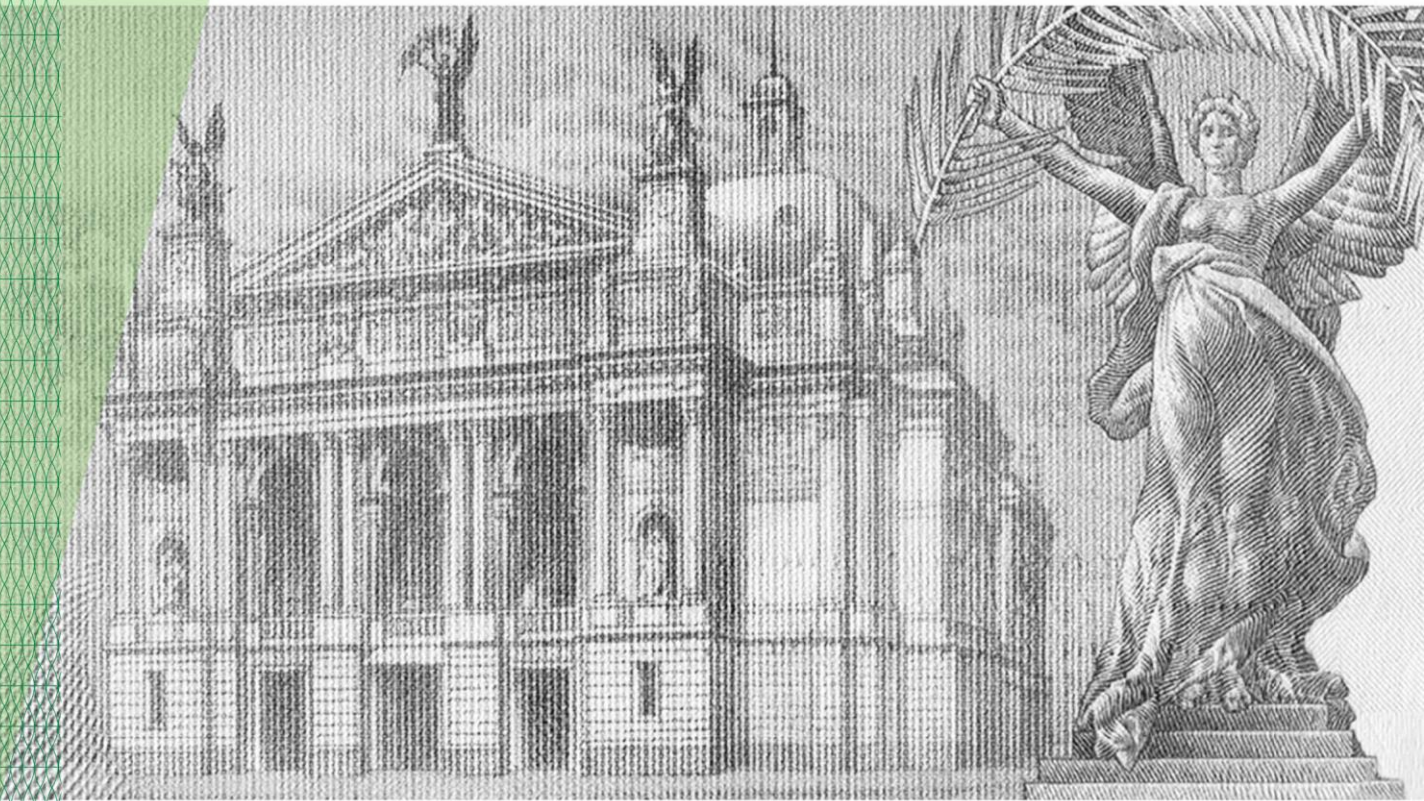




National Bank
of Ukraine

Inflation Report

October 2019



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 the data in this report is 23 October 2019.

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 24 October 2019¹.

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. 795-D *On Approval of the Inflation Report* dated 24 October 2019.

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Summary

Inflation pressures continued to subside thanks to a tight monetary policy

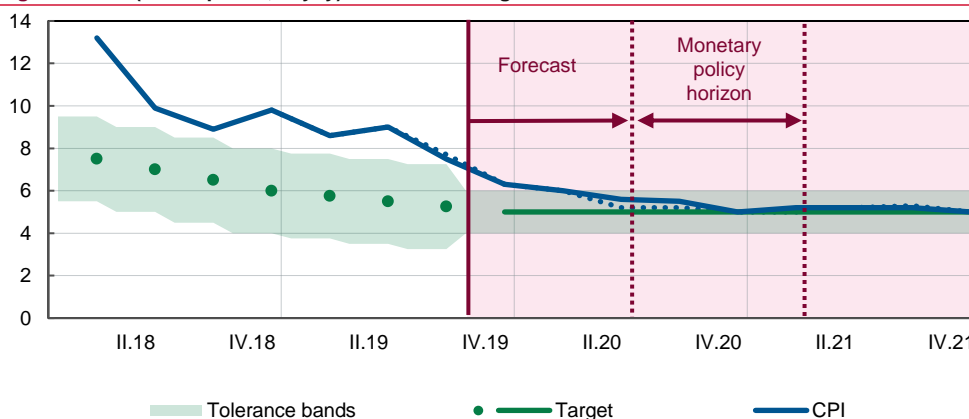
Consumer inflation decelerated year-on-year over the course of Q3 2019. In September 2019, inflation dropped even faster (to 7.5% yoy) than the NBU projected in its [July 2019 Inflation Report](#).

The rapid slowdown in core inflation (to 6.5% yoy) indicates that underlying price pressures are gradually easing, restrained by tight monetary conditions. The tight monetary policy was among the reasons behind the strengthening of the hryvnia exchange rate and an improvement in inflation expectations. This outweighed the impact of other pro-inflationary factors, such as sustained consumer demand. Non-core inflation also decelerated, due to the strengthening of the hryvnia and a fall in global energy prices. Although persisting, pressures from the supply of some foods also eased noticeably at the end of the quarter.

Consumer inflation will continue to decelerate and will return to its target range in early 2020

Consumer inflation will decline to 6.3% by the end of this year, reaching the target range of $5\% \pm 1$ pp in early 2020. It is expected to meet its medium-term target of 5% at the end of 2020.

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



Source: SSSU, NBU staff estimates.

By the end of 2019, core inflation will decelerate more quickly (to 5.3%) and fuel prices will drop, driven by a stronger hryvnia than expected earlier. Administered prices will also grow at a slower pace in 2019 (11.7%), mainly due to lower prices for imported gas. Meanwhile, upward pressures on inflation will persist due to some supply shocks on the food market (mostly from the supply of fruit and vegetables), as a result of which the forecast for raw food prices has been revised upward, to 7.2%. Therefore, considering the mutually compensating effect of these factors, the NBU has left its 2019 year-end inflation forecast unchanged.

As this year, the rather tight monetary stance will continue to push inflation down, to 5%, in 2020–2021. Despite the gradual reduction in the key policy rate, its real value will remain high on the back of improved inflation expectations. Relatively higher real interest rates will continue to make hryvnia financial instruments attractive to investors and thus support the exchange rate of the hryvnia. As a result, more favorable FX market conditions than expected will offset the pressure on prices from domestic demand, which, according to the new forecast, will be somewhat higher than predicted earlier.

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

Other factors behind gradual disinflation will include:

- a prudent fiscal policy
- relatively low energy prices on the global markets
- an increase in food supply, driven by higher productivity in the Ukrainian agricultural sector.

Core inflation will slow to 3.7–3.8% in 2020–2021. Administered prices will continue to grow at a rather fast pace (about 10%), due to excise duty rates on tobacco and alcohol being brought to European levels. Raw food prices are expected to grow moderately (3–4%), provided there are no significant supply shocks, including those arising in the global markets.

Economic growth accelerated markedly in Q2 2019

In Q2 2019, real GDP growth accelerated to 4.6% yoy, the highest rate in the last three years. Major drivers were growth in private consumption on the back of higher wages and pensions, improved consumer sentiment, and the bumper harvest of early grain crops. In contrast, the impact of investment demand weakened temporarily, as expected, owing to a deterioration in companies' business expectations and the completion of several large investment projects. Economic growth amid a greater supply of labor contributed to higher employment and lower unemployment.

According to the NBU's estimates, economic growth decelerated in Q3, dragged down by the weaker performance of some key sectors. Domestic demand, from both consumers and investors, continued to play an important role in supporting economic growth, as evidenced by robust growth in the domestic trade, transportation and construction sectors. Growth in the agricultural sector also remained robust, propelled by the better harvest of late grain crops and oilseeds. Conversely, the performance of the industrial sector weakened in the wake of less favorable external conditions for exporters.

In spite of that, the current account deficit narrowed over the first eight months of 2019 compared to the same period last year. This resulted, among other things, from more rapid growth in exports of goods due to the bumper harvest of early grain crops, which offset the adverse impact of unfavorable external conditions. Although speeding up gradually, the growth in imports of consumer and investment goods remained moderate on balance, on the back of a drop in energy prices.

The continued growth in wage receipts from abroad and lower dividend payments were additional factors. Capital inflows were strong in both the public sector (due to the sustained inflows of nonresident investment in hryvnia domestic government securities) and in the private sector. These inflows helped finance the current account deficit and offset payments made on IMF loans. As a result, international reserves were little changed over the course of the year, totaling USD 21.4 billion as of the end of September (3.4 months of future imports).

Ukraine's economy will grow steadily at 3–4% in 2019–2021

Economic growth will accelerate to 3.5% in 2019 (from 3.3% in 2018). Another record harvest of grains, robust domestic demand, and lower energy prices will compensate for the slower growth in the global economy and trade, as well as for the less favorable price environment faced by Ukrainian exporters.

The economy will keep growing at the rate of 3.5% next year. In 2021, the growth will accelerate to 4% thanks to monetary policy easing, active investment activity, solid consumer demand, and the launch of the land market in late 2020. A significant decline in natural gas transit from Russia to the EU through Ukraine will be a drag on GDP growth.

Compared to its July projections, the NBU has revised its real GDP growth forecast upwards for the entire forecast horizon: to 3.5% for 2019 and 2020 (from 3.0% and 3.2%, respectively) and to 4.0% for 2021 (from 3.7%). The revision is connected to firmer domestic demand, higher productivity in agriculture, and brighter consumer sentiment.

The current account deficit will remain sustainable

Despite the stronger hryvnia, the current account deficit in 2019 will narrow to 2.9% of GDP, thanks to the bountiful grain harvest and an improvement in the terms of trade. In 2020–2021, the current account deficit will widen slightly, as a result of a decrease in natural gas transit and less favorable global commodity prices (lower iron ore prices and gradually rising energy prices).

The NBU will gradually ease its monetary policy, while taking into account the need to meet the inflation target of 5%

In view of lower inflation risks and better inflation expectations, the NBU Board reduced the key policy rate two times in Q3 2019, by a total of 100 bp, to 16.5% per annum. A more rapid decline in underlying inflationary pressures and the balance of risks remaining unchanged since the previous meeting in September created room for a somewhat faster monetary policy easing this year than envisaged in the July macroeconomic forecast. The NBU Board decided to cut its key policy rate to 15.5% effective 25 October 2019.

As in the July's Report, the NBU's forecast scenario sees the key policy rate decreasing further to a neutral level of 8% (in nominal terms) in 2021, provided that inflation steadily declines towards the 5% target. The pace of rate cuts will be the fastest in 2020, in line with inflation returning to the target range and inflation expectations improving. However, the projected path of the key policy rate for the coming quarters has shifted somewhat downward compared to the July's forecast, given a more significant cut in October.

The underlying assumption of the macroeconomic forecast is further cooperation with the International Monetary Fund under a new program

With interest rates remaining attractive, the signing of a new IMF cooperation program by the end of 2019 will allow Ukraine to receive other official financing, improve access to international capital markets, and support investor interest in Ukrainian assets. These borrowings will make it possible for the government to finance large repayments on external public debt in 2019–2021. This will also foster foreign investment inflows into the private sector. As a result, notwithstanding the large external debt repayments, international reserves will range at around USD 23–24 billion in the coming years, which is sufficient to cover three months of future imports.

A delay in entering into a new cooperation agreement with the IMF and increased threats to macrofinancial stability – mainly due to Ukrainian court rulings – pose the key risks to the forecast

The following risks also remain important:

- a complete halt of the transit of Russian gas through Ukraine
- intensified trade tensions and more turbulent global commodity and financial markets
- an escalation of the military conflict and new trade restrictions introduced by Russia.

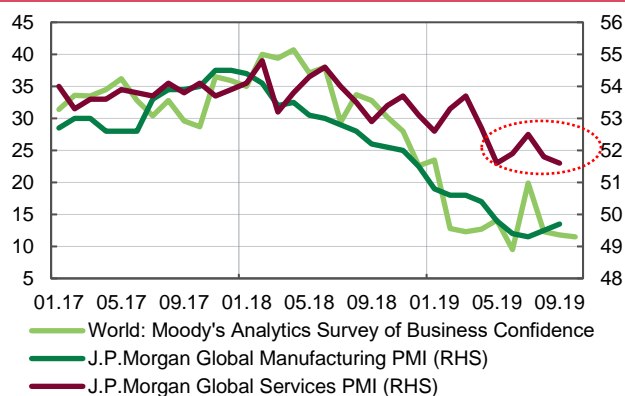
If materialized, these internal and external risks could worsen exchange rate and inflation expectations, and make it harder for Ukraine to access the international capital markets at a time when debt repayments are peaking. As a result, the key policy rate would approach the level of 8% at a slower pace than assumed in the baseline scenario.

At the same time, a quicker reduction in the rate is also possible. That would be driven by a faster implementation of key internal reforms, such as those envisaged in the memorandum of understanding signed by the Ukrainian government and the NBU, and the judicial reform required to establish the rule of law in Ukraine.

Part 1. External Environment

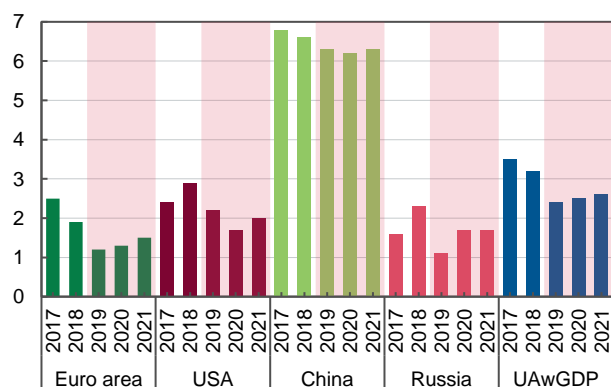
- Trade tensions and geopolitical uncertainties have exacerbated negative processes in the global economy. Weak external demand and slower growth in global trade were the main factors behind lower commodity prices in Q3 2019. Further on, supply factors will prevail.
- A significant monetary policy easing by the leading central banks in Q3 was favorable for emerging markets and will positively influence their economies over the forecast horizon.

Figure 1.1. Global PMI and World Business Confidence



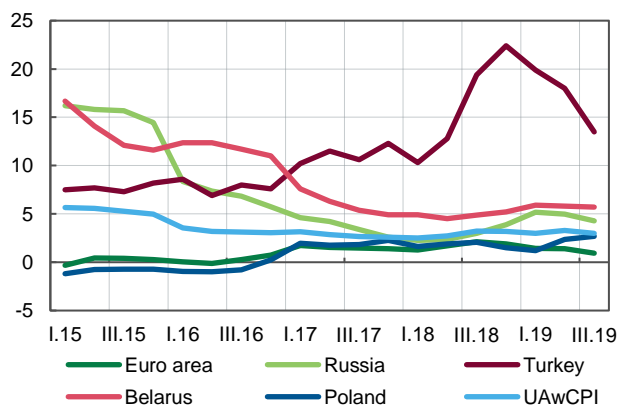
Source: IHS Markit, Moody's.

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



Source: National Statistical Offices, NBU staff estimates.

Figure 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 Offices, NBU staff estimates.

Economic Activity

Trade wars – primarily the confrontation between the United States and China – continue to adversely affect production and trade. Activity in the services sector, which was rather stable at the start of the year, is also weakening. The global trade indicator [Goods Trade Barometer](#) has been below trend for 12 rolling months already. [The Business Confidence Index](#) was close to the survey record low. According to the Global Composite PMI, growth in production and services as of the middle of Q3 was the weakest in the past three years.

U.S. economic growth remained strong in Q2 2019, although decelerated, as expected. Inflation was close to the 2% target, at 1.7% yoy in September. The unemployment rate was at a multi-year low, which made room for the Fed to ease its monetary policy. That will support the economy in the coming periods, as will a strong pro-cyclical fiscal stimulus provided by tax cuts in 2017, and a number of recent legislative changes³. However, economic growth in the United States will slow as the effects of reducing the tax load disappear and trade wars continue.

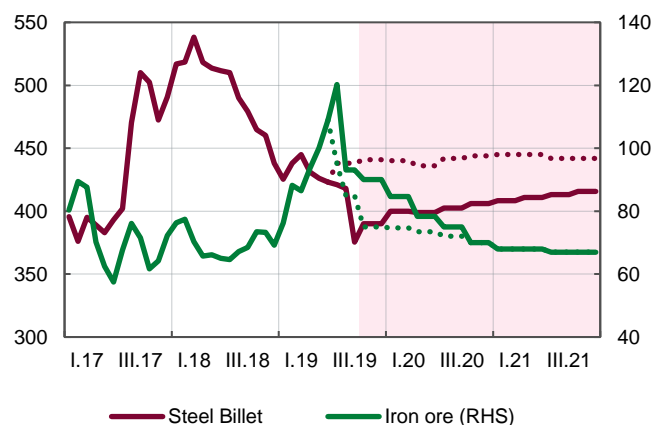
Economic growth in the euro area remained sluggish in Q2 because of weak global trade and uncertainty over Brexit. At the same time, the economy is expected to recover gradually thanks to the monetary and fiscal stimulus.

EMs were also affected by decreased external demand and lower trade volumes. For example, in China, stimulus measures taken by the government supported domestic production and demand, but did not prevent a deceleration in economic growth. Against this background, the countries of Central and Eastern Europe (CEE) stood out. Their economic growth accelerated and will remain relatively stable over the forecast horizon. Higher household income will support consumption, in particular thanks to rises in wages in the public sector, as well as in pensions and social benefits. Inflation will remain close to its target values, which allows keeping monetary policy loose. Labor shortages will encourage companies to invest, which will contribute to higher productivity. Moreover, gradually decreasing EU funds are expected to be replaced with domestic government investments.

Trade wars will remain a major drag on global economic growth. The cyclical recovery in advanced economies is

³ According to [an update of the report of the Congressional Budget Office \(CBO\) from August 2019](#), due to the enactment of the Bipartisan Budget Act of 2019 and several other legislative acts, the forecast for the U.S. federal budget deficit for 2020–2021 was revised upwards, to 4.5%–4.6% of GDP, from the 4%–4.2% of GDP stated [in the previous report](#), which will lead to faster debt growth (80.7%–82.4% of GDP versus 79.5%–81% of GDP).

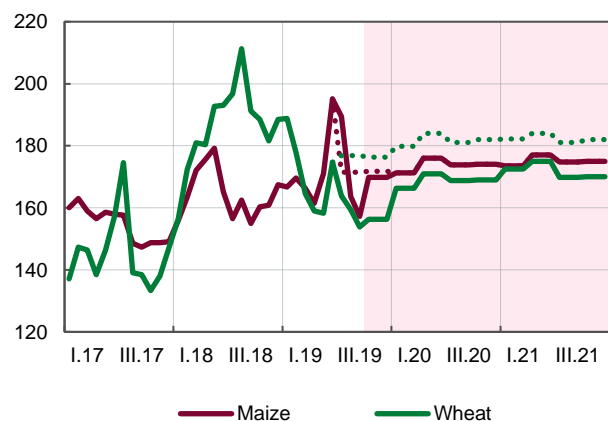
Figure 1.4. World prices for ferrous metals and iron ore*, USD/MT, quarterly average



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

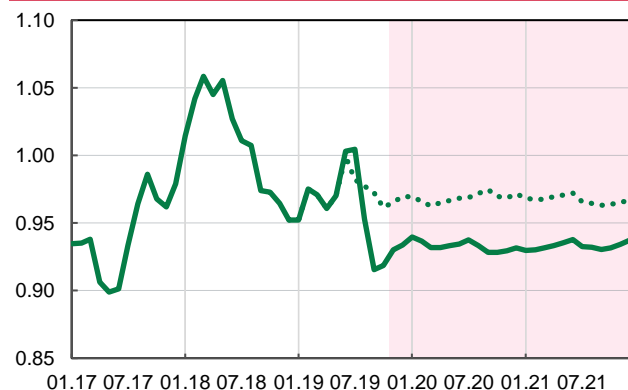
Source: Refinitiv Datastream, NBU staff estimates.

Figure 1.5. World grain prices, USD/MT, quarterly average



Source: Refinitiv Datastream, NBU staff estimates.

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



Source: NBU staff estimates.

projected to lose momentum as they approach their potential output level. Growth in the Chinese economy will slow as it rebalances away from investment-driven growth to consumption. At the same time, a more favorable environment on the global financial markets following monetary policy easing by the leading central banks will support growth in the global economy. Economic growth in Ukraine's main trading partners (MTPs), as measured by the UAWGDP index, will accelerate gradually over the forecast horizon, on the back of the recovery in the euro area and some EMs (Turkey, India, Russia) and steady growth in CEE countries.

Global Commodity Markets

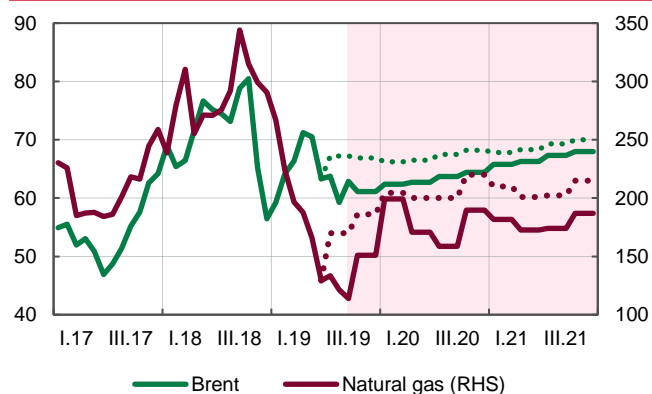
Global commodity prices continued to decline on the back of weak external demand and slower growth in global trade. According to Global Steel Users PMI, conditions have been worsening for the metallurgical industry for almost a year already, primarily due to a decrease in new orders. On the other hand, supply remained solid, although production grew somewhat more slowly. Prices will continue to decline, owing to an oversupply on the market and weak external demand. In the meantime, the price decline will be contained by Chinese government financing, which will fuel high domestic demand in that country, as well as by relatively high prices for iron ore. However, iron ore prices will also drop as Australia is gradually increasing its production and mines in Brazil resume operation.

Prices of grain, especially wheat, fell sharply after the new harvest entered the market. According to USDA estimates, the global wheat harvest will be record-breaking in the 2019/2020 marketing year. That will keep prices under pressure not only in the current marketing year, but also in the next one because of large carry-over stocks. On the other hand, lower supply, primarily from the United States, will support corn prices.

As a result, the external price environment for Ukrainian exporters, as expressed by the external commodity price index (ECPI), deteriorated both in Q3 and over the forecast horizon.

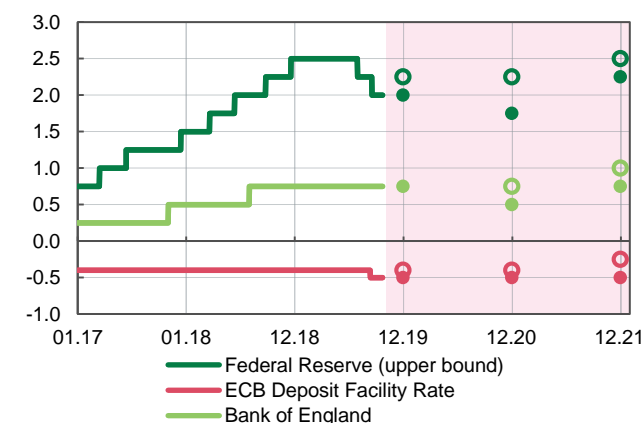
Influenced by geopolitical conflicts and trade wars, crude oil prices were quite volatile in Q3, declining as of the end of the quarter. If geopolitical conflicts persist, the implementation of OPEC+ agreement will push prices upwards in the coming periods. However, the price growth will be moderate due to weaker demand for oil and increased production in the United States. Natural gas prices continued to fall rapidly on the back of low demand and further growth in production volumes in the United States and Russia. Increased geopolitical tensions in the Middle East put upward pressure on natural gas prices. In addition, uncertainties over a potential halt in Russian gas transit through the Ukrainian gas pipe system in Q1 2020 will cause a price jump on the European market. Further on, prices will undergo a correction followed by a weak uptrend, owing to an increase in demand for gas, as it is considered more environmentally safe than oil.

