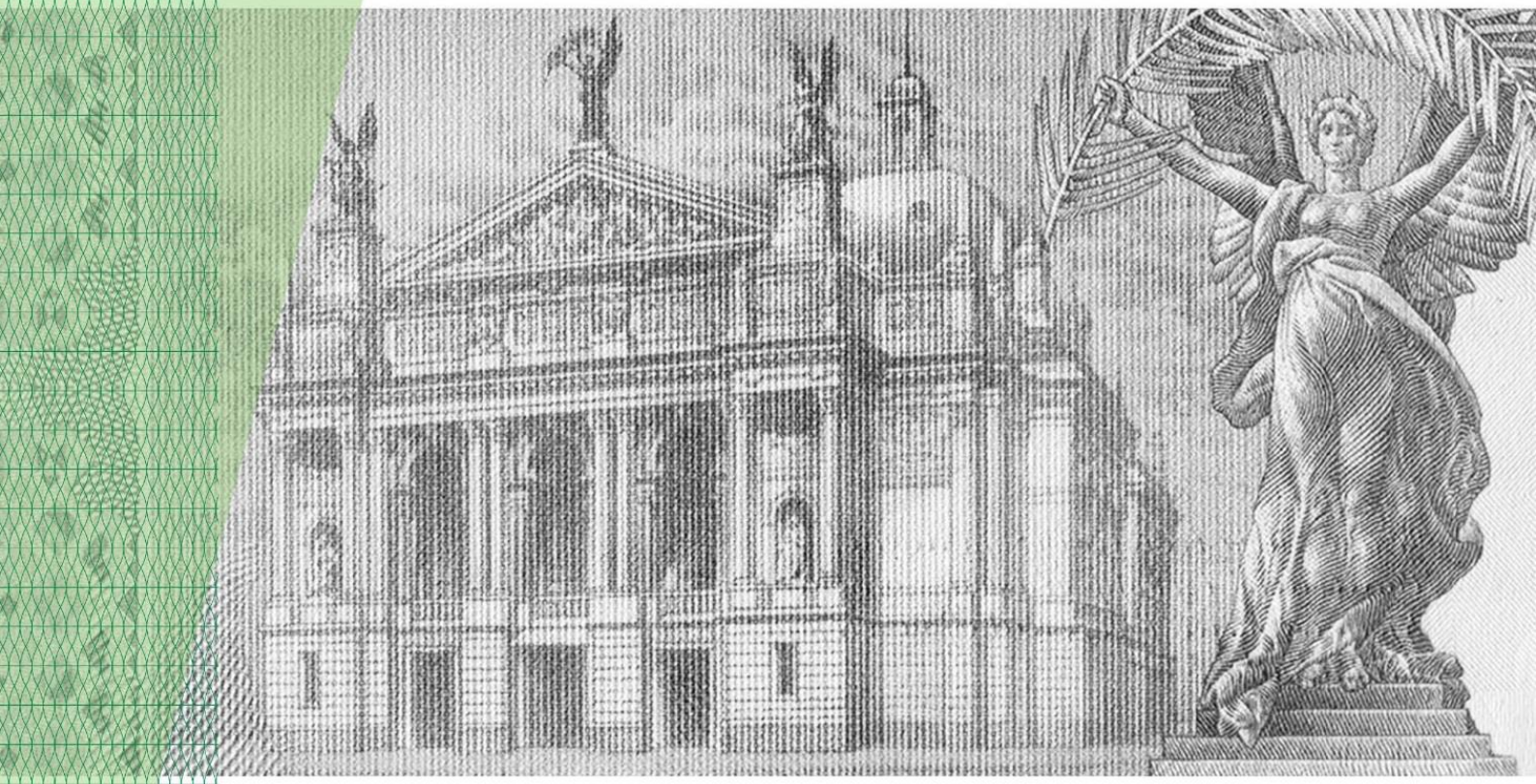
National Bank of Ukraine

Inflation Report

April 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 forecast frequency.

The publication of the macroeconomic forecast and its underlying assumptions aims at strengthening the transparency and predictability of the NBU's monetary policy. This should enhance society's confidence, an important prerequisite for anchoring inflation expectations and achieving price stability, which is the NBU's priority.

The Monetary Policy and Economic Analysis Department developed forecasts of inflation and other macroeconomic variables. The NBU Board approved the forecasts during a meeting devoted to monetary policy issues on 25 April 2019.[1] Macroeconomic projections, including inflation, comprise the principal input, but not the only one, the NBU Board considers in its decision-making. In addition to the projections of inflation and other macroeconomic variables, the NBU Board takes into account any new information appearing after the forecast has been developed. The assessment of risks to the outlook or relations between macroeconomic parameters may vary between members of the NBU Board.

The analysis in the Inflation Report is based on the macroeconomic data available at the date of its preparation; therefore, the time horizon of the analysis for some indicators may vary. This report used 24 April 2019 as the cut-off date for the data.

Previous issues of Inflation Report, presentation of the Inflation Report, summary of macroeconomic projections, time series and data for charts and tables in the Inflation report are available at the following link:
https://bank.gov.ua/control/en/publish/category?cat_id=16036612.

[1] NBU Board Decision No. 312-D as of 25 April 2019 On the Approval of the Inflation Report.

Contents

Summary

Consumer price inflation continued to slow

In Q1 2019, inflation continued to slow, to 8.6% yoy in March from 9.8% yoy in December 2018. Actual inflation was in line with the forecast published in the January 2019 Inflation Report. Core inflation decelerated even faster than expected, to 7.6% yoy, indicating a weakening in underlying inflationary pressures. Moreover, despite it being election time, the situation on the Ukrainian financial market remained benign during the quarter, and inflation expectations of households, banks and financial analysts continued to improve.

The disinflation trend and the improvement in inflation expectations were driven by the NBU's tight monetary policy, which was particularly reflected in the hryvnia strengthening against the basket of partner countries' currencies. An important channel of influence of high interest rates on the exchange rate was the market of hryvnia-denominated domestic government bonds, and the strong demand for them from nonresidents. The appreciation of the hryvnia was also due to the sizeable foreign currency proceeds from agricultural companies, low amount of dividend repatriation abroad, weak growth in merchandise imports, and the net sale of foreign currency by households. Under these conditions, the NBU continued replenish its international reserves through interventions on the interbank foreign exchange market.

The stronger hryvnia impacted prices of imported goods and goods that have a substantial import content. Coupled with a past drop in global crude oil prices, this caused fuel prices to fall. Meanwhile, production costs continued drive prices up, although this effect became weaker. In particular, this factor kept fueling the still fast growth in services prices and utility tariffs.

Temporary factors prompted the acceleration in raw food prices, although their contribution to headline inflation remained small. Other indicators of price changes pointed to the easing food inflation pressures. In particular, thanks to the ample harvest of 2018 and positive developments in animal breeding (especially in poultry farming), the index of prices for agricultural products declined, while growth of producer prices in the food industry moderated. Coupled with favorable FX market and lower global prices for the majority of raw commodities, this caused producer price inflation to slow, to 8.9% yoy in March.

Demand pressure remained substantial, and in early 2019 it was supported by fiscal policy. In Q1, the consolidated budget ran a deficit, rather significant for this period, and the primary balance, although remaining positive, decreased. The fiscal policy easing was mainly due to weak revenue growth (despite the effects of temporary factors, such as legalizing cars with European registration and the receipt of confiscated funds).

An increase in social payments (higher pensions and additional pension payments) and migrants' remittances supported growth in household income. Uncertainty about the political situation was an additional factor limiting the further decline in inflationary pressures and the improvement in inflation expectations.

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

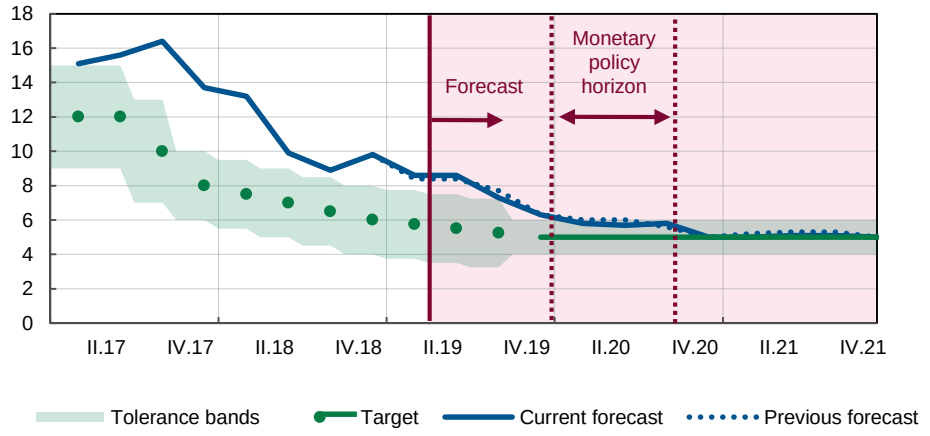
Inflation will decline to 6.3% by the end of this year and will reach the target range by early next year. It is expected to meet the medium-term target of 5% in late 2020. The disinflation will be driven by:

- tight monetary conditions and restrained fiscal policy;
- slower wage growth as wages gradually converge with the levels of neighboring countries, and labor migration from Ukraine subsides;
- hryvnia appreciation in Q1 2019, which will restrain growth in the prices for nonfood goods;
- lower global prices for natural gas, which will also pass through to domestic prices;
- a larger supply of both domestic and imported food products.

Core inflation will continue to slow (to 5.0% in 2019 and 3.7% in subsequent years), primarily due to lower pressure from aggregate demand. Services prices will be the fastest growing component of the core CPI, although their growth will slow markedly as wage growth decelerates. Low imported inflation, coupled with the moderate volatility of the hryvnia exchange rate, will put downward pressure on both core inflation and raw food prices.

An increase in some tariffs to market levels and higher excise taxes on alcohol and tobacco products will restrain the decline in inflation. As a result, administered prices will grow by 13.9% in 2019, and by almost 10% in subsequent years. Domestic prices of natural gas for households will reach the import parity level in 2019 and after that will depend mostly on global price developments.

Figure 1. CPI (end of period, % yoy) and Inflation Targets



Source: SSSU, NBU staff estimates.

In Q1 2019, economic growth slowed, as expected

In 2018, economic growth in Ukraine accelerated to 3.3% yoy from 2.5% yoy in 2017, and was in line with the NBU expectations published in the January 2019 Inflation Report. GDP growth was mainly fueled by domestic consumer and investment demand. Consumption was supported by a robust increase in household income. Investment growth slowed somewhat, on the back of the waning effect of the pent-up investment seen during the post-crisis period, and the relatively moderate improvement in financials of companies in 2018, due to, among other things, weaker export performance. The latter, in turn, resulted from the negative impact of protectionist measures in global trade, the escalation of the Sea of Azov conflict in the latter half of the year, and repairs at several large metallurgical plants. Across sectors, agriculture made a significant contribution to GDP growth in 2018 due to the record harvest of grains and oilseeds.

In early 2019, economic growth decelerated, as expected (to 2.4% yoy according to NBU estimates). Thus, the contribution of the agricultural sector decreased as the effect of the record harvest had waned as anticipated. In addition, industrial sector performance has weakened. Domestic demand (mainly consumption by households and investment by businesses) remained the main driver of economic growth. In particular, the sustained growth in consumer demand was evidenced by growth pickup in retail trade turnover, which was propped up by increases in real wages and pensions. Construction output grew at a faster clip, reflecting sustained investment demand and favorable weather conditions.

In contrast, external conditions deteriorated somewhat. The growth of the world economy and global trade decelerated in the wake of protectionist measures. This pushed down prices on all commodity markets, apart from the oil and iron ore markets, where supply factors played an important role. Nevertheless, global financial market conditions became more benign for emerging markets. This was attributed, among other things, to a dovish rhetoric of leading central banks, such as the Fed and the ECB, amid moderate inflationary pressures and

weaker economic growth. Rising optimism about trade talks between the United States and China was an additional factor.

The current account deficit narrowed further in Q1 2019, to USD 0.4 billion, the level seen in the same quarter last year. More specifically, the deficit in the trade in goods declined, and dividend payments decreased. Last year's bumper harvest of grain and industrial crops buoyed the growth in exports of goods, despite a drop in metallurgical exports. The growth in merchandise imports slowed, due to a fall in energy imports and a reduction in import prices for some consumer goods.

The current account deficit was more than offset by USD 0.8 billion in financial account inflows, which were largely generated by borrowing in the government sector. The sources of funds included both official financing and foreign portfolio investments in hryvnia government securities. The private sector was a net creditor to the rest of the world despite a solid inflow of foreign direct investments (almost USD 0.8 billion). Owing to a USD 0.3 billion surplus in overall balance of payments, international reserves were little changed in Q1 2019, despite IMF loan repayments. Reserves stood at USD 20.6 billion or 3.4 months of future imports at the end of Q1 2019.

Economic growth will decelerate temporarily in 2019

GDP growth will slow to 2.5% in 2019, only to speed up again starting next year (to 2.9% and 3.7% in 2020 and 2021 respectively).

The causes of the 2019 economic slowdown include weaker growth in the world economy and global trade, a restrained fiscal policy due to the need to repay large amounts of government debt, and the tight monetary conditions necessary to bring inflation to the target. In addition, the harvest of grain and oilseeds is expected to decline compared to the 2018 record. These developments will be counterbalanced in part by better terms of trade, due to high prices for selected Ukraine's export commodities and lower natural gas prices.

Private consumption will remain the main driver of economic growth. However, it will decelerate on the back of slower growth in real household income, such as wages, pensions and remittances from abroad. Investment demand will be dampened by the political uncertainty arising from the two elections in 2019.

Starting next year, real GDP growth will be spurred by the gradual easing in monetary policy, which will stimulate domestic demand, and by a pick-up in investment activity once political uncertainty abates. Economic growth will be dampened to some extent by a decrease in gas transit to European countries, due to the construction of bypassing gas pipelines.

The current account deficit in 2019 will remain at the previous year's level, amounting to 3.3% of GDP, driven by counteracting factors. Export proceeds from last year's record harvest of corn and effects from favorable terms of trade will be offset by a cooling in the economies of Ukraine's main trading partners, which will affect exports and remittances from labor migrants. The current account deficit will widen somewhat over the forecast horizon (hitting 4% of GDP in 2021), due to a decrease in gas transit and subdued demand from Ukraine's main trading partners, and more robust growth in domestic investment demand.

A key assumption of the macroeconomic forecast is that Ukraine will fulfill its commitments under the cooperation program with the International Monetary Fund

Financing from the IMF and other official lenders will improve access to the international capital markets, and will help maintain non-resident's appetite in hryvnia-denominated government bonds over the forecast horizon. These borrowings will enable the government to finance external public debt repayments in 2019 – 2021. Sustained high real interest rates will contribute to the inflows of foreign debt and investment capital to the private sector. As a result, international reserves will hover at around USD 21–22 billion over the forecast horizon.

The main risk to the forecast is a worsening of expectations and external conditions

The heightened uncertainty during the presidential and parliamentary elections poses the main domestic risk to the economic outlook. Delays in passing the state budget, the formation of the new government and an increase in social spending that outpaces the growth in labor productivity are commonly seen during parliamentary elections and may adversely affect the financial market and inflation expectations.

