military tensions along Ukraine’s border with Russia, and a benign external price environment. Further on, this trend was supported by households’ net FX sales and an increased FX supply by businesses ahead of the payment of quarterly taxes, as well as by foreign investment in domestic government debt securities.

The hryvnia exchange rate corrected during some periods, in particular in late Q2, due to temporary one-off factors. Stronger demand for FX was caused by large budget expenditures, greater volatility on the global financial markets, and FX purchases for dividend payments.

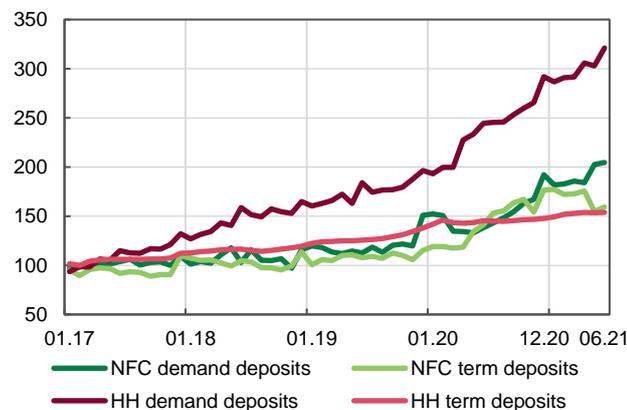
To smooth out excessive exchange rate fluctuations, the NBU both purchased and sold foreign currency in Q2 2021. The NBU generated USD 500 million in net FX purchases in Q2 2021 (USD 800 million year-to-date).

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



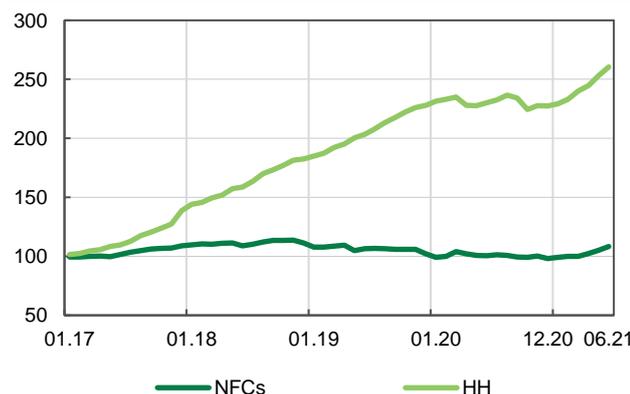
Source: IFS, NBU staff estimates.

Figure 2.6.8. Hryvnia deposits, 12.2016 = 100



Source: NBU.

Figure 2.6.9. Hryvnia loans, 12.2016 = 100



Source: NBU.

The official UAH/USD exchange rate strengthened on average by 1.4% in Q2 2021, or by 3.9% year-to-date. With inflation in Ukraine being higher than that in its trading partners, this resulted in a strengthening of both the nominal and real exchange rates of the hryvnia.

These trends enabled the regulator to continue to liberalize the FX market. During the recent months, the NBU:

- made it easier for businesses to raise external financing by [placing Eurobonds](#)
- [extended the opportunities](#) to provide banking services related to trading in cash foreign currency and foreign investment by individuals and businesses, within e-limits
- [allowed](#) legal entities and sole proprietors to purchase foreign currency up to a limit of the equivalent of EUR 100,000 per day without having to present their reasons and commitments or submit confirmation documents to the bank.

Hryvnia deposits in the banking system continued to rise. Lending is slowly reviving

The annual pace of hryvnia deposit inflows to the banking system remained high in Q2 2021. That said, the pace of the inflow slowed somewhat due to comparison base effects. Demand deposits were in greatest demand among both households and nonfinancial corporations.

The banks' lending activity continued to gradually recover. Q2 2021 saw the largest increase in hryvnia loans to agricultural companies and loans for real estate activities. Most of the loans were for terms of up to one year. That said, the banks also ramped up lending for terms of one to five years, especially to agricultural companies.

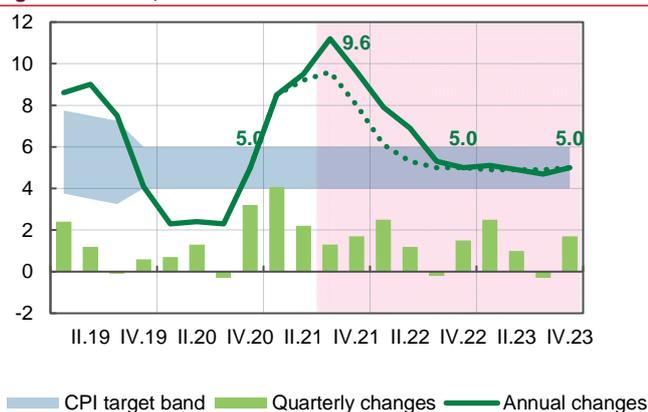
Hryvnia lending to households also picked up noticeably. Consumer loans grew by 11% yoy in June, including car loans, which rose by 20%. The banks also actively stepped up mortgage lending. Loans for the purchase, construction, and renovation of real estate increased by 21% yoy (by 18% year-to-date compared to the 2% growth for the whole of 2020).

Part 3. Economy of Ukraine: Forecast

3.1. Inflation Developments

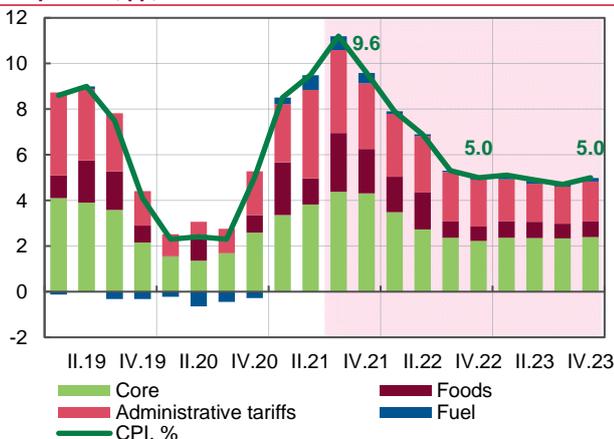
- Inflation will peak in autumn on the back of high global commodity prices and the continued recovery of domestic demand.
- Inflation will start to slow in late 2021 and will reenter its 5% ± 1 pp target range in 2022 due to a tighter monetary policy, larger crop yields, the correction in global commodity prices, and the waning effect of last year's low comparison base.

Figure 3.1.1. CPI, %



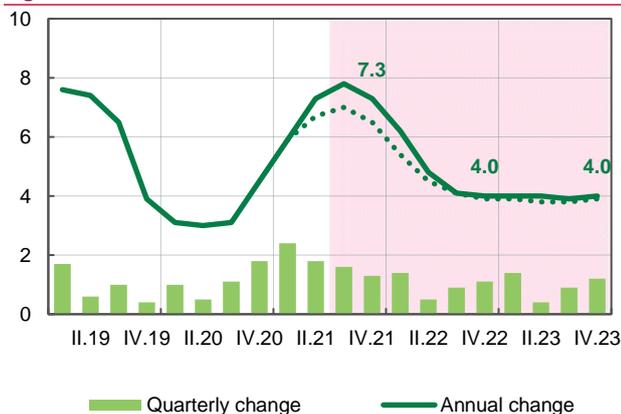
Source: SSSU, NBU staff estimates.

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



Source: SSSU, NBU staff estimates.

Figure 3.1.3. Core inflation, %



Source: SSSU, NBU staff estimates.

Following a surge in 2021 caused by higher global prices and rebounding demand, inflation will return to its 5% target in late 2022

The NBU continues to expect that inflation will peak in Q3 2021, driven, among other things, by last year's low comparison base. The inflation forecast for the end of 2021 has been revised upward, from 8% to 9.6%. The upward revision resulted from the faster growth in global food and energy prices and stronger underlying pressures, amid persisting high consumer demand and an increase in businesses' production costs, including labor costs.

Inflation will start to decelerate in late 2021 thanks to the new harvest coming onto the market and the correction of global energy prices. The tighter monetary policy will also enable the central bank to keep inflation expectations in check, while also decreasing underlying inflationary pressures. The underutilization of production capacity and gradual fiscal consolidation will also rein in inflation. The budget declaration envisages moderate growth in the minimum wage, which will not put any significant pressure on prices. Imported inflation will also decrease due to a relatively stable FX market and falling global inflation. In H2 2022, inflation will return to its 5% target and after that remain within its target range.

It will take inflation longer to decrease to its target than foreseen in the previous forecast. The main reasons for this are higher food and energy prices over the forecast horizon. In contrast, monetary policy will be tighter than expected before.