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



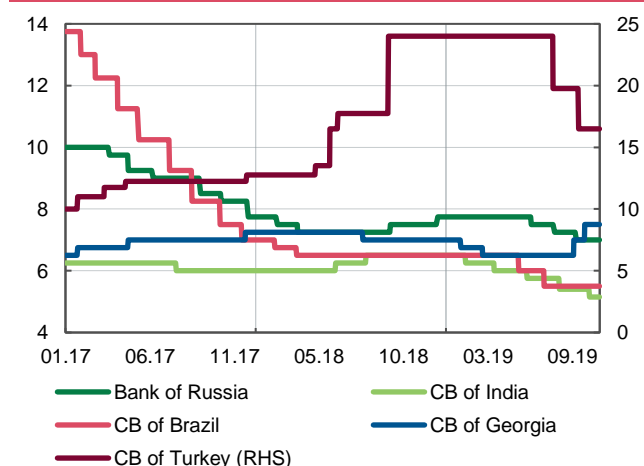
Source: Refinitiv Datastream, NBU staff estimates.

Figure 1.8. Key policy rates of major central banks and ECB deposit facility rate*, %



* Fill points - current forecast, unfilled points - previous.
Source: official web-pages of central banks, NBU staff estimates.

Figure 1.9. Key policy rates in selected EM, %



Source: official web-pages of central banks.

Financial Conditions

An escalation of trade wars in Q3 led to an increase in demand for safe assets and capital flight from EM stocks (USD 13.9 billion in August alone according to the IIF). Risk premia increased sharply as yields on long-term U.S. treasury bonds declined. The increase was the most significant for countries, the assets of which are considered the riskiest due to macroeconomic or political problems (e.g., Turkey). At the same time, the situation on the bond market was more benign than that on the stock market, despite a decline in investor interest. That was due to the perceived safety of bonds as a fixed income asset class. Another factor was investors' exit from U.S. and Chinese stocks.

At the same, monetary policy easing by the leading central banks, the Fed and the ECB, outweighed investors' fears regarding the slower growth of the global economy. A more ample global liquidity amid low or negative yields on bonds of developed countries contributed to renewed net inflows of foreign capital to EMs.

Thus, central banks in some EMs also eased their monetary policies. In particular, the central banks of Russia, Belarus, Turkey, India, Mexico, and Brazil reduced their benchmark rates on the back of lower inflation and slower economic growth.

The Fed and the ECB are expected to continue easing their monetary policies next year in view of the weak macroeconomic environment. A gradual recovery in economic activity and higher inflationary pressures will allow the central banks to switch to monetary policy normalization no earlier than in late 2020 or early 2021. As a result, financial conditions will be better than expected for EMs over the forecast horizon.

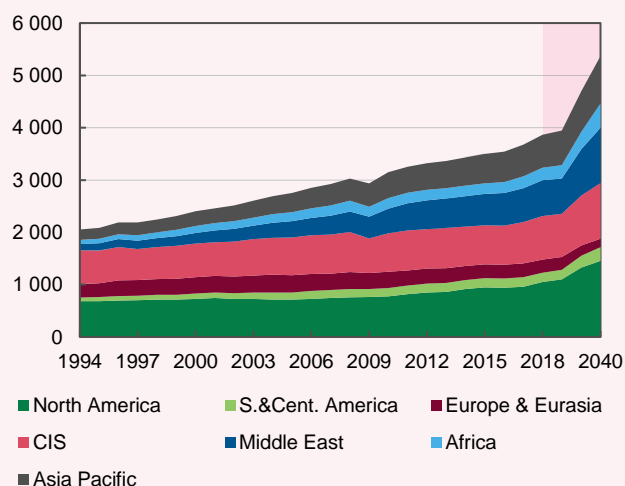
Box 1. Pricing on the European Natural Gas Market and the Link to Oil Prices

Prices of natural gas and crude oil had been moving in sync for an extended period. However, their interdependence recently became significantly weaker. Prices were even moving in opposite directions in some periods of this year. This is due to a sizeable increase in gas supply on the back of the shale revolution, tensions between the major players on the gas market, and regulatory changes on the European market that contributed to a gradual revision of the pricing system, with the aim of putting greater weight on gas spot prices and prices of liquefied natural gas. All of the above is leading to the formation of the global gas market, which is gradually detaching from the crude oil market. On the other hand, the oil market remains strongly dependent on the compliance with the OPEC+ agreement and other geopolitical factors, despite there being a generally large supply. Apart from differences in supply factors, an increase in demand for gas, as a more environmentally safe energy resource compared with oil and petroleum products, will remain a major factor behind the weaker correlation between the prices of oil and gas.

Natural gas is a relatively new type of fuel, and its development and production requires sizeable amounts of investment and spending on infrastructure. For this reason, there is still no integrated global gas market, while regional markets use different pricing mechanisms.

Pricing mechanisms based on the so-called Groningen model have dominated the gas markets of continental Europe for more than a half a century. The concept was developed in the Netherlands in the early 1960s. Its main aim was to minimize the noncommercial risks of investing in field development and to bring the duration of guaranteed gas sales close to the period of optimal exploitation of a gas field in terms of the maximum drawdown in stockpiles. The pricing model envisaged using special formulas (set forth in long-term export contracts) to peg contractual gas prices to the prices of energy resources that are close substitutes for gas for final consumption. At first, gas prices were mainly pegged to mazut (40%) and diesel fuel (60%). Later, oil was added to the list, resulting in the co-movement of oil and gas prices.

Figure 1. World natural gas production by region*, billion cu.m



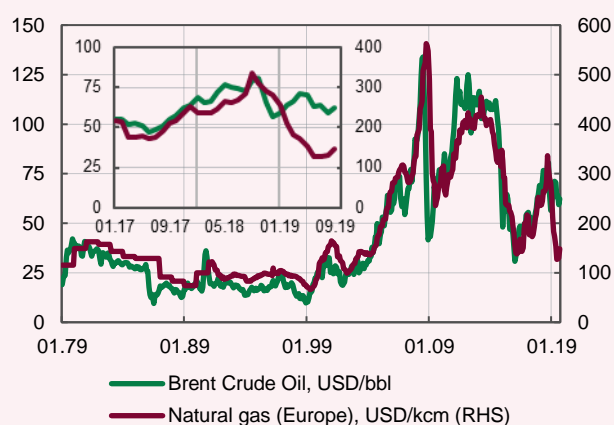
* Excludes gas flared or recycled.

Source: British Petroleum, Cedigaz, FGE MENAgas service.

The Groningen pricing model proved to be highly adaptive to changes on the energy market. Europe continued to use this model even after numerous oil crises, which saw significant drops in oil prices (e.g., to 9.5–9.8 USD/bbl in 1986 and 1998), periods of regulatory changes in the EU gas sector, and other market changes.

The onset of the shale revolution in North America in 2012, when there was an increase of gas supplies to Europe not related to long-term contracts, led to certain changes in the gas price calculation. Whereas previously only the production cost of crude oil and petroleum products influenced gas prices, some countries began to apply spot contract prices and liquefied gas prices to the calculation. As a result, the correlation between crude oil and natural gas prices weakened, with prices even moving in opposite directions during some periods.

Figure 2. Brent crude oil and European natural gas prices



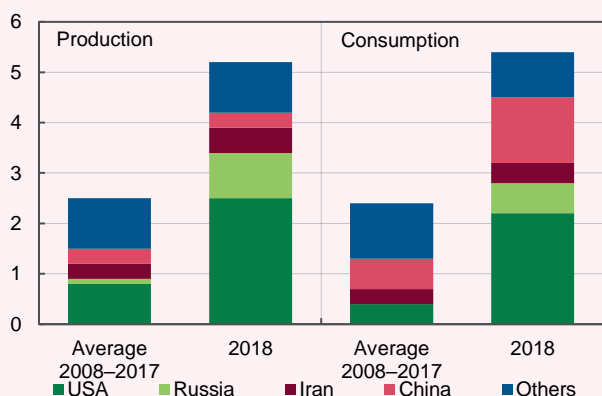
Source: World Bank, NBU calculations.

This effect is mostly explained by the extremely strong dependence of the oil market on geopolitical factors and the constantly growing global supply of natural gas. That said, the gas supply has also been growing through the extraction of associated gas, which is a by-product of oil production. Due to the ban on flaring off associated gas, which was imposed for environmental reasons, oil producers started to use it actively to produce electricity and chemicals.

Overall, in 2018, global production of natural gas hit a record of 190 billion cu. m, or 5.2% yoy, which was the highest level in almost thirty years. The United States accounted for around half of this growth, while the year-on-year growth hit an all-time high. The United States is expected to continue increasing production, despite weak growth in its domestic consumption. Natural gas production is also on a rise in other countries: Russia increased its production by 5.3%, Iran by 8.8%, and Australia by 15.3%.

Gas consumption also grew at a fast pace in most regions of the world (by 4.2% yoy in 2018), in part because gas is less damaging to the environment than petroleum products.

Figure 3. Global natural gas production and consumption growth, %

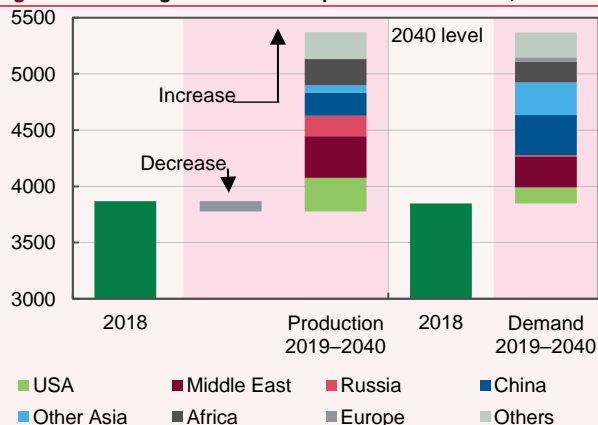


Source: British Petroleum, NBU calculations.

As energy is an integral part of modern life, global demand for energy resources is expected to continue growing. However, unlike in previous periods, the interdependence between oil and gas prices will continue to weaken. This will be driven by the following factors:

- higher demand for more environmentally safe types of energy. The U.S. Energy Information Administration (EIA) estimates that demand for natural gas will grow by around 1.3% annually over the next five years, while the growth in demand for oil and petroleum products will slow significantly. China will account for approximately 40% of the growth in demand for gas, as it gradually stops using coal under the Blue Sky program to improve air quality and switches to using natural gas in industrial production

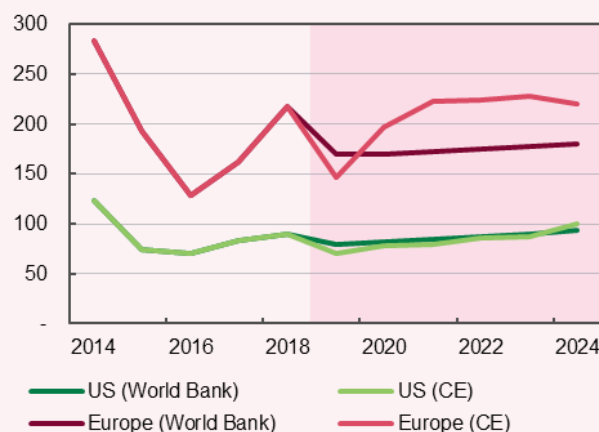
Figure 4. Natural gas demand and production forecast, billion cu.m



Source: British Petroleum, NBU calculations.

- a high probability of stronger mismatches on the European gas market. According to the IEA, Europe may face gas shortages in five years, due to further decreases in its own production. The depletion of Groningen gas field and gas fields in the North Sea will create an additional gap of around 50 billion cu. m per year. Europe is projected to cover this gap with increased imports of gas from both traditional and innovative sources, which will push prices upwards
- a stronger link between gas prices and gas exchange prices in the National Balancing Point (UK), Europe’s most liquid trading platform for gas

Figure 5. Natural gas prices, forecast, USD/kcm



Source: World Bank, Consensus Economics, NBU calculations.

- a large increase in the global supply of gas. Liquefied gas from the United States will make the largest contribution to the increase in supply. China, Iran, and Egypt will also ramp up their gas production, but it will be almost entirely consumed domestically in these countries.

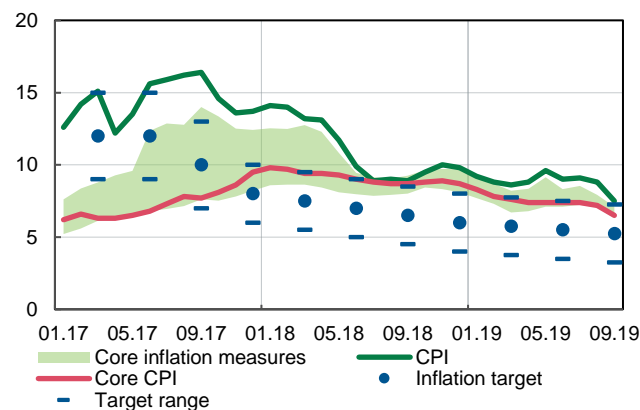
The rapid development of the natural gas market and the entry of new players to it will restrain the pressure from higher demand for gas fueled by the growing worldwide popularity of low-carbon energy (including natural gas). As a result, gas prices will grow moderately (by around 1.6% annually, according to World Bank estimates), and the interdependence between oil and gas prices will continue to weaken.

Part 2. Ukrainian Economy: Current Trends

2.1. Inflation Developments

- Consumer inflation declined in Q3 2019: headline inflation slowed to 7.5% yoy, and core inflation to 6.5% yoy. In September the decline was even faster than the NBU had projected in its July 2019 Inflation Report.
- Tight monetary policy remained a major factor in restraining the underlying pressures on prices, including through the exchange rate channel and inflation expectations. Most components of noncore inflation were also below the forecast thanks to the strengthening of the hryvnia and a fall in energy prices.
- However, upward pressures on prices from consumer demand and the supply of some foods persisted, although the effect of the latter weakened noticeably at the end of the quarter.

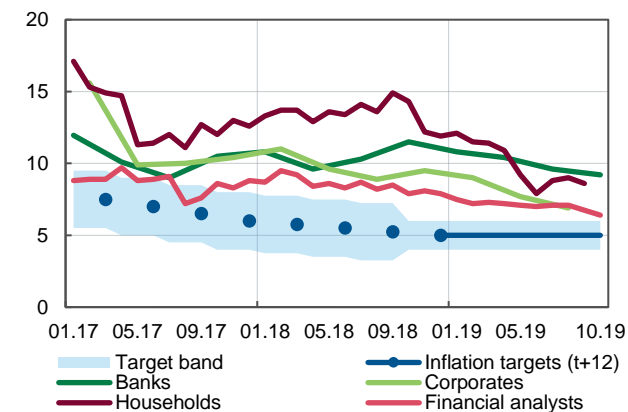
Figure 2.1.1. Underlying inflation trends*, % yoy



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

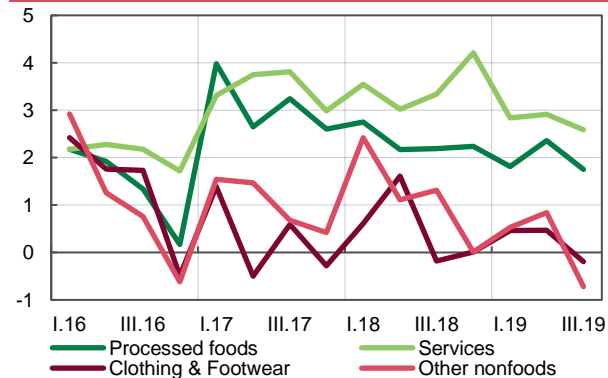
Source: NBU staff estimates.

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



Source: NBU, GfK Ukraine.

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



Source: SSSU, NBU staff estimates.

Underlying Inflation Pressures

In Q3 2019, core inflation declined (to 6.5% yoy in September), which was generally in line with the forecast the NBU published in its July 2019 Inflation Report. Tight monetary policy was a strong factor holding back the underlying pressures on prices, in particular through the exchange rate channel. The growth in nonfood prices slowed to 0.4% yoy, thanks to favorable FX markets. These were mainly the prices of imported goods, or goods with a significant import share in their production costs. As a result, prices for furniture, pharmaceuticals, and bicycles grew more slowly, while cars, home appliances, and computer equipment became cheaper. Moreover, the appreciation of the hryvnia also impacted the prices of services, food products, and other goods with import-driven costs.

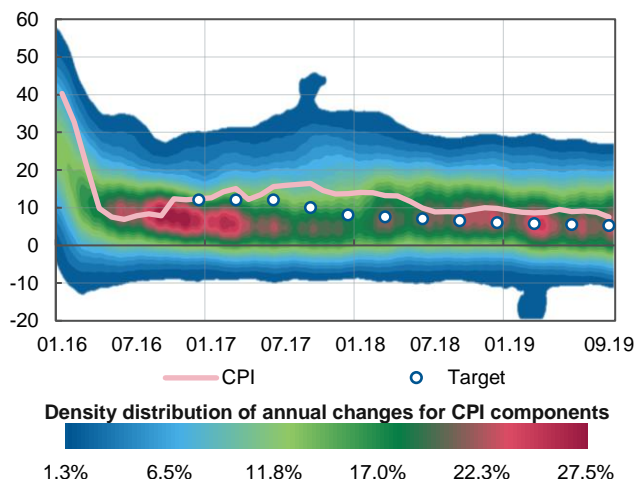
Inflation expectations mostly improved across the majority of respondent groups in reaction to the tight monetary policy, the strengthening of the hryvnia, slower actual inflation, and the easing of political uncertainty. As seen from the results of the [Business Outlook Survey](#), the perceived impact of the exchange rate on producer prices continued to weaken in Q3 2019. Moreover, inflation expectations of corporates and financial analysts for the following 12 months approached the upper bound of the NBU's target range of 5% ± 1 pp. At the same time, the inflation expectations of bank credit managers, despite some improvement, remained high. Households' inflation expectations even grew compared to the end of the previous quarter, which may be explained by the faster growth in raw food prices in spring⁴.

Despite positive developments, inflation pressures remained strong, supported by high consumer demand and the continued growth in labor costs. According to surveys, in Q3, businesses reported a significantly higher impact of demand for their products on their selling prices, while the factor of labor costs has been at around 55% for the third consecutive quarter.

These were the main factors limiting the decline in inflation for both services with market prices and those with administered prices. Notwithstanding a slowdown, market services prices continued to grow at a fast pace (13.1% yoy in September). The price growth of cinema tickets, mobile

⁴ According to NBU staff estimates, the correlation between the inflation expectations of households and the annual change in prices for raw foods, with a six-month lag, is around 60%.

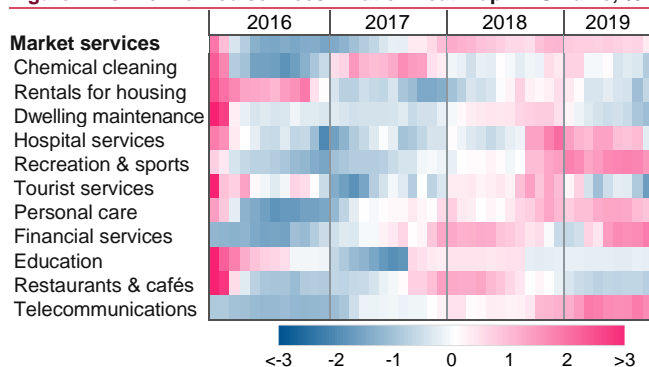
Figure 2.1.4. CPI, inflation targets and distribution of annual changes for CPI components*, % yoy



* The contour plot shows the density of the distribution of data points. Distribution density indicates the probability that a data point falls within a specified range of values.

Source: SSSU, NBU staff estimates.

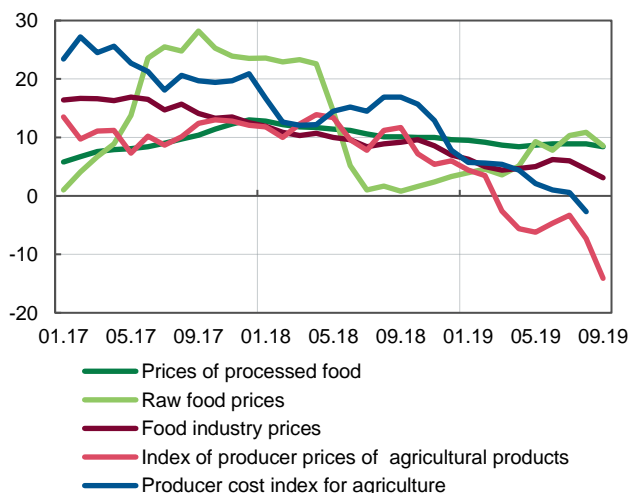
Figure 2.1.5. Normalized services inflation heat map* in Ukraine, %



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

Source: SSSU, NBU staff estimates.

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



Source: SSSU, NBU staff estimates.

communications, financial services, insurance, and outpatient care even accelerated.

Supply Factors

In Q3, the impact of supply factors on prices remained significant, although some of these factors weakened at the end of the quarter (particularly the factor of vegetable supply). As a result of a limited supply of some vegetables, the growth in raw food prices accelerated over the quarter, but slowed in September (to 8.6% yoy). An increase in supply slowed the rise in prices for most vegetables, including onions, tomatoes, zucchinis, and eggplants. Cucumbers and bell peppers were even cheaper than a year ago. Potato prices bucked the trend, more than doubling due to a poor harvest. The prices of apples also grew sharply on the back of a tighter supply compared to last year.

Among other factors, an ample harvest of grains sent prices for crop products plunging further (16.6% yoy). That led to slower growth in flour prices, which, coupled with lower energy prices, supported a decrease in the growth rates of producer and retail prices of bread. The bumper harvest of grains and higher competition on external markets impacted poultry prices: prices for chicken meat grew much more slowly, and egg prices remained below last year's levels.

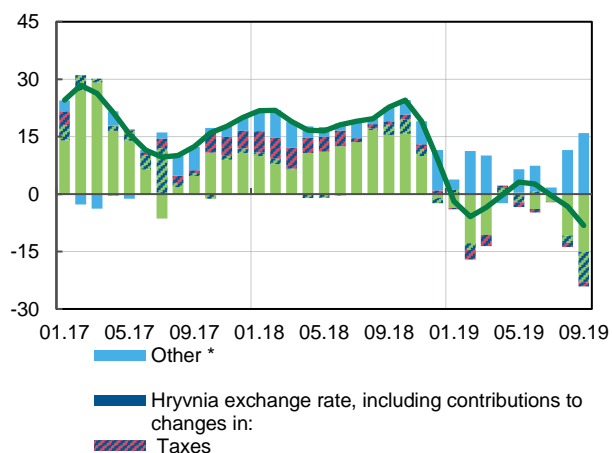
In contrast, a decrease in livestock spurred growth in the prices of other types of meat. The consumer prices of dairy products continued to rise, due to a year-on-year increase in global prices and a more pronounced decline in milk production. For the same reasons, producer prices were rising at a fast pace also in dairy production⁵.

Energy and Administered Prices

A decline in global energy prices and a favorable situation on the FX market had a positive impact on consumer inflation in Ukraine. Fuel prices continued to decrease in annual terms (by 8.2%), but still there remained ample room for a further decline. Firstly, the fuel excise tax is set in euros, but is paid in the domestic currency for goods produced in the customs territory of Ukraine. That said, the excise tax is calculated at the official exchange rate of the hryvnia as of the first day of the quarter in which the goods are sold, and remains unchanged until the end of the quarter. The hryvnia appreciation in Q3 will thus impact fuel prices in the next quarter. Secondly, the NBU estimates that administrative costs and retail markups grew in Q3. At the same time, their actual effect was lower, as fuel companies offer special discounts that [are not taken into account when recording prices in line with the SSSU methodology](#).

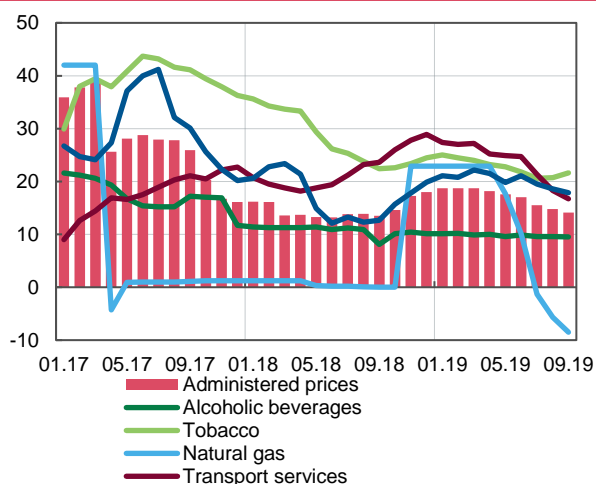
Global natural gas prices also continued to decline, which translated into lower gas prices for households (down by 8.5% yoy in September), thanks to [changes in the approach to calculating natural gas tariffs for households](#). Moreover, lower global gas prices enabled a cut in gas tariffs for industrial producers. As a result, prices for domestically produced crude oil and natural gas also kept declining. The

⁵ According to NBU staff estimates, changes in the prices of food, beverages, and tobacco products correlate most of all with the relevant PPI component. Read more in [the July 2016 Inflation Report](#), pages 16–17.

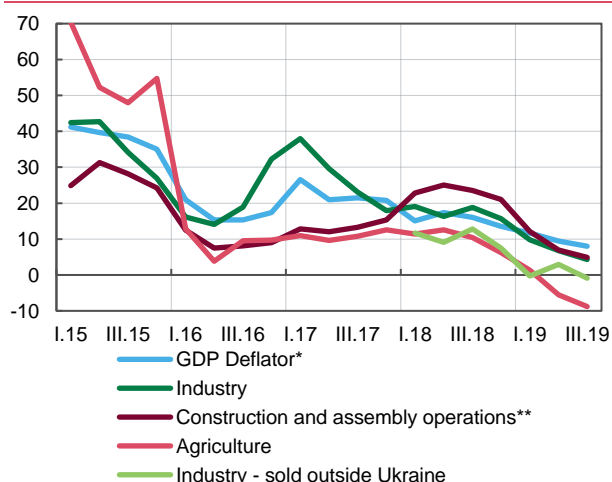
Figure 2.1.7. Factor decomposition of annual changes in fuel prices, pp

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

Source: Nefterynok, Refinitiv, SSSU, NBU staff estimates.