A worsening of external conditions if the global economy goes into recession and a decrease in world commodity prices pose serious external risks to the baseline scenario. Risks of a sharper slowdown in the global economy have been on the rise recently, with the financial markets rattled by a flare-up in geopolitical conflict, continued uncertainty over Brexit, a sharp slowdown in the euro area economy, and heightened volatility in the financial markets. Changes in external conditions will affect current account inflows, the ability of the government and the private sector to borrow from international capital markets, and nonresident demand for hryvnia-denominated government bonds.

In addition, risks arising from escalated military aggression and new trade sanctions from Russia remain high. On top of that, substantial uncertainty remains regarding the volume of gas transit through Ukraine from 2020 onward, as pipelines bypassing the country are being built to deliver gas to Europe.

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

Inflation has been steadily declining towards the 5% target, allowing the NBU to launch a cycle of key policy rate cuts. Considering the revised macroeconomic forecast and the balance of risks, the NBU Board decided to cut the key policy rate to 17.5% per annum on 26 April 2019. The baseline scenario envisages further key policy rate cuts. But the NBU's next moves will be contingent on whether inflation risks materialize and whether inflation expectations improve. At the same time, the NBU will keep monetary conditions sufficiently tight to reduce inflation to the 5% target in 2020. Simultaneously, the NBU will gradually decrease the tightness of its monetary policy as inflationary pressures ease. As a result, the key policy rate is projected to decline in real terms from the current 10–11% to its equilibrium level of 3–4% in 2021.

However, although the macroeconomic prerequisites for a cycle of key policy rate cuts are in place, risks to Ukraine's financial stability and to the NBU's independence may impede this process. If the risks noted above materialize, the NBU stands ready to respond by using its monetary policy instruments.

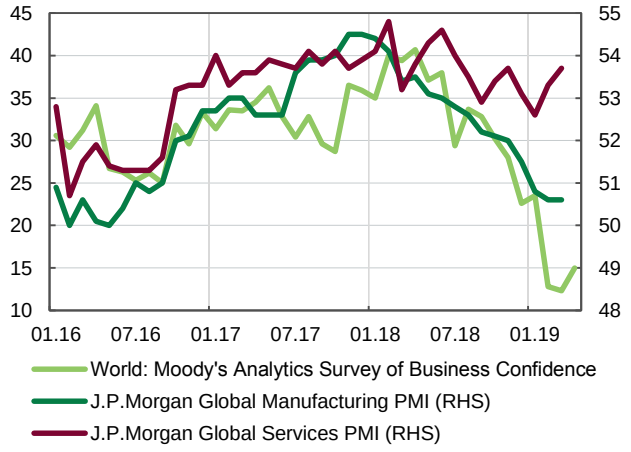
Part 1. External Environment

The growth of the world economy and global trade decelerated in the wake of protectionist measures, which spread to nearly every country, and also as a result of country-specific factors. This affected industrial activities first and foremost. At the same time, sustained private consumption, driven by strong labor markets, fueled growth in most countries. Leading indicators pointed to a continued slackening of business activity in early 2019. Meanwhile, talks on lifting trade restrictions in Q1 inspired optimism about the future growth of the global economy.

As growth in global trade slowed, prices declined in most commodity markets, except the oil and iron ore markets, where supply factors played an important role. The average weighted ECPI Index, which tracks changes in global prices for Ukrainian exports, was practically unchanged in Q1 2019 compared to the previous quarter and was higher than expected.

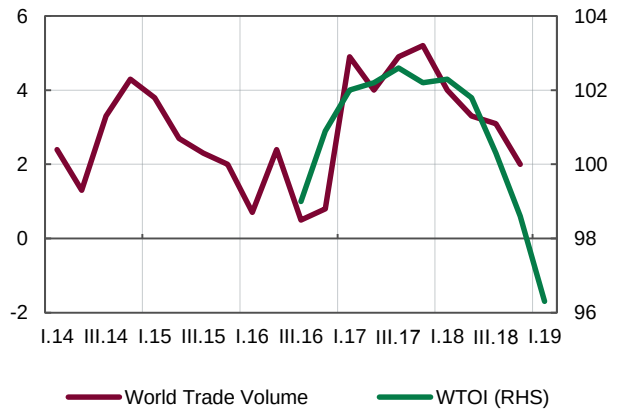
Global financial market conditions became more benign for emerging markets. This was attributed to not only the positive developments in financial markets, but to a considerable softening in the rhetoric of leading central banks, such as the Fed and the ECB, amid moderate inflationary pressures and weaker economic growth. Yields on the long-term bonds of developed countries plunged as a result, boosting investor interest in high-yielding, though risky, assets.

Figure 1.1. Global PMI and world business confidence



Source: HIS Markit, Moody's.

Figure 1.2. World trade volume, % yoy, and world trade outlook indicator (WTOI)



Source: WTO.

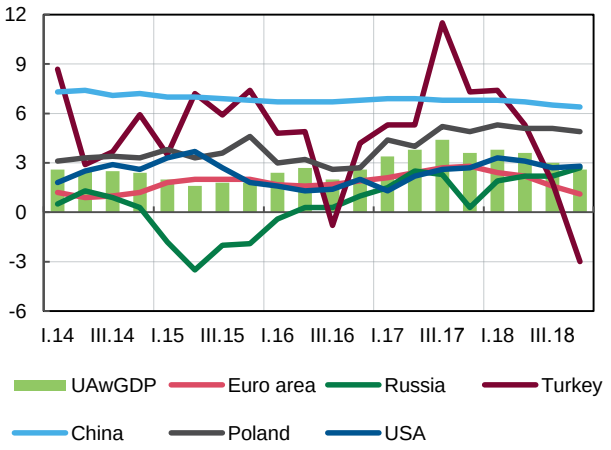
1.1. Economic Activity

Global economic growth continued to slow as the positive effects of low interest rates wore off and protectionist measures were reinforced. In addition, significant negative effects came from country-specific factors (the imposition of tighter car emission standards in Germany, uncertainty over economic policy in Italy, protests in France, Brexit, etc.). The combined negative impact of these factors was primarily reflected in global trade and industrial production. The WTO's World Trade Outlook Indicator (WTOI) for Q1 2019 was the lowest since March 2010, signaling that global trade was below trend. Global manufacturing PMI fell at the start of 2019, approaching the critical 50-point mark. Global Sector PMI data for February 2019 show that the global production of motor vehicles continued to fall at the fastest pace in a decade), with production in metallurgy and mining dropping for six months in a row.

Meanwhile, the production of consumer and investment goods increased only marginally as trade wars eased in February–March, leaving the Global Manufacturing PMI practically unchanged. The increase in the Global Services PMI reflected the ongoing contribution of private consumption to growth. In addition, Moody's reported a slight increase in business confidence in late Q1 2019.

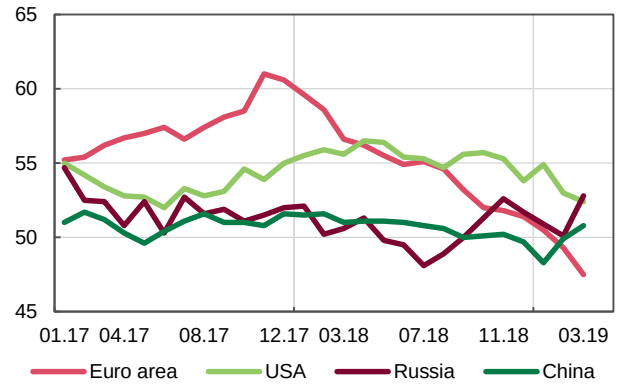
In Q4, the annual GDP growth of Ukraine's main trading partners (MTPs) declined more than expected, primarily due to a significant slackening of economic activity in the euro area, and in Turkey. The growth in the euro area economy decelerated (to 1.1% yoy) as a result of weaker external demand and country-specific domestic factors, such as the introduction of new motor vehicle emission standards in Germany. Economic growth was below potential – a reversal on early 2018. With unemployment in late 2018 at a ten-year low of 7.9% and wage growth accelerating, the labor market was a rather robust driver of economic activity. However, adjusted for the change in energy prices, inflation remained low and continued to gradually decline. In early 2019, growth in euro-area business activity continued to decelerate, almost reaching a six-year low at the end of Q1, according to PMI

Figure 1.3. Real GDP of selected countries and weighted average of annual GDP growth of Ukraine's MTP countries (UAwGDP), % yoy



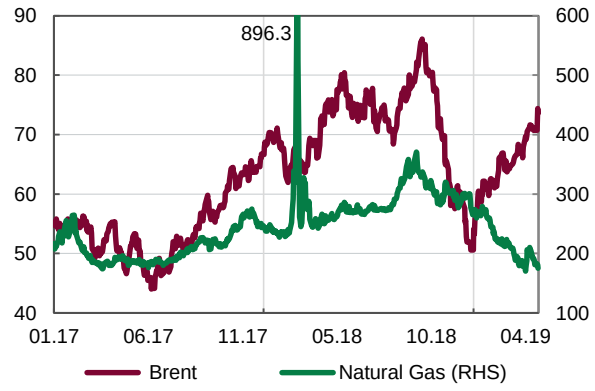
Source: National Statistical Offices, NBU staff estimates.

Figure 1.4. Manufacturing PMI, selected economies, points



Source: IHS Markit.

Figure 1.5. World crude oil prices, USD/bbl, and German Hub natural gas prices, USD/bcm



Source: Thomson Reuters.

data. In Europe's three largest economies – Germany, France, and Italy – growth continued to decelerate significantly.

The United States stood out from other developed countries. The U.S. economy continued to grow at a high rate (2.8% yoy) in Q4, thanks to its procyclical fiscal policy, outpacing the growth of potential GDP. Growth in private sector investment continued to accelerate, making up for the slower growth of exports and imports, which decelerated after protectionist measures came into force. The rather strong labor market and wage growth supported consumer demand. Furthermore, there has been a significant increase in labor productivity in recent years, which has exceeded the average growth rate of the past five years. In Q1 2019, however, business activity in the United States fell to the lowest level in two years, as highlighted by the manufacturing PMI. The slackening of business activity was driven by a sluggish increase in export orders as a result of the trade standoff, and weak demand from foreign companies due to high tariffs.

Unlike advanced countries, most emerging markets showed greater resilience to geo-economic shocks. Economic growth in CEE countries held steady in Q4. The economic growth was largely supported by domestic demand, fueled by greater consumption (wages increased amid higher employment rates) and investment (particularly government investment through co-financing from EU funds under existing four-year programs).

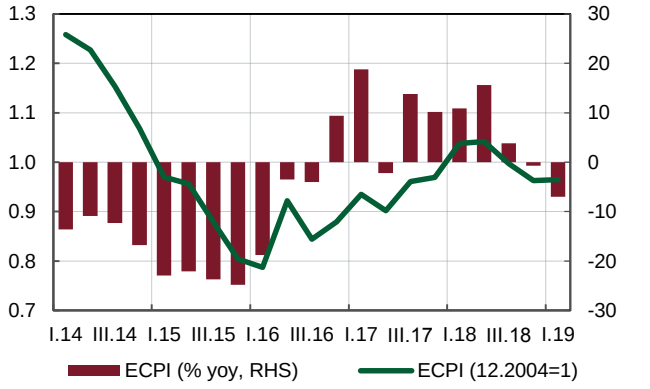
Russia's economic growth picked up due to an increase in mining and an acceleration in agriculture. Leading indicators for March pointed to continued improvement of market conditions in manufacturing amid improved business expectations. Russia's growth, in turn, supported growth in Belarus and Kazakhstan.

Growth in some Asian countries, including China and India, slowed but remained rather high. Government support and domestic consumption were major growth drivers. Turkey saw its GDP reduced by a sizable 3% yoy in Q4 2018 as a result of a sharp downturn in industry and construction, in turn due to a significant shrinking of domestic demand and investment.

1.2. World commodity markets

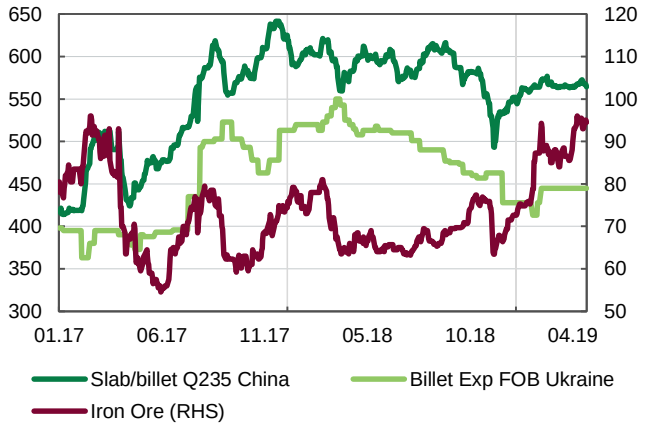
Global oil prices have been steadily rising since the start of 2019 after plunging in the final days of 2018. Major factors driving global oil prices were cuts in production under the OPEC+ agreement, primarily by Saudi Arabia, and a decrease in oil supplies from Venezuela and Iran due to US sanctions. However, oil production in the United States, which remained at a record high, held back further growth in global oil prices. Oil prices have been accelerating since the start of April. A major driver was the announcement by U.S. President Donald Trump that there is no need to reissue waivers on the oil sanctions on Iran that were set to expire on 2 May.

Figure 1.6. External commodity price index (ECPI)



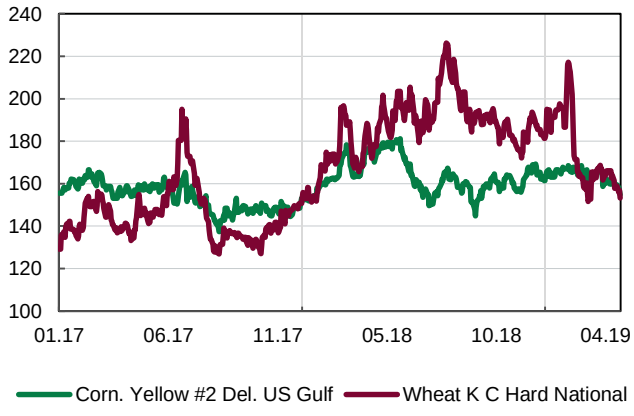
Source: NBU staff estimates.

Figure 1.7. Semi-finished steel prices in China and Ukraine, USD/MT



Source: Thomson Reuters.

Figure 1.8. World grain prices, USD/MT



Source: Thomson Reuters.

Meanwhile, the decrease in natural gas prices, which started in September last year, continued. This was due to the significant accumulated reserves of liquefied natural gas as a result of the relatively warm winter in the Northern Hemisphere, and the growth of gas production in the United States and Russia.

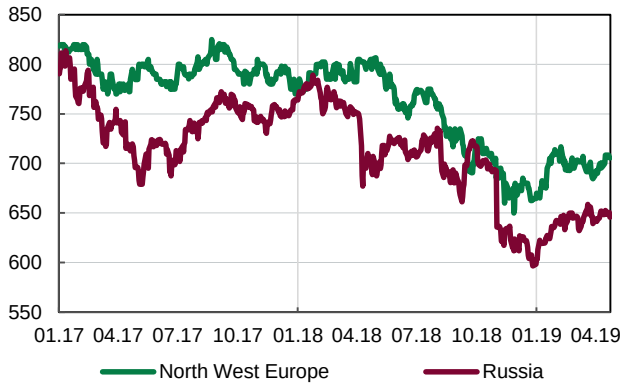
In Q1 2019, the average weighted ECPI Index, which tracks changes in global prices for Ukrainian exports, was virtually unchanged compared to the previous quarter. Even though the decrease in the ECPI Index deepened in year-on-year terms, the overall global price environment was more favorable for Ukrainian exporters than the NBU projected in its January 2019 Inflation Report.