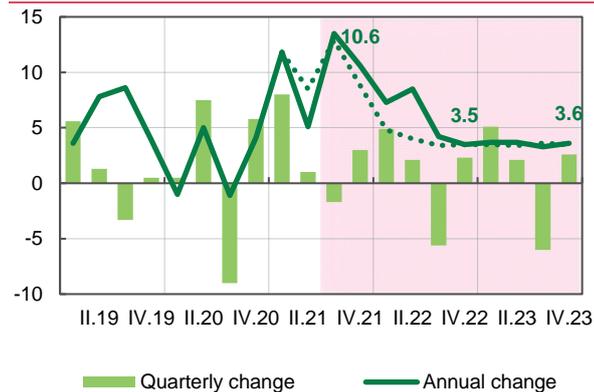
Core inflation will decrease in 2022, dragged down by the correction of food prices and the tighter monetary policy

Core inflation will accelerate to between 7% and 8% in H2 2021 on the back of second-round effects from higher food prices and recovering economic activity. Higher wages will bolster consumer demand, while also pushing up production costs. Businesses will compensate for this by raising prices, especially in the services sector.

In the near future, increased pressures will arise from imported inflation. Burgeoning global demand resulted in shortages of some products, such as semiconductors, which are a component of many final consumption goods. This intensified the surge in global inflation. This shock is expected to be short-lived and to fade in H1 2022.

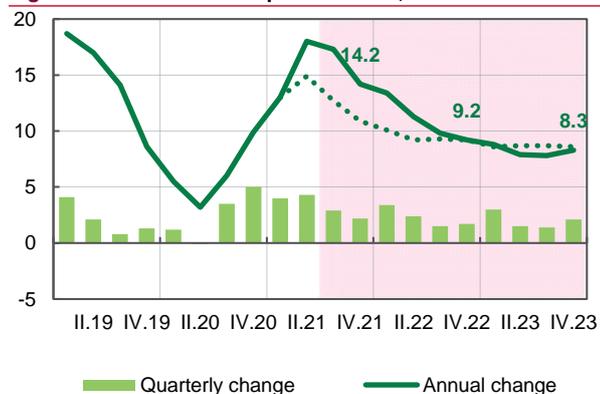
As these shocks subside and monetary policy is tightened, core inflation will decrease to 4% in 2022 and will remain at that level thereafter. In order to achieve the 5% inflation target in 2022 and 2023, core inflation has to be lower (4%) to offset higher growth in administrated prices, another CPI component.

Figure 3.1.4. Raw food inflation, %



Source: SSSU, NBU staff estimates.

Figure 3.1.5. Administered price inflation, %



Source: SSSU, NBU staff estimates.

Following a temporary surge in 2021, food price inflation will decline due to sufficient supply and the correction of global prices

Raw food inflation in Ukraine will accelerate in 2021, propelled by higher global food prices. In addition, food price inflation will be driven by increased production costs resulting from higher wages and rising prices for animal feeds and energy.

Further on, pressures on food prices will ease due to higher harvests and, consequently, larger food supply on the domestic market, as well as due to the correction of global prices. Food price inflation is projected to drop below 4% in 2022–2023.

Although gradually declining, administered price inflation will remain high (8% to 14% per year) due to higher prices for tobacco products and electricity

Over the entire forecast period, administered price inflation will be the highest among CPI components. It will speed up in 2021, driven mainly by higher electricity and natural gas prices and, consequently, higher prices for central heating and hot water supply.

Q3 2021 is expected to see a rise in electricity prices for households with differential electricity tariffs charged depending on the amount consumed. This rise will contribute 0.3 pp to CPI growth. In 2022–2023, electricity prices will also be among the fastest growing across inflation components, as these prices will be increased to economically sound levels. Over the whole of 2021, the weighted average gas price will be close to the current one, thanks to the introduction of annual tariff plans for households. Nevertheless, prices for heating and hot water supply will rise, as these prices were not corrected in 2020. Other utility prices will also increase, driven by higher wages and other production costs. As expected, excises taxes on tobacco products will continue to rise, as planned in the Tax Code, pushing up the prices of these products by 16% to 17% annually.

Fuel prices will grow by almost 20% in 2021 on the back of higher oil prices. This increase will have a pronounced effect on headline inflation, as it will drive up the prices of other consumer products – among other things through higher transportation costs. In 2022–2023, the expected correction of global oil prices, coupled with the moderate volatility of the exchange rate, will decrease the growth in fuel price inflation to below 5%.

Box 5. How the Inflation Targeting Design Affects the Deviation of Inflation from Its Target Level and Target Range²⁵

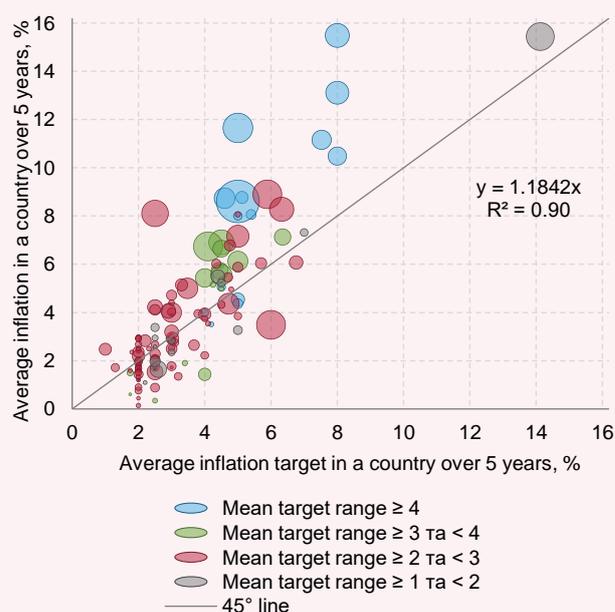
When targeting inflation, central banks publicly and clearly announce what their monetary policy design will be over the medium-term, including the level of the inflation target and/or the tolerance band. Inflation targeting (IT) designs can vary across countries and over time. Deviations of inflation from its target usually decrease when the inflation target is lowered. At the same time, countries with higher inflation targets more often see actual inflation overshoot its target, but not undershoot it. A larger target range is no guarantee that inflation will stay within that range. This confirms the evidence documented in economic literature that there is a direct relationship between an inflationary environment and inflation volatility, which in turn increases uncertainty and dampens economic growth.

Low and stable inflation is one of the main requirements for sustained economic growth in the long-term. A moderate inflation environment reduces risks of uncertainty, while also enabling households and businesses to forecast and allocate economic resources more effectively, thus improving their current well-being. That is why central banks often rely on the IT framework, which aims to achieve price stability.

The design of an inflation targeting regime often differ across countries²⁶, both in terms of the level of inflation targets set and the degree of their detail. The initial choice of an IT strategy, and its possible revision in the future, often depend on the specific features of an economy. More specifically, advanced economies are more resilient to negative shocks, and have lower inflation targets. In contrast, emerging markets, which are more vulnerable to unpredictable shocks, set higher inflation targets. Some countries set only the central value of the inflation target, while others establish target ranges, which indicate to economic agents under which conditions a central bank's monetary policy is neutral with respect to inflation fluctuations. Sometimes countries use both an inflation target and a target range.

Since inflation targeting was introduced, most central banks have succeeded in keeping inflation close to the inflation target in the medium-term. Figure 1 shows the relationship between average inflation and the average inflation target in inflation-targeting countries over five-year periods since the launch of IT. Despite there being a rather strong correlation between inflation and the inflation target, actual inflation mostly overshoot the target in the countries that set higher inflation targets. In contrast, inflation undershoots the target in countries with lower inflation targets.

Figure 1. The relationship between the average inflation (y-axis), average inflation target (x-axis), and inflation volatility (bubble size*) in countries with a different target band width**



* The size of the bubbles reflects proportionally the degree of inflation volatility, which is calculated as inflation standard deviation.

** Based on data of 41 countries since the start of the IT regime until 2019 divided into 5-year periods (132 observations in total)

Source: NBU's staff estimates based on data from the SSSU, the IMF and the web pages of the world's central banks.

What is more, a strong direct relationship is observed between the inflation target and inflation volatility. More specifically, when countries have high inflation targets, they also experience higher inflation volatility and often have wider target ranges. The NBU's April 2021 [Inflation Report](#) (Box 2) provides an overview of empirical data about how effectively central banks, including the NBU, meet their inflation targets.

The NBU, using panel data, conducted an econometric analysis of factors that cause inflation to deviate from its target with a view to providing a better understanding of how a selected IT strategy, coupled with other specifics of economic and institutional development, can influence

²⁵This box was prepared on the basis of a study conducted by Oleksandr Faryna, Sergii Nikolaychuk, and Viktor Koziuk, which will be published later.