Figure 2.1.8. Components of administered price index, % yoy

Source: SSSU.

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

* Data for Q3 2019 – according to the NBU staff estimates.

** Data for Q3 2019 – covering two months.

Source: SSSU.

lower prices of hydrocarbons influenced subsequent links in the production chain: prices of chemicals decreased further, and coke and petroleum products were cheaper than a year ago.

The new electricity market was launched on 1 July 2019. As a result, electricity prices for industrial producers increased rapidly during the quarter, accelerating to 8.4% yoy in September. This did not have a direct impact on the CPI, as [the government imposed public service obligations on electricity market participants](#) with regard to mandatory sales of a part of the electricity generated at nuclear power plants and hydroelectric power plants until 31 December 2020, which among other things is aimed at keeping household tariffs unchanged. At the same time, second-round effects – higher production costs – will persist. As estimated by the NBU, the launch of the new electricity market for industrial producers will contribute 0.2–0.3 pp to annual consumer inflation in the first year of the market's operation.

Most other administered prices also grew at a slower pace. Prices for alcoholic beverages, water supply and sewage services, and road transport services also rose less rapidly. At the same time, the growth rates of tobacco products prices remained high, as excise taxes on these products increased by 9.0% from 1 July. Railway transport fares, especially those for commuter transport, rose at a faster pace.

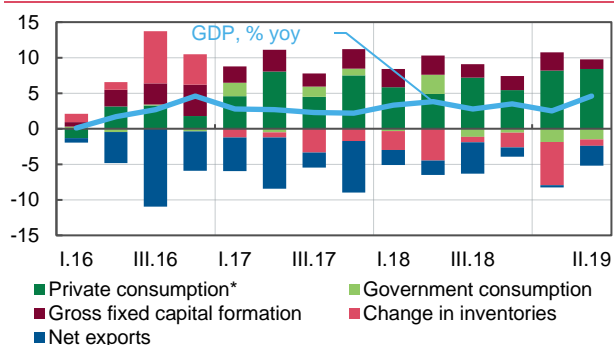
Other Measures of Inflation

Other price indices also indicated a weakening of price pressures in Q3 2019. In line with the global price trends for energy and commodities, that constitute the bulk of the Ukrainian exports, and the strengthening of the hryvnia, the prices of manufacturing products that are sold outside Ukraine decreased by 7.0% yoy (compared with a 3.7% yoy increase in June). Prices for domestically sold mining and metals products also grew more slowly. As a result, producer price inflation declined to 1.7% yoy, its lowest since the beginning of 2014. Prices grew more slowly in construction (4.6% yoy in August) and postal and communication services (18.1% in Q3). The NBU expects that the GDP deflator will slow further in Q3 2019, down from 9.4% yoy in Q2, on the back of weaker inflationary pressures in most sectors of the economy.

2.2. Demand and Output

- In Q2 2019, economic growth accelerated to 4.6% yoy, supported by a further pickup in consumer demand, a bumper harvest of early grain crops, and improved performance in the financial sector.
- According to the NBU's estimates, economic growth decelerated somewhat in Q3 (to 3.5% yoy) as the performance of the key sectors – primarily industrial production – weakened on the back of less favorable external conditions. Domestic demand continued to play a major role in supporting economic growth.

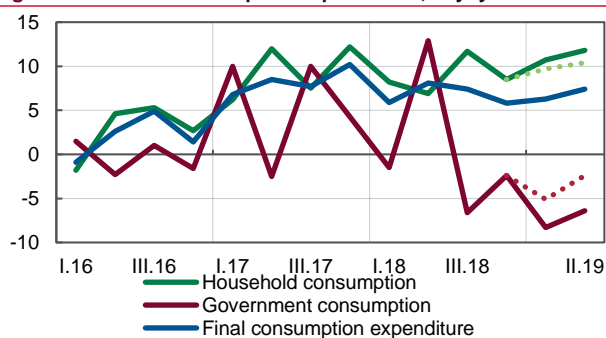
Figure 2.2.1. Contributions to annual GDP growth by final use, pp



* Including consumption expenditures of households and non-profit institutions serving households.

Source: SSSU, NBU staff estimates.

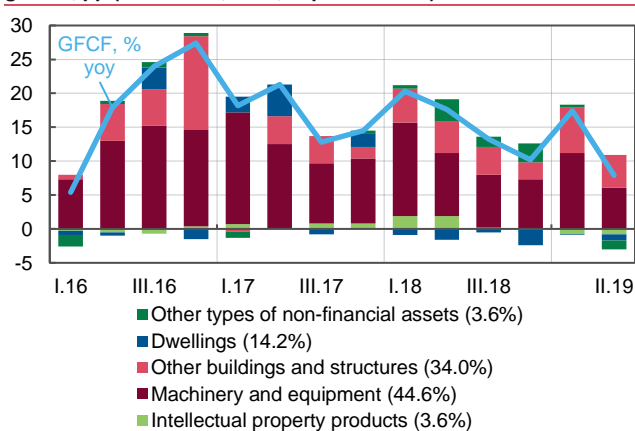
Figure 2.2.2. Final consumption expenditure*, % yoy



* Dotted lines reflect NBU staff estimates obtained by excluding the effect of monetization.

Source: SSSU, NBU staff estimates.

Figure 2.2.3. Contributions of non-financial assets to annual GFCF growth, pp (% of GFCF, 2018, in parentheses)



Source: SSSU, NBU staff estimates.

Aggregate Demand

In Q2 2019, real GDP increased by 4.6% yoy, which was the highest growth in the past three years. In quarterly terms, GDP grew by 1.6% sa.

GDP growth continued to be driven mainly by private consumption, which accelerated fueled by sustained growth in household income and a significant improvement in consumer confidence⁶ (read more in Box 2. "Consumer Confidence in Ukraine", on page 18).

Rapid growth in consumption of non-essential goods and services (clothing and footwear, furnishings, recreation and restaurant services) was a notable feature of this year. The faster growth in spending on foods can be explained by an increase in pensions, including through additional payments being made to the poorest social groups (pensioners receiving pensions of less than UAH 1,700). The effect of subsidy monetization persisted⁷, supporting growth in households' final consumption expenditure on utility services on the one hand, and – together with lower budgetary spending on utility subsidies – causing a decrease in the government's final consumption expenditure on the other.

The impact of investment demand weakened as expected. Growth in gross fixed capital formation slowed sharply in Q2, in particular due to a worsening in business expectations⁸ and the completion of some large private (construction of renewable energy facilities and repairs at mining and metallurgical companies) and public investment projects (construction of roads). Investment in machinery and equipment and in other buildings and structures grew more slowly. In view of the better financial performance of businesses in Q2⁹, the NBU considers that the weakening in investment activity was probably temporary.

In contrast to the previous year, in Q2 2019 demand for imported goods and services rose slightly faster than demand for domestic goods. That spurred growth in imports, which was additionally supported by larger gas purchases – needed to fill underground storage facilities. Exports of goods and services also increased on the back of a bountiful harvest of early grain crops, albeit at a slower pace than in the previous quarter. The slowdown in the growth in exports was mainly driven by a decrease in physical volumes of ferrous metals

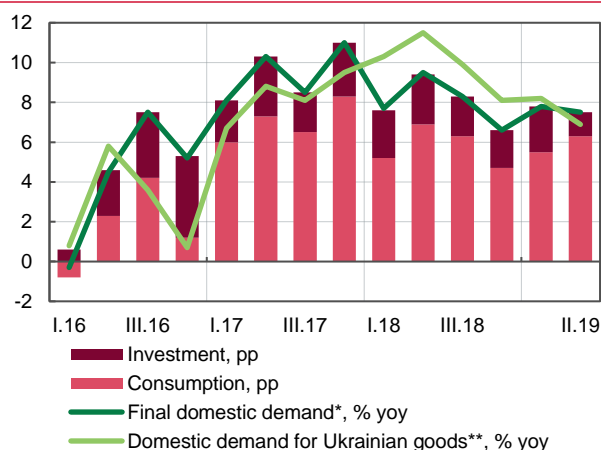
⁶ According to Info Sapiens, the consumer confidence index rose rapidly from the start of Q2 2019 to reach a 12-year maximum in September.

⁷ The subsidy monetization envisages accounting the monetary transfers as consumer spending by households, but not as expenditures of the government.

⁸ The Business Outlook Index (BOI) decreased to 117.8% in Q2 2019, down from 119.7% in the previous quarter.

⁹ Companies mainly use own funds to finance their capital investments: in H1 2019, more than 73% of all capital investments were financed with own funds of companies and organizations. Companies' financial results decreased by 7.1% yoy in Q1 2019 and grew by 23.4% yoy as of the end of H1 2019.

Figure 2.2.4. Contributions to annual percent change in domestic demand and domestic demand for domestically-produced goods and services

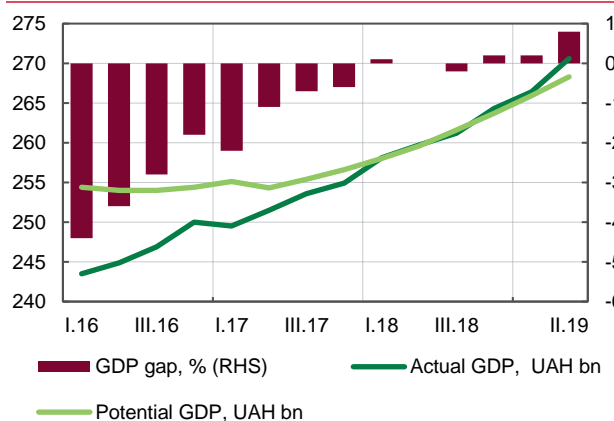


* Calculated as the sum of investment and consumption (in constant 2010 prices).

** Including services. Calculated as the difference between domestic demand and 65% of imports (in constant 2010 prices), as 35% of imports are used to produce exported goods and services according to NBU calculations.

Source: SSSU, NBU staff estimates.

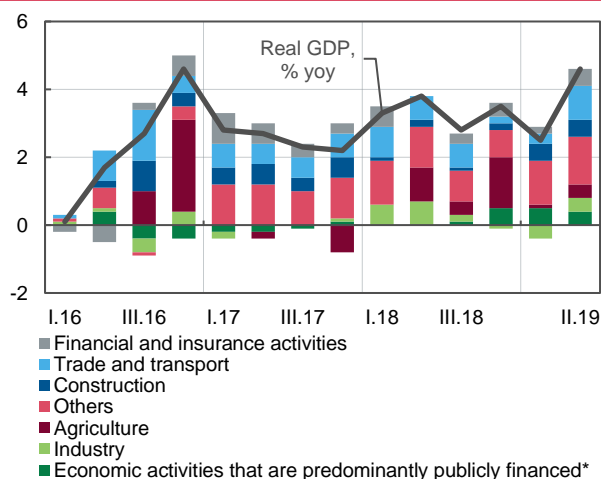
Figure 2.2.5. Output gap, %



* At constant 2010 prices, sa.

Source: SSSU, NBU staff estimates.

Figure 2.2.6. Main sectors' contribution to the annual percentage change in real GDP, pp



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

Source: SSSU, NBU staff estimates.

exports due to lower global prices and the repairs conducted at mining and metals companies. Moreover, the growth in physical volumes of last year's grain and oil crop exports moderated, as inventories were depleted due to the poor harvest of wheat in 2018 and significant volumes of exports in previous periods. As a result, the negative contribution of net exports to GDP growth rose to 2.8 pp. At the same time, the bumper harvest of early grain crops and increasing natural gas inventories reduced the negative contribution of inventories, which was an important factor behind the faster growth in real GDP.

The NBU estimates that last year the Ukrainian economy was close to its potential output level. The output gap turned positive at the end of 2018 and widened in Q2 2019 (to 0.8%). Thus, [according to the Business Outlook Survey](#), in 2019 around one quarter of businesses believed they would need to increase their production capacity in the event of an unexpected rise in demand (this response was most common among companies in the construction and mining industries). That means that the increase in domestic demand – especially consumer demand supported by rapid growth in wages and other household income – outpaced the growth in potential output, which pushed inflationary pressures upwards.

Gross Value Added

The agriculture sector made an important contribution to GDP growth, thanks to crop yields exceeding last year's levels and the faster harvesting of early grain crops.

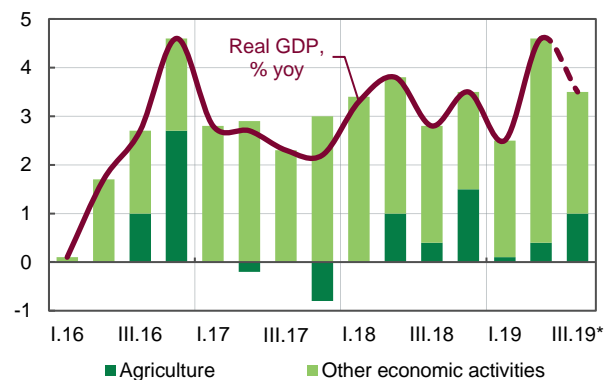
In addition, gross value added (GVA) accelerated markedly in trade and transportation as consumer demand picked up and greater volumes of gas were purchased to increase gas inventories.

GVA of industrial production also made a larger contribution: GVA grew both in mining (thanks to higher global iron ore prices) and in the processing industry (thanks to the completion of repairs at metals and chemical companies). In turn, the increased demand for electricity from industrial producers also supported GVA growth in the energy sector.

Higher fee and commission income in the banking system (particularly through an increase in consumer lending, securities transactions, and commissions for cash and settlement services) drove a substantial acceleration of the GVA of financial and insurance activities and an increase in their contribution to GDP growth.

On the other hand, slower growth in budget capital expenditures and weaker investment activity, including in the construction of residential real estate, restrained growth in GVA in the construction industry. A moderate increase in current expenditures from the budget reduced the positive contribution of economic activities that are predominantly publicly financed, such as education, healthcare, and others.

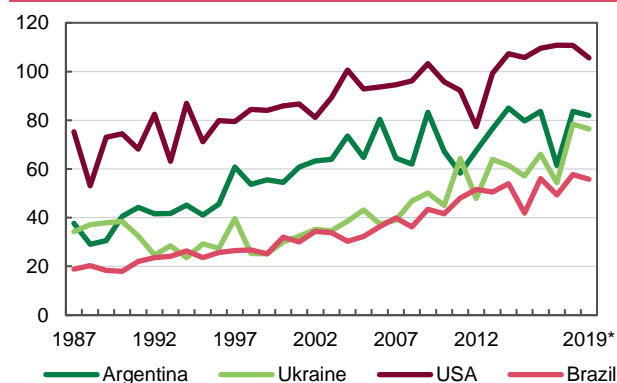
Figure 2.2.7. Contributions to annual percent change in real GDP, pp



* III.19 – NBU's estimates.

Source: SSSU, NBU staff estimates.

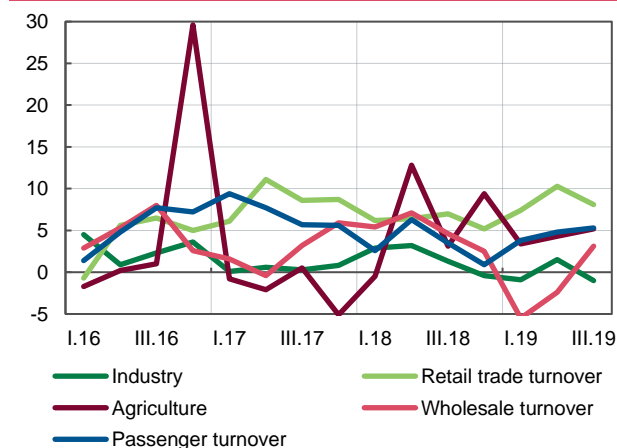
Figure 2.2.8. Corn yield, centners per hectare



* For Ukraine – NBU staff estimate, for other countries – USDA's estimate.

Source: FAO, NBU staff estimates, USDA's estimates.

Figure 2.2.9. Indexes of output, selected industries, % yoy (quarterly averages)



Source: SSSU, NBU staff estimates.

Estimates for Q3 2019

According to NBU estimates, real GDP growth slowed in Q3 2019, to 3.5% yoy, largely due to weaker performance in some key sectors. Thus, the performance of the industrial sector weakened¹⁰ (especially in the mining and metallurgical industries) as external conditions for exporters continued to deteriorate. That, in turn, impacted the performance of cargo transportation. The finance and insurance sector also saw weaker performance, primarily due to a less favorable comparison base.

Conversely, agricultural production continued to grow at a fast pace, supported by a good harvest of late grain and oil crops, which offset the smaller harvest of potatoes, fruit and berries. That said, the grain harvest was abundant this year owing both to an increase in sown areas, and higher crop yields.

Over the past five years yields of grain crops have risen markedly in Ukraine: average wheat yields have increased by around 25% compared with the average yields of the previous five years; while corn yields have grown by almost 20%. The yield increases were driven by investment in modern agricultural equipment, the wider use of crop protection agents, and agricultural producers giving preference to high-yielding crops. In recent years, wheat yields in Ukraine have exceeded the yields in large grain producers and exporters such as Argentina, the United States, and Canada. Ukraine's corn yields have been above those of Brazil and approached the levels of Argentina's.

Consumer demand continued to support GDP growth in Q3 amid a significant improvement in consumer confidence and an increase in wages and pensions¹¹. That contributed to the robust growth in retail trade and in passenger turnover. Investment demand was buoyed by capital expenditures from the budget and the implementation of projects to construct renewable energy facilities¹² in anticipation of legislative changes¹³.

Wholesale turnovers returned to growth on the back of large exports of grain due to the last year's low comparison base, which was caused by transport restrictions in the Sea of Azov.

¹⁰ That was due to the start of major repairs at some industrial companies and lower production of coal and natural gas, caused by difficulties in obtaining special permissions to use new mining sites in previous periods.

¹¹ In Q3, growth in the average level of pensions accelerated as the subsistence minimum increased, and additional payments were provided to persons who had accumulated the required number of years of pensionable service but had small pensions.

¹² According to the National Commission for State Regulation of Energy and Public Utilities, the solar power plants put into operation in Q3 2019 had a total capacity of 779.6 MW (more than five times the level of Q3 2018) and the capacity of newly launched wind power plants was 155.2 MW (versus 7 MW in Q3 2018).

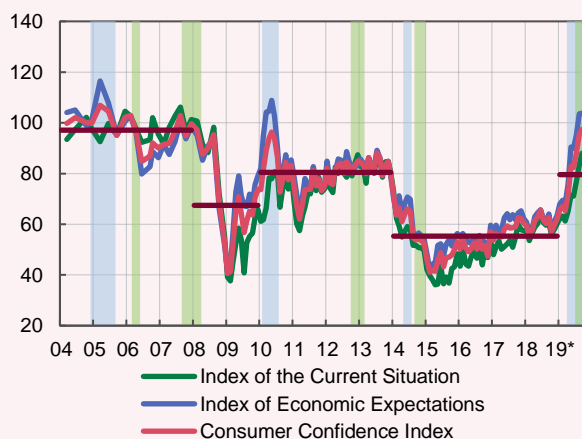
¹³ Effective 1 January 2020, tariffs for renewable energy sources will be set through auctions – a new approach to replace the current fixed feed-in tariffs.

Box 2. Consumer Confidence in Ukraine

Consumer confidence has been on the rise this year, reaching a 12-year high in September 2019. It was driven by high household income and improved macroeconomic conditions – weaker inflationary pressures, the stronger hryvnia, and faster economic growth. The traditional rise in consumer optimism on the back of positive expectations of changes in the country after the elections also played a role. The improvement in consumer confidence supported growth in household consumption, which is a major GDP driver.

[Consumer confidence](#)¹⁴ has been growing rapidly since April 2019, up by more than 30 points through September. The current level (almost 100 points) is the highest in the past 12 years. Similar strong consumer confidence was seen in Ukraine in 2004–2008, the period when the Ukrainian economy was growing at an average annual rate of 7%–8%, supported by an extremely favorable external environment and a number of structural changes in the country (the most significant one being the reprivatization of Kryvorizhstal and the entry to Ukraine of the world's largest steel producer).

Figure 1. Consumer Confidence Index and its components, points



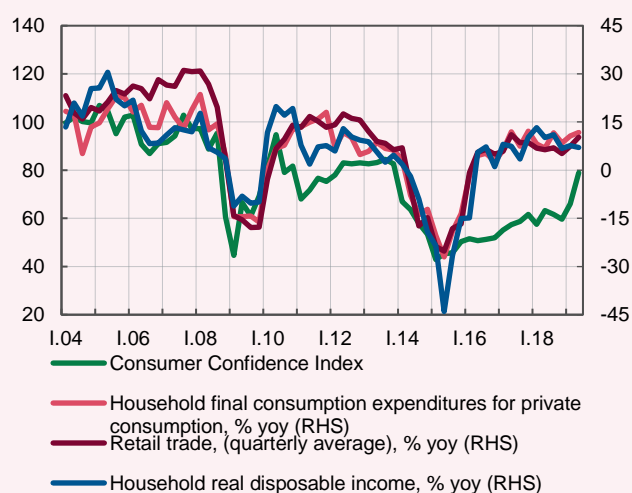
The blue area represents presidential elections, the green area shows parliamentary elections, and the dark red line is the period average for Consumer Confidence Index.

* The latest observation is for September 2019.

The level of consumer confidence has closely correlated primarily with household income – from the launch of the survey and until 2014, the correlation between the index and real household income exceeded 80%. In turn, the decreases in real disposable income seen during the crises of 2008–2009 and 2014–2015 were accompanied by sharp drops in consumer confidence. However, consumer confidence recovered in a completely different way after these two crises: following the first crisis, most components of the index (except for assessments of the current situation) quickly recovered almost to the pre-crisis levels. In contrast, after the 2014–2015 crisis, consumer confidence remained subdued for a relatively long time, despite rapid growth in wages and

household income. This might have been the result of the greater severity of the macroeconomic crisis, in particular the significant weakening of the hryvnia and an increase in inflation, the military conflict in the east of Ukraine, and the generally negative information environment.

Figure 2. Consumer Confidence Index, points (quarterly average), household real disposable income, household final consumption expenditures (private consumption) and retail trade



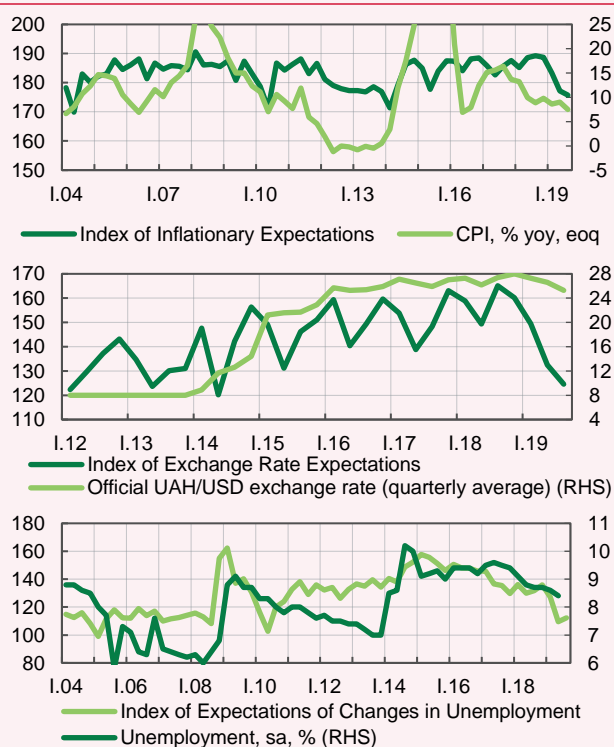
Source: GfK Ukraine, Info Sapiens, NBU staff estimates.

The improvement in consumer confidence since the start of 2019 largely reflects the fast growth in two major components of the index – the index of the current situation and the index of economic expectations¹⁵. On the one hand, consumer confidence improved for objective reasons. Research shows that household expectations are mostly adaptive, meaning that they reflect the current situation in the economy. Therefore, the slowdown in inflation, lower unemployment, and the stronger hryvnia led to an improvement in the corresponding expectations of households.

¹⁴ Info Sapiens started to conduct consumer confidence surveys in 2019 (previously this was done by GfK Ukraine, which had been conducting the surveys since 2000). The surveyors poll 1,000 persons over 16 years of age every month. The sample is representative by sex and age and takes into account the urban and rural population, as well as the size of a populated center. The Autonomous Republic of Crimea was excluded from the sample in April 2014. Since then, polls in Donetsk and Luhansk oblasts have been conducted only in the territories controlled by Ukraine. The standard deviation in the survey does not exceed 3.2%. The index is calculated by deducting the share of negative responses from the share of positive responses and adding 100 to eliminate negative values. The index values thus vary from 0 to 200. The index equals 200 when the entire population views the economic situation as positive. The index is 100 when the shares of positive and negative responses are equal. The index dropping below 100 means that society mostly considers the situation to be negative.