Global steel prices increased moderately at the start of 2019 compared to Q4 2018 amid positive news on progress in U.S.-China trade talks. But then the growth stopped because of the lack of concrete results of negotiations and due to weak demand. In February 2019, the reduction in steel demand was the most significant in the last ten years, Global Steel Users PMI showed. At the same time, market supply remained significant, with countries such as the United States and China continuing to ramp up steel production, although other countries such as Turkey and Iran significantly reduced it.

Despite projections of a decline, global prices for iron ore substantially increased after a dam at a Vale iron ore mine in Brazil collapsed, reducing the supply. The company will cut back on iron ore supplies by over 40 million tonnes a year in the next few years, and by another 30 million tons going forward, Vale said in a statement following the accident. This adds up to an overall 15% reduction in the capacity of the world's leading supplier of iron ore. In addition, the company ran into complications with the regulatory authorities in Brazil, which left the market fearing that the shrinking supplies may spread to other mining companies. Prices stabilized to some extent by the end of Q1, as Vale said it would resume production at one of its mines. But iron ore prices rose again in early April, to five-year highs, due to adverse weather conditions in Australia and increased demand from China. The surge in demand was driven by the resumption of construction following the winter lull and by an increase in iron ore reserves by steel companies to ward off supply disruptions.

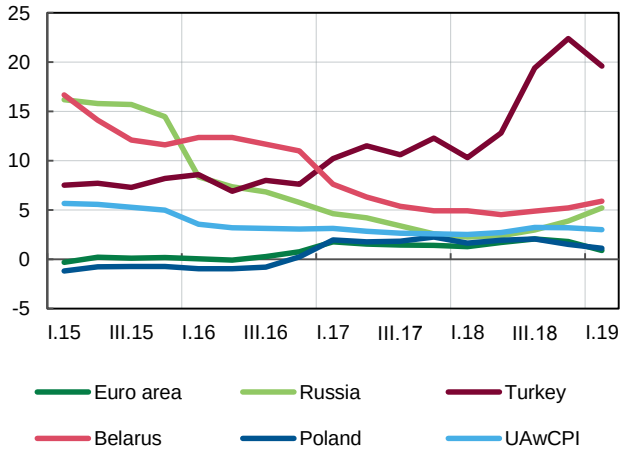
Global corn prices remained at practically the same low level throughout the quarter due to there being high stocks of this crop, especially in Ukraine, and the upward revision by the International Grain Council of projections for this year's global harvest. In contrast, wheat prices were rather volatile. The steep rise in wheat prices at the beginning of the year was driven by a US-China deal under which China was to purchase a significant amount of agricultural products (including wheat) from the United States. Other contributors to the price surge were the USDA's low projections of global wheat harvest in the 2018–2019 marketing years (down 3.9% from the previous marketing year) amid record-low areas allocated for the crop, and robust demand from Brazil, India,

Figure 1.9. World sunflower oil prices, USD/MT



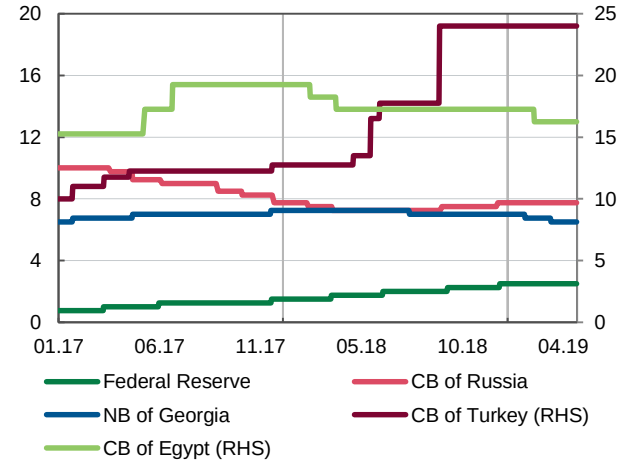
Source: Thomson Reuters.

Figure 1.10. Consumer Price Index of selected Ukraine's MTP countries and Weighted Average of Ukraine's MTP Countries' CPI (UAwCPI), % yoy



Source: National statistical agencies, NBU staff estimates.

Figure 1.11. Key policy rates in selected countries, %



Source: official web-pages of central banks.

Italy, Egypt, Syria, Algeria, and Indonesia. In the second half of the quarter, however, prices fell sharply as Argentina increased production and Australia, India, the EU, Brazil, Indonesia, etc. revised their harvest projections upwards.

Sunflower oil prices declined in most regional markets, driven by high supply and lower prices for other types of vegetable oils, especially soybean and rapeseed oil. At the same time, rising prices and demand for palm oil, which has begun to be actively used as biofuel in Indonesia and Malaysia, lent some support to prices for other types of oils, sunflower oil included.

1.3. Global Financial Markets

The slowdown in economic activity led to a decrease in inflation in most countries in early 2019. As a result, external inflationary pressure from Ukraine's MTPs eased, as shown by changes in the UAwCPI index[2], which fell to 2.9% yoy in Q1 2019. This prompted leading central banks to adjust their monetary policies.

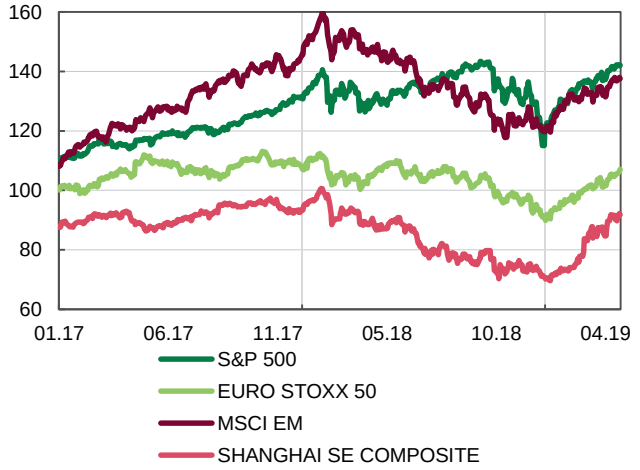
More specifically, the minutes of Q1 meetings of the Fed, the ECB, and the Bank of Japan indicated the possibility of a monetary policy easing should negative risks to economic growth and inflation materialize. Among other things, the Fed as expected left the federal funds rate unchanged at the beginning of the year. However, in contrast to its previous decisions, the Fed said that going forward it would take a "patient" approach to monetary policy, and that it expected that the federal funds rate would remain unchanged until the end of the current year. In addition, following its March meeting, the Fed announced changes to its balance sheet normalization plan (reducing the minimum reinvestment of repayments of principal on Treasury bills starting in May 2019 and stopping the reduction in these bonds starting in September), contributing to a decrease in speculation over this process. In turn, in spite of curtailing its asset purchase program, the ECB substantially softened its rhetoric on further monetary policy, and announced the introduction of a new long-term refinancing program, TLTRO-III, in September this year. This shifted the expected timing of the ECB's interest rate hike to May–June 2020 at the earliest. In a similar move, central banks in emerging markets like Egypt, Georgia, and India eased their monetary policies.

Apart from the easing of monetary policy by leading central banks, financial market conditions for emerging markets improved due to:

- increased optimism about trade talks between the United States and China after the former postponed the imposition of additional import tariffs by 60 days
- the end of the government shutdown in the United States
- somewhat better-than-expected macroeconomic statistics in the United States
- the reverse repurchase of stocks following their selloff in the final days of 2018, when U.S. investors chose to sell securities rather than receive dividends, as return on capital

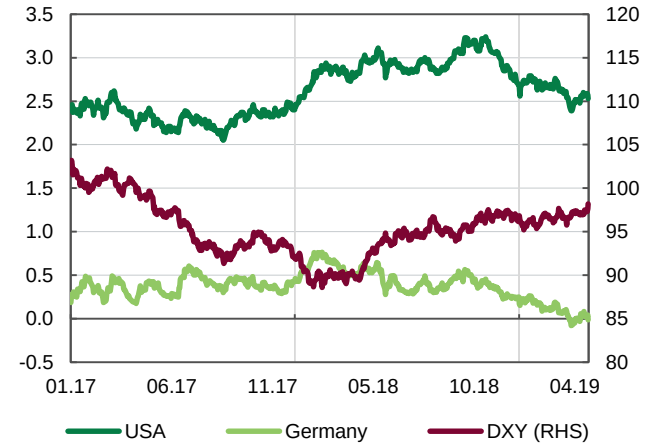
[2] For more on the UAwCPI index, see the April 2016 Inflation Report.

Figure 1.12. Global equity benchmarks, 01 Jan 2016 = 100



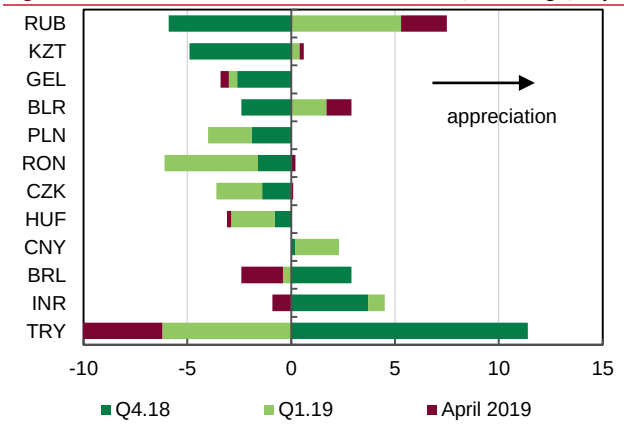
Source: Thomson Reuters.

Figure 1.13. US and Germany 10-year government bond yields, %



Source: Thomson Reuters.

Figure 1.14. Selected EM currencies versus USD, % change, eop



Source: Thomson Reuters, NBU staff estimates, as of 24.04.2019.

in the United States is taxed at rates lower than the dividend tax

– a steep rise in technology stocks, in part due to surging demand for microchips

– the EU's approval of the postponement of Brexit until 22 May 2019.

Capital inflows into stock markets amid slowing inflation and the dovish rhetoric by leading central banks reduced yields on the long-term government securities of leading countries, while yields on German securities went back into negative territory. Given the lack of high-yielding assets in financial markets,[3] this supported an increase in demand for EM assets. Still, most EM currencies depreciated. This happened amid a modest strengthening of the U.S. dollar, the continued presence of risks to the global economy and trade, and as a result of a shift to less tight monetary policies, by the central banks of Egypt, Georgia, Armenia, and India in particular.

[3]In early February 2019, USD 8.6 trillion in financial assets with negative yields was being traded in the global financial markets (for comparison, the world's international reserves totaled USD 10.7 trillion in late 2018), Bloomberg estimated.

Box 1. Financial Markets' Response to Changes in the Fed's and ECB's Communications

Monetary policy decisions impact financial markets not only by changing the conditions for central bank transactions with market players, but also by shaping the market's expectations regarding the likely path of interest rates and overall monetary conditions over the long term. Given that there is information asymmetry, central bank communication is the main channel for transmitting the information taken into account by the financial sector when pricing stocks and bonds. Many recent studies have focused on the financial market's response to monetary policy decisions and communication, and the subsequent monetary transmission.[4]

It is important to differentiate the impact of monetary policy shocks (such as rate hikes, changes in the monetary regime, etc.) from the information effects of central bank communication. In other words, one needs to distinguish the impact of monetary policy tools from the effect produced by communicating about them. Jarocinski and Karadi (2018) provide a possible approach to resolving this issue. Stock prices usually decline when interest rates are raised. The authors draw attention to cases when a central bank's interest rate and stock quotes move in the same direction. They believe this results from the effect of central bank communication on the current state and development prospects of the economy, and market participants revising their forecasts accordingly. An analysis of communication shocks for the case of the Fed and the ECB allows the direct impact of the communication component on stock indices and market interest rates to be assessed.

On 20 March 2001, the Fed surprised the market with a decision to reduce the federal funds rate by more than had been expected (by 50 bp). But instead of the anticipated increase, the S&P 500 dropped markedly in the first hours after the decision was made. This response becomes less odd given that in its press release following the monetary policy meeting, the Fed emphasized significant risks that might lead to weak demand and sluggish industrial production. There are many such cases: one third of the Fed's decisions made after 1990 have been accompanied by positively correlated changes in interest rate and stock quotes.

Almost one half of communications on the results of the ECB's meetings (press releases and announcements by the head of the ECB) have been marked by a positive correlation between changes in the ECB's key rate and changes in stock indices. This is explained by the better transparency of the ECB's communications compared to the Fed over the period of observations (the ECB has been holding press conferences since 1999, while the Fed only introduced this practice in 2011).

The ECB produced one of its largest communication shocks when it suddenly opted for monetary policy easing in 2011 during the sovereign debt crisis. That time, the ECB kept its rate unchanged following two hikes in April and July. However, the EuroStoxx 50 collapsed in response, as the ECB pointed to substantial uncertainty, especially on the financial markets. In June 2012, the ECB reduced the interest rate by 25 bp after many of the risks faced by the euro area had actually materialized. The stock market dived by more than 2%.

Central bank communication influences not only short-term interest rates, but also long-term ones that determine economic decisions. Leombroni, Vendolin, Venter, and Whelan (2018) showed that the communication component is responsible for the largest changes in the euro area's yield curve in a narrow window after the publication of a press release and a press conference by the ECB head. The effect of the change in the central bank's rate quickly weakens when moving along the yield curve. At the same time, a study by Hansen, McMahon, and Tong (2018) shows that economic uncertainty is an important factor in shaping the long end of the yield curve. Monetary policy actions can alter the probability distribution of economic growth forecast. As a result, some future economic growth outcomes can be ruled out entirely as implausible. Hence, central bank communication has a strong impact on long-term interest rates. This especially concerns the distribution of risks and uncertainty over economic conditions. Signals that impact long-term interest rates do not influence short-term rates, and are primarily reflected in risk premiums. That said, this reflects changes in risk premiums across maturities, in line with shifts in investor interest in securities with different maturities.

Monetary policy changes and communication produce different effects over different time spans. When aimed at the short term, they reduce the term premium. If they target the medium term (e.g., within the framework of the forward guidance policy), they cause an increase in the term premium across different maturities. The effect is the most pronounced for the short end of the yield curve.

In the case of the ECB, the influence of the central bank's macroeconomic projections and announcements on the market's expectations of future interest rate trends tended to prevail until 2012. After the ECB's rates approached zero amid the implementation of QE and the transition to a forward guidance policy in July 2013, the effect of pure monetary policy shocks increased (including the effect of information about changes in the monetary policy). This was the conclusion drawn by Andrade and Ferroni (2018).

At their most recent monetary policy meetings in March 2019, the Fed and the ECB signaled there would be more marked monetary policy easing than had been priced into the stock market. Making a sharp turnaround, the ECB eased its monetary policy radically. Rate hikes were put off to no sooner than the middle of 2020 (they had previously been expected to take place this year), a new round of targeted longer-term refinancing operations was announced, and the

[4]Some of these studies will be presented at the NBU's annual research conference *Central Bank Communications: From Mystery to Transparency,* which will take place on 23–24 May 2019 (http://conference.bank.gov.ua)

euro area's economic growth forecast was revised downwards significantly. After the decisions were made public, yields on Germany's 10-year sovereign bonds fell to their lowest level in the past three years. Stock markets responded with a rise, however, erased the gains by the end of the session. Bank stocks lost the most in view of the prospects of interest rates remaining close to zero, which affected the banks' profits. Trading in shares based on algorithmic approaches, which associate monetary policy easing by central banks with growth in stock prices, are believed to have been part of the cause of the following sharp fluctuations on the financial markets. In general, investors were pessimistic about the shift of the ECB to more accommodative monetary policy amid a downward revision of macroeconomic projections.