²⁶According to the IMF's [Annual Report on Exchange Arrangements and Exchange Restrictions \(AREAER\)](#) for 2019, the list of inflation targeters includes 41 countries: Australia, Albania, Brazil, the UK, Armenia, Ghana, Guatemala, Georgia, the Dominican Republic, Israel, India, Indonesia, Iceland, Kazakhstan, Canada, Colombia, Korea, Costa Rica, Mexico, Moldova, New Zealand, Norway, Paraguay, Peru, South Africa, Poland, Russia, Romania, Serbia, Thailand, Turkey, Uganda, Hungary, Ukraine, Uruguay, the Philippines, the Czech Republic, Chile, Sweden, Jamaica, and Japan.

inflation across countries.²⁷ The random effects method²⁸ was used to estimate the following equation:

$$y_{it} = Level_{it} + Size_{it} + Age_{it} + Controls_{it} + c + e_i + u_{it},$$

where y_{it} is the deviation of inflation above/below the target/target range for country "i" in year "t"; $Level_{it}$ is the inflation target level; $Size_{it}$ is the width of the target range; Age_{it} is the number of years during which a country has engaged in IT; $Controls_{it}$ is the vector of control macroeconomic and institutional variables; e_i is random effects; u_{it} is errors; and c is a constant.

To allow for the possible nonlinearity of impact factors, the above equation was estimated separately for inflation deviations above and below the target and the target range. The final results of the estimation are presented in Table 1.

Table 1. Modeling the determinants of inflation deviations above and below the target and target range: Summary results*

Determinants	Absolute deviation of inflation from			
	target midpoint		target range	
	above	below	above	below
<i>1. IT policy design</i>				
Target level	+	ns	+	-
Target range	+	ns	ns	ns
Age of IT	-	ns	-	ns
<i>2. Macroeconomic environment</i>				
Real GDP growth	-	ns	ns	ns
Economic development	+	+	+	+
Balance of payment deficit	+	+	+	+
Exchange rate change	+	-	+	-
Terms of trade in commodities	ns	ns	+	+
Trade openness	ns	ns	ns	ns
Financial openness	ns	ns	ns	ns
<i>3. Indexes of institutional quality</i>				
Regulatory quality ²⁹	-	ns	-	ns
Central bank transparency ³⁰	ns	-	ns	-
Central bank independence ³¹	+	-	+	-
Explanatory power **	0.32	0.05	0.31	0.08
Number of observations	212	228	179	176

Signs "+", "-", and "ns" indicate direct, inverse, and non-significant relationships, respectively. * Averaged results based on 288 models estimated using a different combination of explanatory variables. ** Average adjusted coefficient of determination R².

Source: NBU's staff estimates obtained from random effect models based on annual data from the SSSU, the IMF and the web pages of the world's central banks.

The results show that high inflation targets are associated with greater deviations of inflation above the midpoint of the

inflation target, but not below it. Inflation fluctuations outside the target range also tend to occur in countries with higher inflation targets. At the same time, wider target ranges increase inflation deviations from the midpoint, but do not guarantee that inflation will stay within the target range. In contrast, the duration of IT application is a factor that reduces upward inflation deviations both from the target and the target range. This demonstrates the importance of conducting a consistent monetary policy to anchor inflation expectations.

A country's institutional development is also an important factor for meeting inflation targets. It is essential to improve general indicators of regulatory quality – indicators for the institutional specifics not only of a central bank, but also for other government bodies. Conversely, central bank transparency has a special role in preventing inflation from deviating below its target and target range. The results regarding the impact of a central bank's legal independence turned out to be rather unintuitive. Countries in which central banks have greater legal independence witness larger inflation deviations above the target and smaller deviations below the target. The creators of the index explain this by the fact that the level of a central bank's de jure independence envisaged by law may not correspond to the level of de facto independence in less developed democracies. Therefore, legal independence does decrease inflation volatility, but only in countries that enforce the rule of law.

Other macroeconomic indicators which explain inflation deviations include the level of an economy's development compared to other economies, a balance of payments deficit, exchange rate changes, and terms of trade in commodities. At the same time, financial and trade openness have no effect on inflation volatility.

In view of the above, an analysis of the experience of inflation-targeting countries shows that the chosen IT design has a significant impact on a country's inflationary developments. Lower inflation targets help decrease inflation volatility, while also improving conditions for sustained economic growth. Conversely, higher inflation targets increase inflation volatility, while inflation often overshoots the target. A wider target range does not guarantee that inflation will stay within the bounds set. To minimize inflation volatility it is important to improve the quality of institutions and to conduct a consistent and predictable policy.

²⁷ Annual data for 41 countries from the launch of IT through the end of 2019. 2020 data was excluded in order to remove the extraordinary effects of the pandemic.

²⁸ The choice of the random effects method was motivated by the specific nature of the sample, as well as major interest variables (such as the target level, the width of the range, and how long a country has been engaging in IT), which change little over time across countries. Therefore, the use of the fixed effects method, which evens out constant cross-sectional differences, can distort the results. At the same time, for most model specifications, the appropriateness of the choice of the random effects model was confirmed by econometric tests.

²⁹ The index is constructed by the World Bank (World Governance Indicators) and captures perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development.

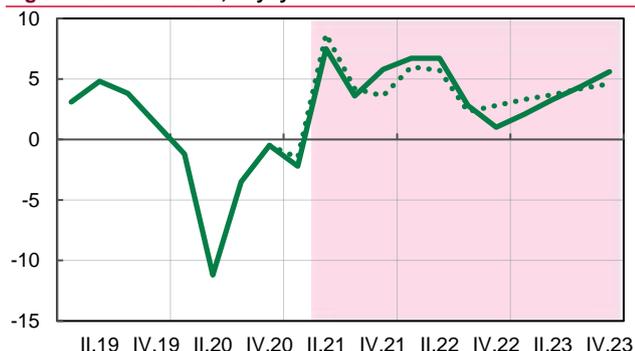
³⁰ The index is constructed the Bodea and Hicks (2015).

³¹ The index, which reflects the legal aspects of central bank's independence, is constructed by Dincer & Eichengreen (2014).

3.2. Demand and Output

- The Ukrainian economy will grow on the back of reviving domestic demand due to eased quarantine restrictions and a benign external environment.
- Private consumption, spurred by larger household income and improved consumer sentiment, will remain the main driver of GDP growth.
- Stronger financial results and improved business expectations will encourage companies to ramp up investment. Robust domestic demand will be met mainly by rising imports.

Figure 3.2.1. Real GDP, % yoy



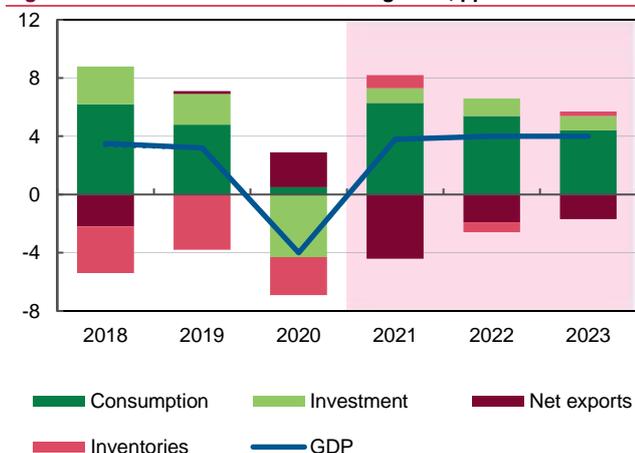
Source: SSSU, NBU staff estimates.

Sustained consumer demand and favorable terms of foreign trade will offset the losses the Ukrainian economy sustained because of the tighter quarantine imposed last winter and spring. The NBU has therefore left its forecast for 2021 real GDP growth unchanged, at 3.8%.

After that, the Ukrainian economy will grow by around 4.0% annually. This growth will be fueled not only by high private consumption, but also by robust demand for Ukraine's exports and a rebound in companies' investment activity.

This forecast is based on the assumption that adaptive quarantine remains in place in the near future. It is expected that the pace of the COVID-19 vaccination campaign will accelerate noticeably, so that all those who want to get vaccinated will be able to do so next year. There will be no bans on economic activities, but requirements that enhanced measures to combat the disease be in force at the regional level.

Figure 3.2.2. Contributions to real GDP growth, pp



Source: SSSU, NBU staff estimates.