¹⁵ The consumer confidence index is based on respondents' assessments of the following: current personal financial standing over the previous six months (x1), expected changes in personal financial standing over the next six months (x2), expectations of the country's economic development over the next year (x3), expectations of the country's economic development over the next five years (x4), and the willingness to make a major purchase for home (x5). These five indices are used to calculate three aggregate indices: the consumer confidence index, which is the arithmetic mean of indices x1–x5; the index of the current situation, which is the arithmetic mean of indices x1 and x5; and the index of economic expectations, which is the arithmetic mean of indices x2, x3, and x4.

Figure 3. Household expectations for inflation, exchange rate and unemployment expectations, points (quarterly average), and their actual indicators*

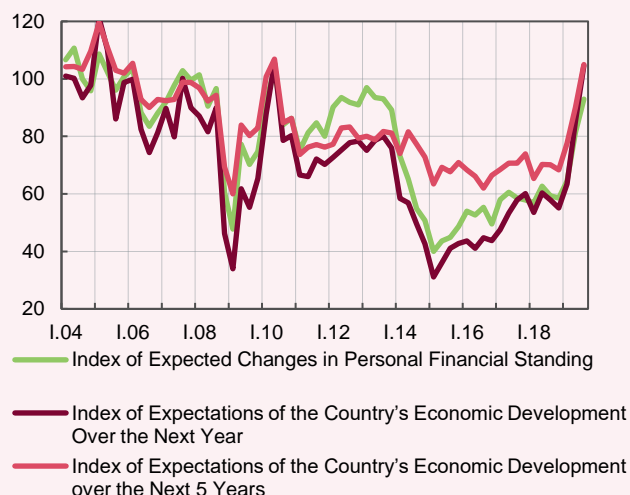


* Lower indexes indicate an improvement in expectations.

Source: GfK Ukraine, Info Sapiens, NBU staff estimates.

On the other hand, among components of the consumer confidence index, the most rapid growth was recorded in the index of economic expectations, which aggregates assessments of economic growth for the coming year and the next five years with expected changes in personal financial standing. [According to Info Sapiens, such an improvement in expectations is typical for a post-election period](#), but it may be temporary. For example, expectations were on the rise for two quarters after the presidential elections of 2004 and 2010. Even in 2014, expectations improved slightly, albeit the improvement being small and short-lived due to the severity of the crisis.

Figure 4. Components of the Index of Economic Expectations, points, quarterly average



Source: GfK Ukraine, Info Sapiens, NBU staff estimates.

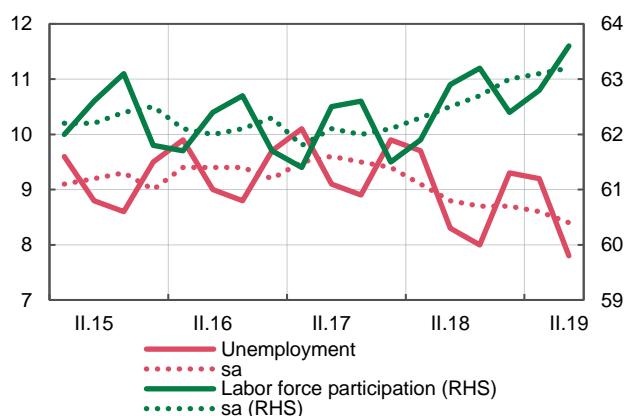
Higher incomes and strong consumer confidence determine households' consumption behavior. The NBU estimates the index of current personal financial standing and the index of expected changes in personal financial standing to strongly correlate with growth rates in retail trade. In turn, retail trade is a leading indicator for assessing household consumer spending.

In such a way, a steady improvement in consumer confidence translates into greater household consumption, which, in turn, is one of the factors influencing GDP and inflation. Therefore, central banks should take into account changes in consumer confidence in their monetary policy decision-making process.

2.3. Labor Market and Household Income

- In Q2 2019, demand for labor strengthened as economic activity gained momentum. In turn, the labor supply expanded due to an increase in the minimum pensionable service period required to receive an old-age pension, and the prolonged steady wage growth. As a result, unemployment and employment rates improved.
- At the same time, mismatches in the labor market remained, contributing to wage growth.
- Nominal household income continued to rise quite rapidly. In addition to the rise of wages in Ukraine, significant contributions to income growth came from rises in the wages of Ukrainians working abroad, and an increase in pensions.

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

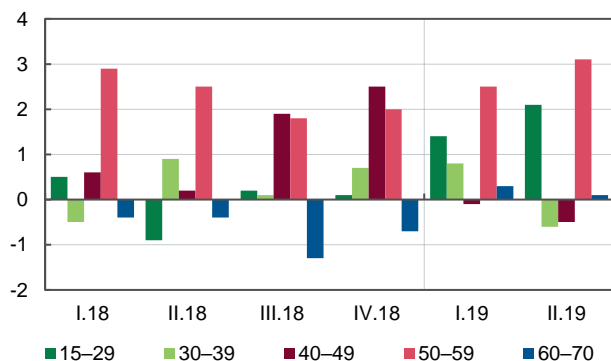


* As a % of population aged 15–70 in the labor force.

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

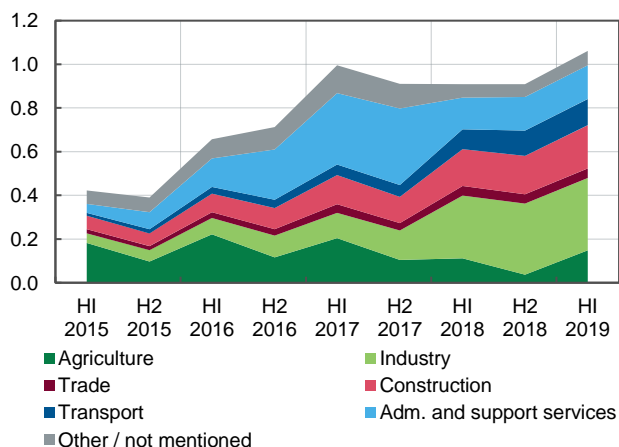
Source: SSSU, NBU staff estimates.

Figure 2.3.2. Annual change in labor force participation rate by age groups, pp



Source: SSSU, NBU staff estimates.

Figure 2.3.3. Number of employers' declarations and work permits issued for Ukrainians in Poland by selected types of activity, m



* In 2018, the classification of types of activities has changed, and a new type of seasonal work permits has been introduced, so the breakdown by type of activity may not be comparable.

Source: Ministry of Family, Labor and Social Policy of Poland.

Labor Market

The favorable performance of most economic activities in Q2 2019 supported the sustained demand for labor. As a result, unemployment fell to 8.4% sa, while employment increased to 58.0% sa.

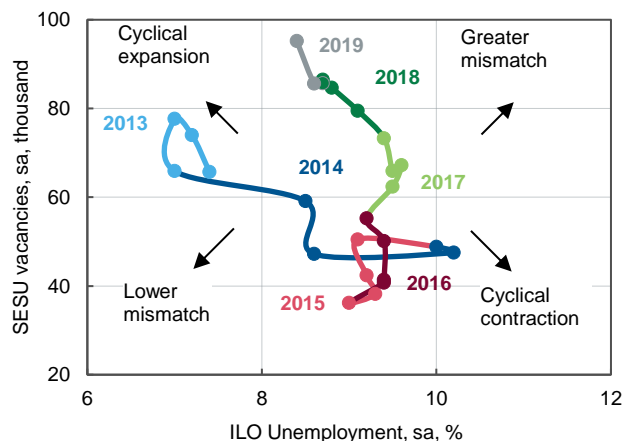
The labor supply also increased (by 0.6% yoy) in spite of negative demographic trends (the number of people aged 15–70 shrank by 0.6% yoy). The growth in the labor supply was driven by an increase in labor force participation (to 63.2% sa). The main factors behind this increase were the effect of the increase in the minimum pensionable service period required to receive an old-age pension, and the prolonged steady wage growth. Consequently, the labor force participation of women and persons aged 50–59 has seen the largest rises in the past few years. A notable feature of this year is the increase in the labor supply of individuals aged 15–29. This can be explained by the acceleration of economic growth and an expansion of employment opportunities for young people, thanks to the greater availability of internships and professional training programs.

Despite the expanded labor supply, the labor market became increasingly tight as employers continued to struggle to fill vacancies. According to the NBU's [Business Outlook Survey](#), the proportion of firms reporting that qualified staff shortages were impeding output growth reached 34%, the highest since 2006. First, the shortage of qualified employees stemmed from a mismatch between the professional qualification requirements of employers and the level of training of job seekers. Second, the shortages resulted from mismatches between the supply and demand for certain professional groups and activities, partly due to labor migration.

Despite there being signs that migration processes have stabilized (according to Google Trends, individuals showed less interest in looking for jobs abroad in 2019), the available data indicates there have been changes in the breakdown of migration by type of activity. Specifically, in 2018 through H1 2019 in Poland, the share of work permits and declarations in industry, transport, and construction increased. Accordingly, this made it difficult to fill existing vacancies in the domestic market. A survey of Ukrainian enterprises shows that labor shortages were the most acute in these particular sectors.

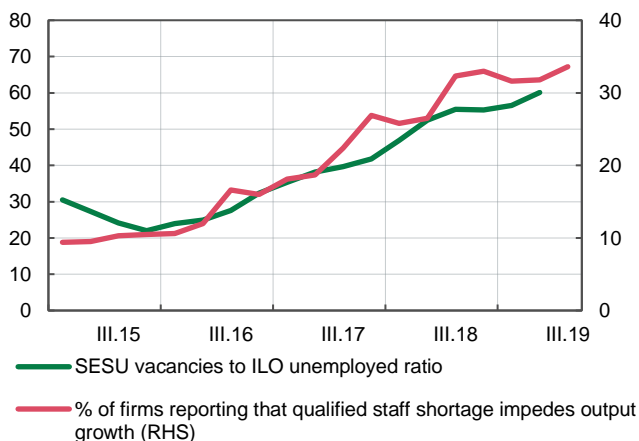
Other indicators also contributed to the evidence that labor market mismatches have continued to worsen. The ratio of the number of vacancies reported by the SESU to the ILO unemployed persons reached a ten-year high. The Beveridge

Figure 2.3.4. Beveridge Curve



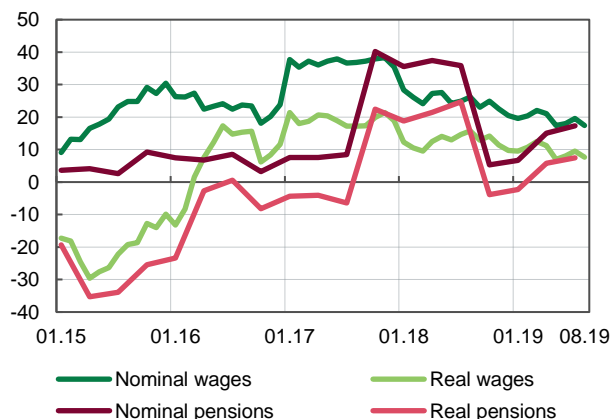
Source: SSSU, SESU, NBU staff estimates.

Figure 2.3.5. Labor market tightness indicators



Source: SSSU, SESU, Business Outlook Survey of Ukraine (NBU), NBU staff estimates.

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



Source: SSSU, PFU, NBU staff estimates.

curve continued to shift toward cyclical growth, reflecting the continued mismatches.

Household Income

In Q2, the growth in nominal income and real disposable income remained relatively strong (15% and 7% yoy, respectively).

Wages received in Ukraine, the largest component of income, increased by 16% yoy in nominal terms. The growth in this income component continued to be driven by mismatches between labor supply and demand (for details, see Box 3 "What Is Driving the Change in Wages?" on page 22). As a result, the highest rates of wage growth were observed in sectors where the shortages of qualified staff were the most acute – industry and construction. Meanwhile, wages in the budget sector grew more slowly, dragged down by the restrained growth of budget revenues.

Real wages increased by 9% yoy, outpacing labor productivity growth (which the NBU estimated at 3% yoy). This triggered inflationary pressures from both consumer demand and production costs (see more in Box 3 "The Relationship between Productivity, Real Wages, and Inflation" in the [July 2019 Inflation Report](#)).

As labor migration stabilized and the hryvnia strengthened, the wages Ukrainians obtained for work abroad increased at a somewhat slower pace than wages in Ukraine – by 12% yoy in the hryvnia equivalent.

The growth in social benefits and other current transfers remained strong (12% yoy). On the one hand, the increase in pension payments accelerated due to the [old-age pension modernization in March and one-off pension supplements paid in March and April](#). On the other hand, subsidies declined, reflecting a decrease in the number of subsidy recipients amid growth in other components of household income and a moderate growth in utility tariffs. Remittances from abroad declined as well.

In Q3, the growth in pension payments accelerated, driven by an [increase in the pensions of individuals who meet the minimum pensionable service period requirement but who receive small pensions](#), and an increase in the subsistence minimum since 1 July 2019. Labor shortages remain a significant factor driving wage growth in Ukraine. As a result, nominal household incomes continued to grow rapidly in Q3.

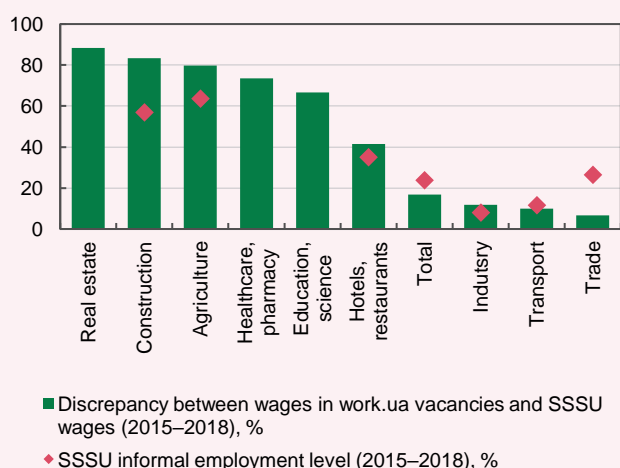
Box 3. What Is Driving the Change in Wages?

In recent years, wages have been growing at a fast clip. The growth was primarily driven by the sharp increase in the minimum wage in 2017, and labor shortages caused by labor migration and qualification mismatches, which is supported by econometric evidence. At the same time, the impact of labor productivity on wage developments was minor, although it is rising labor productivity that creates the conditions for noninflationary wage growth.

Wages are one of the key economic indicators. As workers' income, they affect aggregate demand, and as expenses of businesses they impact aggregate supply. A simple microeconomic model defines wage as a price that balances supply and demand in the labor market. Demand for labor is determined by labor productivity and the prices of goods produced by firms that employ that labor. Labor productivity reflects the experience and educational level of an employee, which are the key factors in the theory of human capital. Wages are thus influenced by inflation and inflation expectations. Labor supply depends on the number of people with a particular set of skills and on wages in other labor markets. Labor supply is therefore dependent on the educational system, demographics, and labor migration. At the macro level, wages also depend on the stage of the economic cycle and negatively correlate with unemployment.

It is noteworthy that a high proportion of informal employment impairs the quality of the official wage rate. SSSU data shows that in 2018, 22% of all workers were employed informally. Also, the [EU-ILO Project survey](#) conducted in 2017 found that 9% of hired workers had been paid "under the table" during the previous 12 months. To a large extent, this may explain why salaries posted on private job search platforms are substantially higher than official salaries¹⁶.

Figure 1. Informal employment indicators by types of activity

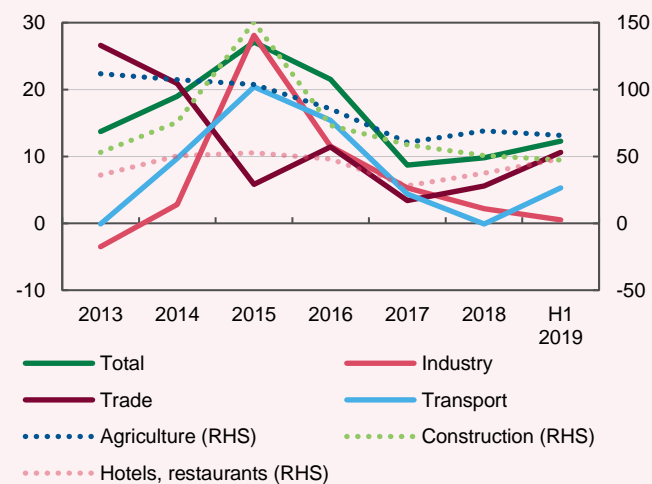


Source: SSSU, work.ua, NBU staff estimates.

Real estate, construction, agriculture, healthcare, and pharmaceuticals had the largest discrepancies. The sectors with the smallest ones included trade, transport, and industry. Overall, these data correlate with the SSSU's informal employment statistics. In recent years, however, these discrepancies have narrowed significantly, which may be

due, among other factors, to a reduction in the payroll tax burden since 2016.

Figure 2. Discrepancy between wages in work.ua vacancies and SSSU wages by selected types of activity, %



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

To quantify the impact of individual factors on wage developments in Ukraine, a linear regression was used, following the example of [Národná banka Slovenska](#). In theory, wages can be influenced by the following factors, which were included in the study:

- labor productivity
- inflation and inflation expectations
- variables reflecting labor shortages: the vacancies to unemployed ratio and the share of businesses reporting qualified staff shortages
- economic cycle indicators: the unemployment rate and GDP gap
- the minimum wage and the Kaitz index (the ratio of the minimum wage to the average wage).

Table 1 presents the results of the calculations. The signs of the estimated coefficients match the ones predicted by theory. The effect of the GDP gap, inflation expectations, and the Kaitz index are not statistically significant. Figure 3 shows the estimated contributions of individual factors to wage developments.

¹⁶ The results of a comparison between salaries offered on private platforms and official SSSU data should be viewed with caution because of differences in classifications by type of activity, regional differences, a lack of information on private platforms about the level of wages before or after taxes, or the currency in which these wages are denominated, and so on.

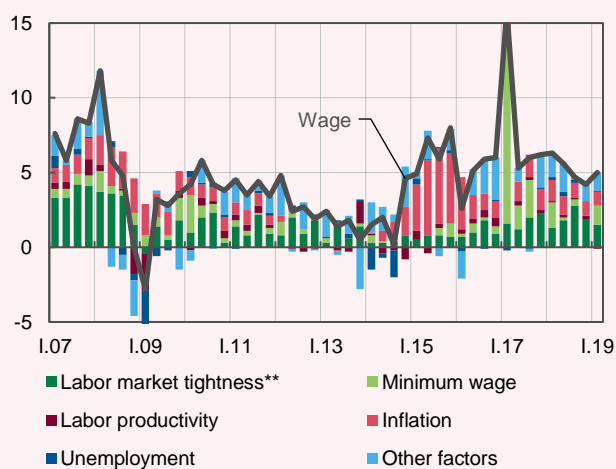
Table 1. Estimated impact of different factors on wage changes (sa, % qoq)

	Coefficient	Beta-coefficient*
AR 1	0.13	0.09
AR 2	0.21**	0.17**
Minimum wage, % qoq	0.11***	0.55***
Vacancies to unemployed ratio, sa	21.20***	0.23***
Labor productivity, qoq	1.0*	0.19*
Inflation, % yoy	0.07***	0.27***
Unemployment rate, sa, qoq	-0.07**	-0.21**
Share of enterprises reporting qualified staff shortages, qoq	0.22**	0.21**
N Observations	51	
Time period	Q3 2006 – Q1 2019	
Adj. R ²	0.93	

*Prob(t-statistic)<0.1, **Prob(t-statistic)<0.05, ***prob(t-statistic)<0.01.

* Beta-coefficient ranges from -1 to 1 and measures the degree and the direction of influence on the dependent variables.

Source: SSSU, SESU, Business Outlook Survey of Ukraine (NBU), NBU staff estimates.

Figure 3. Wage change decomposition*, sa, % qoq

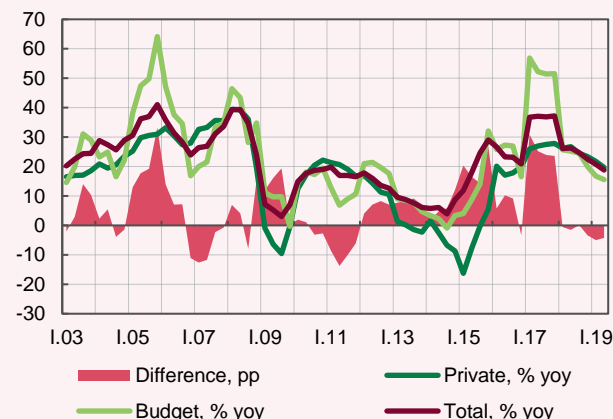
* Blue bars indicate regression residuals. Other columns reflect the effect of factors on wages: both contemporaneous and lagged due to the impact on wages in previous periods.

** The sum of contributions of two factors: vacancies to unemployed ratio and share of enterprises reporting qualified staff shortages. This factor illustrates actual labor shortages as well as mismatches between candidates' skills and employers' requirements.

Source: SSSU, SESU, Business Outlook Survey of Ukraine (NBU), NBU staff estimates.

According to the results, the statutory minimum wage is a major driver of the average wage growth in Ukraine. The minimum wage directly affects the wages of the lowest-paid workers, and passes into other wages. After the minimum wage was doubled in 2017, wages increased by a record-breaking 16% qoq sa. The impact of the minimum wage is most noticeable in the budget sector¹⁷ where wages are on average 25% lower and there is no informal employment. This sector experienced the bulk of the impact of the minimum wage increases that took place in 2005, 2009, and

2017, which outpaced the average growth rate of the overall economy (Figure 4).

Figure 4. Nominal wages in private and budget sectors and their difference

Source: SSSU, NBU staff estimates.

The second most significant factor is inflation, which was especially pronounced during the last crisis, when inflation accelerated. Its effect has decreased and stabilized in recent years.

Another factor explaining the variation in the wage growth is the labor shortage. Its significant contribution in 2007–2008 was evidence of robust demand for labor at that time as the Ukrainian economy overheated. Since 2016, the growing labor shortages have been driven by high migration pressures. Lower barriers to employment amid higher wages abroad have caused a reduction in the aggregate labor supply in Ukraine. This effect is the most pronounced for blue-collar occupations, where the wage gap is the largest (read more in previous Inflation Reports and in the Box "Migration Impact on the Ukrainian Labor Market" in the [January 2018 Inflation Report](#)). Furthermore, this period was characterized by deepening mismatches between labor supply and demand.

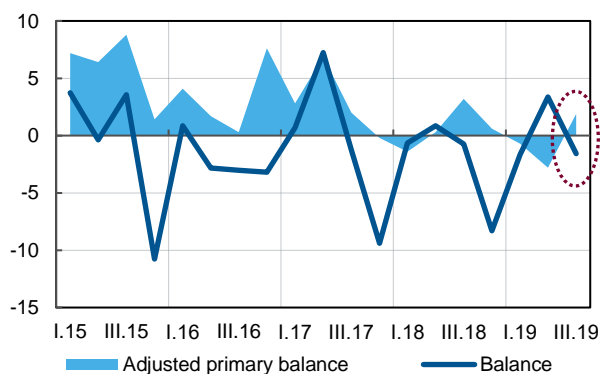
However, unlike in [the EU](#) and the [United States](#), Ukrainian wages show little sensitivity to changes in labor productivity. This poses a problem for the Ukrainian economy, as rapid wage growth amid lagging productivity fuels inflationary pressures. This implies that a boost to labor productivity will provide the potential for noninflationary wage growth and bring wages closer to those in neighboring countries. In turn, this will help ease migration pressures on the labor market. A rise in labor productivity can be secured through key reforms, particularly labor market reforms, as well as through education reform with the aim of matching employee skills with employer requirements.

¹⁷ In this box, the budget sector includes public administration, education, and healthcare, while the private sector comprises the other types of activities.

2.4. Fiscal Sector

- In Q3, fiscal policy was estimated by the NBU as tighter than in previous quarters, although the consolidated budget ran a deficit. This reflected, first and foremost, the continued restrained pace of expenditure growth, given weak revenues and significant debt repayments.
- The slow growth in revenues, primarily tax receipts, was driven by both temporary factors (a decrease in the volume of customs clearance of imported natural gas) and general economic factors (the strengthening of the hryvnia, a drop in the output of excisable goods, etc.).

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

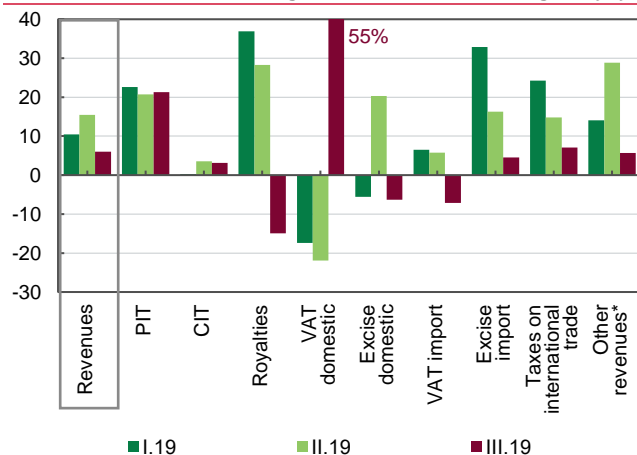


* Balance (% of GDP) is the consolidated budget balance, taking into account loans to the Pension Fund from the STA. Q3 GDP is based on NBU forecasts.

** 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. Additionally, one-off proceeds (such as unplanned funds from special confiscation and effects of the Stockholm Arbitration Court's ruling) are subtracted from revenues. A positive value indicates tight fiscal policy, negative – expansionary fiscal policy.

Source: STSU, NBU staff estimates.