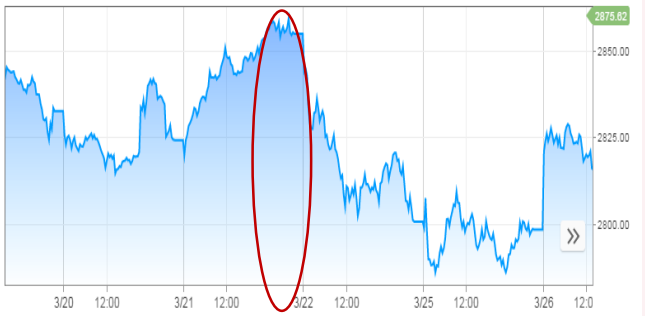
Figure 1. Euro Stoxx 50 hourly dynamics for the period of 3–13 March and after the March ECB meeting (7 March 2019)

Source: https://www.cnbc.com/quotes/?symbol=.STOXX50E.

The Fed also made its monetary policy much looser at its March meeting: the regulator announced its plans to finish its balance sheet normalization in September (and, possibly, to return to the balance sheet expansion), a pause in rate hikes this year, and only one hike in 2020. The Fed also made some downward revisions to its median forecasts of GDP and inflation. The market was surprised by the large number of FOMC members who supported this decision. Within only a few months, the Fed's position changed from a systematic unwinding of the balance sheet to a slower reduction, and then to a complete halt. This eliminated the second most powerful tool for tightening monetary policy (the interest rate being the first).

Initially, the stock market responded with faster growth following the publication of the Fed's press release. However, gains were erased by the massive sell-off in the second half of the session, when investors began weighing the effect of the monetary policy easing by the Fed against the scale of the expected economic slowdown in the United States and globally. At his press conference, the Chair of the Fed Jerome H. Powell quelled the unease by speaking positively about the state of the U.S. economy and voicing expectations of a moderate slowdown in the global economy. The stock market calmed as market participants mulled the information communicated in the Fed's decisions. This led to a rise in the S&P 500.

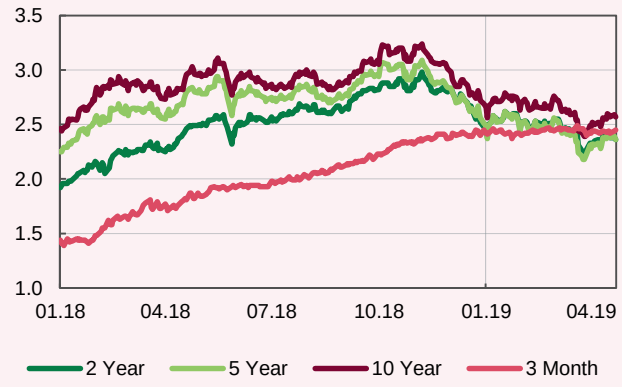
Figure 2. S&P 500 hourly dynamics for the period of 20–26 March and after the March Fed meeting (21 March 2019)



Source: https://www.cnbc.com/quotes/?symbol=.SPX

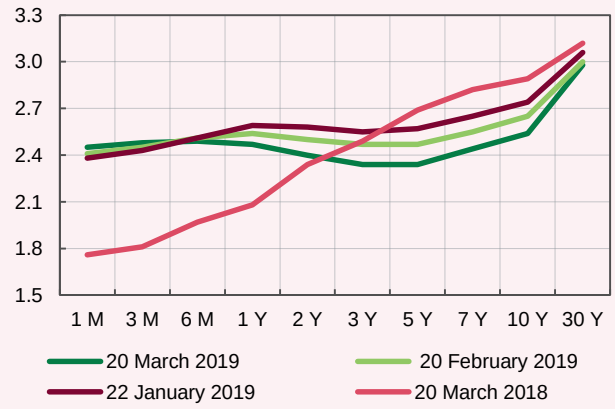
The gloomier global economic outlook had more of an effect on bond prices. Yields on 10-year Treasury bonds declined by 8 bp on the day of the Fed's meeting, and continued to drop to a two-year low. The yield curve became more inverted after the meeting, while the probability of a reduction in the interest rate increased.

Figure 3. U.S. Treasury constant maturity rate, %



Source: Federal Reserve.

Figure 4. Yield curve after the Fed's policy meeting



Source: Federal Reserve, NBU calculations.

Although both the ECB and the Fed made policy decisions to ease monetary policy, the financial market's response was opposite because of the differences in the ways the regulators communicated their decisions. Whereas the ECB highlighted the economic weakness, the Fed confined itself to warning about risks, and demonstrated a wait-and-see approach to monetary policy.

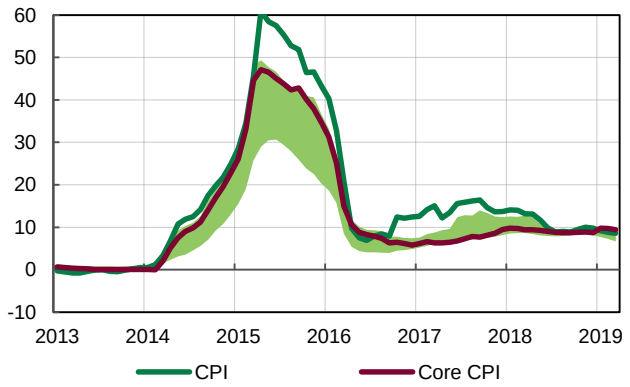
Part 2. Domestic Economy

2.1. Inflation developments

In Q1 2019, consumer price inflation decelerated further, to 8.6% yoy in March, from 9.8% yoy in December 2018. Actual inflation was practically in line with the NBU forecast published in its January 2019 Inflation Report. The drop in inflation was driven by the NBU's tight monetary policy, which was reflected, among other things, in a strengthening of the hryvnia against the currencies of Ukraine's trading partners. In addition, Q1 saw an ongoing improvement in the inflation expectations of most respondent groups. As a result, core inflation slowed to 7.6% yoy, slightly faster than expected.

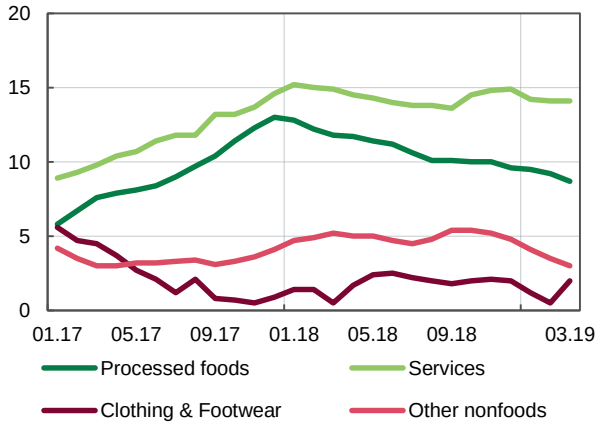
The strengthening of the hryvnia and the fall in global oil prices seen in previous periods contributed to a drop in fuel prices. Meanwhile, higher production costs continued to put upward pressure on prices, albeit less strongly. Among other things, this was reflected in a moderate decrease in the growth in market services prices, and was an additional factor in the growing contribution from administered price increases, amid rising utility prices. The growth in raw food prices sped up somewhat, fueled by temporary factors. Despite that, the contribution of these prices to headline inflation remained insignificant, while other measures of food price inflation showed that the upward pressure on prices was abating. In particular, the price index for agricultural production declined, and producer prices in the food industry grew at a slower clip on the back of last year's good harvest and an improvement in animal production– mainly poultry production. Together with favorable FX market conditions and lower global prices for most commodities, this contributed to a slowdown in producer price inflation, to 8.9% yoy in March.

Figure 2.1.1. Underlying inflation trends*, % yoy



* Green field reflects a range of core inflation rates.
Source: NBU staff estimates.

Figure 2.1.2. Main components of core CPI, % yoy



Source: SSSU, NBU staff estimates.

Core Inflation

Underlying inflationary pressures continued to ease in Q1 2019, as core inflation slowed to 7.6% yoy in March, from 8.7% yoy in December 2018. The drop in core inflation in Q1 was also evident from alternative measures of inflation.[5] In addition, these measures continued to stay in a narrow range, evidencing that changes in the prices of the representative goods (services) included in the CPI calculation became more homogenous under the influence of common factors, such as the strengthening of the hryvnia exchange rate.

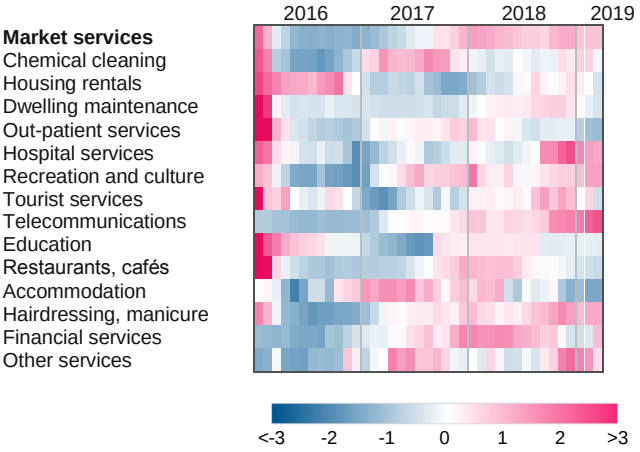
Thus, a stronger hryvnia also decelerated the growth in non-food prices, to 2.7% yoy. These were mainly the prices of imported goods, or goods with a significant import share in their production costs. In particular, prices for home appliances, furniture, and pharmaceuticals grew more slowly, while the prices of audio, video, and computer equipment even declined compared to last year. The prices of clothes and footwear continued to rise at a slow pace (by 2% yoy).

The annual growth in the prices of processed foods decelerated, to 8.7% yoy, due to lower raw material costs and weaker pressures from global prices. In particular, the growth in meat product prices slowed, to 8.9% yoy, as supply widened due to an improvement in animal production and a drop in purchase prices. The 2018 bumper harvest of sunflowers and lower global prices for oilseeds contributed to the slower growth in sunflower oil prices (to 1.2% yoy). The growth in the prices of dairy products also slowed (to 8.8% yoy).

The growth in services prices decelerated to 14.1% yoy, down from 14.9% yoy in December 2018. This resulted mainly from a slowdown in the growth in the dwelling maintenance costs (to 15.2% yoy) against a high comparison base (these cost have been on the rise since the start of 2018

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

Figure 2.1.3. Normalized* services inflation heat map in Ukraine, %**

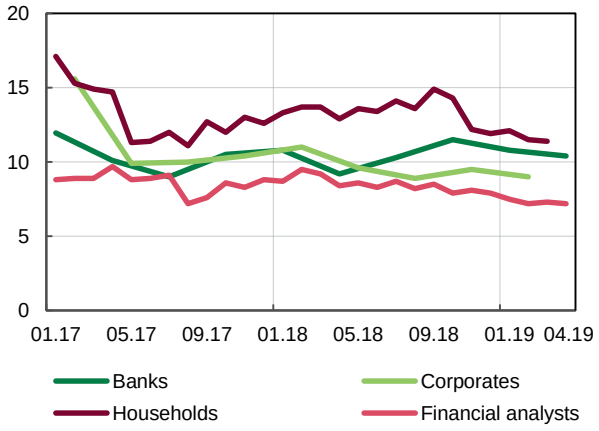


* Data are normalized by subtracting the mean change and dividing by standard deviation. Data for 2015 is excluded from the mean and STD calculation. See more at stlouisfed.org.

** Graphical representation of data where the individual values contained in a matrix are represented as colors. Red indicates higher inflation, blue lower inflation. The color of the components corresponds to the pace of normalized annual inflation.

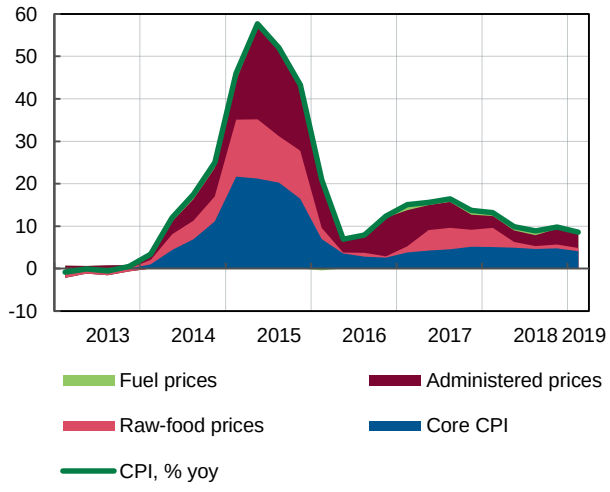
Source: SSSU, NBU staff estimates.

Figure 2.1.4. Inflation expectations for the next 12 Months, %



Source: NBU, GfK Ukraine.

Figure 2.1.5. Contributions to annual inflation, eoq, pp



Source: SSSU, NBU staff estimates.

in most Ukrainian cities). The growth in the cost of catering, housing rentals, and insurance services also decelerated.

Overall, however, the slowdown in the growth in services prices remained rather moderate, due to, among other things, ongoing increases in the prices of telecommunications services. The latter was driven by sizable investments, among other factors. According to the preliminary financial statements published by the largest mobile service providers, investments in network development, including the acquisition costs of 4G licenses, doubled in 2018 compared to 2017. Furthermore, investment and maintenance costs per subscriber are rising, while the numbers of mobile and cable TV subscribers are declining. Although slowing compared to December 2018, the growth in the prices of recreational, cultural and sports and personal care services remained strong, which may have been due to both buoyant consumer demand and higher expenditures, mainly labor costs.

A moderate decline in inflation expectations also contributed to the slowdown in core and headline inflation. In particular, despite there being political uncertainty, household inflation expectations improved further in Q1, due to, among other things, favorable FX market conditions. The inflation expectations of corporates and financial analysts also decreased. Meanwhile, although softening slightly since the start of the year, the banks' inflation expectations were close to the average level seen in the two previous years.

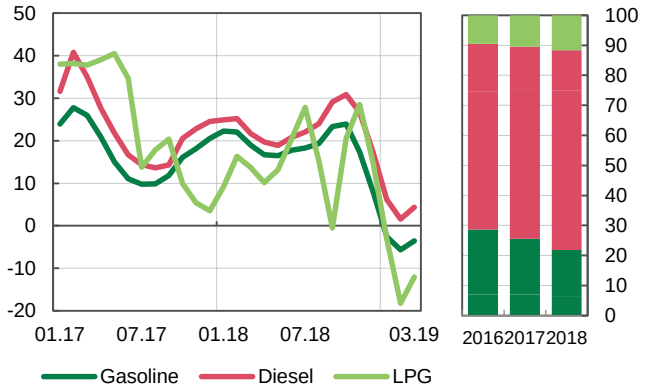
Non-core Inflation

Non-core inflation also decelerated moderately in March, to 10.0% yoy, from 10.7% yoy in December 2018. This mainly resulted from a drop in fuel prices, which outweighed the rise in administered prices and raw food prices.