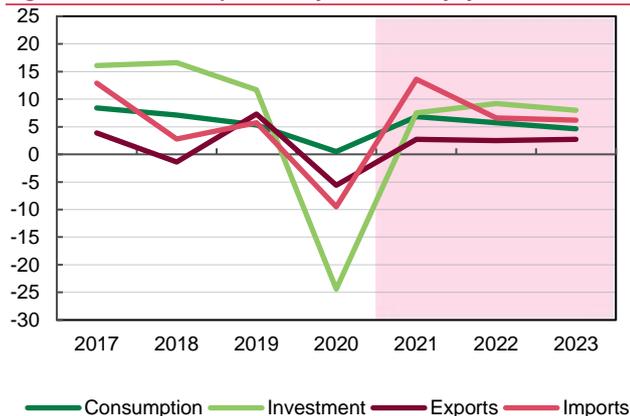
Ukraine's GDP will grow by 3.8% in 2021, buoyed by stronger external demand and the absence of tight quarantine restrictions in H2

The Ukrainian economy will recover at a fast pace in 2021. Consumer demand, fueled by an increase in real household income, will remain the main driver of the recovery. The absence of tight quarantine restrictions and the reduction in uncertainty will contribute to an improvement in consumer sentiment and the intensification of business activity in H2. The services and passenger transportation sectors, which were hit the most by the quarantine, will recover faster thanks to the acceleration of the vaccination campaign in Ukraine. Those sectors that have suffered the least from quarantine restrictions (such as industry and agriculture) will receive the main impetus from the growth in external demand. What is more, the performance of the agro sector will improve markedly, thanks to the expected bumper harvests of most crops. Favorable terms of trade will improve the financial results of exporters and revive investment activity.

After that, Ukrainian GDP will grow by around 4% annually. The steady recovery of the global economy will boost demand for Ukraine's exports. The improved financial results of companies and ramped up lending will contribute to the increase in investment activity. Together with more robust private consumption, this will spur import growth.

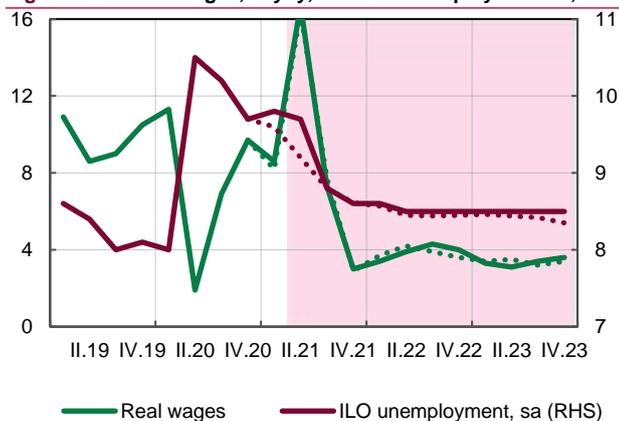
Private consumption will rise on the back of increased household income and improved consumer sentiment

Figure 3.2.3. GDP components by end use, % yoy



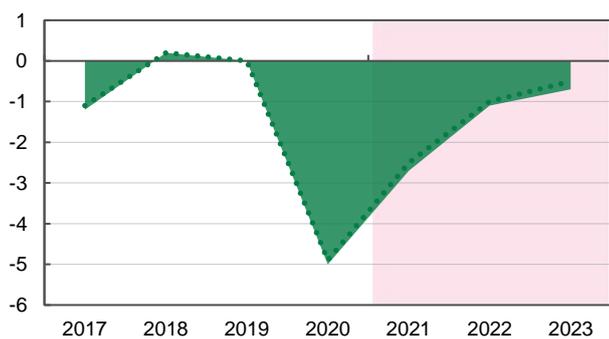
Source: SSSU, NBU staff estimates.

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



Source: SSSU, NBU staff estimates.

Figure 3.2.5. Output gap, % of potential GDP



Source: NBU staff estimates, SSSU.

Consumer spending will continue to rise at a fast pace over the forecast horizon, propelled by the growth in real household income. Nominal wages will grow by almost 20% in 2021, driven by the economic recovery, which will fuel demand for labor, as well as by the increase in the minimum wage. As a result, private consumption will accelerate by 8%, and will be the main driver of GDP growth.

The labor market situation will also improve amid the economic recovery. The unemployment rate will drop, approaching the neutral level of 8.5% next year.

In the medium-term, slower wage growth will hold back the pace of private consumption growth somewhat (to 5% to 6.5% annually). At the same, consumption will be fostered by a continued improvement in consumer sentiment and stepped-up lending.

After the slump seen last year, investment activity will recover supported by companies' improved financial results and business expectations

Decreased uncertainty over future quarantine restrictions thanks to vaccinations will also contribute to the recovery. Favorable terms of trade will enable exporters to expand their financial resources, which will boost their ability to invest in fixed assets. The need to renovate production facilities (mainly in the metals industry) results from tighter environmental requirements for exports to EU countries. That is why investment growth in 2021 is expected to be generated not only by government programs, but also by the private sector. Capital investment will rise by 8% to 9% annually over the entire forecast period. However, its share of GDP will grow rather slowly – from 13% in 2020 to 14% in 2023. Such a small ratio of investment to GDP was observed only once, during the 2014–2015 crisis, and may be attributed to a significant increase in uncertainty over future developments.

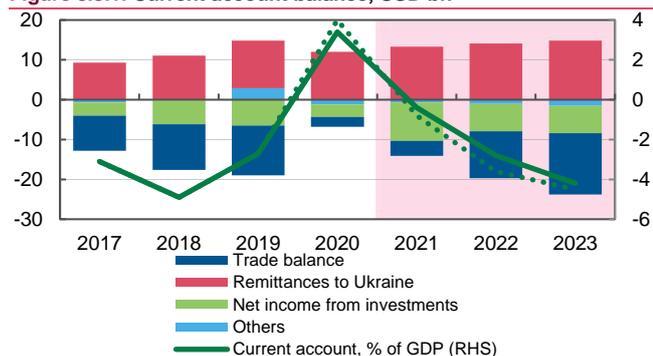
Robust domestic demand will be met mainly by rising imports

Recovering consumer and investment demand will result in a surge in imports. Real imports will expand by 13% in 2021, and after that growth will slow to 6% to 7% annually. Rebounding foreign tourism will also contribute to import growth. Demand for energy imports will rise. Exports will also increase, albeit at a slower pace of 2% to 3%. The increase in exports will be facilitated by the resumption of global demand for raw materials.

3.3. Balance of Payments

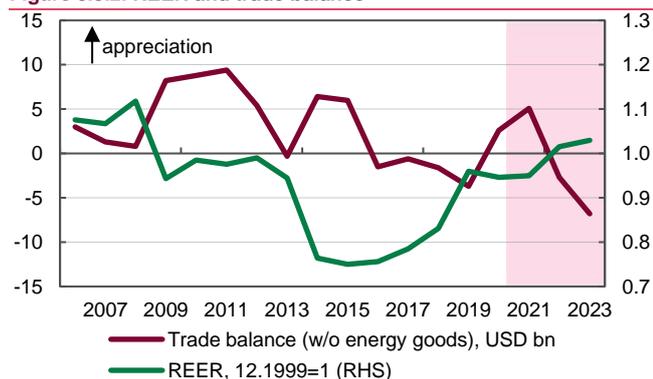
- The current account will return to a deficit in 2021 on the back of stronger domestic demand, the resumption of foreign tourism, and larger payments of dividends. The deficit will be restrained by favorable terms of trade and a record grain harvest.
- In 2022–2023, the current account deficit will widen further, buoyed by the correction of global prices and the ongoing revival of consumer and investment demand.
- The deficit will be financed through investment and debt capital thanks to sustained attractive yields on Ukrainian assets. Provided that cooperation with the IMF continues, international reserves will increase to USD 31 billion in late 2021 and remain at that level after that.

Figure 3.3.1. Current account balance, USD bn



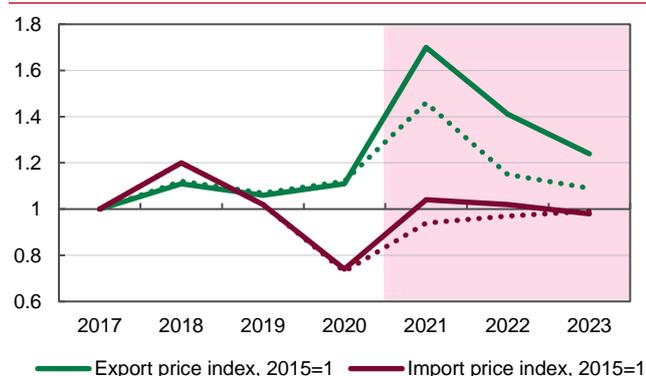
Source: NBU staff estimates.

Figure 3.3.2. REER and trade balance



Source: NBU staff estimates.

Figure 3.3.3. Index of export and import prices*



Source: NBU staff estimates.

*The index of export prices for Ukraine includes: iron ore, ferrous metals, wheat, corn and sunflower oil. The index of import prices includes: coal, oil products and gas.