Chart 2.4.2. Consolidated budget revenues, annual change, % yoy



* Other taxes, non-tax revenues, other revenues.

Source: STSU, NBU staff estimates.

Balance

In Q3 2019, the consolidated budget went back into deficit (UAH 12.3 billion). This was primarily due to insufficient tax revenues¹⁸ as a result of differences between actual economic indicators and the underlying budget assumptions about import volumes, prices for certain imported goods, the hryvnia exchange rate, the production of excisable goods, and so on. As a consequence, expenditures fell short of the planned amount¹⁹, unlike in the previous quarter, when the underperformance of tax receipts was offset by the NBU's larger-than-expected and early transfers of part of its distributable profit²⁰ for 2018, which made it possible to increase expenditures. As a result, fiscal policy as a whole is estimated as tighter in Q3 than in the previous periods.

Revenues

During the first nine months of 2019, consolidated budget revenues increased moderately (by 10.8% yoy). Furthermore, the growth in revenue from both tax and nontax receipts slowed substantially in Q3. The waning of the effect of significant NBU transfers and the lower volume of dividend payments for 2018 by Naftogaz of Ukraine NJSC²¹ were significant reasons for the weakening of the growth in nontax receipts. The reasons for the slower growth in tax receipts were the aforesaid inaccurate underlying assumptions about key macroeconomic variables and imports of natural gas under what is known as the customs "warehouse regime".

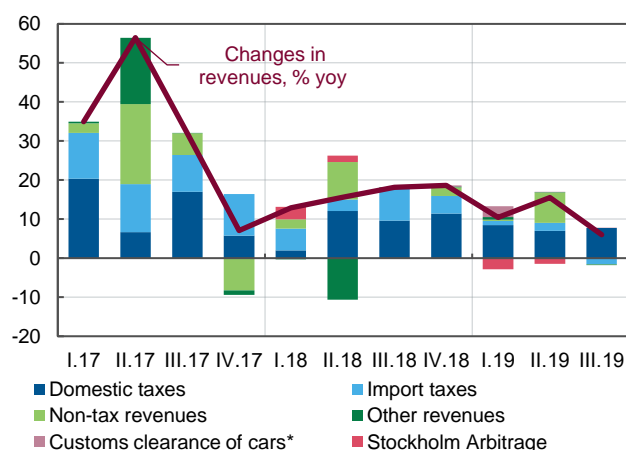
More specifically, after the output of tobacco products picked up in Q2 ahead of the planned 9% increase in the excise tax (scheduled for 1 July 2019), their production declined again, which led to lower excise tax proceeds. Weak imports and the greater-than-expected strengthening of the hryvnia were reflected in receipts from international trade taxes and VAT on imported goods. However, only about half of the total gap (UAH 31 billion in January–September 2019) between the planned and actual VAT revenues from imported goods can be explained by the stronger hryvnia, the NBU estimates. Other reasons include privileges for imports of equipment for renewable energy facilities ([which accounted for UAH 0.6 billion in monthly losses, according to MFU estimates](#)) and [imports of natural gas by Naftogaz of Ukraine NJSC under the customs "warehouse regime"](#). The performance of

¹⁸ The data presented hereinafter on the implementation of the planned of the state budget general fund are those as published by the STSU. In the first nine months of 2019, the government received UAH 50 billion, or 8.6%, less in tax revenues than had been planned for this period.

¹⁹ Expenditures of the general fund of the State Budget were underfinanced by UAH 49.4 billion, excluding debt-servicing expenditures.

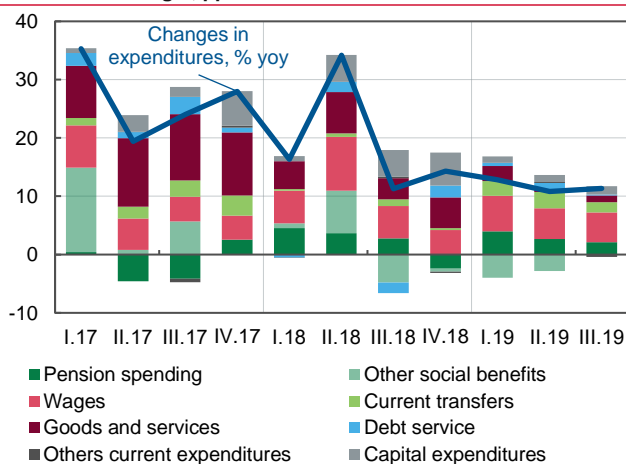
²⁰ [Consolidated financial statements for the year ended 31 December 2018](#), page 49.

²¹ Read more in [the CMU Ordinance](#).

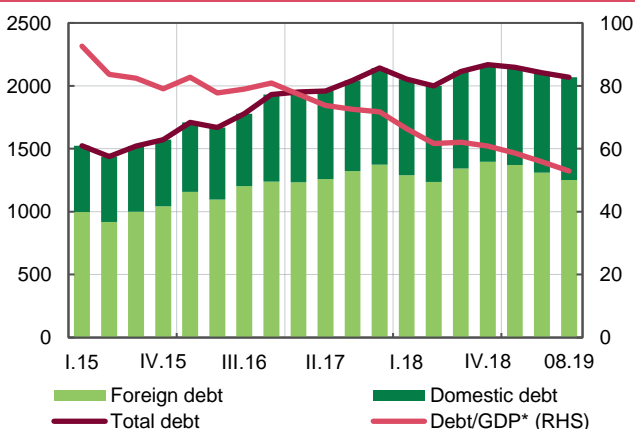
Chart 2.4.3. Contributions to annual changes in revenues of the consolidated budget, pp

* The customs clearance of cars transported into the customs territory of Ukraine which fall under the customs regime of transit or temporary import (according to Law of Ukraine, dated 08.11.2018 "On amendments to the tax code of Ukraine concerning the excise tax on cars").

Source: STSU, NBU staff estimates.

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

Source: STSU, NBU staff estimates.

Chart 2.4.5. Public and publicly guaranteed debt, UAH bn and % of GDP*

* Rolling GDP for 2019. Q1-Q2 2019 – historical GDP data, NBU estimates for Q3 2019.

Source: STSU, NBU staff estimates.

proceeds from royalties worsened as natural gas production²² and prices fell in Q3.

The increase in tax revenues was supported by steady proceeds from the personal income tax, thanks to high wages. Domestic VAT revenues also improved, among other things due to the modest growth in VAT refunds (1.6% yoy in Q3, down from almost 30% yoy in H1 2019). These increases, however, failed to offset the decline in receipts from other tax and nontax revenues.

Expenditures and Funding

The increase in consolidated budget expenditures remained modest in spite of significant government borrowing in both the current and previous quarters. The moderate growth in expenditures is driven by the need to accumulate funds for future repayments on sovereign debt, given the tight repayment schedule, and for a number of objective reasons, such as lengthy and complex procedures to implement project expenses. The latter had a significant impact on expenditures on current transfers and on goods and services.

Meanwhile, social spending increased. Expenses on compensation of employees continued to grow at a fast pace, including due to an increase in allowances for military personnel. Expenditures to support the Pension Fund continued to increase: [the subsistence minimum and minimal pension payment](#) for certain categories of pensioners were increased starting on 1 July 2019.

Despite having issued Eurobonds in late Q2, the government has continued to rely mostly on domestic hryvnia financing this year amid an almost complete lack of privatization proceeds. In Q3, the government continued to actively borrow in hryvnias while redeeming its FX debt obligations. As a result, the currency composition of public debt continued to improve.

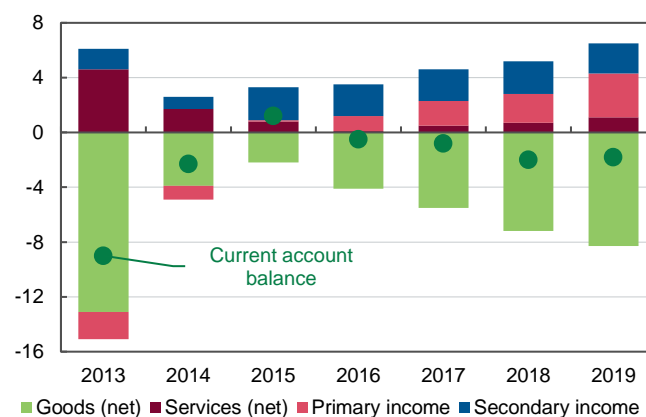
Despite significant borrowings, public and publicly guaranteed debt shrank by 4.7% year-to-date, to UAH 2.067 trillion as of late August 2019. In addition to debt repayments, the strengthening of the hryvnia was another important factor underlying the reduction in public debt. Overall, the debt-to-GDP ratio declined further (to less than 53%, by NBU estimates).

²² Ukrtransgaz data for [January–September 2019](#) shows that natural gas inflows into the Ukrainian gas transit system remained practically unchanged compared to the same period in 2018, but increased by 3% yoy in [January–June 2019](#).

2.5. Balance of Payments

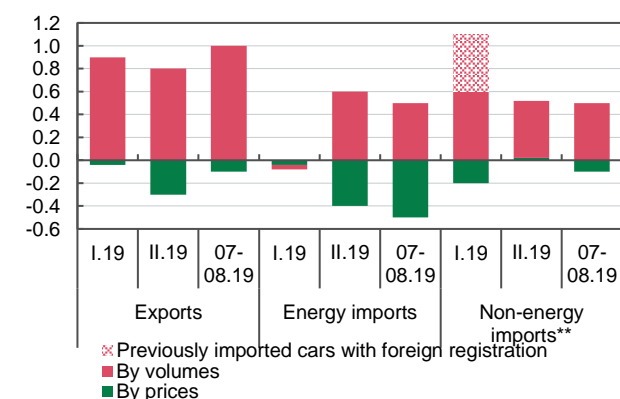
- The current account deficit narrowed in January–August 2019 compared to the same period last year on the back of a further increase in remittances under “compensation of employees” and lower dividend payments.
- The deficit in the trade in goods widened only moderately, thanks to the more rapid growth in exports in goods, propelled by the bumper harvest of crops both in 2018 and in 2019.
- The public sector continued to attract large capital inflows, which, together with the sizeable increase in capital inflows to the private sector in July–August, were sufficient to cover the current account deficit and repayment of IMF loans.

Figure 2.5.1. Current account balance in January – August, USD bn



Source: NBU.

Figure 2.5.2. Exports and imports of selected* goods in 2019, yoy change, USD bn

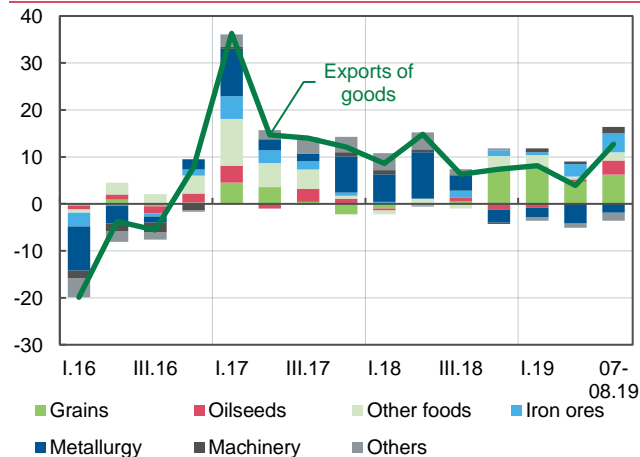


* 78% of goods exports, 53% of goods imports.

** Excluding customs clearance of previously imported cars with foreign registration.

Source: SFSU, Ukravtoprom, NBU staff estimates.

Figure 2.5.3. Contributions to annual change in exports, pp



Source: NBU staff estimates.

Current Account

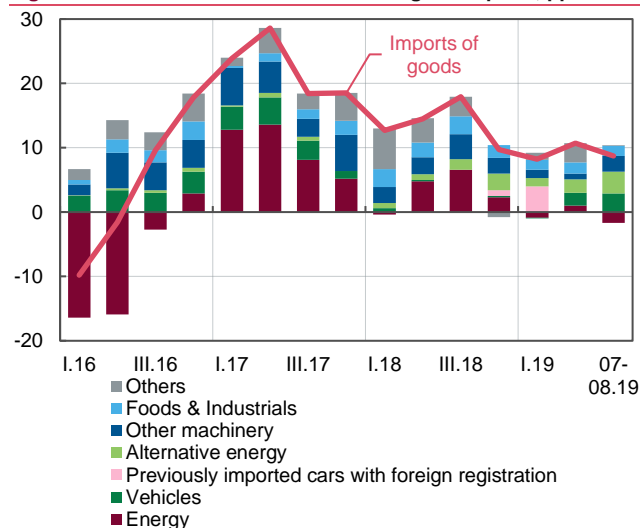
Although the deficit in the trade in goods stopped widening in July–August, the 2019 deficit was slightly higher than last year’s figure. Export growth accelerated due to the bumper harvest of new crops, offsetting a fall in the prices of the country’s main exports. On the other hand, sustained domestic demand spurred the acceleration in investment and consumer imports. Nevertheless, energy imports declined due to a further drop in energy prices, as a result of which overall import growth remained moderate.

Higher productivity in the agricultural sector remained the main contributor to the growth in exports of goods. This growth accelerated in July–August, buoyed by the bumper harvest of early crops and the rapid sale of stocks amid expectations of a bumper maize harvest. In particular, exports of wheat and barley reached a record high for this period. The growth in exports of oilseeds also sped up, driven by higher rape exports to EU countries on the back of its [poor harvest in this region](#). Exports of sunflower oil and oil cake residues also grew, fueled, among other things, by [stronger demand from China](#), resulting from trade tensions between China and the United States. The increases in exports of grains and oilseeds more than offset weaker growth in exports of other foods. More specifically, the growth in meat exports slowed in the wake of stronger competition on the Asian markets due to an [increase in exports of Brazilian poultry](#), while the growth in exports of dairy products decelerated, dragged down by [raw material shortages on the domestic market](#).

The less benign external environment in the current year continued to weigh on metallurgy. Lower prices, coupled with more intense competition on external markets, led to a decline in the volumes of metal exports. In addition, export growth was dampened by trade restrictions introduced by some countries, such as the [anti-dumping duties re-introduced by the United States](#), and the [trade ban imposed by Russia in the spring of the current year](#). Cast iron exports to the United States also dropped [after U.S. plants made a partial shift to using domestic raw materials](#).

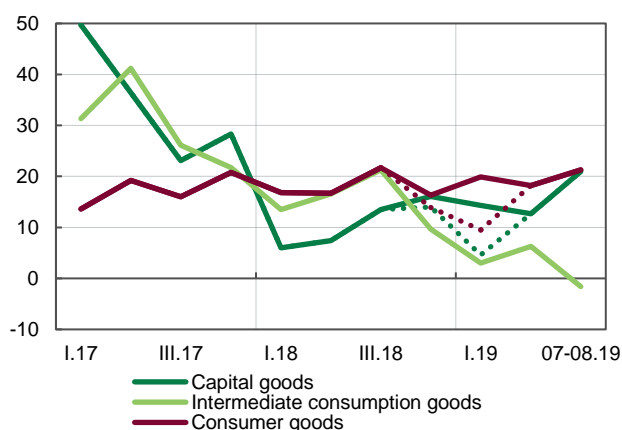
In contrast, iron ore exports continued to rise at a fast clip, supported by [high iron ore prices](#). Machinery exports have also been growing at a rather stable pace in the current year. The growth sped up in July–August, driven by exports of turbojet engines, along with [freight wagons](#) and [spare parts for them](#).

Figure 2.5.4. Contributions to annual change in imports, pp



Source: NBU staff estimates.

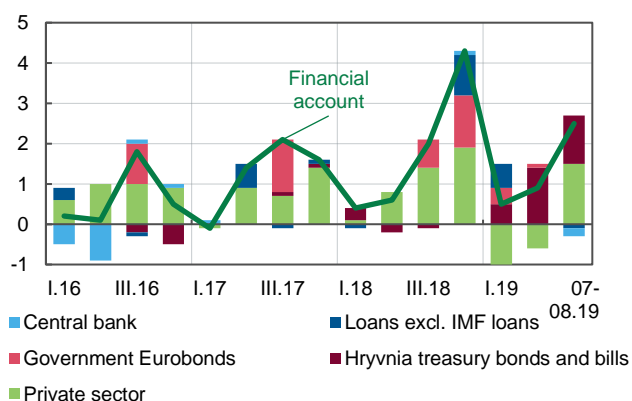
Figure 2.5.5. Imports by broad economic categories*, % yoy



* Dotted line – excluding preferential custom clearance of motorcars.

Source: NBU staff estimates.

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



Source: NBU.

Import growth remained moderate – a drop in global energy prices was offset by more robust growth in consumer and investment imports (excluding the temporary effects of the customs clearing of foreign cars)²³.

The growth in machinery imports has continued to accelerate in the course of the year. More specifically, imports of electrical equipment rose on the back of multiple projects being conducted in the renewable energy sector. Imports of new and used cars also continued to grow at a fast pace – [businesses were actively renewing their car fleets](#), while people who had cars with European number plates hurried to get customs clearance for their cars before the [introduction of new fines for violating customs laws on car imports](#).

[Solid consumer demand](#) amid favorable FX market conditions and a rapid improvement in consumer sentiment continued to support growth in imports of household appliances (such as refrigerators, washing machines and vacuum cleaners) and industrial products.

The value of energy imports decreased in annual terms, despite there being a significant increase in the volume of gas imports, and large purchases of oil products. A further drop in prices was the main factor behind this, while additional factors included the [decline in imports of diesel fuel from Russia seen in August](#) due to the introduction of a special duty on the supply of diesel fuel via pipelines, and restrictions on [coal imports](#) imposed by Russia.

The primary income account surplus continued to widen, due to a decrease in the amount of repatriated dividends compared to January–August 2018, and a further increase in remittances under “compensation of employees”.

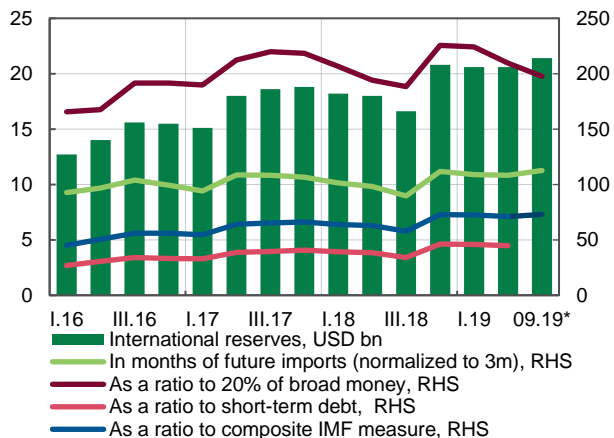
Financial Account

The financial account has been recording capital inflows throughout the year. As in previous periods, a significant portion of the inflow was generated by the public sector thanks to nonresidents' high demand for hryvnia treasury bonds and bills. The portfolio of the hryvnia Treasury bonds and bills held by nonresidents had by 23 October 2019 risen by USD 3.4 billion year-to-date. Even in August, when significant capital outflows from risky assets took place worldwide, the Ukrainian market continued to witness slight increases in foreign investments in hryvnia-denominated government securities. Nevertheless, despite the record investments, the share of hryvnia Treasury bonds and bills held by nonresidents was until recently considerably smaller than that in other emerging markets.

In contrast to H1, in July–August the private sector also generated capital inflows. In light of improved macroeconomic conditions and the commitment undertaken by the new government to speed up structural reforms and to continue cooperation with the IMF, the international rating agencies [Fitch](#) and [S&P](#) in September upgraded Ukraine's sovereign rating from B- to B. Among other things, this also

²³ For more details, see [January 2019 Inflation Report](#) and [July 2019 Inflation Report](#).

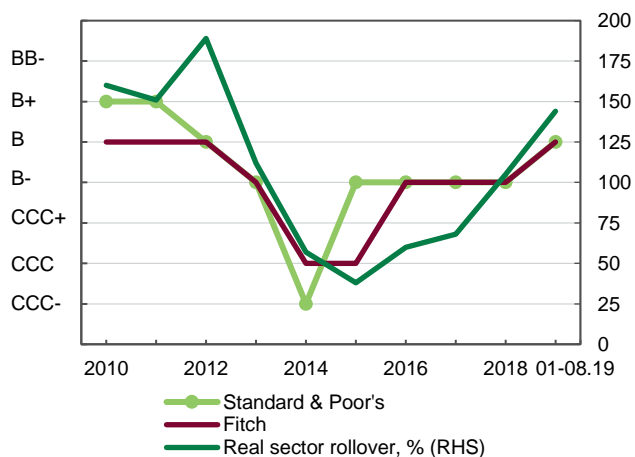
Figure 2.5.7. Adequacy criteria of international reserves, %



* Preliminary data and NBU staff estimates.

Source: NBU staff estimates.

Figure 2.5.8. Ukraine's sovereign rating* and real sector rollover



* As of the end of the period.

Source: NBU staff estimates, S&P, Fitch.

helped the private sector to successfully place its Eurobonds (in July–August, [Ukrainian railways JSC](#) and [Naftogaz of Ukraine NJSC](#) placed Eurobonds worth a total of USD 1.5 billion), while also increasing rollover in the real sector (to 144% in January–August, compared to 103% in the same period last year).

In the current year, investment capital flows exceeded last year's level, in part due to investment in real sector equity. The main recipients of investment were the wholesale and retail trade and the mining industry. Large financial account inflows, both from the start of the current year and in July–August, fully covered the current account deficit and repayments of IMF loans. As a result, gross international reserves have increased somewhat since the start of the year, to USD 21.4 billion or 3.4 months of future imports as of late September. The growth in gross international reserves was due to an increase in net international reserves. Although gross external debt had by late H1 risen to USD 115.5 billion, its ratio to GDP dropped to 83.5% on the back of more robust economic growth and a stronger hryvnia.

Box 4. Assumptions about the Volumes of Russian Gas Transit through Ukraine in 2020–2021

Russia is actively putting into operation gas pipelines that bypass Ukraine. The total capacity of these pipelines is sufficient to fully replace the Ukrainian gas transportation system in the coming years. The current ten-year gas transit agreement between Ukraine and Russia expires in late 2019. A new agreement is still being negotiated. It is currently unclear what term any new agreement will have, and what the transit volumes will be. Ukraine earns about USD 3 billion from gas transit per annum. A halt in gas transit will not only result in a direct loss of FX earnings, but will also create risks to the operation of related sectors of the economy, and to Ukraine meeting its own needs for gas. According to the baseline scenario, transit volumes could drop from about 90 billion cu. m in 2019 to 50 billion cu. m in 2020 and to 30 billion cu. m from 2021 onwards. The direct losses of the economy compared to 2019 transit volumes could hit 0.6% of GDP in 2020 and 0.9% of GDP in 2021.

Russia has been actively constructing pipelines to bypass Ukraine since 1999. At present, six bypassing pipelines, with a total projected capacity of 200 billion cu. m per year, are either already operating or being completed.

Three out of six of the bypassing pipelines, with a total projected capacity of 113 billion cu. m per year, are already in operation: Blue Stream (put into operation in 2002), Yamal-Europe (has been operating at full capacity since 2006), and Nord Stream-1 (has been operating at full capacity since 2012). As a result, gas transit through Ukraine dropped to 84 billion cu. m in 2013, down from 136 billion cu. m in 2005 (by 40%). Despite the reduction in gas transit volumes, Ukraine remains the major transit country for Russian gas (transporting 40% of exports of Russian gas to Europe). However, the first line of TurkStream, with a capacity of 16 billion cu. m, is expected to be put into operation from the beginning of 2020. Despite there being certain delays due to some difficulties, Nord Stream-2 (with a capacity of 55 billion cu. m) and the second line of TurkStream (with a capacity of 16 billion cu. m) are expected to be completed and put into operation in the second halves of 2020 and 2021 respectively.

The maximum capacity of the Ukrainian gas transport system at input is 302 billion cu. m per year, including 21 billion cu. m from EU countries, while the maximum capacity at output is 180 billion cu. m per year, including 146 billion cu. m to European countries. Currently, gas transit takes place under an agreement signed in 2009 between Ukraine and Russia, which expires in 2019. Although under this agreement Gazprom undertook to transport no less than 110 billion cu. m of gas per year, the actual transit volume has been about 90 billion cu. m per year²⁴. Gas transit services earned Ukraine about USD 3 billion, and accounted for about 20% of its exports of services.

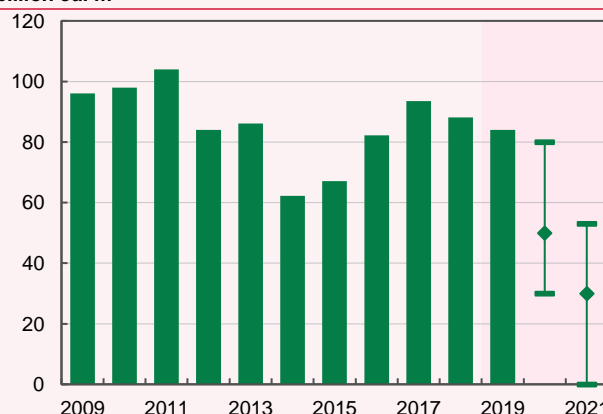
A new gas transit agreement is currently being negotiated between Ukraine and Russia, with the involvement of EU representatives. In view of some difficulties in completing Nord Stream-2 and TurkStream, and large volumes of gas

transit to Europe (about 200 billion cu. m per year), in 2020 Russia will not be able to stop using Ukrainian gas pipelines completely. Under the baseline scenario, gas transit drops to 50 billion cu. m in 2020 (which under the current tariffs is equivalent to USD 1.5 billion in export proceeds) based on the assumption that:

- Nord Stream-2 is completed in August 2020 at the earliest, and the pipeline operates at no more than 70% of its capacity²⁵
- a portion of the gas that was transported via the OPAL pipeline is supplied via Ukrainian pipelines²⁶
- the second line of TurkStream is not completed.