Fuel prices dropped by 3.5% yoy in March compared to a 9.1% yoy rise in December 2018, driven by the slump in global oil prices seen in late 2018, and the strengthening of the hryvnia. Diesel fuel was an exception among all the other types of fuel. In 2017 – 2018, the growth of diesel fuel prices ran ahead of that of gasoline prices. Although slowing markedly, diesel fuel prices continued to grow in early 2019. This may be explained by the rising demand for this type of fuel from some sectors of the economy, such as the agricultural, transportation and defense sectors, and from households. Active imports of used cars, a significant share of which run on diesel, also contributed to this.

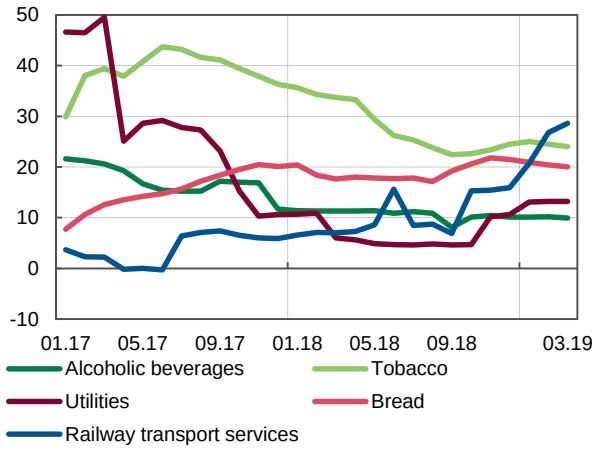
The growth of administered prices accelerated, to 18.7% yoy from 18.0% yoy in December 2018. In particular, the prices of heating, hot and cold water supplies, sewage collection, and landline telephone services increased in Q1 2019, as expected, on the back of higher production costs, such as labor costs. The growth in passenger railway transport fares also sped up (to 28.7% yoy, up from 16.0% yoy in December 2018), fueled mainly by higher prices for additional services. The growth in alcohol prices was little changed, at 9.9% yoy. Meanwhile, despite higher excise taxes, the growth in tobacco prices decelerated, to 24.0% yoy. This may have resulted from the fact that the indexation of specific excise tax

Figure 2.1.6. Selected fuel prices, % yoy, and structure of their consumption (thousand tons), %



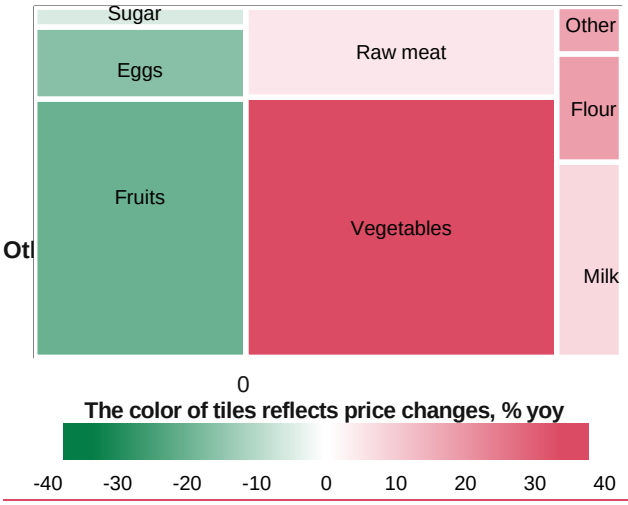
Source: SSSU, NBU staff estimates.

Figure 2.1.7. Administered prices and utility tariffs, % yoy



Source: SSSU.

Figure 2.1.8. Contributions of food products to the annual raw food price inflation in March, pp



Source: SSSU, NBU staff estimates.

rates on tobacco (by 20%) was smaller than the growth in tobacco prices.

The growth in raw food prices accelerated slightly, to 3.6% yoy in March from 3.3% yoy in December 2018. This slight acceleration was mainly due to temporary factors. More specifically, there was a significant rise in the prices of greenhouse vegetables after adverse weather at the start of the year hit Turkey, the main supplier of such vegetables in wintertime. Furthermore, the annual increases in the prices of borsch vegetables remained high (67.2% yoy), reflecting rapid growth in these prices in previous months, due to a poorer harvest of some vegetables in Ukraine and Europe.

Conversely, growth in raw food prices was restrained by further drops in fruit prices (by 22.6% yoy), resulting from the bumper harvest of apples, and falling prices for imported bananas and citrus fruits.

The temporary acceleration in food prices was also evident from other price indices. Specifically, Q1 2019 witnessed more sluggish producer price growth in the food industry, and a decline in selling prices for agricultural products. The prices in the crop production decreased (by 1.9% yoy in March), while animal product prices dropped by 5.8% yoy. Producer prices for meat products were the same as last year (after rising by 3.5% yoy in December 2018), thanks to cheaper raw materials in domestic and external markets. Sugar prices continued to fall, pushed down by the large supply of sugar, due to last year's good harvest of sugar beets. The prices of bakery products continued to grow at a significant pace, supporting the high growth rates of retail prices for bread (20.0% yoy). This was due to rising prices for flour against the backdrop of higher global prices, the limited volume of high quality raw materials, and the high rates of growth in electricity prices for industrial consumers in previous periods.

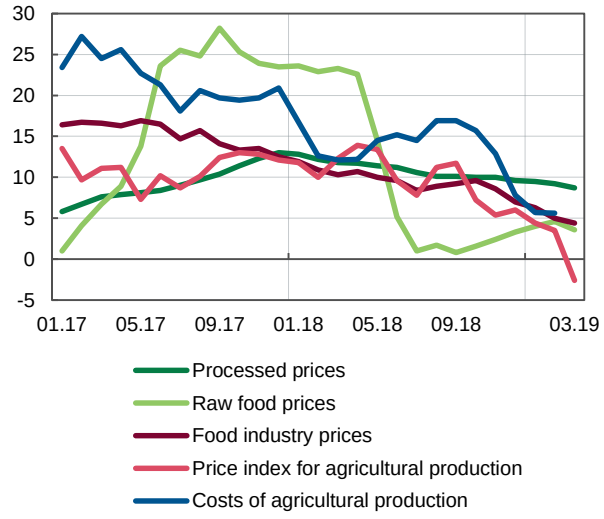
According to NBU estimates, changes in the prices of food, beverages and tobacco correlate most strongly with the relevant PPI component.[6] As a result, one could expect that a slowdown in the growth of producer prices for these products (to 4.4% yoy in March), and the waning effects of temporary factors will contribute to sustained moderate growth in food prices in future.

Prices in other industrial branches also rose at a slower clip. With a drop in external gas prices, Naftogaz of Ukraine NJSC cut natural gas tariffs for industrial consumers. This, together with weaker growth in global fertilizer prices, decelerated price growth in the chemical industry, to 3.4% yoy. Falling gas prices pushed down prices in the electricity production by thermal power plants. As a result, the growth in prices for the supply of electricity, gas, steam, and air conditioning slowed noticeably, to 19.0% yoy.

Reflecting trends in the world markets, prices in metallurgy decreased (by 5.0% yoy, compared to a 5.6% increase in

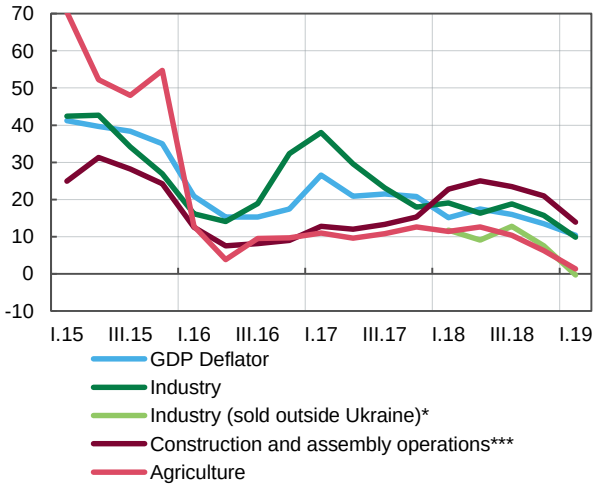
[6] Read more in the July 2016 Inflation Report, pages 16–17.

Figure 2.1.9. Raw and processed food prices in food industry and agricultural production, % yoy



Source: SSSU, NBU staff estimates.

Figure 2.1.10. Other measures of inflation, quarterly average, % yoy



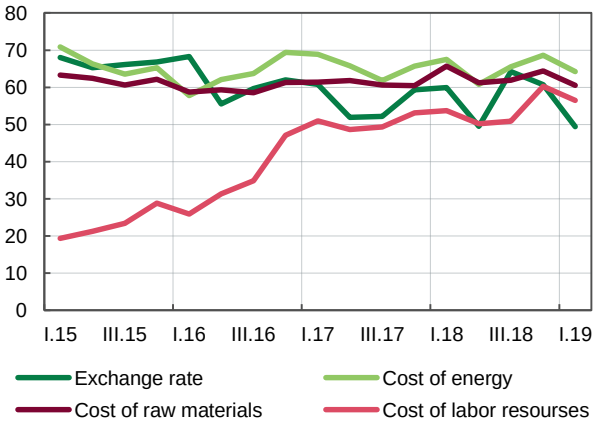
* Data for Q1 2019 – according to the NBU staff estimates.

** SSSU began publishing data on the dynamics of industrial prices for products that are sold outside Ukraine only from 2018.

*** Data for Q1 2019 - for two months.

Source: SSSU.

Figure 2.1.11. Impact of factors on estimated price changes in goods and services sold by companies



Source: NBU.

December 2018). Meanwhile, the growth in metal ore prices sped up (to 10.0% yoy), fueled by disruptions in supplies of ores from Brazil and Australia.

The strengthening of the hryvnia against the currencies of Ukraine's main trading partners was an additional factor behind the slower producer price inflation. This was seen from the results of the latest *Business Outlook Survey* that said that in Q1 2019 respondents cited a significantly weaker impact from the exchange rate on producer prices. Respondents also reported softer impacts on producer prices from input prices, and from fuel costs. Meanwhile, although declining somewhat, the impact from the costs of labor resources was said to have remained at one of the highest levels in recent years.

With rising global oil prices, in Q1 2019, price growth in the production of crude oil and gas remained robust (19.7% yoy), while prices in the production of coke and petroleum products returned to growth (by 7.3% yoy).

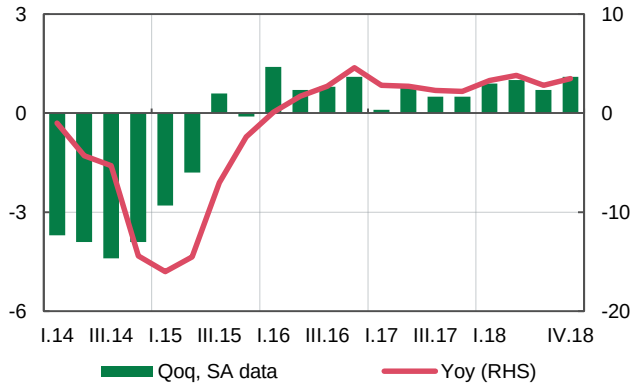
Overall, however, producer price inflation slowed dramatically in Q1, to 8.9% yoy in March. The growth in the prices of construction works also decelerated, to 9.7% yoy in February, on the back of a favorable comparison base, while the index of cargo transportation tariffs remained unchanged. Despite a spike in the prices of postal and communications services for companies, institutions and organizations, the NBU expects that the GDP deflator will slow further in Q1 2019, from 13.5% yoy in Q4 2018, on the back of weaker inflationary pressures in most other sectors of the economy.

2.2. Demand and Output

In 2018, the growth of the Ukrainian economy accelerated to 3.3% yoy, up from 2.5% yoy in 2017.[7] This was in line with the NBU estimates published in its January 2019 Inflation Report. The GDP growth was mainly fueled by domestic consumer and investment demand. Rapid growth in household income supported consumption. Investment growth decelerated slightly due to the fading effect of a pick-up in investment following underinvestment in the post-crisis period, as well as moderate improvement in the pre-tax financial results of companies, in particular due to weaker export performance. The latter was driven by the negative impact of protectionist measures in global trade, the escalation of the conflict in the Sea of Azov in H2 2018, and repairs at several large metallurgical companies. Among economic sectors, agriculture made a sizeable contribution to GDP growth in 2018, thanks to the record harvest of grain and oil crops.

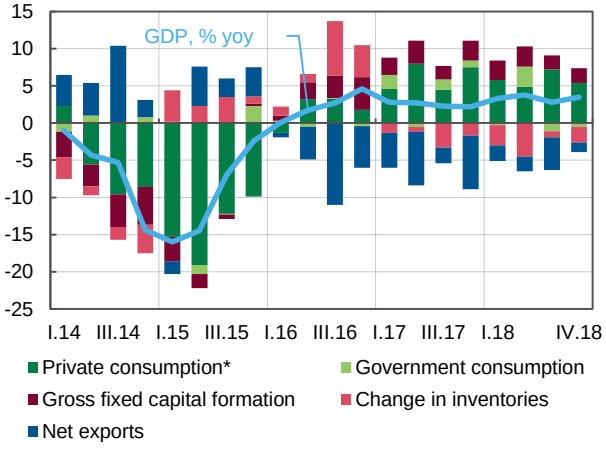
The NBU estimates economic growth slowed to 2.4% yoy in Q1 2019. The contribution to growth by agriculture declined as expected, with the effect of the bumper crops waning (the performance of the agricultural sector in Q1 was driven only by animal production). Moreover, the performance of industrial production weakened: both in the energy sector (as the weather was warmer this year compared to 2018) and in some manufacturing industries. At the same time, the fast growth in retail turnover and construction signaled that domestic demand was stable.

Figure 2.2.1. Real GDP, %



Source: SSSU.

Figure 2.2.2. Contributions of final use categories to annual GDP growth, pp



* Including consumption expenditures of households and nonprofit institutions serving households.
Source: SSSU, NBU staff estimates.

Aggregate Demand

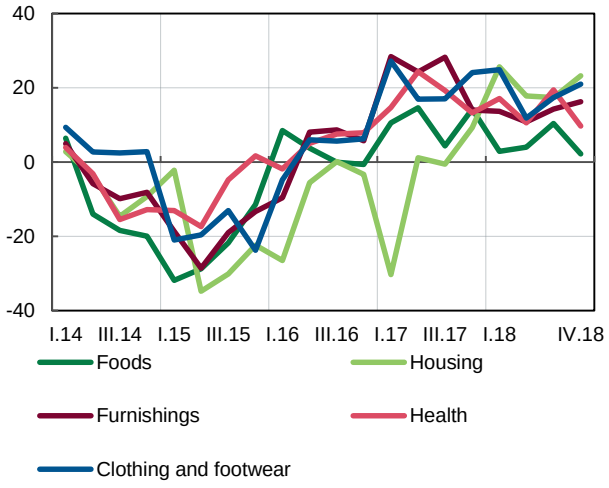
In Q4 2018, real GDP growth accelerated to 3.5% yoy. GDP grew by 1.1% qoq in seasonally adjusted terms.

Private consumption has been the main contributor to GDP growth for two years running, supported by the rapid rise in household incomes. In the meantime, the growth in household final consumption expenditure somewhat slowed in Q4 2018 (to 8.5% yoy) as household income grew more slowly (read more in the section *Labor Market and Household Income*).