The current account will return to a deficit in 2021, which will gradually widen in 2022–2023, propelled by rebounding economic activity

In 2021, the current account will record a deficit of 0.4% of GDP on the back of stronger domestic demand, including that for foreign travel, and larger income from nonresidents' investment in domestic assets. These factors will be only partly offset by favorable terms of trade and the bumper harvest of grain.

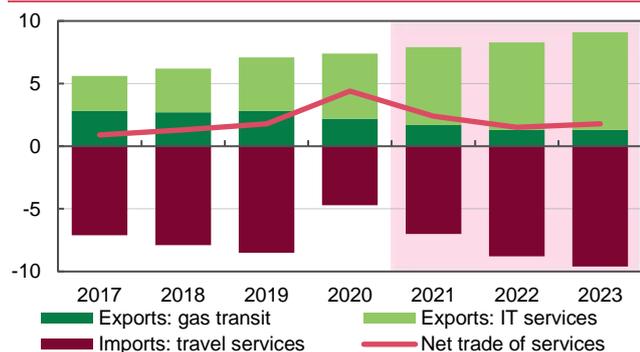
The current account deficit will widen in 2022–2023, driven by larger consumer and investment imports amid substantial export earnings. Less favorable terms of trade, the resumption of foreign tourism, and the expected decline in earnings from gas transit will also contribute to the widening of the deficit.

Exports and imports of goods in 2021 will exceed their pre-crisis levels. Export performance over the forecast horizon will be mainly determined by the price component. The value of exports will grow in 2021 but decline in 2022–2023, dragged down by the correction of global prices. At the same time, the volumes of exports will rise steadily.

In 2021–2023, imports growth will be mainly generated by non-energy imports. The growth will be fueled by the rapid recovery of domestic demand amid rising real household income, exporters' robust financial results, and the effect of the hryvnia's REER appreciation. Continued imports of pharmaceuticals and medical equipment under the conditions of the pandemic will be additional growth drivers. Energy imports will grow only in 2021, buoyed by a surge in prices, including the prices of natural gas. Demand for energy will remain stable in 2022–2023. However, an increase in domestic gas production will gradually reduce Ukraine's dependence on imports.

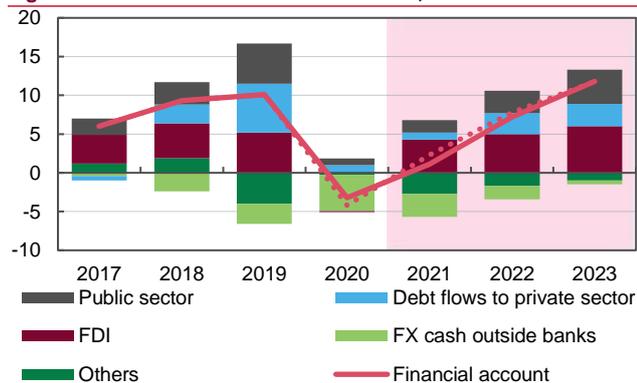
The surplus in the trade in services will narrow somewhat in 2021–2022 because of the resumption of travel and decreased gas transit. In 2021, gas transit will increase the contracted amount by 10 billion cubic meters due to robust demand from Europe. After that, gas transit will be in line with the contracted volume (40 billion cubic meters annually from 2021 until 2024). Imports of travel services will exceed pre-crisis levels only in 2022. Exports of services will grow gradually, driven by higher exports of IT services, which grew steadily even during the 2020 crisis.

Figure 3.3.4. Trade of services: selected items, USD bn



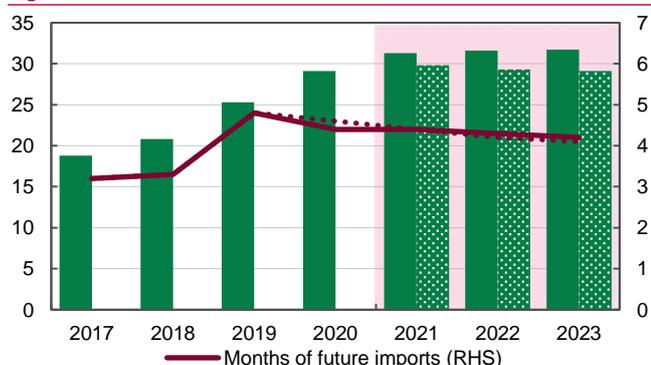
Source: NBU staff estimates.

Figure 3.3.5. Financial account: net inflows, USD bn



Source: NBU staff estimates.

Figure 3.3.6. International reserves



Source: NBU staff estimates.

Remittances will rise by 11% in 2021, driven by the revival of economic activity resulting from the fast pace of the vaccination campaign in Europe. Remittance growth will decline in the coming years, reduced by more moderate demand for labor in migrants' host countries, and lowered growth in these countries' economies.

Dividend repatriation will grow in 2021, spurred mainly by the large profits earned by metals-and-mining companies. Looking ahead, dividend payments will decline somewhat, but will remain larger than those in previous years.

International reserves will meet the minimum adequacy criteria in late 2021, thanks to borrowing by the private and government sectors, and provided cooperation with the IMF continues

With economic activity recovering, inflows of investment and debt capital to the private sector will gradually rise, while cash foreign currency outflows outside the banking system will decrease.

It is expected that Ukraine will continue to cooperate with the IMF under the current program, and that the government sector will receive USD 2.7 billion as a result of a new SDR allocation. Carrying out reforms under the SBA program will enable Ukraine to receive official financing from the World Bank and the EU, while also helping push down interest rates on Eurobonds and maintain nonresidents' steady demand for hryvnia domestic government debt securities.

Borrowing by the government and private sectors will increase international reserves to USD 31 billion in late 2021, or to about 100% of the IMF ARA metric. After that, reserves will remain at that level.

The current account deficit has remained practically unchanged from the previous forecast. More specifically, better terms of trade than had been expected and the upward revision of the harvest had a positive effect on the current account balance. This was mostly offset by a rise in investment imports, more active recovery in foreign tourism, and nonresidents' higher earnings from direct investment in Ukraine.

The forecast for financial account inflows has remained unchanged – nonresidents' stronger demand for domestic government debt securities will be offset by somewhat smaller borrowing by the private sector.

Box 6. The Current Account Norm: Estimates for Ukraine

A significant current account deficit or its rapid expansion are two of the most common signals of the vulnerability of a country's external position and the high probability of a currency crisis. Analyses performed to estimate this probability make use of measures of the equilibrium current account balance. Estimates for Ukraine show that in recent years this deficit has been 3%–4% of GDP. The value of this level is a function of long-term trends in the structure of foreign trade, demographics, fiscal policy, and economic growth.

The equilibrium value of the current account, known in foreign literature as the *current account norm* (hereinafter the CA norm), is an indicator of the external sustainability of an economy. It represents the largest possible deficit that is safe for a country's external position, and for which exchange rate adjustments are not required. Large and long-lasting excesses of the actual current account deficit over its equilibrium level are a sign that the economy is coming under pressure from an excessive debt burden that will likely be difficult to repay. Therefore, the absence of significant gaps between the actual and equilibrium levels is an important factor in ensuring macrofinancial stability.

The CA norm is also used in economic policy analyses, for example to determine the size of a deviation of the real exchange rate from its equilibrium value. A current account deficit above the CA norm indicates that the real exchange rate is overvalued, which has a number of negative implications for the economy. In Ukraine, such situations emerged in 2008 and 2011–2013, according to NBU estimates (for more, see Box 6. “Estimating the REER Trend for Ukraine: the BEER Approach” of the [July 2020 Inflation Report](#)³², pages 43–44). This resulted in the accumulation of economic imbalances, exacerbating the negative impact of the 2008–2009 and 2014–2015 crises on the economy, and leading to the loss of international reserves.

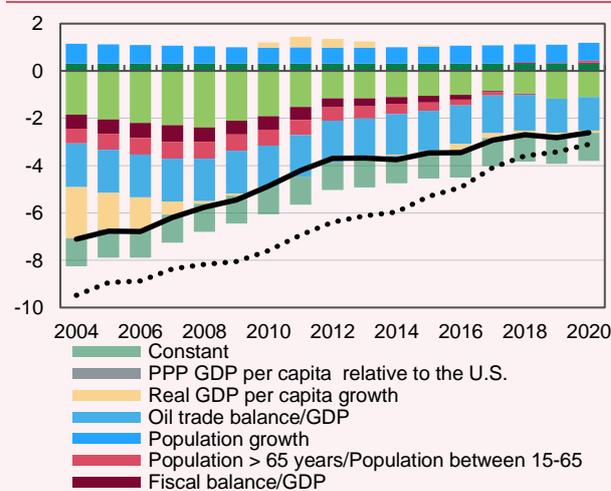
One approach to estimating the CA norm is to capture the relationships between the current account and the fundamentals affecting it in the medium and long term. Such dependencies are estimated using panel regressions that include data from individual groups of countries grouped by membership in economic unions, degree of economic development, etc. ([Lee et al \(2008\)](#); [Medina et al \(2010\)](#); [Mano et al \(2019\)](#)). To estimate Ukraine's CA norm, the results of a panel regression for Central and Eastern Europe from [Communale \(2015\)](#) were used. The regression specification corresponds to that proposed in [Medina et al, 2010](#). The variables and parameters used to estimate the CA norm for Ukraine are shown in Table 1³³.