The baseline scenario envisages a halt in gas transit through Ukraine in Q1 2020. Uncertainty about future gas deliveries is very likely to lead to a temporary rise in gas prices on the European market, despite record gas stocks both in Ukraine (Ukraine's gas storages are 69% full) and in Europe (European gas storages are 97% full).²⁷

Figure 1. Volumes of gas transit through Ukrainian GTS, billion cu. m*



* In 2020–2021, the green markers reflect the baseline scenario assumptions, the lower and upper bounds of the ranges, respectively, the pessimistic and optimistic scenarios. The data for 2019 are NBU estimates.

Source: NBU, Ukrtransgaz.

In 2021, once TurkStream is put into operation, Russia could potentially transport all of the gas it exports to Europe via

²⁴ Since Russia violated the agreement by transiting less gas, Naftogaz filed a lawsuit at the Stockholm Arbitration Court, which it later won. The court ruled that Gazprom should pay Naftogaz USD 2.56 billion, and sell gas to Ukraine at market prices.

²⁵ The experience of Nord Stream-1 shows that during the first year or the first year-and-a-half after being put into operation a pipeline operates at 70% of its expected capacity.

²⁶ On 10 September 2019, the Polish PGNiG Group won a lawsuit on the OPAL pipeline it had filed at an EU court. The court prohibited Gazprom from using the pipeline at 100% capacity.

²⁷ As of 22 October 2019.

bypassing pipelines. However, in view of expectations of a new gas transit agreement between Ukraine and Russia, the ban on Gazprom's using the OPAL pipeline at full capacity, and the experience of the operation of Nord Stream-1, Ukraine could continue to transit Russian gas, but transit volumes would drop to 30 billion cu. m.

Under the baseline scenario, the direct losses of the Ukrainian economy compared to 2019 transit volumes would hit 0.6% of GDP in 2020 and 0.9% of GDP in 2021.

A significant risk under this scenario is that gas transit would be unevenly distributed over a year – an almost annual volume of gas could be transported over the course of one or two months, making it significantly more difficult to support the operation of the GTS. Moreover, domestic consumers would bear almost the full cost of supporting the system. Therefore, the price of gas transportation services would go up for industrial and household consumers.

In addition, there are two alternative scenarios. The optimistic scenario envisages both the signing of a long-term gas transit agreement, and bypassing pipelines reaching their full throughput capacity at a slower pace, which would increase the workload of the Ukrainian GTS. Under this scenario, transit volumes would drop to only 80 billion cu. m in 2020, and to 50 billion cu. m in 2021. As a result, direct losses from a reduction in transit volumes would be 0.2% of GDP in 2020 and 0.6% of GDP in 2021.

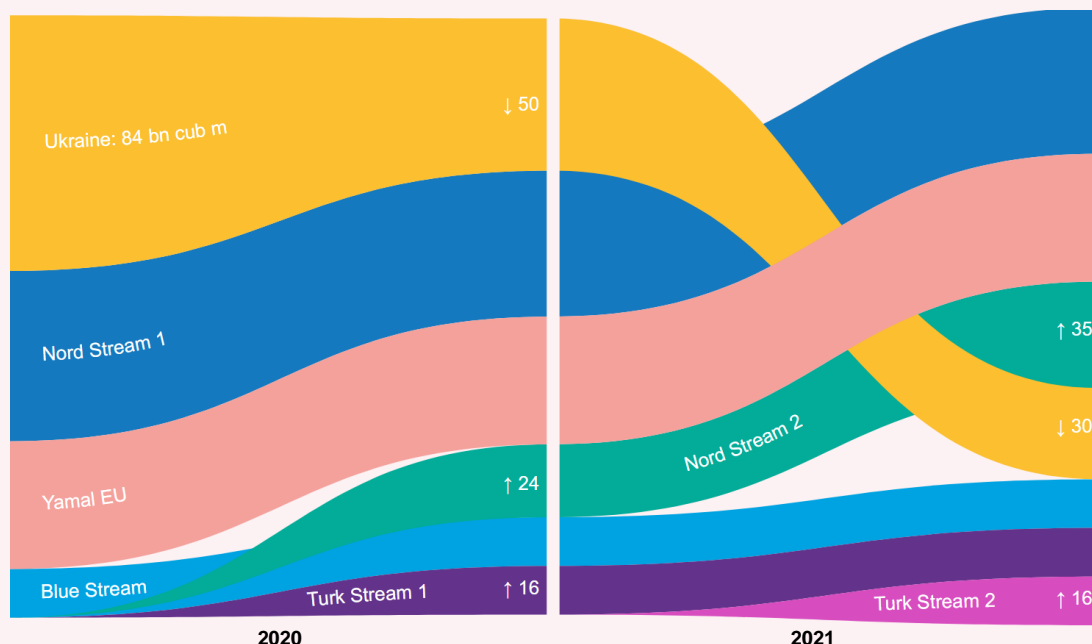
The pessimistic scenario is based on the assumption that bypassing pipelines are put into operation quickly, and start operating at full capacity in 2021. Under such conditions, gas transit via the Ukrainian GTS would drop to about 40 billion cu. m in 2020, and could dry up completely in 2021. Apart from direct losses related to a halt in gas transit (to 1.5% of GDP in 2021), some indirect losses and risks could arise:

- difficulties in meeting domestic gas needs. Currently, Ukraine imports about a third of the gas it consumes. If gas transit stops, a portion of the gas supplied to Ukraine as reverse flow from EU countries will also fall, due to the technical specifics of gas transportation.
- short-term delays in extracting gas from underground gas storages when gas consumption peaks because of weather conditions.

The consequences of a reduction in gas transit could be minimized by:

- stepping up domestic gas production by simplifying the procedure for issuing special field development permits to local authorities (the time span between issuing a special permit and the launch of commercial development is 3 to 6 years)
- looking for alternative import sources, including those of liquefied gas
- implementing energy conservation and renewable energy policies.

Figure 2. Transit of Russian gas by main pipelines, billion cu. m

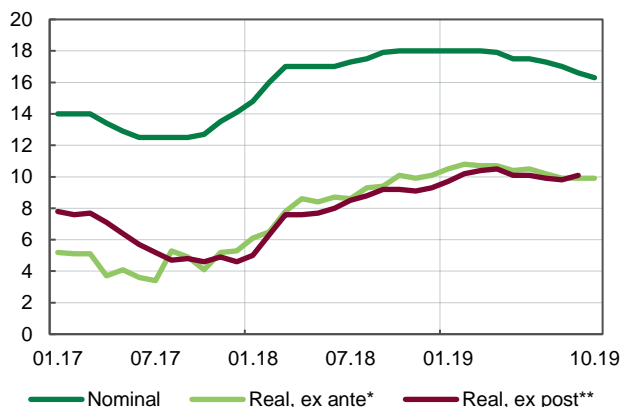


Source: NBU, Ukrtransgaz, app.rawgraphs.io.

2.6. Monetary Conditions and Financial Markets

- In Q3 2019, the NBU Board reduced the key policy rate twice, by a total of 100 bp, to 16.5% per annum. At its latest meeting, in October, the NBU Board cut the key policy rate by another 100 bp, to 15.5%. Monetary conditions nonetheless remained tight, which the NBU estimates will bring inflation to its medium-term target of 5% in late 2020.
- The lowering of the key policy rate and expectations that rate cuts will continue contributed to a decrease in interbank funding costs and yields on treasury bonds and bills.
- The FX market continued its appreciation trend, driven by fundamental factors, enabling the NBU to continue replenishing its international reserves.

Figure 2.6.1. Nominal and real key policy rates, average, %

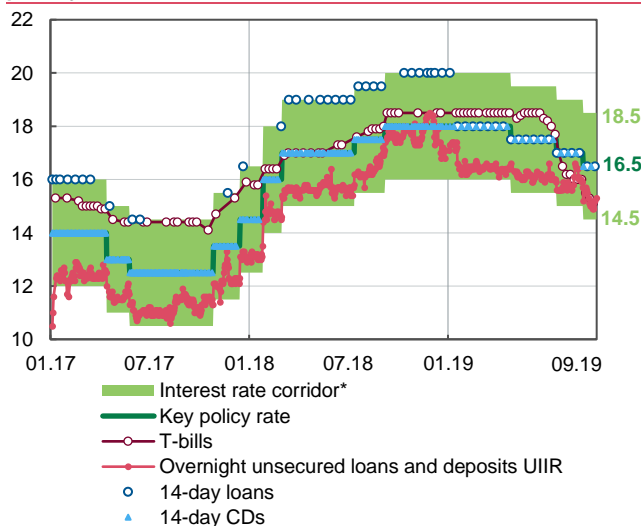


* Deflated by 12-month ahead inflation expectations of financial analysts.

** Deflated by actual annual rate of core inflation.

Source: NBU staff estimates.

Figure 2.6.2. NBU policy rates, UIIR and 1-year hryvnia T-bills on primary market, %



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

Source: NBU.

Interest Rates

In Q3 2019, the NBU Board extended the monetary policy easing cycle it launched in April. Overall in Q3 2019, the NBU Board reduced the key policy rate by 100 bp, to 16.5%. Another 100 bp cut came in October. Monetary conditions nonetheless continued to be reasonably tight, as the rate cut came amid improved inflation expectations. As a result, the real key policy rate remained between 10% and 11% in 2019 – well above its neutral level, which the NBU estimates at around 3%. According to the NBU, this will ensure that the medium-term inflation target of 5% will have been reached by the end of next year.

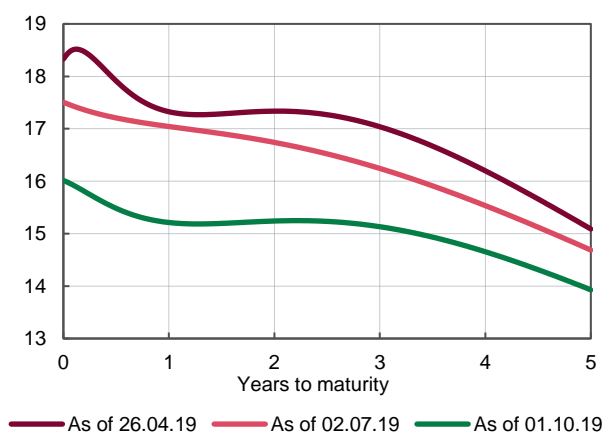
The [UIIR](#)²⁸ also declined in Q3 after the NBU's decision to reduce the key policy rate. The significant liquidity surplus pushed the UIIR closer to the lower bound within the NBU's rate corridor for standing facilities. The spike in the UIIR in late August was driven by the narrowing of liquidity that typically occurs when quarterly taxes are paid into the budget, and this was accompanied by an uneven distribution of liquidity across the banks.

The easing of monetary policy and expectations of further cuts to the key policy rate (read more in the [July 2019 Inflation Report](#), page 46) contributed to the decline in yields on hryvnia Treasury bonds and bills across all maturities. In addition, the government put downward pressure on yields by restricting the supply of treasury bonds and bills, in view of large borrowings having been made in previous periods. However, despite the decline in yields in nominal terms, they remained high in real terms compared to those issued by other emerging markets. On top of that, robust demand from nonresidents for hryvnia Treasury bonds and bills reflected improved expectations arising from the rapid appointment of the new government and its commitment to accelerating structural reforms and continuing cooperation with the IMF. With access to the domestic Treasury bond and bill market simplified (after Ukraine joined Clearstream in late May 2019), all of the above stimulated further inflows of nonresident portfolio investments into hryvnia Treasury bonds and bills. In Q3, the amount outstanding of hryvnia treasury bonds and bills held by nonresidents increased by USD 1.6 billion (in the equivalent).

Investor expectations of further key policy rate cuts shifted the demand for hryvnia Treasury bonds and bills towards medium- and long-term instruments, which expanded the

²⁸ [The indicator of hryvnia interbank interest rates for the purposes of the interest rate policy.](#)

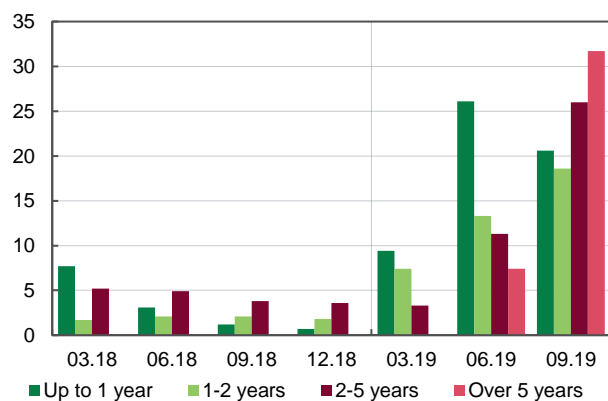
Figure 2.6.3. Zero coupon yield curves for hryvnia T-bonds & bills on the secondary market*, %



* Spot rates with continuously compounded interest plotted using Svensson parametric model.

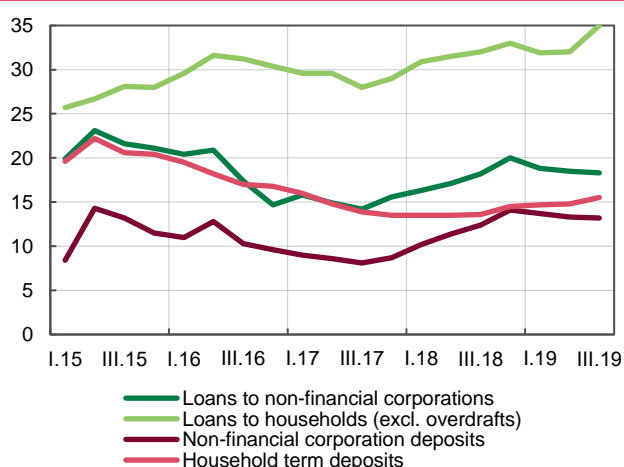
Source: NBU.

Figure 2.6.4. Hryvnia T-bonds & bills in the non-residents' portfolio broken down by maturity, UAH bn



Source: NBU staff estimates.

Figure 2.6.5. Weighted average interest rates on new hryvnia loans and deposits, %



Source: NBU.

share of hryvnia Treasury bonds and bills with maturities over one year in the nonresident portfolio up to 79% by late September (hryvnia Treasury bonds and bills with maturities over two years account for 60% of the nonresident portfolio).

At the same time, despite the decrease in yields on hryvnia Treasury bonds and bills, the MFU had and still has considerable potential to reduce the cost of medium-term borrowing (see Figure 3.4.1).

Hryvnia rates for bank customers in Q3 2019 also responded to the reduction in the key policy rate and UIIR, but the effect of the monetary transmission mechanism was weakened by market-driven and structural factors. In particular, a significant impact on the growth of interest rates on household deposits came from the interest rate policies of several state-owned banks, which other market participants believe provide a benchmark, and from relatively higher yields on hryvnia Treasury bonds and bills – despite the decline in the latter. Meanwhile, solid demand for consumer loans led to an increase in the cost of hryvnia household loans.

FX Market

In Q3 2019, the FX market continued to be dominated by an appreciation trend driven by a large FX supply.

The following main factors ensured that the FX supply from bank customers outweighed demand in Q3:

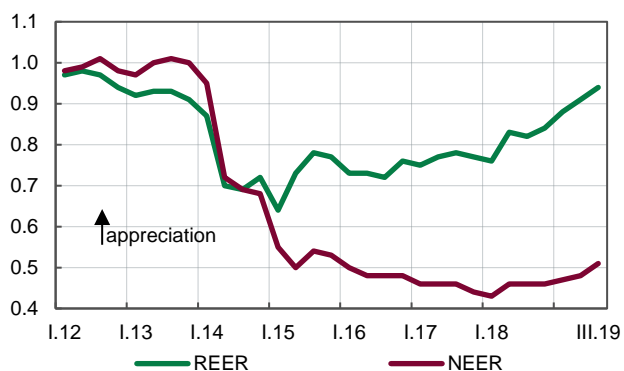
- record inflows of foreign portfolio investments
- significant receipts from agricultural exports
- a sizeable reduction in the cost of energy (primarily gas)
- relatively constrained imports.

This enabled the NBU to continue replenishing international reserves without counteracting the prevailing market trends. The NBU's positive net FX position as a result of transactions in the interbank FX market was USD 2.5 billion in Q3, and USD 3.9 billion since the beginning of the year. Along with that, the NBU for the third time in 2019 [decided](#) to increase the daily amount of planned FX purchases (from USD 20 million to USD 30 million in Q4 2019) to replenish international reserves.

The official exchange rate of the hryvnia appreciated against both the U.S. dollar and the euro in Q3 2019 compared to the previous quarter, and compared to the start of the year. On the other hand, most of the currencies of Ukraine's MTPs depreciated against the U.S. dollar. As a result, the NEER and REER of the hryvnia continued to strengthen in Q3 (by 16.4% yoy and 21.6% yoy, respectively).

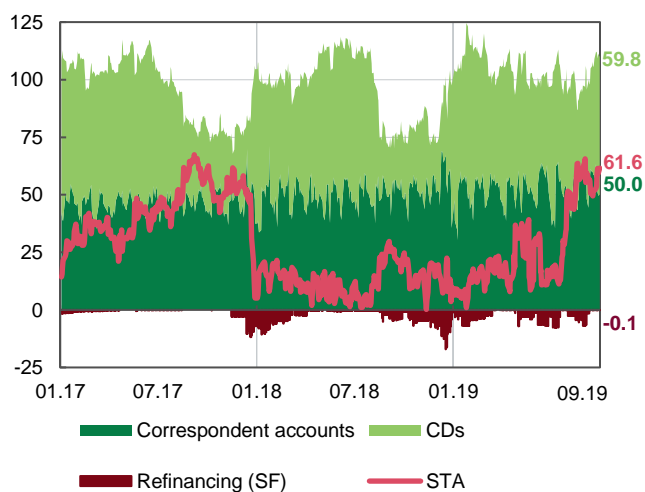
Taking advantage of benign FX market conditions, the NBU continued to implement the gradual liberalization of this market. Specifically, the decisions to abolish the [dividend repatriation limit](#) and a raft of other [administrative restrictions](#) came into force in Q3 2019.

Figure 2.6.6. Hryvnia REER and NEER indices, average, 12.2011=1



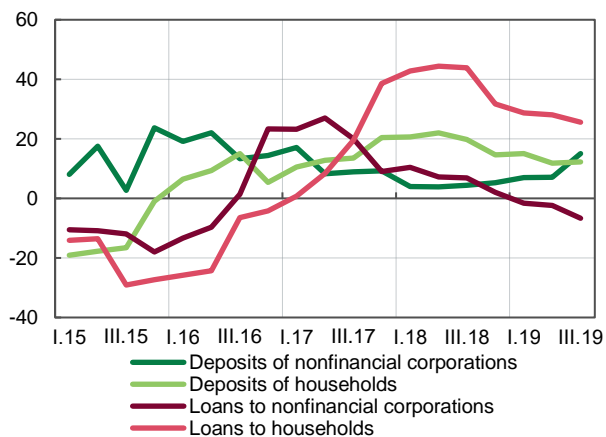
Source: NBU staff estimates.

Figure 2.6.7. Banking system liquidity, selected indicators, UAH bn



Source: NBU staff estimates.

Figure 2.6.8. Hryvnia deposits and loans, % yoy



Source: NBU.

Banking System Liquidity

As in previous periods, the banking system continued to run a significant liquidity surplus in Q3, as measured by the balances in the banks' correspondent accounts and the balances of NBU's CDs. Furthermore, the surplus widened in late Q3 compared to the previous quarter as the NBU made significant FX interventions, which outweighed the negative impact of fiscal factors²⁹. In addition, liquidity grew due to lower cash volumes and the DGF's transactions. However, the effect of these factors was almost completely counterbalanced by the banks' repayment of refinancing loans and bank liquidators' transactions

Deposits and Loans

In Q3 2019, hryvnia deposits in the banking system continued to grow, accelerating in annual terms (to 12.2% yoy in September). The rapid growth in household deposits was driven by a steady increase in wages and a rise in the attractiveness of hryvnia deposits due to the stronger hryvnia and lower inflation. The growth in corporate deposits reflected the accumulation of proceeds from the sale of this year's good harvest and funds to finance projects, in particular the construction of renewable energy facilities. The same factors, along with proceeds from the placement of Eurobonds by several companies, accelerated the growth in FX deposits (in the U.S. dollar equivalent).

In Q3, the banks continued to expand hryvnia lending to households, primarily for the purchase of vehicles and other consumer needs. Strong demand for these loans was supported by improved consumer confidence, which made large purchases more feasible, and rising household incomes.

By contrast, lending to nonfinancial corporations remained sluggish. The decline in hryvnia loans to nonfinancial corporations was driven by the banks' efforts to resolve bad debt (through write-offs, repayments, and restructuring) and by the continuing statistical effect of excluding data reported by banks that were undergoing liquidation. Excluding this effect, net hryvnia loans to nonfinancial corporations increased in year-on-year terms, though only moderately. The banks' lending activities continued to be hampered by a number of predominantly structural factors, such as the large share of nonperforming loans, outstanding issues in the area of creditor rights protection, and others.

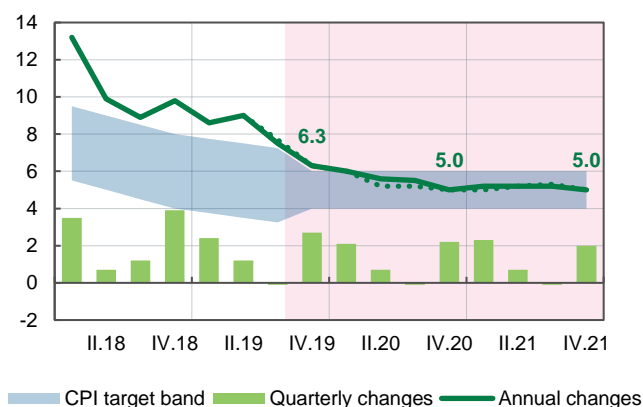
²⁹ The NBU calculated the impact of fiscal factors on the liquidity of the banking system based on the following key factors: the increase in STA balances, including due to the sizable placement of hryvnia Treasury bonds and bills, and the government's payments on its liabilities to the NBU.

Part 3. Ukrainian Economy: Forecast

3.1. Inflation Developments

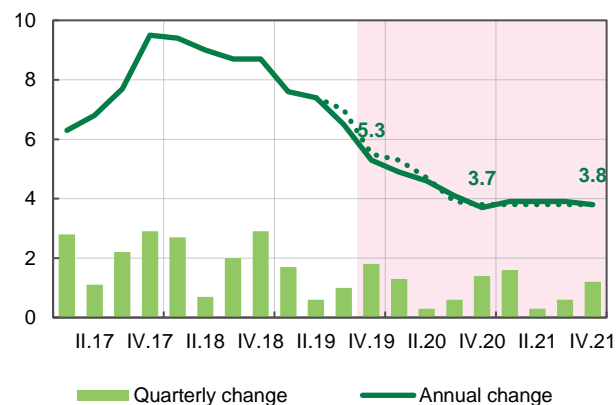
- The steady disinflationary trend is expected to persist over the next two years, as a result of which inflation will enter the target range of $5 \pm 1\%$ as early as the beginning of 2020. Inflation will drop to 6.3% by the end of 2019, meeting the medium-term target of 5% from late 2020 onwards.
- Factors behind disinflation will include weaker underlying pressures on prices amid a tight monetary policy, improved inflation expectations, slower wage growth, and low food inflation.
- The contribution of administered prices to inflation will remain significant, being largely determined by ongoing rises both in excise taxes on tobacco products and in the minimum price of alcohol.

Figure 3.1.1. CPI, %



Source: SSSU, NBU staff estimates.

Figure 3.1.2. Core inflation, %



Source: SSSU, NBU staff estimates.

Inflation will continue to decelerate in 2019–2020, and in 2021 inflation will fluctuate around its medium-term target. A more rapid reduction in underlying inflationary pressures in 2019 than expected earlier, thanks to a stronger hryvnia, will offset increases in the prices of some vegetables and fruits resulting from the poor harvest of these foods.

As this year, the rather tight monetary stance will continue to push inflation down, to 5%, in 2020. Despite the gradual reduction in the key policy rate, its real value will remain high on the back of improved inflation expectations. High real interest rates will continue to make hryvnia financial instruments attractive to investors and thus support the exchange rate of the hryvnia. As a result, more favorable FX market conditions than expected will offset the pressure on prices from domestic demand, which, according to the new forecast, will be somewhat stronger than projected earlier.

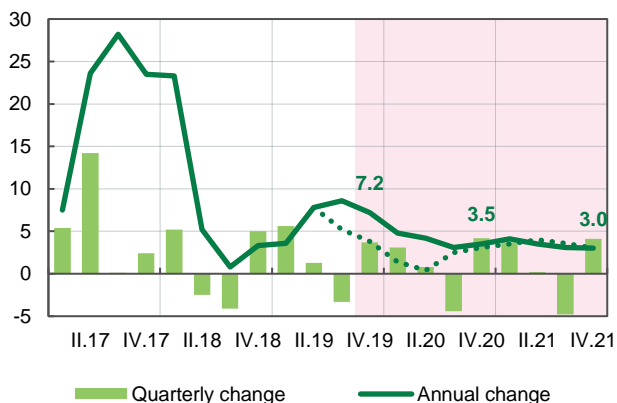
Other contributors to gradual disinflation will be a prudent fiscal policy, relatively low energy prices on the global markets, and an increase in the food supply, driven by higher productivity in the agricultural sector.