By consumption purpose, the growth in expenditure on foods, which traditionally account for the largest share of expenditures (around 40%), slowed markedly, to 2.2% yoy. Spending on alcohol and tobacco products also grew more slowly (1.8% yoy) – probably due to demand dampened by higher excise taxes on tobacco products and a rise in minimum prices for alcoholic drinks in October 2018. Household expenditures on healthcare, transportation, and education also increased somewhat more slowly. Spending on communication decreased, which may be attributed to a decline in the number of mobile subscribers, among other things, on the back of a hike of tariffs for public telecommunication services for households effective from 1 November 2018. In contrast, spending on recreation and culture, clothing and footwear, restaurants and hotels, and furnishings grew rapidly (around 20% yoy). These trends could reflect a change in consumer behavior: steady income growth over the past few years is allowing households to increase their consumption of nonstaple goods and services. Moreover, the growth in household expenditures on housing and utilities accelerated to 23.2% yoy in Q4 2018 as a result

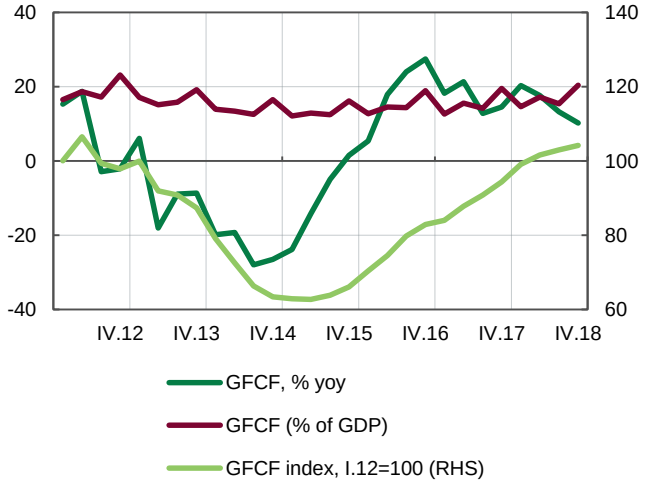
[7] In March 2019, the State Statistics Service of Ukraine (SSSU) revised its GDP data for 2017–2018. According to the revised data, the recovery of Ukraine's economy was more rapid than estimated previously, given the more significant increase in private consumption in both 2018 and 2017. In 2018, additional factor was the upward revision of growth rates of investment, exports, and imports.

Figure 2.2.3. Real final consumption expenditure of households by purpose, % yoy



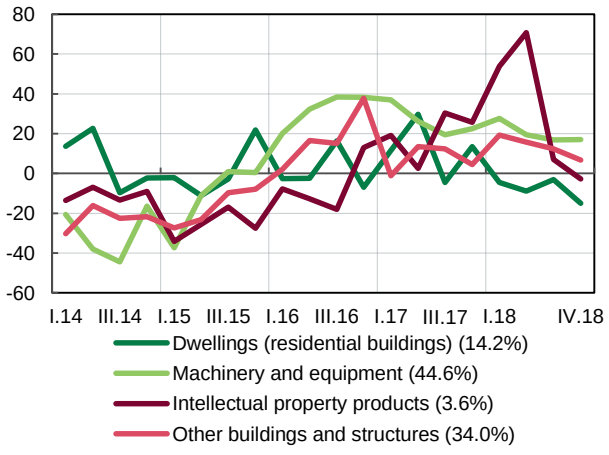
Source: SSSU, NBU staff estimates.

Figure 2.2.4. GFCF index, change in % and as % of GDP



Source: SSSU, NBU staff estimates.

Figure 2.2.5. GFCF by types of nonfinancial assets, % yoy (% of GDP in 2018)



Source: SSSU, NBU staff estimates.

of a cut in utility subsidies[8] (read more in the section *Labor Market and Household Income*).

General government final consumption expenditure decreased further in Q4 2018, although the pace of decline slowed down (to 2.4% yoy) owing to the fiscal policy easing at the end of the year. Overall, the growth rates of final consumption expenditure declined, to 5.8% yoy.

The growth in gross fixed capital formation continued to slow in Q4 2018 (to 10.2%). On the one hand, this was due to the waning effect of the pick-up in investment after underinvestment in the crisis period and the large investments in upgrading production facilities and renewing fixed assets performed in previous years. On the other hand, own funds of enterprises remained the main source of investment (71.3% in 2018), which means that the deterioration in companies' pre-tax financial results seen in H2 2018 could have an impact on investment activity. In late 2018, investment activity was also hampered by increased uncertainty caused by the escalation of the conflict in the Sea of Azov and the imposition of the martial law in 10 oblasts of Ukraine. The slower growth in capital expenditure of the budget in Q4 was another factor that put the brakes on investment growth.

At the same time, despite a deceleration, investment in machinery and equipment continued to grow rapidly, primarily driven by a pick-up in the investment activity of manufacturing companies. In particular, metallurgical companies continued to renovate their production facilities. Large investment projects were under way in the energy sector, especially in the area of renewable energy (construction of new solar and wind power plants). Ukrainian Railways JSC continued to increase its capital investments on the reconstruction of railroads, purchases of open-top wagons and the manufacturing of its own, and the renewal of its fleet of locomotives and passenger cars. Investment in other buildings and structures also rose, particularly in the energy sector and retail trade. In contrast, gross fixed capital formation in dwellings declined faster, reflecting the lower share of household funds (in sources of investment funding) invested in residential construction. The role of other resources (bank lending, foreign investment) also remained minor.

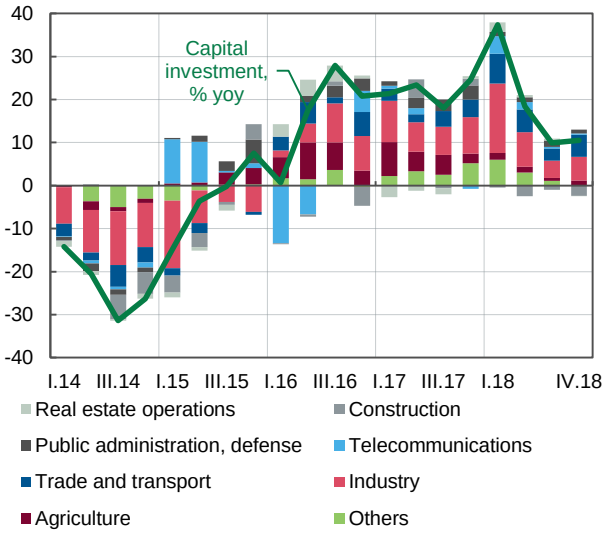
Imports of goods and services grew somewhat more slowly (2.8% yoy), largely on the back of lower energy imports and a decline in prices of some imported consumer goods. The ample harvest of corn and oil crops resulted in the rebound in the exports of goods and services (by 0.4% yoy), with the negative contribution of net exports in real GDP growth down in Q4 2018 compared to the previous quarter (to -1.3 pp).

Gross Value Added

The faster growth of real GDP in Q4 2018 was primarily due to a larger contribution made by agriculture as its GVA grew

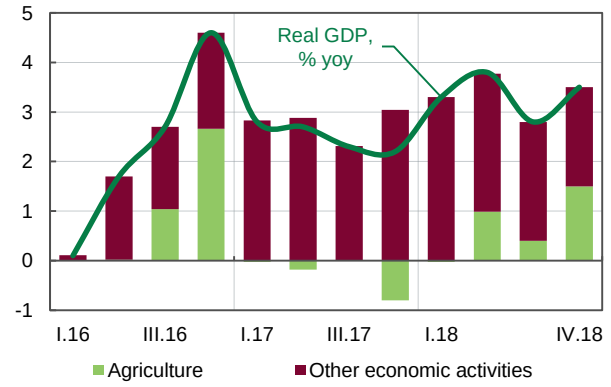
[8] When calculating changes in household final consumption expenditures on housing and utilities, the SSSU takes into account the sources of the funds used to pay for these services (i.e., subsidies or households' own funds), and counts services paid with subsidies as general government consumption expenditure, rather than consumption expenditure of households.

Figure 2.2.6. Contributions to annual growth of capital investment, pp



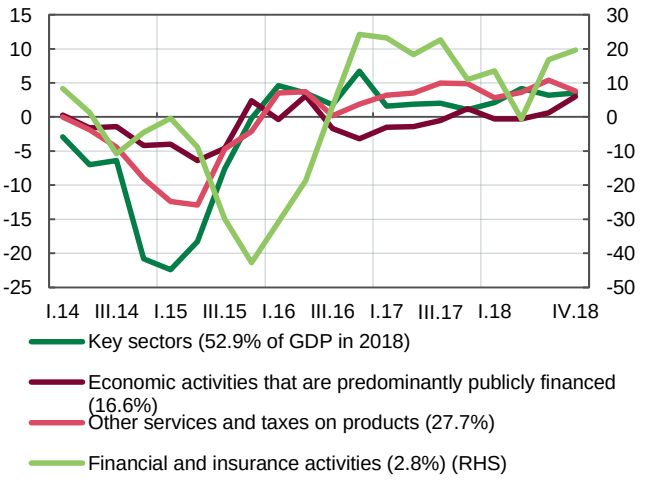
Source: SSSU, NBU staff estimates.

Figure 2.2.7. Contributions to GDP growth, pp



Source: SSSU, NBU staff estimates.

Figure 2.2.8. GVA by groups of sectors, % yoy



Source: SSSU, NBU staff estimates.

at an accelerated pace (13.5% yoy). The latter was mostly driven by rapid growth in crop production (owing to the record harvest of late grain and oil crops) and an improvement in some performance indicators of animal production (especially in poultry farming). Overall, the NBU estimates that the GVA of agriculture directly contributed 0.8 pp to real GDP growth in 2018. The high performance of the agriculture sector also had a positive impact on the performance of related industries (transportation, trade, the food industry, etc.). Second-round effects therefore contributed positively as well (0.6 pp).[9]

In Q4 2018, GVA also improved in the sectors that are predominantly publicly financed as a result of the easing of fiscal policy at the end of the year. The GVA in financial and insurance activities also grew rapidly, reflecting the development of both the banking and nonbanking financial sectors.

On the other hand, the growth in the GVA of trade slowed notably (to 1.6% yoy in Q4 2018), driven by a decline in wholesale turnover in late 2018, as well as other factors. In turn, the latter was a result of complications in cargo transportation, the escalation of the conflict in the Sea of Azov in H2 2018, and ongoing repairs at some metallurgical companies. These factors also affected the GVA of transportation and manufacturing (down by 0.1% yoy and 2.8% yoy, respectively).

The energy sector benefited from weather conditions, which were colder than last year[10] (the GVA growth accelerated to 3% yoy). However, the weather factor restrained growth in construction (the sector's GVA grew slower, by 7.6% yoy) (read more about the influence of weather conditions on various sectors of the Ukrainian economy in the box *The Impact of Weather Conditions on the Dynamics of Key Sectors of Ukraine's Economy*). These developments were in line with the overall slowdown in investment activity.

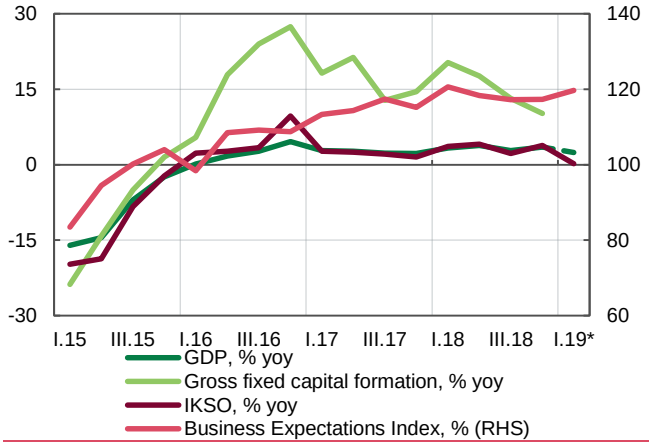
Estimates for Q1 2019

According to NBU estimates, real GDP growth slowed in Q1 2019, to 2.4% yoy. The slowdown compared to the previous quarter was due to the expected decline in the positive contribution of agriculture on the back of the waning effect of the record harvest of grain and oil crops in 2018. Thus, despite an improvement in animal production indicators in January–March 2019, the contribution to GDP growth made by agriculture, while remaining positive, was small.

In addition, the performance of industrial production weakened. This was primarily due to a sizeable decrease in the output of the energy sector, mostly due to warmer weather.[11] Production also dropped in some manufacturing sectors. In particular, output in the chemical industry continued to fall for most of the quarter, largely on the back of repairs and renovation activities at some plants. The ban on imports of certain types of machinery imposed by Russia in late 2018 was one of the reasons for the further decline in

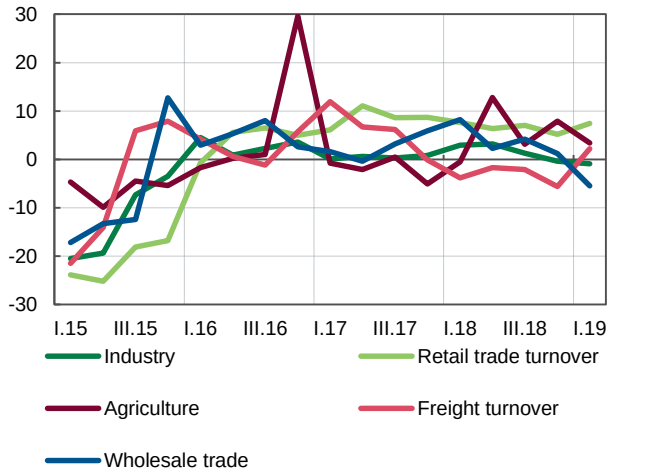
[9] Estimate based on the SSSU's input-output table for 2017.
[10] In Q4 2018, the average air temperature was 1.5°C lower than in the same period last year.
[11] In Q1 2019, the average air temperature was 3.1°C higher than in the same period last year.

Figure 2.2.9. Real GDP, Index of Key Sector Output, gross fixed capital formation, and business expectations



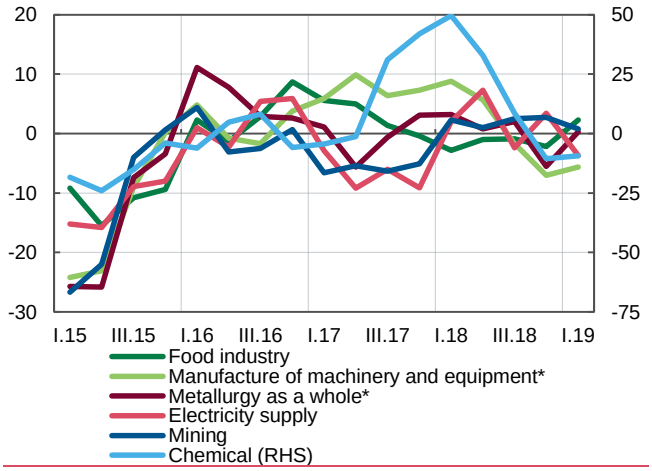
* Q1 2019: GDP – NBU estimates.
Source: SSSU, NBU staff estimates and surveys.

Figure 2.2.10. Output by selected sectors, % yoy (quarterly averages)



Source: SSSU, NBU staff estimates.