A full description of this study is provided in ³²[Vdovychenko \(2021\). Empirical estimation of REER trend for Ukraine. IHEID Working Papers 06-2021, Economics Section, The Graduate Institute of International Studies.](#)

³³ The variables were compiled on the basis of annual data for the period 2004–2020. Data on the initial value of net foreign assets (NFA) were taken from the updated External Wealth of Nations database ([Lane and Milesi-Ferretti, 2007](#)). FDI and oil balance figures came from Ukraine's balance of payments data, which are compiled by the NBU. GDP, government revenues and expenditures data for Ukraine and for its MTPs were taken from the IMF database (WEO). Data on demographic changes and the old-age dependency ratio came from World Bank statistics (WDI). Real GDP growth per capita was taken from UNCTAD statistics. To estimate the relative variables, MTP data were assigned the same

To estimate the CA norm, the fundamentals that determine its state must also be at their equilibrium values. This is usually achieved using five- or seven-year forecasts made each year in real-time³⁴ mode. As there are no forecasts for such horizons for Ukraine for most years in the available data sample, seven-year moving averages of selected fundamentals were used.

Figure 1. Estimates of equilibrium CA for Ukraine and contributions of fundamentals, % of GDP³⁵



Source: NBU.

At the current stage in the development of the Ukrainian economy, the CA norm is estimated at 3%–4% of GDP. This figure has been fairly stable in recent years, while it declined significantly from the mid-2000s. Similar trends were seen in some Baltic countries, in particular Lithuania and Latvia, after they gained EU membership ([Communale, 2015](#)).

The reduction in the equilibrium current account deficit is primarily driven by several factors. The first is a change in the age breakdown of the population relative to the country's MTPs. At the start of the sample, the population of Ukraine was older than those of its MTPs (calculated as the ratio of elderly people to the working population), but this discrepancy has leveled off gradually. This can be partly explained by the gradual shift in the direction of foreign trade

weights that are used in estimating the REER (for more, see [Vdovychenko \(2021\)](#)).

³⁴This means that to estimate the equilibrium value of a variable, for example in 2010, it is necessary to use the five-year forecast that was made for it in 2010.

³⁵The research used to assess the equilibrium level of the current account in Ukraine included only the impact of the balance of trade in oil and petroleum products. However, Ukraine is historically highly dependent on natural gas imports. Therefore, alternative estimates were maintained taking into account the balance of natural gas trade. This increases the equilibrium deficit (shown in Figure 1 by a dotted line) to 3–4% of GDP in recent years. At the same time, these results should be interpreted with caution, as taking into account new data should change the estimated coefficients on the basis of which the calculations were made.

towards the EU since 2015.³⁶ The higher share of older people in the EU leads to lower savings. Therefore, to meet consumption needs, the current account deficit of the EU is widening, while those of its MTPs, including Ukraine, are narrowing. Thus, the “rejuvenation” of the population structure in comparison with MTPs reduces the equilibrium current account deficit.

The second factor was the transition to a more sustainable fiscal policy after the 2014–2015 crisis. A significant quasi-fiscal deficit was eliminated, and the public finance system became more balanced. The more conservative fiscal policy drove an increase in the savings rate, thus reducing the equilibrium current account deficit.

The drop in FDI revenues³⁷ in 2012–2018 supported the trend towards an increase in the CA norm. In 2019–2020 FDI inflows increased, making it possible to finance a larger current account deficit.

The birth rate in Ukraine is lower than in its MTPs, with the result that the population growth factor allows Ukraine to maintain a smaller current account deficit. People under the age of 15 do not save. As their share in the population structure expands, national savings decline, and, consequently, the current account deficit widens in the long run.

The most variable indicator turned out to be the relative increase in GDP per capita. In 2004–2009 and 2016–2020, this figure in Ukraine was higher than in its MTPs, diminishing Ukraine’s equilibrium current account deficit. This economic convergence to the MTPs required an influx of investment and an expansion of both investment and consumer imports.³⁸ However, the economic crises of 2008–2009 and 2014–2015 slowed this process. In 2010–2015 the growth in GDP per capita decelerated sharply, inflating the equilibrium current account deficit.

In 2016–2019 the actual values of the current account deficit were in the range of 2%–5% of GDP, which corresponds to the estimated CA norm for Ukraine and signals the absence of significant disconnects in its external position.³⁹ This, in particular, is evidence of the effectiveness of the floating exchange rate regime in ensuring the more balanced growth of Ukraine’s economy.

Table 1. CA fundamentals and estimates of coefficients⁴⁰

Variable	Expected impact	Coefficient
Initial NFA to GDP ratio (2004)	(-) Countries with negative NFA are expected to improve the CA position to preserve long-term solvency.	-0.0144
FDI to GDP ratio	(-) FDI is more stable investments and less prone to sudden stops. If FDIs are directed to finance the CA deficits, this brings a decline in CA over time, because the method of financing is less uncertain and allows you to borrow and import more.	-0.435
General government deficit to GDP ratio (relative to MTP)	(+) more tight FP increases savings in an economy, improving CA.	0.258
Old-age dependency ratio (relative to MTP)	(-) High number of old people should bring a decrease in savings	-0.297
Population growth (relative to MTP)	(-) High number of kids boosts spending, decreasing savings	-0.983
Ratio of Oil Balance to nominal GDP in current USD	(+) Importers of oil products usually run lower CA.	0.412
Real GDP growth rates per capita ⁴¹ (relative to MTP)	(-) Stronger growth is often linked with a decline in CA because of higher need in investment import and income growth, boosting consumption.	-0.635
GDP per capita over US (in PPP 2017)	(+) As relative income approaches the income level of advanced economies, import demand and propensity to consumption decrease and savings norm goes up.	0.00927

Source: [Medina et al. \(2010\)](#), [Comunale \(2015\)](#).

³⁶ In particular, the share of CIS countries in trade shrank from 39.8% in 2005–2009 to 19.6% in 2016–2020, while that of EU member states expanded from 31.3% to 38.9%, respectively.

³⁷ The FDI time series includes reinvested earnings since 2015.

³⁸ The growth in consumer imports is driven by increases in household incomes during periods of relatively high economic growth.

³⁹ Current account deficits between the 2014–2015 crisis and the COVID-19 crisis in 2020: 2016 – (-2% of GDP); 2017 – (-3.1% of GDP); 2018 – (-4.9% of GDP); 2019 – (-2.7% of GDP).

⁴⁰ The fit of the panel regression comes from [Medina et al. \(2010\)](#).

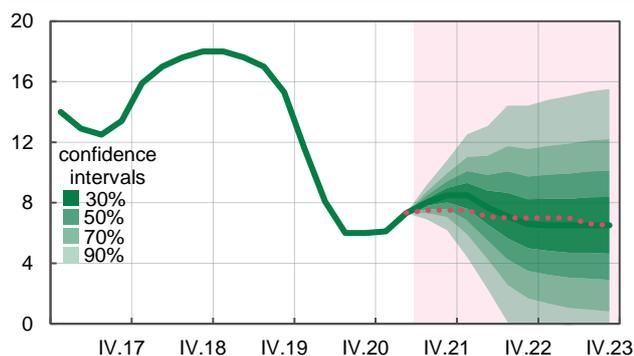
Estimates were made in [Comunale \(2015\)](#) on the 2004–2015 sample of annual data from Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, Slovenia.

⁴¹ As a result of the economic crises of 2008–2009 and 2014–2015, the GDP growth per capita was very volatile. To reduce the impact of these deviant values on the estimations, we smoothed GDP growth per capita for Ukraine in 2009, 2014 and 2015, taking the average value for the previous three years before and three years after.