Core inflation will decline to 5.3% by the end of 2019 due to a tight monetary policy and low imported inflation on the back of the hryvnia REER appreciation. In 2020, core inflation will continue to slow amid still tight monetary conditions, to about 4%, and will hold steady from that year onwards. Although wage growth is expected to decelerate markedly over the entire forecast period, wages will continue to converge with those in neighboring countries, as labor productivity rises. Therefore, the cost of market services, with the largest share of wage costs, will be the major contributor to core inflation growth.

Downward pressure on core inflation will continue to come mainly from low imported inflation, due to both persistently low inflation in Ukraine's MTP countries and favorable FX conditions. In addition, a smaller incentive to migrate will also push inflation down, as pressures on wages ease.

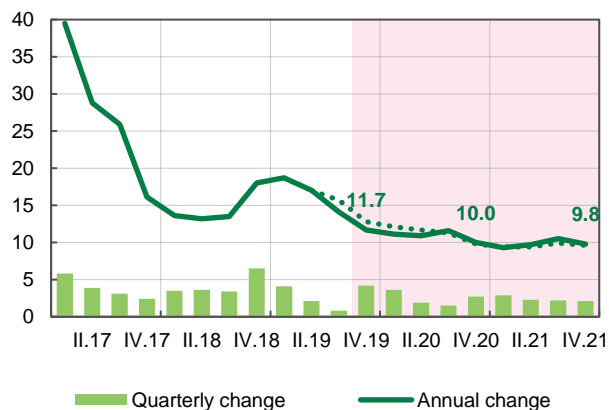
Raw food inflation is projected at 7.2% in the current year. The bulk of the acceleration in price growth has already taken place, in mid-2019, mainly due to a decline in domestic supply in the wake of the poorer harvest of some fruits and vegetables (such as potatoes, berries and apples). Raw food

Figure 3.1.3. Raw food inflation, %



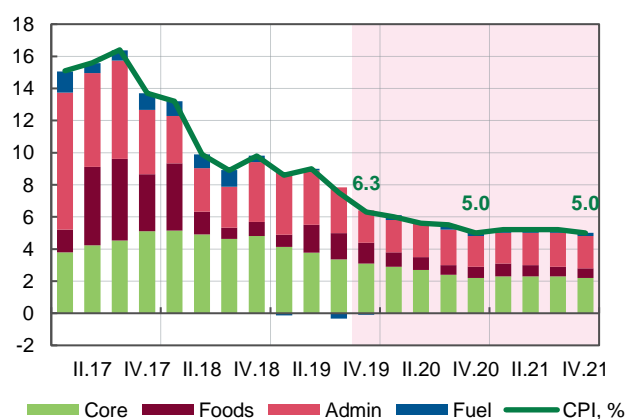
Source: SSSU, NBU staff estimates.

Figure 3.1.4. Administered price inflation, %



Source: SSSU, NBU staff estimates.

Figure 3.1.5. Contributions to annual CPI growth by main components, pp



Source: SSSU, NBU staff estimates.

prices are expected to grow moderately (3%–4%) in the coming years, provided there are no significant supply shocks, including those arising in the global markets. Food inflation will be curbed by higher agricultural output owing to increased productivity in the agricultural sector. However, rising nominal and real household incomes will continue to contribute to the upward pressure on food inflation.

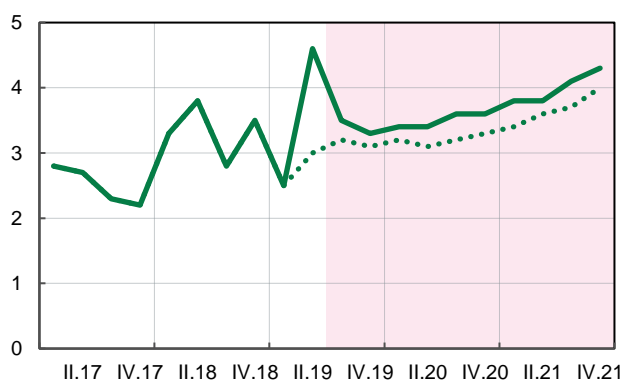
The growth in administered prices will slow to 11.7% in 2019, while gradually dropping to single-digits in 2021. High administered price inflation will be largely determined by ongoing rises in excise taxes on tobacco products and in the minimum price of alcohol. The prices of tobacco products are expected to rise the most (by over 20% in 2019 and by about 13% in subsequent years). Gas prices for households are expected to drop noticeably over the whole of 2019 on the back of favorable gas prices on European markets and the introduction of market pricing, which will also reduce the pressure on gas-dependent prices for heating and hot water. In the coming years, domestic gas prices are expected to remain dependent on import parity prices. Apart from some increases in gas prices (4%–13%) in the coming periods, this could lead to seasonal fluctuations in gas prices for households. Apart from the energy component, ongoing rises in the wages of utility service providers will continue to push up the costs of the main utilities.

Fuel prices are expected to decline in 2019, thanks to relatively stable global oil prices and a hryvnia exchange rate appreciation. This will help rein in headline inflation, due to both the direct negative contribution of these prices and the lower costs of other goods and services. Looking ahead, the annual growth in fuel prices is expected to be close to the overall inflation rate.

3.2. Demand and Output

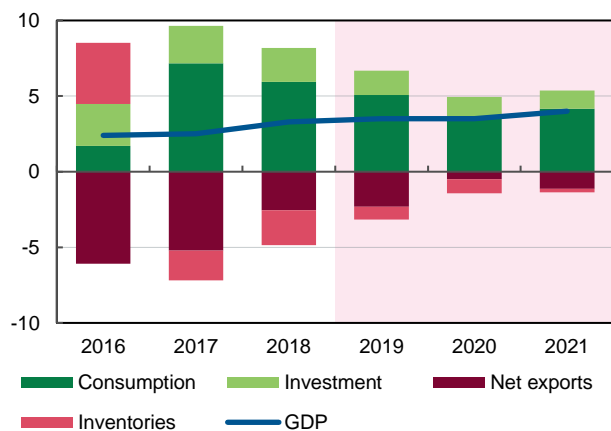
- Economic growth will accelerate to 3.5% this year, driven by higher productivity in the agricultural sector and stronger domestic demand, despite the slower growth in Ukraine's MTPs.
- Next year the economy will continue growing at the rate of 3.5%. In 2021, growth will accelerate to 4% thanks to the easing of monetary policy, active investment, and better consumer confidence.
- GDP growth will primarily be limited by a significant decline in natural gas transit from Russia to the EU through Ukraine (read more in Box 4. "Assumptions about the Volumes of Russian Gas Transit through Ukraine in 2020–2021", on page 29).

Figure 3.2.1. Real GDP, % yoy



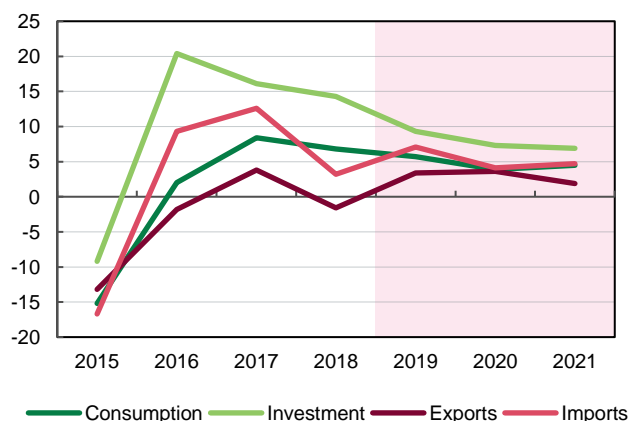
Source: SSSU, NBU staff estimates.

Figure 3.2.2. Contributions to real GDP growth, pp



Source: NBU staff estimates.

Figure 3.2.3. GDP components by final use, % yoy



Source: SSSU, NBU staff estimates.

In 2019, economic growth will accelerate to 3.5% owing to favorable terms of trade, as well as another bumper harvest of grains in Ukraine. Domestic demand will remain consistently high, even with low GDP growth rates in Ukraine's MTPs.

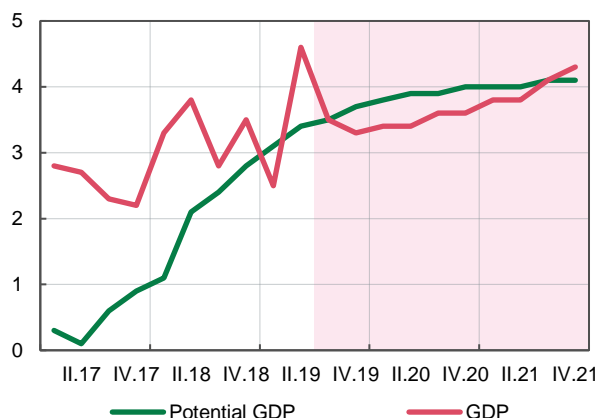
Private consumption will continue to be the main driver of economic growth. It will increase this year by 8.5% on the back of sustained growth in household income, but will slow to about 5% in the coming years, in line with projected movements in real wages. In 2020–2021, stronger consumer confidence and a pick-up in lending amid a significant easing in monetary conditions will boost the growth in private consumption.

Among GDP components, investment will grow the fastest, but its growth will slow over the forecast horizon (to 9.3% in 2019 and to about 7% in the coming years) as the share of labor costs in total business costs increases and investment gradually covers production needs. Investment activity will be determined by the modernization and growth of production in export-oriented industries (mainly agriculture, mining, and metallurgy), as well as in the renewable energy sector, which will be boosted by state benefits. The gradual easing of monetary policy and the introduction of the land market in late 2020 will also help maintain the strong pace of investment. Investment in construction will rise, driven by the government's policy to renovate road infrastructure.

The negative contribution of net exports to GDP growth over the forecast horizon will gradually shrink. Exports of Ukrainian products in 2019 will grow by 3.4%, primarily due to an increase in supplies of grains, metallurgical products, and iron ore. The weakening of external demand amid slowing growth among Ukraine's MTPs remains a drag on growth. Reductions in natural gas transit through Ukraine will hinder export growth in 2020–2021, despite the expected increase in exports of agricultural and manufacturing products.

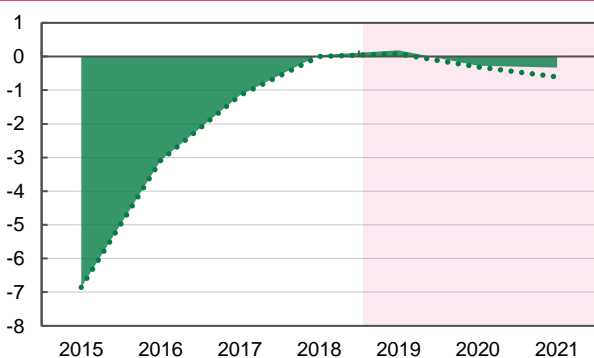
The increase in the volume of imports this year (by 7.1%) was mainly due to the growth in the volume of natural gas imports to form an additional reserve in case gas transit stops. In future, import growth will slow to 4%–5% per year in real terms, in part due to a reduction in energy imports. Rising investment in fixed assets will continue to drive investment imports, especially machinery and equipment. Households are also expected to create additional demand for imported goods as real disposable incomes grow.

Figure 3.2.4. Actual and potential GDP, % yoy



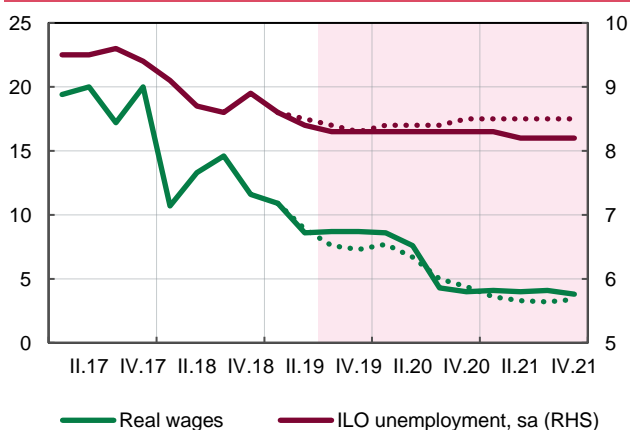
Source: SSSU, NBU staff estimates.

Figure 3.2.5. Output gap, % of potential GDP



Source: NBU staff estimates.

Figure 3.2.6. Real wages, % yoy and ILO unemployment sa, %



Source: SSSU, NBU staff estimates.

The outlook for economic growth has improved throughout the forecast horizon compared to the previous Inflation Report. One of the main factors underlying this revision is a significantly higher-than-expected grain yield (both in the current year and projected for coming years), which will spur an increase in agricultural exports. An increase in the resources available to exporters will allow them to boost their investment in fixed assets, which explains the upward revision of investment growth forecast by 0.2–0.3 pp. The improvement in consumer confidence caused the revision of the private consumption over the entire forecast horizon.

Potential GDP and the Cyclical Position of the Ukrainian Economy

Potential GDP growth will accelerate to almost 4% at the end of 2019, and will continue at the same rate over the forecast horizon (from 2020 onwards, by NBU estimates, potential GDP growth will reach a long-term equilibrium level). Potential GDP growth will mainly be driven by higher total factor productivity, which will gradually converge with that of Ukraine's more developed neighboring economies.

Stronger economic growth requires the implementation of structural reforms (read more in Box 5. "An Alternative Scenario of the Macroeconomic Forecast: the Speeding Up of Reforms," on page 43).

In 2019, the contribution of labor to potential GDP growth will be positive, which is a result of pension reform. In future, this contribution will turn negative again, primarily due to shortages of blue-collar workers, driven by mismatches in the domestic labor market and a natural decline in the population. This negative contribution will gradually diminish as migration slows.

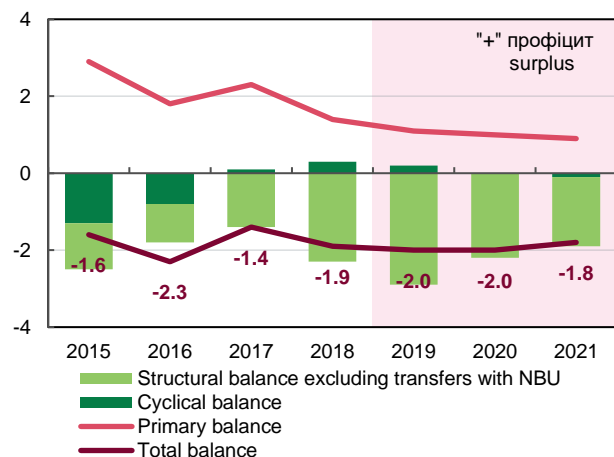
The GDP gap is expected to be insignificant over the forecast horizon, thus creating no significant additional inflationary pressures. In 2019, increased household incomes and improved consumer sentiment are expected to create a small positive GDP gap, generating demand-pull inflation pressures. In addition, improved terms of trade will increase production in export-oriented sectors, which will also help widen the positive output gap. A small negative output gap in 2020–2021 will be driven by worsened terms of trade and a slowdown in wage growth, which will correspond to an increase in labor productivity.

Household Income and Unemployment

The growth in household incomes will remain high, albeit decelerating gradually over the entire forecast period. This year, wages are projected to grow by 18.2% in nominal terms or 9.2% in real terms on the back of intensive labor migration and robust labor demand. In future, incentives for labor migration will be reduced due to the narrowing of the wage gap between Ukraine and its immediate neighbors. Accordingly, wage growth will also decelerate to 9%–12% per year (or to 4%–6% in real terms).

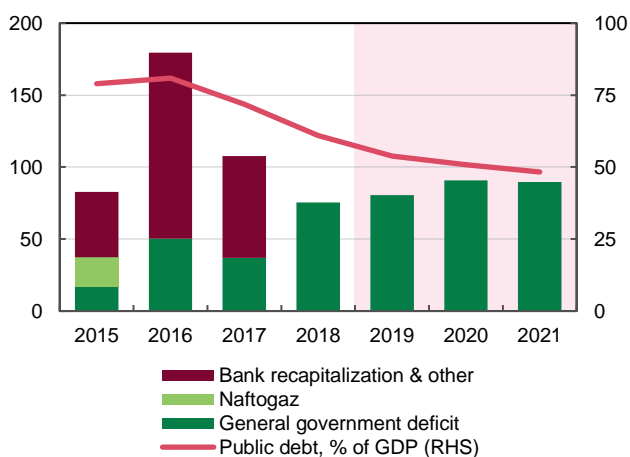
Unemployment will gradually decline to 8% (by ILO methodology) in 2021, which is in line with its natural level.

Figure 3.2.7. Consolidated budget, % of GDP



Source: STSU, NBU staff estimates.

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



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

Among other things, the drop will result from people's increased motivation to seek employment, resulting from higher wages and the need to obtain the pensionable service period required by the new pension law. The slowing of labor migration will help eliminate the current labor market imbalances, including the shortage of skilled labor.

Fiscal Policy

A positive fiscal impulse for economic growth is expected this year. Fiscal policy will be more expansionary than previously anticipated, and it will be determined by a widening budget deficit due to the underperformance of budget revenues, as well as by funding opportunities, which have significantly improved for the government since nonresidents actively entered the domestic bond market. The public sector deficit is projected to widen to 2% of GDP by the end of 2019 and to stay at this level next year.

The increase in public sector revenues will slow to 11% this year due to the poor performance of tax revenues (except for revenues from personal income taxes, which have been growing on the back of the sustained solid growth in nominal wages). This will be partially offset by a significant increase in nontax revenues (in particular, due to a 45% increase in the portion of the NBU's profit that is transferred to the budget).

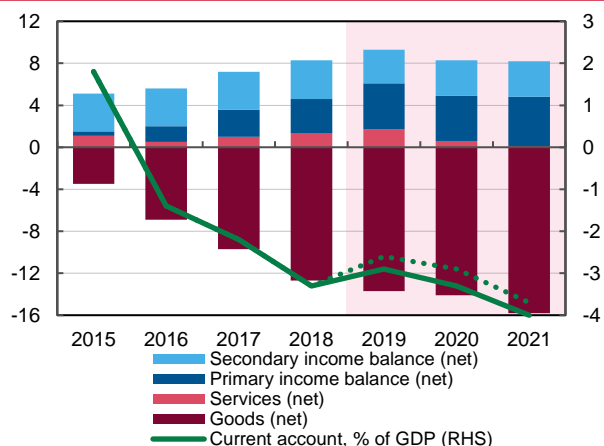
The increase in public sector expenditures will be in line with the growth in revenues. As expected, social spending will increase the most this year, including expenses on employee salaries and pensions, which will grow by more than 17%, stimulating the expansion of domestic consumer demand. Capital expenditures will grow at a much slower pace, and will be one of the factors underlying the expected slowdown in the growth of investment activity.

Public and publicly guaranteed debt as a percentage of GDP will gradually decline throughout the forecast period, driven by strong economic growth, low exchange rate volatility, and the annual primary budget surplus of 1% of GDP.

3.3. Balance of Payments

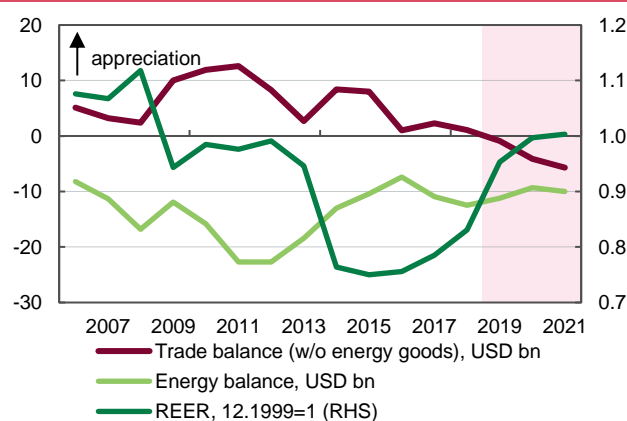
- Despite the stronger hryvnia, the current account deficit will narrow to 2.9% of GDP in 2019, thanks to favorable terms of trade and large exports of grains.
- In 2020–2021, the current account deficit will gradually widen, primarily because of less favorable terms of trade, stronger domestic demand, and a decrease in natural gas transit. At the same time, the current account deficit will remain at the sustainable level (which the NBU estimates at 3% ± 1 pp of GDP) and will be financed by capital inflows.
- The launch of the IMF's new program with Ukraine and maintaining attractive interest rates will facilitate capital inflows into the public and private sectors.

Figure 3.3.1. Current account balance, USD bn



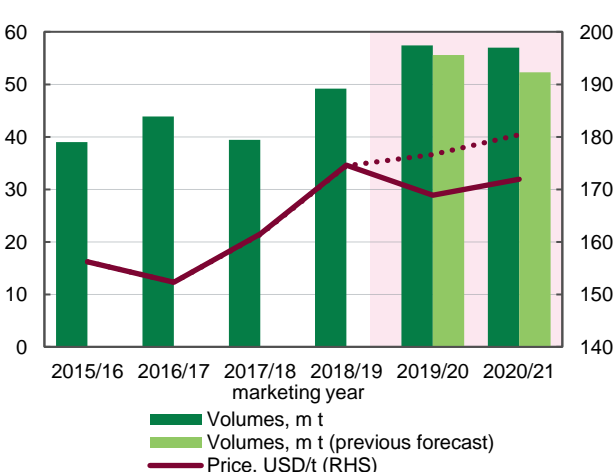
Source: NBU.

Figure 3.3.2. REER and trade balance



Source: NBU.

Figure 3.3.3. Grains exports



Source: NBU.

Over the forecast horizon, the trade deficit will widen amid steady consumer and investment demand.

In 2019, the bumper harvest of grain and global prices for iron ore will drive rapid growth in merchandise exports (6% yoy). This growth is expected to slow to 2% in 2020–2021 as terms of trade worsen, despite continued high yields of grains and oilseeds. In addition to the growth in traditional commodity exports, machinery exports are projected to increase, particularly railcar products to neighboring countries.

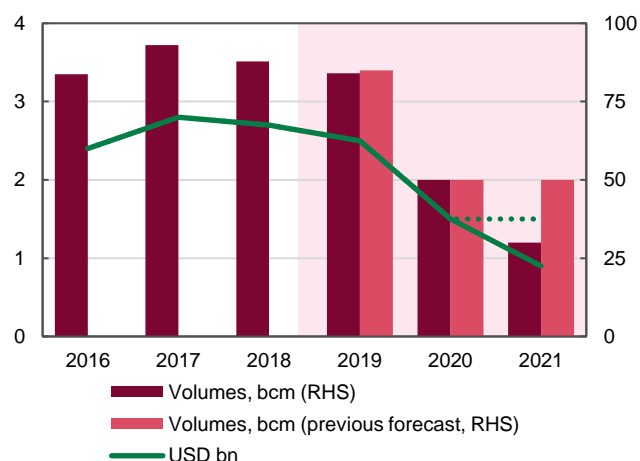
In 2019–2021, the growth in imports will gradually decelerate, ranging between 2% and 6% (down from 14% in 2018), primarily as a result of lower energy imports. In 2019, energy imports will decrease by 10% as gas prices fall by a third and prices for other energy commodities decline as well. This will be partially offset by an increase in the volume of natural gas imports to prepare for the possible suspension of gas transit through Ukraine by Russia in early 2020. Moving forward, energy imports will remain low: the gradual increase in energy prices will be balanced out by a decline in gas imports.

Non-energy imports will grow more slowly as well, but this deceleration (to 4% in 2021) should be less sharp. In 2019, the growth in imports will be driven by both sustained investment (particularly in green energy projects) and consumer demand as the hryvnia appreciates. In 2020–2021, consumer demand will fade as wage growth decelerates and the hryvnia REER stops appreciating. At the same time, investment demand will remain robust.

Over the forecast horizon, the services trade surplus is projected to narrow as a result of a reduction in gas transit volumes to 50 billion cu. m in 2020 and 30 billion cu. m in 2021 (read more in Box 4. "Assumptions about the Volumes of Russian Gas Transit through Ukraine in 2020–2021," on page 29). This will be partially offset by continued growth in the exports of IT services.

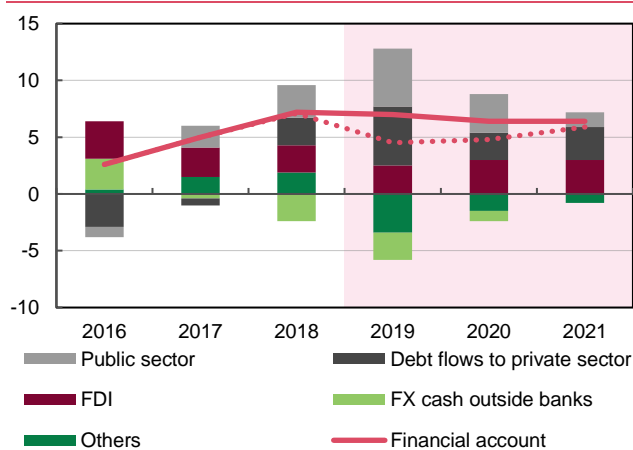
In 2019–2021, the surplus of both primary and secondary income will widen, primarily due to increased remittances from labor migrants. Their incomes are anticipated to continue to grow on the back of an increase in the share of skilled workers, as well as due to the steady growth of GDP in the main destination countries for labor migrants. Meanwhile, the number of labor migrants will remain practically unchanged as wages of blue-collar workers converge and the labor market saturate.