Figure 2.2.11. Output by selected industrial sectors, % yoy (quarterly averages)



* Includes manufacture of machinery, motor vehicles and transport equipment.
** Metallurgical production and production of finished metal products.
Source: SSSU, NBU staff estimates.

production of the machinery industry. Although the pace of growth of the metallurgical industry accelerated significantly in March (as planned repairs at several large mining and metallurgical companies were completed), it was close to zero as of the end of Q1 2019.

Despite a slight slowdown, domestic demand (mainly consumption by households and investment by businesses) remained the main driver of economic growth. In particular, further sustained growth in consumer demand was evidenced by accelerated growth of retail and passenger turnover, which was propped up by the steady growth in real wages and pensions.[12]

Growth accelerated in construction, which was driven by this year's more favorable weather conditions compared to 2018, but which may also indicate steady investment demand.

[12] In particular, pensions for military personnel were raised from 1 January 2019, which was followed by an increase in regular pensions from 1 March and additional pension payments (read more in the section *Labor Market and Household Income*).

Box 2. The Impact of Weather Conditions on the Dynamics of Key Sectors of Ukraine's Economy

Weather has a significant impact on some sectors of the economy in the short run. For example, the unusually snowy and chilly weather in March 2018 was considered to be one of the reasons for the relatively modest performance of the real sector in Q1 2018. In June 2018, the harvesting campaign started early compared to the previous year, boosting real GDP growth in Q2 2018. Weather conditions had an overall negative effect on economic activity in Q1 2019, although they contributed to expansion in output in some sectors, particularly in the construction sector. This box presents a quantitative assessment of the impact of weather on monthly performance indicators in some sectors of the economy, and on economic activity as a whole.

Simple regression equations were used to assess the impact of the weather on the performance of some sectors of the Ukrainian economy. The monthly output indices of some economic sectors and quarterly annual growth in GVA were dependent variables. The independent variables included the deviation of average monthly precipitation and/or average monthly air temperatures from last year's levels, dummy variables, and autoregressive components. The assessment results are provided in Table 1.

Table 1. Impact of weather conditions on selected economic activities, pp[1]

	Construction, % yoy	Energy sector, % yoy	Mining industry, % yoy	Manufacturing industry, % yoy
Temperature	1.0*	-1.1**	0.5**	0.4**
Number of observations	168	170	167	169
R^2	0.82	0.71	0.76	0.82

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

[1] Only statistically significant coefficients of the impact of weather conditions over the course of the year were taken into consideration (observation period: January 2004 – February 2019). In particular, for construction, the average value of this impact was calculated based on the data from December till March, for energy sector – from October till March, for mining and manufacturing industries – from December till February.

Source: SSSU, CGO, NBU staff estimates.

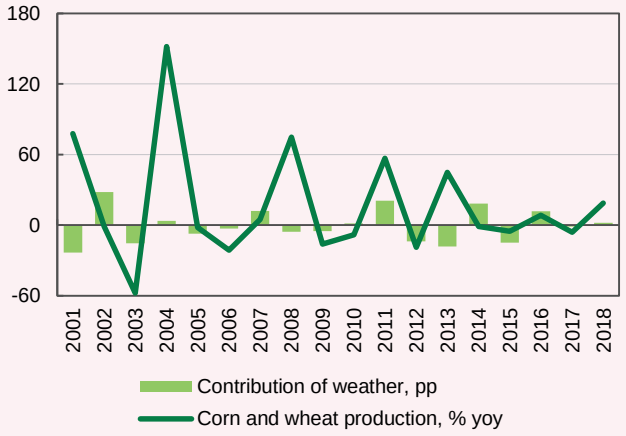
Weather conditions mostly influence performance in sectors in which work is carried out in the open air, or in unheated premises. This particularly concerns open-air construction sites, opencast mining, and so on. The NBU estimates that cold weather in winter and in early spring reduces the volume of completed construction work on average by 1.0 pp in annual terms for every degree below the level of the same month of the previous year.

Cold weather in winter also affects the performance of the mining industry. A decline of 1°C slows output growth by 0.5 pp on average. Winter weather has a similar effect on manufacturing.

However, not all sectors are adversely affected by a deterioration in weather conditions. When during the heating season the weather is colder compared to the previous year, production grows in the energy sector. According to the NBU's estimates, each 1°C of decline in air temperature against the same period of the previous year spurs growth in the energy sector by 1.1 pp on average during the cold season (October–March). Apart from temperature, the energy sector's performance is impacted by the amount of precipitation – in particular due to its influence on the operation of hydroelectric power plants.[13]

The main sector that is constantly dependent on weather conditions is agriculture. Weather is an important factor for the start of sowing and harvesting. However, the impact from shifts in the time of sowing and harvesting is largely transitory, with the subsequent adjustment occurring in the months to follow.

Figure 1. Impact of weather conditions (temperature and precipitation) on wheat and corn production, pp



Source: SSSU, CGO, NBU staff estimates.

At the same time, weather conditions can have a more durable effect through their influence on crop yields. Applying control variables for changes in sown areas and the amount of fertilizers used, yields of grains (especially winter wheat) strongly depend on sufficient soil humidity in spring and summer, whereas a large increase in precipitation in October–November reduces frost tolerance and survival of winter crops. Air temperature also influences crop yields. For example, high air temperatures in April–May lead to lower yields of wheat. The NBU estimates that dry weather in April–May 2018 slowed the growth of the wheat harvest in 2018 (the negative contribution was nearly 25.0 pp).

At the same time, the accumulation of warmth from April to October and sufficient soil humidity in the summer of 2018 were favorable for the ripening of late grain crops (notably

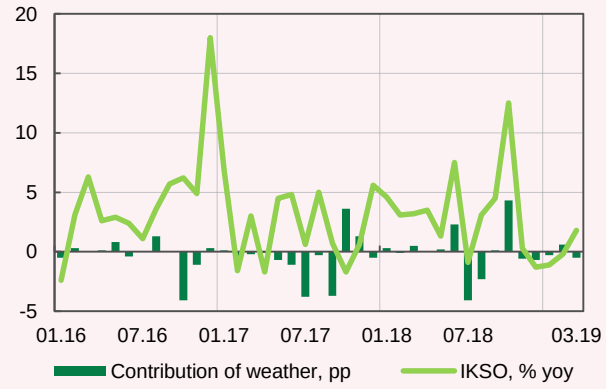
[13] According to official data from the Ministry of Energy and Coal Mining, energy production at hydroelectric power plants mostly increases during periods of spring flooding. The NBU's estimates show the same: an increase in precipitation by 1 mm in this period raises the output of the energy sector by 0.02 pp.

corn). According to the NBU's estimates, the effect of weather conditions on the corn harvest had a positive impact of around 20.0 pp (the rest of the growth was due to other factors, including fertilization and the increase in sown areas). As a result, the total effect of weather fluctuations on the corn and wheat harvests in 2018 was mildly positive.

Although weather substantially impacts the composite index of economic activity (Index of Key Sectors Output, IKSO) in some months, it generally has a temporary effect and is only marginally reflected in quarterly and annual indicators, except crop yields. This is driven by the opposing effects weather conditions produce in different sectors (the positive impact of cold weather on the energy sector is offset by the negative effect on the construction sector, and vice versa) and the redistribution effects by months (shifts in the time of harvesting cause sharp growth in agricultural production in one month, which is offset by a lower harvest in the next month). In February and March 2019, weather conditions made a sizeable positive contribution in the increase in volume of construction works, however their negative impact on the energy sector was higher. Thus, in general, the contribution of weather conditions to the change in the IKSO in Q1 2019 was mildly negative (0.2 pp).

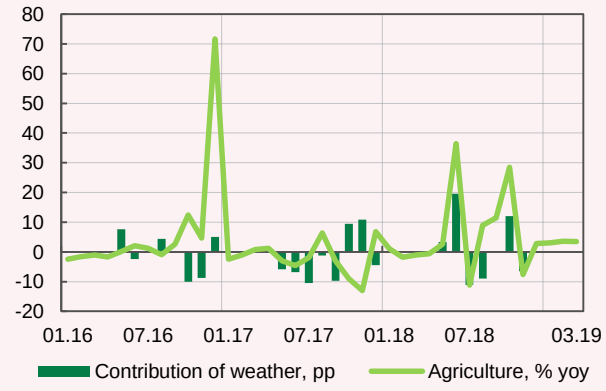
These quantitative assessments allow to take into account the impact of weather on IKSO,[14] the main leading GDP indicator, and accordingly improve the approach to short-term GDP forecasting.

Figure 2. Impact of weather conditions (temperature and precipitation) on the IKSO



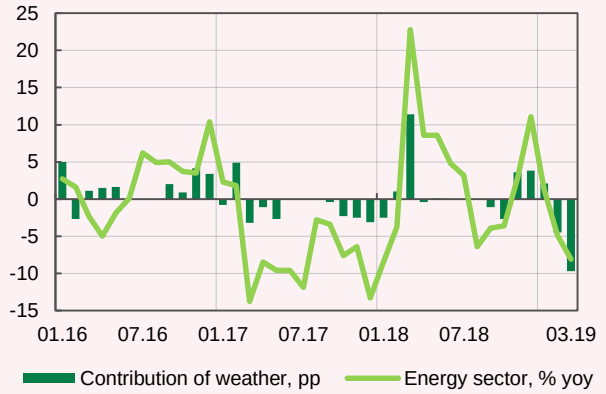
Source: SSSU, CGO, NBU staff estimates.

Figure 3. Impact of weather conditions (temperature and precipitation) on agriculture*



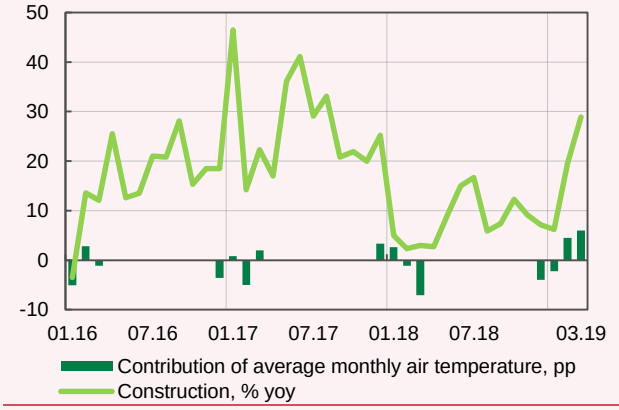
*The regression equation includes the temperature and precipitation factors separately for each season (winter, spring, summer, autumn). These factors explain 38% of variation in the dependent variable (p-value is less than 0.1).
Source: SSSU, CGO, NBU staff estimates.

Figure 4. Impact of weather conditions (temperature and precipitation) on energy sector*



* Electricity, gas, steam and air conditioning supply sector.
Source: SSSU, CGO, NBU staff estimates.

Figure 5. Impact of average monthly air temperature on construction sector



Source: SSSU, CGO, NBU staff estimates.

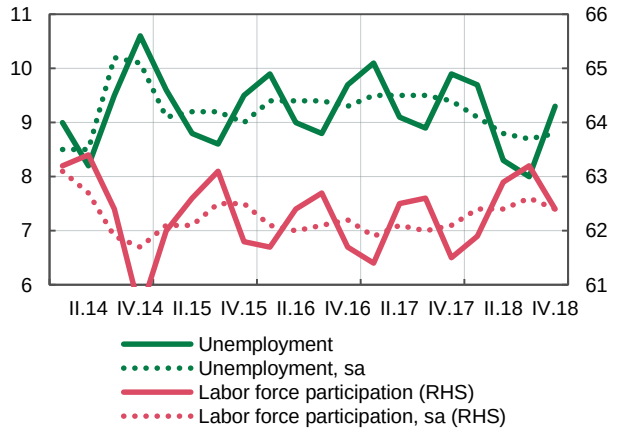
[14] Only statistically significant regression equations were taken into account.

2.3. Labor Market and Household Income

The year 2018 saw an upward trend in labor force participation. The labor force participation rate averaged 62.6% in 2018, exceeding levels seen in 2014–2017. The increase in labor force was driven by tighter requirements for the minimum pensionable service period required to receive an old age pension, and by rapid wage growth seen over the past few years. The new requirements came into force after pension laws were amended in late 2017. With economic growth fueling an increase in labor demand, employment rose to 57.1%, while the ILO unemployment rate fell to 8.8%. The changes to the pension laws were also a factor in reducing the number of informally employed individuals. However, as labor force participation continued to rise, especially in rural areas, the unemployment rate increased somewhat in Q4 2018 in seasonally adjusted terms.

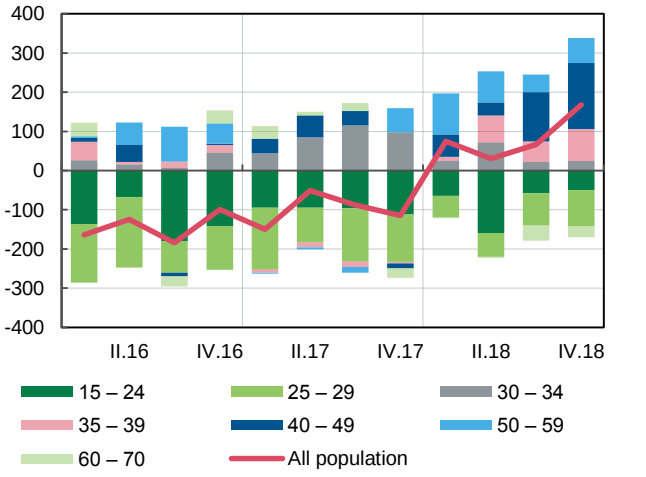
Nominal household income continued to grow rapidly in 2018. Wages were on the rise, driven by robust labor demand, pressure from labor migration, and supply and demand mismatches in the labor market. That said, wage growth slowed as the wage gap narrowed between Ukraine and the neighboring countries that are destinations for Ukrainian labor migrants. Social benefits also grew rapidly for most of the year on the back of pension modernization implemented in late 2017. Growing incomes boosted consumer demand, while the propensity to save remained low.

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



* 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. Contributions to annual change in economically active population, thousand persons



Source: SSSU, NBU staff estimates.

Labor Market

In Q4 2018, labor force participation stood at 62.4%, reaching a new peak of 62.9% since mid-2014 in seasonally adjusted terms. Amendments to pension laws[15] made in late 2017 and further wage growth were factors in expanding the supply of labor. Labor force participation grew the fastest among people aged 40 – 59, which is attributable the Pension Reform. Labor supply increased among the demographic groups with relatively low labor force participation – women and rural residents. Meanwhile, labor force participation among young people (aged 15 – 24 and 25 – 29) continued to shrink, primarily driven by demographic processes that reduced the overall population in these age brackets.

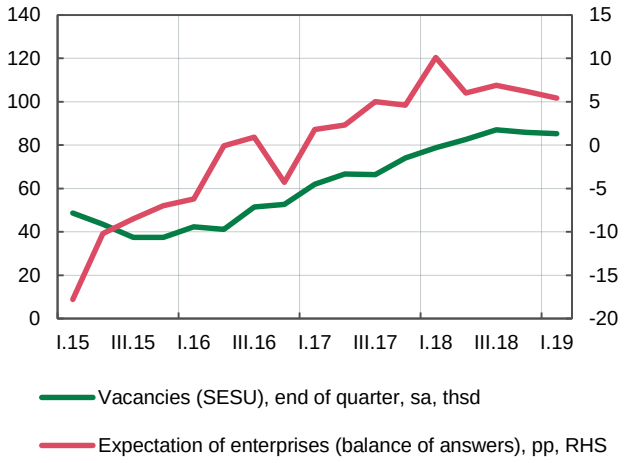
As economic growth accelerated, labor demand remained strong. Businesses maintained high expectations with regard to changes in staff numbers over the following 12 months, the business outlook survey the NBU conducted in Q4 2018 and Q1 2019 showed.