3.4. Monetary Conditions and Financial Markets

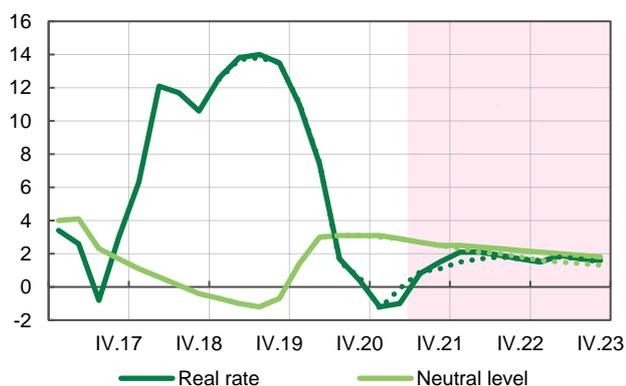
- Increasing the key policy rate and phasing out anti-crisis monetary measures will help bring inflation back to its 5% target in 2022.
- As inflation expectations stabilize and the disinflation trend steadies, the NBU will start a cycle of key policy rate cuts as early as next year.
- Higher inflation in Ukraine compared with its main trading partners will lead to an appreciation of the REER of the hryvnia, which will adversely affect the competitiveness of Ukrainian goods. However, a decline in inflation in the coming years will reduce the REER appreciation trend to an acceptable level.

Figure 3.4.1. Key policy rate*, average, %



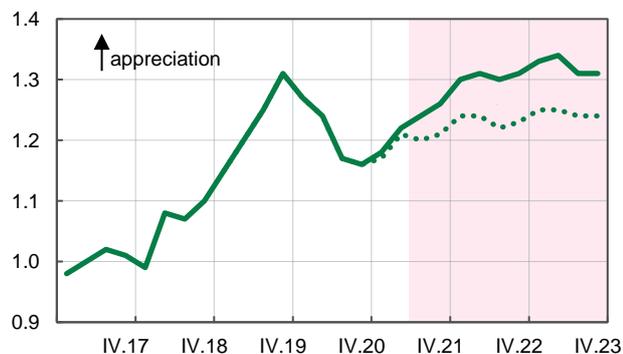
* Decreases in key policy rate are limited by the zero lower bound.
Source: NBU staff estimates.

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.2016 = 1



Source: NBU staff estimates.

The focus is on preventing a risk of a de-anchoring of inflation expectations

In order to bring inflation to its target and prevent a de-anchoring of inflation expectations, the NBU will hike the key policy rate more aggressively than previously expected. The tighter monetary policy is driven by a number of factors: an increase in underlying inflationary pressures, expectations of a faster monetary policy normalization across the globe, and the slower correction of food and energy prices.

A more resolute increase in the key policy rate and the phasing out of the anti-crisis monetary measures in 2021 will contribute to the development of a steady disinflationary trend and allow the easing of monetary policy to begin as early as Q2 2022. Despite the hike, the key policy rate will remain below its neutral level for a while, reaching it only in 2022. This will ultimately ensure a trade-off between the response to inflation risks and support for economic growth.

The REER of the hryvnia will appreciate due to favorable terms of trade and improved productivity in agriculture. However, the fading out of the effects of benign terms of trade and the decline in inflation in 2022 will limit the hryvnia REER appreciation. The appreciation trend is in line with fundamentals, which is also proven by the current account deficit forecast being close to a sustainable level. The REER of the hryvnia will not therefore deviate considerably from its equilibrium level and will not cause any imbalances.

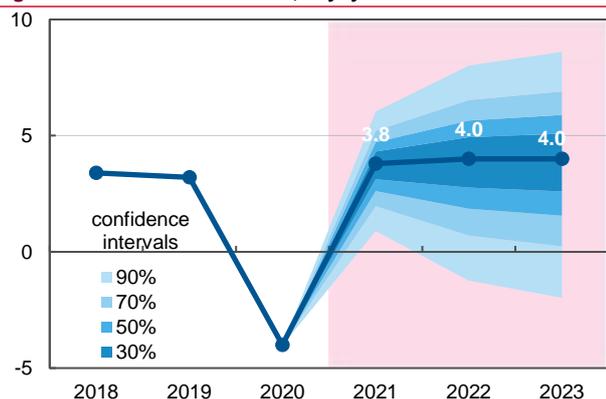
The growth in hryvnia deposits will continue as economic activity recovers and household income increases further. Phasing out anti-crisis monetary instruments will make the banks more interested in attracting deposits, encouraging them to raise their deposit rates. This will have a positive impact on the term structure of the funds attracted by banks.

Rising demand for corporate and retail loans and [the banks' readiness](#) to moderately ease their lending standards will ensure there is further growth in hryvnia loans. However, looking ahead, the banks will have to adapt to operating with lower interest rate margins.

3.5. Risks to the Forecast

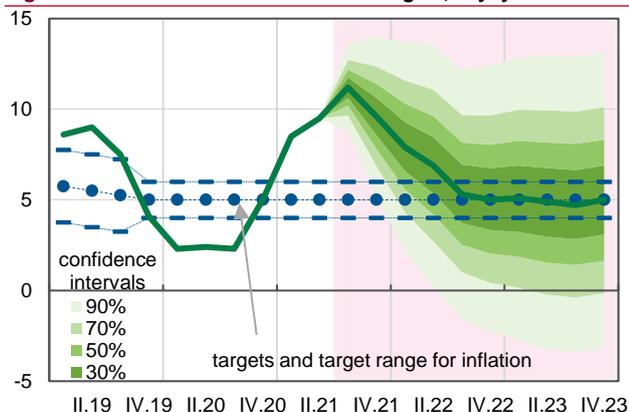
- The underlying assumption of the macroeconomic forecast is that Ukraine will continue to cooperate with the IMF. An interruption in cooperation with the IMF would create risks for the financing of the state budget deficit and could deteriorate expectations, forcing the NBU to tighten its monetary policy.
- The key risks to the macroeconomic forecast are the imposition of stricter quarantine measures in Ukraine and globally, and a longer and more pronounced than expected surge in global inflation.

Figure 3.5.1. Real GDP forecast, % yoy



Source: NBU staff estimates.

Figure 3.5.2. CPI forecast and inflation targets, % yoy



Source: NBU staff estimates.

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

The key assumption of this macroeconomic forecast is that Ukraine will continue to cooperate with the IMF under the fund's program. A prolonged delay in implementing the terms of the cooperation agreement with the IMF may affect macrofinancial stability. In particular, this will create problems in securing sources of external financing for the state budget deficit. Attempts to replace these sources with large-scale borrowing from the domestic market could increase the cost of borrowing and put the Ministry of Finance into more competition with businesses for bank loans. At the same time, fiscal crowding out would slow lending and economic growth. A suspension of the IMF program might significantly worsen inflation and depreciation expectations, forcing the NBU to tighten its monetary policy.

The risk of a longer duration of the pandemic and a tightening of the quarantine remains significant. The spread of new mutations of the coronavirus, in particular the Delta variant, may lead to another wave of infections and a tightening of restrictive measures in the coming months. This would put the brakes on the recovery of the Ukrainian economy and increase the need for fiscal and monetary stimuli. At the same time, a stricter quarantine would not have any significant curbing effect on inflation, mainly due to sustained robust consumer demand. Losses from a lockdown that could be introduced in Ukraine due to the spread of the Delta variant are estimated at 0.6% of annual GDP in the case that it lasts for one month. At the same time, if only red zone (regional) quarantines are put in place, losses would decrease to 0.4% of GDP for every month of additional restrictions.

In terms of the external environment, the major risk lies in longer-lasting and stronger inflation, with a de-anchoring of expectations in developed countries influenced by large fiscal and monetary stimuli. This creates risks of higher imported inflation in Ukraine, and an acceleration in the tightening of the monetary policies of leading central banks. The latter development could significantly decrease investors' interest in EMs, causing capital flight. Under these conditions, the NBU would have to tighten its monetary policy more than envisaged in the baseline scenario.

A greater or faster deterioration in the terms of trade is also an important risk. A sharp fall in global prices of Ukrainian exports from their current high levels or an increase in energy prices would intensify depreciation pressures on the hryvnia exchange rate. This would also require a tighter monetary policy. At the same time, the terms of trade remaining favorable or improving further would contribute to the strengthening of the hryvnia. The disinflation pressure from the foreign exchange channel would enable the NBU to

		Probability that a risk will materialize		
		Low <15%	Medium 15%–25%	High 25%–50%
Degree of impact on the baseline scenario	Weak	Higher volatility of global food prices		
	Moderate	Smaller harvest of main agricultural crops	Significant deterioration in the terms of trade	
	Strong		Escalation of the military conflict Delays in cooperation with the IMF Capital outflows from EM	Longer duration of the coronavirus pandemic Global inflation hike

conduct a looser monetary policy compared with the baseline scenario.

The risk of a weaker harvest in Ukraine due to unfavorable weather looms over the entire forecast horizon. This would spur food price inflation and lead to additional GDP losses. A decrease in foreign currency proceeds from agricultural exports would also increase the pressure on the hryvnia exchange rate, thus impacting the prices of nonfood goods and services. Monetary policy would be oriented toward striking a balance between the need to reduce inflationary pressures and the need to minimize economic losses.