Figure 3.3.4. Gas transit



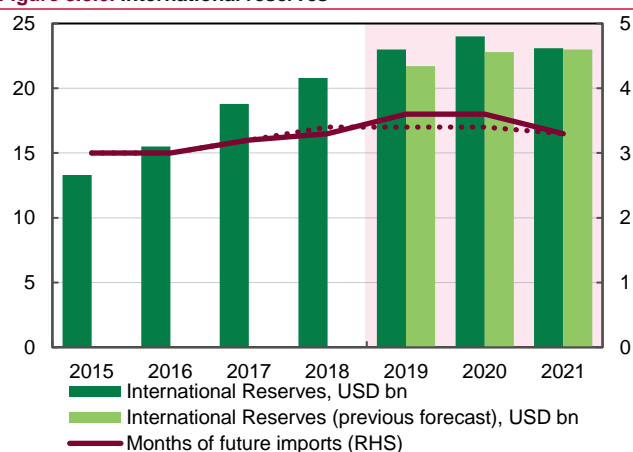
Source: NBU.

Figure 3.3.5. Financial account: net inflows, USD bn



Source: NBU.

Figure 3.3.6. International reserves



Source: NBU.

Debt capital inflows to the private sector will continue to grow over the forecast horizon, which, along with inflows to the public sector, will finance the current account deficit. At the same time, demand for FX cash is projected to wane as inflation expectations decline and the economy adapts to the flexible exchange rate, which implies equal chances that the hryvnia will strengthen or weaken.

The key assumption underlying the forecast is the launch of a new program with the IMF in late 2019. This will allow Ukraine to attract other official financing, improve access to the international capital markets, and enhance the attractiveness of Ukrainian assets to foreign investors. It will also facilitate the implementation of the government's strategy to reduce the share of foreign currency debt in total debt, including through the gradual replacement of FX domestic treasury bills and bonds (held by residents) with hryvnia ones (held by nonresidents).

Thanks to the balance of payments surplus in 2019, international reserves will increase to USD 23 billion. As a result, notwithstanding large repayments on external debt, international reserves will range between USD 23 billion and USD 24 billion in the coming years, which is sufficient to cover three months of future imports.

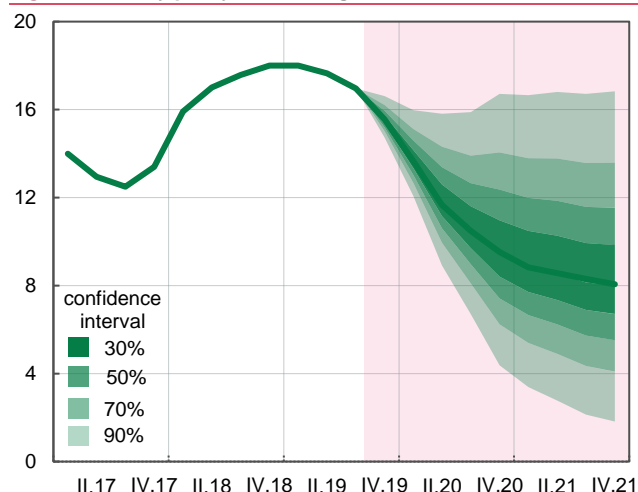
Compared to the forecast published in July, the current account deficit widened marginally over the entire forecast horizon. The main reasons for this revision were an increase in imports of both consumer and investment goods (as domestic demand revived and the hryvnia strengthened) and a decrease in gas transit volumes in 2021. At the same time, the increase in the current account deficit was partially offset by stronger exports, driven by higher prices and volumes of iron ore exports and an upward revision of the grain forecast in 2019–2021.

In 2019–2021, capital inflows into the public sector are projected to be higher than previously expected, primarily due to the rising attractiveness of hryvnia domestic Treasury bills and bonds to nonresidents.

3.4. Monetary Conditions and Financial Markets

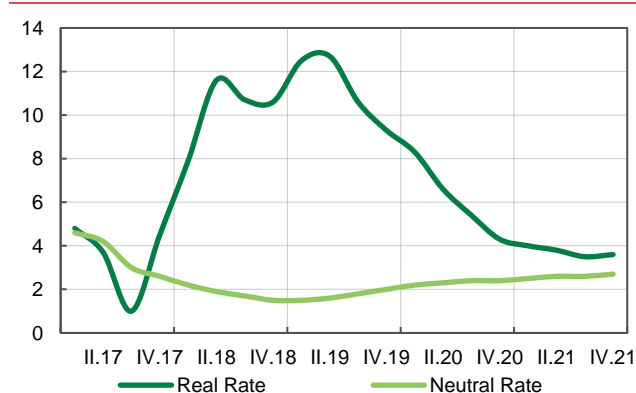
- A steady downward trend in inflation, to its 5% target, alongside improved inflation expectations, will enable the central bank to cut the key policy rate further, to 8% by late 2021.
- A monetary policy easing will help stabilize the hryvnia REER in 2020-2021 following its strengthening in 2016–2019.
- The liquidity surplus in the banking system will be supported by the NBU's interventions in the FX market amid nonresidents' strong appetite for hryvnia Treasury bonds and bills.

Figure 3.4.1. Key policy rate, average, %



Source: NBU staff estimates.

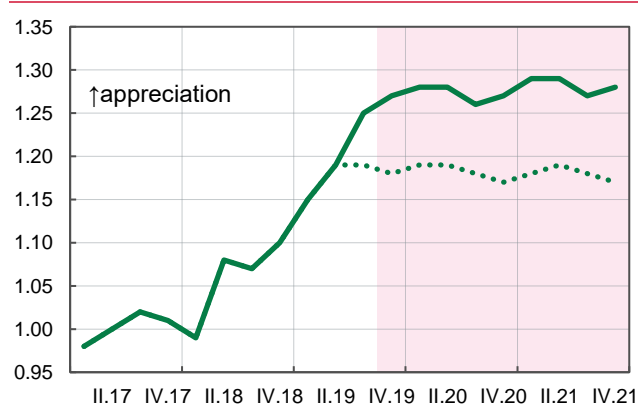
Figure 3.4.2. Real Interest Rate*, %



* Deflated by inflation expectations that are based on the quarterly projection model.

Source: NBU staff estimates.

Figure 3.4.3. Hryvnia REER Index, IV.2016=1



Source: NBU staff estimates.

Further monetary policy easing will depend on whether inflation pressures continue to decline steadily and inflation expectations improve. As disinflation proceeds, the key policy rate will decrease in real terms from the current level of 10%, approaching its neutral level in 2021. Accordingly, the nominal key policy rate will drop to 8% in 2021. As before, the largest cuts in the key policy rate are expected to take place in 2020, along with inflation returning to its target range. However, the current macroeconomic forecast is based on a slightly lower trajectory of the key policy rate over the next few quarters compared to July's forecast, due to rate being cut more significantly in October. That said, the projections of the key policy rate by end-2020 and 2021 have been left unchanged.

Uncertainty about the future trajectory of the key policy rate arises from pro-inflationary risks and progress in conducting structural reforms. If buoyant consumer demand persists and wage growth continues to outpace productivity growth, the key policy rate will be cut at a more moderate pace. Conversely, the implementation of the economic and legislative initiatives declared by the government will help improve the investment climate and the economy, and thus increase the potential for economic growth. Under such conditions, the key policy rate could be decreased more quickly and to a lower level.

A monetary policy easing will help stabilize the real effective exchange rate of the hryvnia in 2020-2021 following its strengthening in 2016–2019. According to NBU estimates, the exchange rate is in line with fundamentals, as the current account deficit is expected to remain sustainable over the forecast horizon.

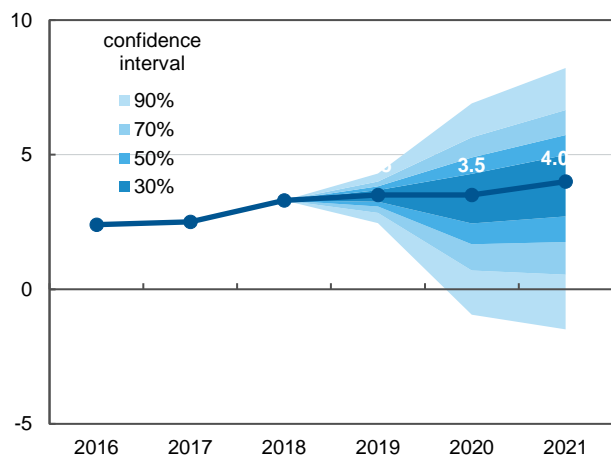
A significant liquidity surplus is expected to persist in the banking system, the main source of which will be the NBU's FX interventions, including on the back of nonresidents' sustained demand for hryvnia Treasury bonds and bills. The widening in liquidity will be in part offset by an increase in the amount of cash in circulation, and the government's FX purchases to repay external debt.

The growth in transaction demand for cash will be to some extent counterbalanced by the rising number of cashless payments. This means that cash will increase at a slower pace compared to nominal consumption expenditure, while the ratio of M0 to GDP will drop further.

3.5. Risks to the Forecast

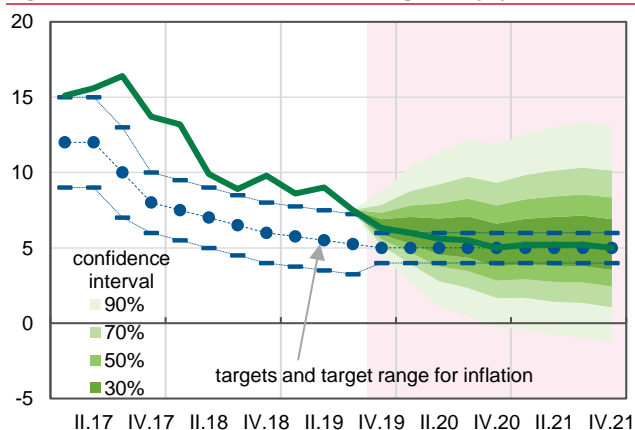
Threats to macrofinancial stability pose the main risk to the baseline scenario of the macroeconomic forecast. These threats could mainly arise from Ukrainian court rulings that could make the Ukrainian economy much more vulnerable and create a barrier to continued cooperation with the IMF.

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.

Any delay in signing a new memorandum with the IMF could worsen exchange rate and inflation expectations. This would make it more difficult for Ukraine to access the international capital markets during a peak in debt repayments, and dent the appetite of foreign investors for hryvnia Treasury bonds and bills. Financing difficulties would lead to a curtailment in budgetary spending, while intensified inflationary pressures, mainly through the exchange rate channel, would force the NBU to conduct a tighter monetary policy than envisaged in the baseline scenario.

A significant risk to the baseline scenario is that the transit of Russian gas through Ukraine will be halted completely once the construction of gas pipelines to Europe bypassing Ukraine is completed. A reduction in FX proceeds would put depreciation pressure on the hryvnia, which could result in the key policy rate being cut more slowly compared to the baseline scenario.

Another pro-inflationary risk could arise from continued weaker growth in the global economy due to an escalation in trade wars and rising geopolitical tensions. This could result in a more significant deterioration in the terms of trade for Ukraine than assumed in the baseline scenario, in the wake of falling prices on the global commodity markets. This, in turn, would lead to a reduction in Ukraine's FX proceeds from exports. In addition, under this scenario capital outflows from developing economies, including Ukraine, will ensue, which would put additional pressure on the exchange rate. Given this scenario, the NBU would also conduct a tighter monetary policy.

However, the opposite scenario is also possible: if the central banks of leading economies succeed in stimulating economic growth, this will give impetus to the global economy, enabling the NBU to ease monetary policy more quickly.

There are still risks related to an escalation in the military conflict in eastern Ukraine and new trade restrictions imposed by Russia. These risks could worsen the country's investment climate and inflation and exchange rate expectations, as a result of which the NBU would have to set the key policy rate above the level envisaged in the baseline scenario.

The scenario of rapid GDP growth, which has been declared a target scenario by the Ukrainian government, is seen as a positive risk (for more details, see Box 5. "An Alternative Scenario: the Speeding up of Reforms," on page 43).

Box 5. An Alternative Scenario: the Speeding up of Reforms

Following the latest crisis of 2014–2015, the Ukrainian economy was recovering, speeding up gradually. In spite of that, the average growth rate remained moderate, at about 3% annually. The implementation of the key internal reforms outlined in the [memorandum of understanding signed by the Ukrainian government and the NBU](#), along with the judicial reform required to establish the rule of law in Ukraine, could noticeably speed up macroeconomic development. The phase of the global economic cycle is also an important factor in accelerating economic growth in Ukraine, as this affects the country's ability to attract foreign investment and influences demand for Ukrainian exports.

The impact of progress in carrying out reforms on the macroeconomic environment would be widespread. It would also cause the economy to transition to new equilibrium levels of economic growth, the exchange rate, and the current account.

This would lead to a significant rise in investment on the back of an improved business environment, which, after a while, would increase total factor productivity (labor and capital), and the rate of the economy's potential growth. However, consumer demand would initially grow at a faster pace, fueled by higher wages, which would put upward pressure on prices. A sizeable inflow in investments would cause the exchange rate of the hryvnia to appreciate, curbing inflationary pressures. In the end, large investments would increase domestic supply, which would also help rein in inflation.

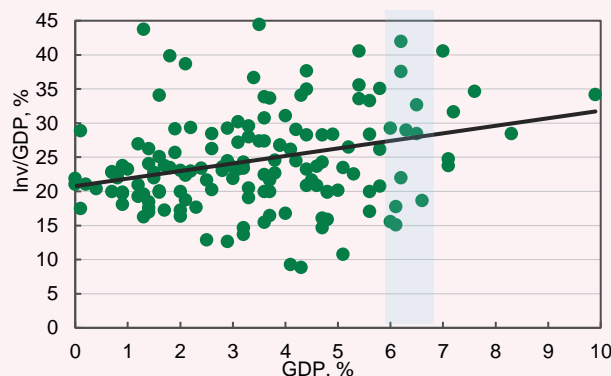
Labor outflows abroad would decrease on the back of an improved macroeconomic and social environment and higher wages, which would in turn help saturate the labor market. The unemployment rate would drop markedly and stabilize at a lower level, as the involvement of households in economic processes increases.

The current account deficit would widen, driven by higher demand for imported investment goods, such as machinery and equipment. Such a widening is typical of economies that are going through the initial stage of rapid economic growth, due to increased needs for fixed assets. Growth in production capacity would help increase export potential, particularly that of the agricultural sector, the mechanical engineering, and metallurgy, while also decreasing the economy's energy intensity. Therefore, the trade deficit would narrow again in the long run, as evidenced by the experiences of Poland, the Czech Republic, Slovakia, and Romania.

The experiences of other countries also point to the key role of investment in speeding up economic growth (see Figure 1) – to achieve a breakthrough, annual investment growth must exceed 20% on average, while the share of investment in GDP must make up 25%–30%. Such rises in investment and the speeding-up of economic growth were preceded or accompanied by a number of structural reforms, such as trade liberalization, the creation and/or expansion of economic unions (the EU), boosts to institutional capacity building, and an improvement in the business climate. A benign external environment was an important factor that bolstered the impact of reforms and supported robust economic growth. However, the experiences of Israel and Malaysia (in the 1990s) and Pakistan and Uruguay (in the

2000s) show that a breakthrough can be achieved mainly through internal transformations.

Figure 1. GDP growth and investment/GDP ratio, % (2009-2017 average)



Source: WEO, NBU staff estimates.

The NBU estimates that the impact on inflation would, on average, be neutral under the accelerated growth scenario (inflation will remain within its target range), as some impact channels would offset each other – a stronger hryvnia would compensate for robust consumer and investment demand. The key policy rate could be decreased to below 8%, as is assumed in the NBU's current forecast, due to a decline in the neutral interest rate. Although the neutral interest rate is currently estimated at 3% in real terms, it could be lower on the back of decreased Ukrainian assets' risk premium, and a more rapid appreciation of the real exchange rate.

This scenario also carries certain risks: the strengthening of the hryvnia may not be able to offset inflationary pressures from overheated consumer demand; insufficient supply on the labor market could also increase inflationary pressures; and vulnerability to capital flows would rise. The phase of the global economic cycle also plays an important role, as the above scenario requires foreign investment and sustained demand for Ukrainian exports.

Macroeconomic forecast (October 2019)

Indicators	2019				2020				2021												
	2016	2017	2018		I	II	III	IV	current forecast	forecast 7.2019	I	II	III	IV	current forecast	forecast 7.2019					
REAL ECONOMY, % yoy, unless otherwise stated																					
Nominal GDP, UAH bn	2385	2984	3559	808	928	1121	1163	4020	4003	893	1022	1233	1272	4420	4390	978	1119	1353	1399	4850	4803
Real GDP	2.4	2.5	3.3	2.5	4.6	3.5	3.3	3.5	3.0	3.4	3.4	3.6	3.6	3.5	3.2	3.8	3.8	4.1	4.3	4.0	3.7
GDP Deflator	17.1	22.1	15.4	11.7	9.4	8.0	7.5	9.2	9.2	7.0	6.5	6.0	5.5	6.2	6.3	5.5	5.5	5.5	5.5	5.5	5.5
Consumer prices (period average)	13.9	14.4	10.9	-	-	-	-	8.3	8.3	-	-	-	-	5.6	5.5	-	-	-	-	5.2	5.1
Producer prices (period average)	20.5	26.4	17.4	-	-	-	-	6.2	7.0	-	-	-	-	7.7	8.9	-	-	-	-	7.6	7.9
Consumer prices (end of period)	12.4	13.7	9.8	8.6	9.0	7.5	6.3	6.3	6.3	6.0	5.6	5.5	5.0	5.0	5.0	5.2	5.2	5.2	5.0	5.0	5.0
Core inflation (end of period)	5.8	9.5	8.7	7.6	7.4	6.5	5.3	5.3	5.5	4.9	4.6	4.1	3.7	3.7	3.8	3.9	3.9	3.9	3.8	3.8	3.8
Non-core inflation (end of period)	17.5	19.4	10.7	10.0	11.7	9.4	8.3	8.3	7.6	7.7	6.8	7.4	6.8	6.8	6.4	6.8	6.7	6.9	6.5	6.5	6.5
raw foods (end of period)	1.2	23.5	3.3	3.6	7.8	8.6	7.2	7.2	3.8	4.8	4.2	3.1	3.5	3.5	3.1	4.1	3.5	3.1	3.0	3.0	3.0
administrative prices (end of period)	34.6	16.1	18.0	18.7	17.0	14.1	11.7	11.7	12.8	11.1	10.9	11.6	10.0	10.0	9.8	9.3	9.7	10.5	9.8	9.8	9.6
Producer prices (end of period)	35.7	16.6	14.2	8.9	4.5	1.7	5.8	5.8	7.6	5.9	10.2	10.4	7.3	7.3	7.6	8.7	7.9	7.1	7.0	7.0	7.3
Nominal wages (period average)	23.6	37.1	24.8	20.8	18.8	18.1	15.6	18.2	17.5	15.5	13.3	10.1	9.4	12.0	11.7	9.4	9.3	9.5	9.0	9.3	8.7
Real wages (period average)	9.0	19.1	12.5	10.9	8.6	8.7	8.7	9.2	8.6	8.6	7.6	4.3	4.0	6.0	5.9	4.1	4.0	4.1	3.8	4.0	3.4
Unemployment (ILO)	9.4	9.5	8.8	-	-	-	-	8.4	8.5	-	-	-	-	8.3	8.4	-	-	-	-	8.2	8.5
FISCAL SECTOR																					
Consolidated budget balance, UAH bn	-54.8	-42.1	-67.8	-	-	-	-	-80.2	-61.9	-	-	-	-	-90.6	-68.0	-	-	-	-	-89.7	-73.6
% of GDP	-2.3	-1.4	-1.9	-	-	-	-	-2.0	-1.5	-	-	-	-	-2.0	-1.5	-	-	-	-	-1.8	-1.5
Public sector fiscal balance (IMF methodology), UAH bn	-50.3	-37.0	-75.4	-	-	-	-	-80.6	-61.5	-	-	-	-	-90.5	-68.0	-	-	-	-	-89.5	-74.4
% of GDP	-2.1	-1.2	-2.1	-	-	-	-	-2.0	-1.5	-	-	-	-	-2.0	-1.5	-	-	-	-	-1.8	-1.5
BALANCE OF PAYMENTS (NBU methodology)																					
Current account balance, USD bn	-1.3	-2.4	-4.4	-0.2	-0.5	-2.0	-1.8	-4.5	-3.8	-0.9	-1.0	-2.5	-1.4	-5.7	-4.6	-1.4	-1.7	-2.9	-1.5	-7.5	-6.3
Exports of goods and services, USD bn	46.0	53.9	59.1	15.1	15.5	16.2	16.3	63.1	62.5	15.3	15.5	15.8	17.1	63.7	64.2	15.5	15.7	16.3	17.6	65.1	66.1
Imports of goods and services, USD bn	52.5	62.5	70.5	16.9	18.3	20.1	19.8	75.1	74.2	17.9	18.6	19.9	20.7	77.2	77.2	18.6	19.7	21.0	21.5	80.8	80.9
Financial account, USD bn	-2.6	-5.0	-7.2	-0.5	-0.9	-3.5	-2.2	-7.0	-4.5	-2.9	-1.6	-0.8	-1.0	-6.4	-4.8	-2.2	-1.5	-1.6	-1.0	-6.4	-5.9
BOP overall balance, USD bn	1.3	2.6	2.9	0.3	0.4	1.5	0.5	2.6	0.6	2.0	0.7	-1.7	-0.4	0.6	0.2	0.8	-0.1	-1.3	-0.5	-1.1	-0.4
Gross reserves, USD bn	15.5	18.8	20.8	20.6	21.4	23.0	23.0	23.0	21.7	24.4	25.8	23.6	24.0	24.0	22.8	24.2	24.8	22.9	23.1	23.1	23.0
Months of future imports	3.0	3.2	3.3	3.3	3.2	3.4	3.6	3.6	3.4	3.8	3.9	3.5	3.6	3.6	3.4	3.6	3.6	3.3	3.3	3.3	3.3
MONETARY ACCOUNTS (cumulative since the beginning of the year)																					
Monetary base, %	13.6	4.6	9.2	-2.8	2.1	1.2	8.1	8.1	8.2	-3.4	0.6	1.0	6.5	6.5	6.5	-4.5	-0.1	0.9	6.3	6.3	6.3
Broad money, %	10.9	9.6	5.7	-1.9	0.8	2.2	8.7	8.7	8.0	-2.3	1.5	4.1	8.9	8.9	8.6	-1.9	2.0	4.6	9.2	9.2	8.8
Velocity of broad money (end of year)	2.2	2.5	2.8	-	-	-	-	2.9	2.9	-	-	-	-	2.9	2.9	-	-	-	-	2.9	2.9

Terms and Abbreviations

BOI	Business Outlook Index	NEER	Nominal effective exchange rate
Brexit	The UK leaving the European Union	NFC	Nonfinancial corporation
CAPB	Cyclically adjusted primary fiscal balance	NJSC	National Joint-Stock Company
CD	Certificate of deposit	OPEC	Organization of the Petroleum Exporting Countries
CEE	Central and Eastern Europe	PFU	Pension Fund of Ukraine
CIT	Corporate income tax	PIT	Personal income tax
CMU	Cabinet of Ministers of Ukraine	PMI	Purchasing Managers' Index
Core CPI	Core consumer price index	PPI	Producer price index
CPI	Consumer price index	REER	Real effective exchange rate
DGF	Deposit Guarantee Fund	Russia	Russian Federation
ECB	European Central Bank	SESU	State Employment Service of Ukraine
ECPI	External Commodity Price Index	SFSU	State Fiscal Service of Ukraine
EM	Emerging Markets	SSSU	State Statistics Service of Ukraine
EU	European Union	STA	Single Treasury Account
FAO	Food and Agriculture Organization	STSU	State Treasury Service of Ukraine
FDI	Foreign direct investment	UAWCPI	Weighted average of Ukraine's MTP countries' CPI
Fed	Federal Reserve System	UAWGDP	Weighted average of annual GDP growth of Ukraine's MTP countries
FX	Foreign exchange	UIIR	Ukrainian Index of Interbank Rates
GDP	Gross domestic product	US	United States of America
GFCF	Gross fixed capital formation	USDA	United States Department of Agriculture
GTS	Gas transit system	U.S. EIA	U.S. Energy Information Administration
GVA	Gross value added	VAT	Value-added tax
IEA	International Energy Agency	WEO	World Economic Outlook
IIF	Institute of International Finance		
ILO	International Labour Organization		
IMF	International Monetary Fund		
JSC	Joint-Stock Company		
MFU	Ministry of Finance of Ukraine		
MTP	Main trading partner		
MY	Marketing year		
NBU	National Bank of Ukraine		
bbl	barrel	pp	percentage point
bcm/billion cu.m	billion cubic meters	qq	in quarterly terms; quarter-on-quarter change
bn	billion	sa	seasonally adjusted
bp	basis point	t	ton
eoq	end of quarter	yoy	in annual terms; year-on-year change
kcm	thousand cubic meters		
MO	cash	RHS	right-hand scale
m	million	UAH	Ukrainian hryvnia
MW	megawatt	USD	US dollar