There is also a risk of higher volatility of global food prices due to climate change. With food products accounting for a large share of the CPI, the sensitivity of inflation expectations to such temporary shocks is rather high. This may cause inflation to deviate from its target. The monetary policy response will be determined by the influence any supply shock has on inflation expectations.

The risk remains of an escalation of the military conflict in the east of the country, which could markedly worsen Ukraine’s investment attractiveness and significantly affect the expectations of all economic agents.

Indicators	Macroeconomic forecast (July 2021)																				
	2021				2022				2023												
	2018	2019	2020	I	II	III	IV	current forecast	forecast 04.2021	I	II	III	IV	current forecast	forecast 04.2021						
REAL ECONOMY, % yoy, unless otherwise stated																					
Nominal GDP, UAH bn	3560	3977	4192	1009	1128	1346	1492	4975	4955	1152	1280	1464	1589	5485	5455	1238	1391	1607	1763	6000	5965
Real GDP	3.5	3.2	-4.0	-2.2	7.5	3.6	5.8	3.8	3.8	6.7	6.7	2.8	1.0	4.0	4.0	2.1	3.3	4.4	5.6	4.0	4.0
GDP Deflator	15.4	8.2	9.8	20.7	20.0	12.0	8.4	14.3	13.8	7.0	6.4	5.6	5.4	6.0	5.9	5.2	5.2	5.2	5.1	5.2	5.1
Consumer prices (period average)	10.9	7.9	2.7	-	-	-	-	9.4	8.5	-	-	-	-	6.6	5.7	-	-	-	-	4.9	5.0
Consumer prices (end of period)	9.8	4.1	5.0	8.5	9.5	11.2	9.6	9.6	8.0	7.9	6.9	5.3	5.0	5.0	5.0	5.1	4.9	4.7	5.0	5.0	5.0
Core inflation (end of period)	8.7	3.9	4.5	5.9	7.3	7.8	7.3	7.3	6.5	6.2	4.8	4.1	4.0	4.0	3.9	4.0	4.0	3.9	4.0	4.0	3.9
Non-core inflation (end of period)	10.7	4.8	5.9	12.4	12.6	16.3	12.9	12.9	10.1	10.1	9.6	7.0	6.5	6.5	6.5	6.3	5.8	5.7	6.1	6.1	6.3
raw foods (end of period)	3.3	3.9	4.1	11.8	5.1	13.5	10.6	10.6	8.8	7.3	8.5	4.2	3.5	3.5	3.5	3.7	3.7	3.3	3.6	3.6	3.5
administrative prices (end of period)	18.0	8.6	9.9	13.0	18.0	17.3	14.2	14.2	10.9	13.4	11.3	9.8	9.2	9.2	9.2	8.8	7.9	7.8	8.3	8.3	8.6
Producer prices (end of period)	14.2	-7.4	14.5	26.3	39.1	35.3	27.5	27.5	21.5	12.5	6.5	5.7	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Nominal wages (period average)	24.8	18.4	10.4	16.6	27.3	18.7	13.3	18.8	17.8	12.5	11.3	10.4	9.3	10.8	9.7	8.5	8.1	8.3	8.6	8.4	8.4
Real wages (period average)	12.5	9.5	7.4	8.6	16.7	7.3	3.0	8.7	8.6	3.4	3.9	4.3	4.0	3.9	3.9	3.3	3.1	3.4	3.6	3.4	3.4
Unemployment (ILO, period average)	8.8	8.2	9.5	-	-	-	-	9.1	9.1	-	-	-	-	-	8.5	-	-	-	-	-	8.5
FISCAL SECTOR																					
Consolidated budget balance, UAH bn	-67.8	-87.3	-224	-	-	-	-	-200	-199	-	-	-	-	-165	-164	-	-	-	-	-181	-181
% of GDP	-1.9	-2.2	-5.3	-	-	-	-	-4.0	-4.0	-	-	-	-	-3.0	-3.0	-	-	-	-	-3.0	-3.0
Public sector fiscal balance (IMF methodology), UAH bn	-75.4	-89.2	-242	-	-	-	-	-199	-200	-	-	-	-	-166	-165	-	-	-	-	-183	-182
% of GDP	-2.1	-2.2	-5.8	-	-	-	-	-4.0	-4.0	-	-	-	-	-3.0	-3.0	-	-	-	-	-3.0	-3.0
BALANCE OF PAYMENTS (NBU methodology)																					
Current account balance, USD bn	-6.4	-4.1	5.2	-1.0	1.2	-0.8	0.0	-0.7	-1.4	-0.3	-1.3	-2.3	-1.7	-5.6	-7.0	-1.5	-2.7	-2.8	-2.1	-9.1	-9.3
Exports of goods and services, USD bn	59.2	63.6	60.7	16.3	19.0	19.3	21.2	75.8	68.3	18.7	17.5	18.5	19.7	74.4	67.5	17.9	16.9	18.4	19.7	72.9	68.3
Imports of goods and services, USD bn	70.6	76.1	63.1	17.1	18.3	21.5	22.7	79.6	76.2	19.7	20.6	22.6	23.3	86.3	80.7	20.1	21.3	23.0	23.9	88.3	83.7
Financial account, USD bn	-9.3	-10.1	3.2	-0.1	0.0	0.1	-1.2	-1.1	-2.3	-1.0	-2.1	-2.3	-1.7	-7.2	-7.8	-3.8	-2.3	-3.4	-2.3	-11.8	-11.8
BOP overall balance, USD bn	2.9	6.0	2.0	-1.0	1.2	-0.9	1.1	0.4	0.9	0.8	0.9	-0.1	0.0	1.5	0.8	2.4	-0.4	0.6	0.2	2.8	2.5
Gross reserves, USD bn	20.8	25.3	29.1	27.0	28.4	29.6	31.3	31.3	29.8	32.1	32.7	31.8	31.6	31.6	29.3	33.1	32.4	32.0	31.7	31.7	29.1
Months of future imports	3.3	4.8	4.4	3.9	4.0	4.1	4.4	4.4	4.4	4.5	4.5	4.4	4.3	4.3	4.2	4.4	4.2	5.3	4.2	4.2	4.1
MONETARY ACCOUNTS (Cumulative since the beginning of the year)																					
Monetary base, %	9.2	9.6	24.8	2.1	8.2	11.8	17.9	17.9	18.2	1.6	3.1	4.4	7.9	7.9	8.0	1.2	2.2	3.0	6.7	6.7	6.6
Broad money, %	5.7	12.6	28.6	0.1	3.4	7.2	13.8	13.8	16.7	1.0	3.4	5.3	10.9	10.9	11.2	3.2	4.1	6.0	11.5	11.5	12.6
Velocity of broad money (end of year)	2.8	2.8	2.3	-	-	-	-	2.4	2.3	-	-	-	-	2.4	2.3	-	-	-	-	2.3	2.2

Terms and Abbreviations

GDP	Gross domestic product	MTP	Main trading partner
GVA	Gross value added	PJSC	Public Joint-Stock Company
STSU	State Treasury Service of Ukraine	VAT	Value-added tax
SCSU	State Customs Service of Ukraine	PIT	Personal income tax
CD	Certificate of deposit	FDI	Foreign direct investment
SESU	State Employment Service of Ukraine	REER	Real effective exchange rate
SSSU	State Statistics Service of Ukraine	U.S.	United States of America
STA	Single Treasury Account	TNC	Transnational corporation
EU	European Union	Fed	Federal Reserve System
ECB	European Central Bank	BoA	Bank of America
CPI	Consumer price index	ECPI	External Commodity Price Index
BAOI	Business Activity Outlook Index	EM	Emerging markets
IT	Information technologies	EMBI	Emerging Markets Bond Index
CMU	Cabinet of Ministers of Ukraine	IIF	Institute of International Finance
QPM	Quarterly Projections Model	PMI	Purchasing Managers' Index
IMF	International Monetary Fund	UAwCPI	Weighted average of the CPI in Ukraine's MTP countries
ILO	International Labour Organization	UAwGDP	Weighted average of economic growth in Ukraine's MTP countries
MFU	Ministry of Finance of Ukraine	UIIR	Ukrainian Index of Interbank Rates
NBU	National Bank of Ukraine		
NEER	Nominal effective exchange rate		
NFC	Nonfinancial corporation		
OPEC	Organization of the Petroleum Exporting Countries		
		pp	percentage point
m	million	bbl	barrel
bn	billion	yoy	in annual terms; year-on-year change
UAH	Ukrainian hryvnia	qoq	in quarterly terms; quarter-on-quarter change
USD	US dollar	sa	seasonally adjusted
p	point	mom	in monthly terms; month-on-month change
			month-on-month
bp	basis point	RHS	Right-hand scale