Both robust labor demand and the expansion of labor supply pushed the employment rate up in Q4 2018 (to 57.4% sa). That said, the number of vacancies registered by the SESU between Q4 2018 and Q1 2019 remained high across all key business activities. The significant number of vacancies amid rising employment reflected both a revival of economic activity and difficulties with filling existing vacancies. This is according to the 2018 business outlook survey (for more details, see Box Business Outlook Survey: Staff Shortages and Robust Demand for Labor in 2018 Resulted from Economic Growth).

A number of reasons led to the shortage of suitable job candidates. Migration processes shifted into lower gear in 2018 but continued to put pressure on the labor market. In 2018 and early 2019, the share of businesses that struggled to fill vacancies with qualified staff remained significant in all key business activities, respondents said. Apart from lacking qualified workers, the labor market was characterized by

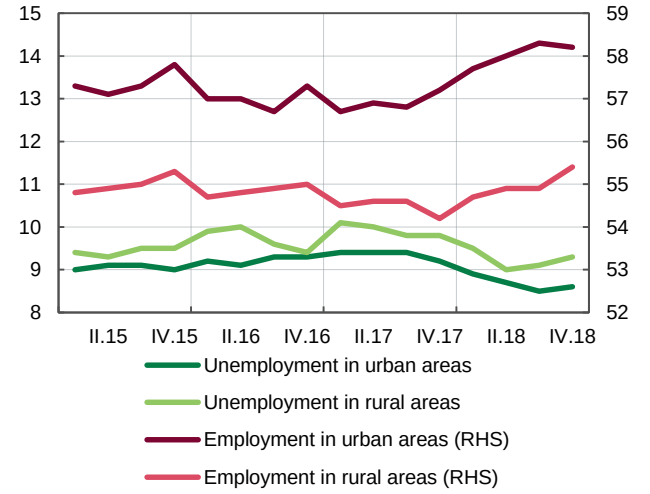
[15] For more details, see Box The Key Elements of the Pension Reform in the October 2017 Inflation Report.

Figure 2.3.3. Vacancies (SESU) and expectations of enterprises as to the change in the number of employees 12-month ahead



Source: SESU, Business outlook survey of Ukraine (NBU), NBU staff estimates.

Figure 2.3.4. ILO Employment and Unemployment in Rural and Urban Areas, sa, %



Source: SSSU. NBU staff estimates.

Figure 2.3.5. Informal employment

Source: SSSU. NBU staff estimates.

regional mismatches between labor demand and supply. More specifically, rural unemployment increased after labor supply in those areas expanded (including in seasonally adjusted terms) in late 2018, despite the continued growth in employment. That, in turn, affected the overall unemployment rate in Q4 2018, with ILO unemployment amounting to 9.3%, or 8.8% (up 0.1 pp) in seasonally adjusted terms.

In addition, the employment landscape continued to shift in 2018. In particular, informal employment continued to shrink (to 21.6%, from 22.9% in 2017), which is attributable, among other factors, to changes in the pension laws. Thus, the number of individuals informally employed in accommodation and catering, trade, and construction – activities that had the highest shares of informal employment in 2017 (over 30%, 20%, and 90%, respectively) – declined significantly.[16]

The reduction in the number of informally employed workers, as well as the decrease in the number of workers formally employed at companies with at least 10 employees, may indicate that the number of workers hired by sole proprietors and/or micro-enterprises increased.[17]

Household Income and Savings

Nominal household income continued to grow rapidly in 2018, although the growth decelerated to 16.4% yoy in Q4.

The further increase in wages was a major contributor to income growth. In addition to improved economic activity and robust labor demand, significant wage growth was driven by labor market imbalances and sustained pressure from labor migration. After-tax wages[18] in Ukraine's neighboring countries continued to be, on average, twice as high as those in Ukraine. Labor migration resulted in a shortage of skilled workers, while difficulties with filling vacancies prompted companies to offer higher wages. According to Poland's Ministry of Labor and Social Policy, over 80% of the work permits that the Polish authorities issued to Ukrainians went to three professional groups: craft workers, plant and machine operators, and those employed in elementary occupations. As a result, wages offered to individuals in these worker categories rose sharply, by 42%, 31%, and 27%, respectively, the SESU data showed.

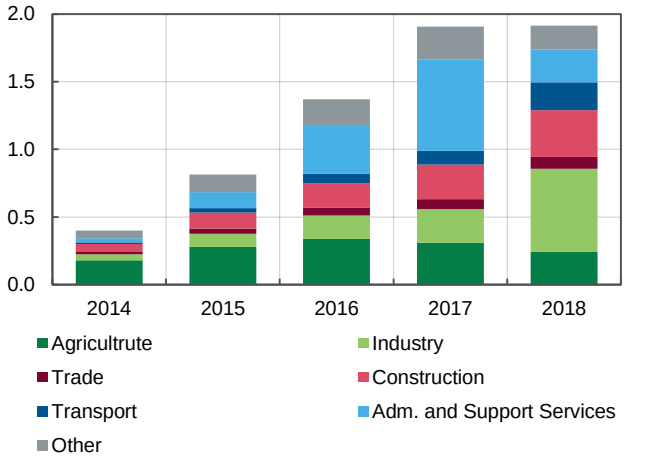
Contrastingly, the ratio between wages in Ukraine and those in neighboring countries decreased in 2018, while labor migration, to Poland in particular, declined in intensity. Coupled with the expansion in labor supply, this dragged down wage growth in Q4 2018 to 22.2% yoy. Wage growth decelerated across most business activities, except construction, which continued to be short of workers after losing many of them to labor migration (construction work permits accounted for 23% of all work permits the Polish authorities granted to Ukrainians in 2018).

[16] The ratio of informally employed workers to all workers employed in a type of activity – NBU estimates.

[17] The SESU defines micro businesses as legal entities employing fewer than 10 workers.

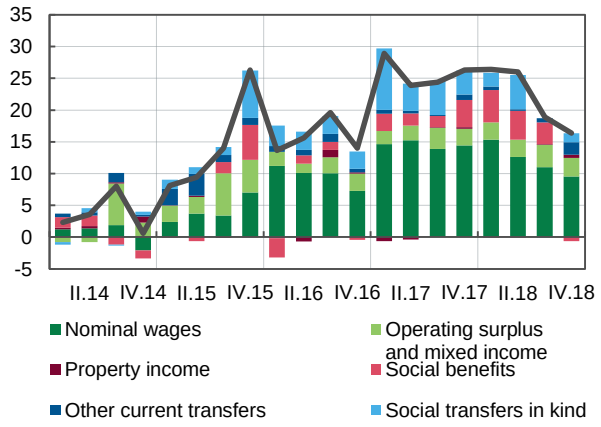
[18] Excluding the individual income tax, social security tax, and military tax.

Figure 2.3.6. Number of employers' declarations and work permits issued for Ukrainians in Poland by selected types of activity, m



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

Figure 2.3.7. Contributions to annual change in nominal household income, pp



Source: SSSU, NBU staff estimates.

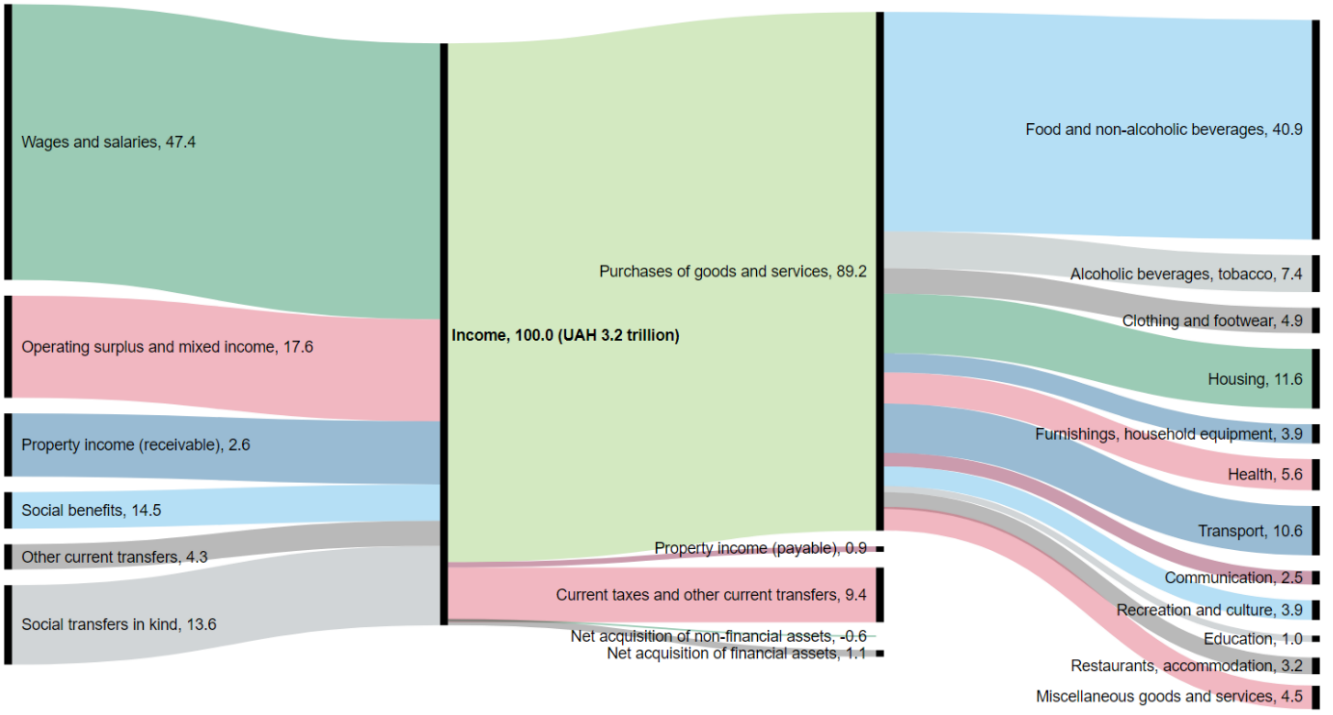
Despite rising at a fast pace in the past three years, wages still accounted for less than half (45.6%) of total household income in Q4 2018. Other significant components of nominal household income were profit and mixed income (18.0%), social transfers in kind (14.1%), and social benefits (12.9%).

In Q4 2018, social benefits declined (by 3.9% yoy). The growth in pensions, which represent three quarters of social benefits, decelerated to 2.3% yoy (from 32.5% yoy in Q3 2018) against a high comparison base on the back of pension modernization in late 2017. Other types of government assistance declined as well, among other things due to growth in other income components.

Social transfers in kind returned to growth (up 9.5% yoy after decreasing 0.7% yoy in Q3). The number of subsidy recipients continued to decrease due to the verification of previously granted subsidies, the growth in other household incomes, and the change in the criteria for setting subsidies in 2018. However, the actual volume of subsidies grew on the back of increases in heating and hot water tariffs.

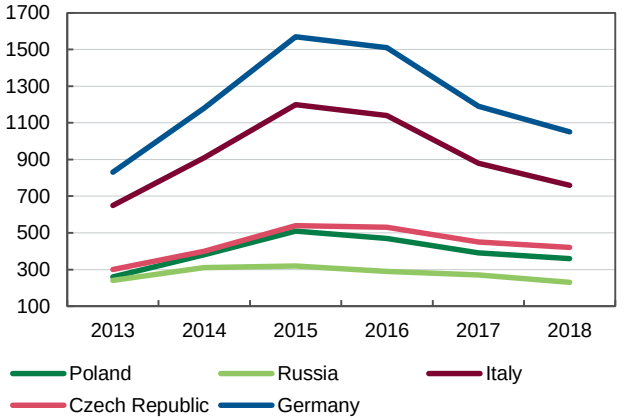
Slower growth in nominal income and an uptick in inflation in Q4 2018 slowed the increase in real disposable income. Overall for the year, however, real disposable income grew 9.9%, supporting the rapid growth in private consumption. Households' propensity to save remained low in 2018, at 0.7%.

Figure 2.3.8. Structure of household income and expenditure in 2018, % of income



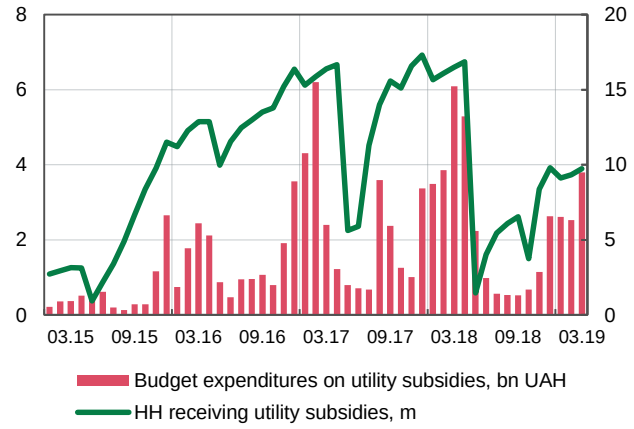
Source: SSSU, NBU staff estimates, app.rawgraphs.io.

Figure 2.3.9. Net wages in main destination countries for migrants relative to wages in Ukraine, %



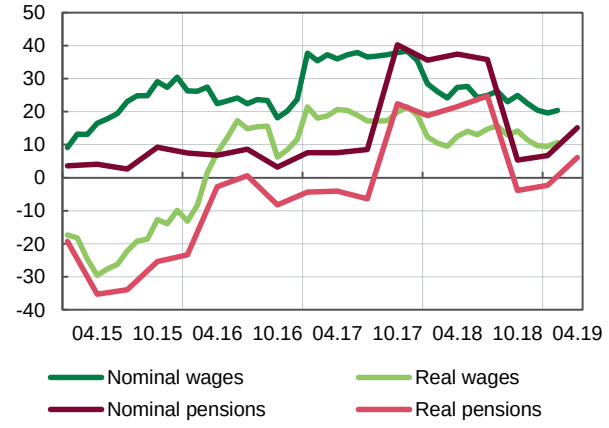
Source: SSSU, NBU, NBU staff estimates, National Statistical Offices, OECD.

Figure 2.3.10. Households receiving utility subsidies and budget expenditures



Source: SSSU, STSU.

Figure 2.3.11. Staff wages and pensions (start of the month), nominal and real, % yoy



Source: SSSU, PFU, NBU staff estimates.

Household incomes continued to grow rapidly in Q1 2019, according to NBU estimates. At the same time, their growth slowed down both on account of wages and due to housing and utility subsidies. The decrease in the rate of wage growth was driven by the drop in the intensity of labor migration and by the continued slowdown in the growth in wages earned abroad.

Budgetary spending on housing and utility subsidies dropped by 33.6% yoy. On the one hand, the number of subsidy recipients continued to decline (by 41.6% yoy). On the other hand, the decline in subsidies was restrained by an increase in heating and hot water tariffs. Meanwhile, the growth in pensions accelerated. In March 2019, the government conducted its first annual recalculation of pension benefits by increasing by 17% the indicator of average wage (income) in Ukraine from which insurance premiums were paid.[19] In addition, the government paid out a one-off pension supplement of UAH 1,205 to 2.1 million pensioners in March and April 2019.

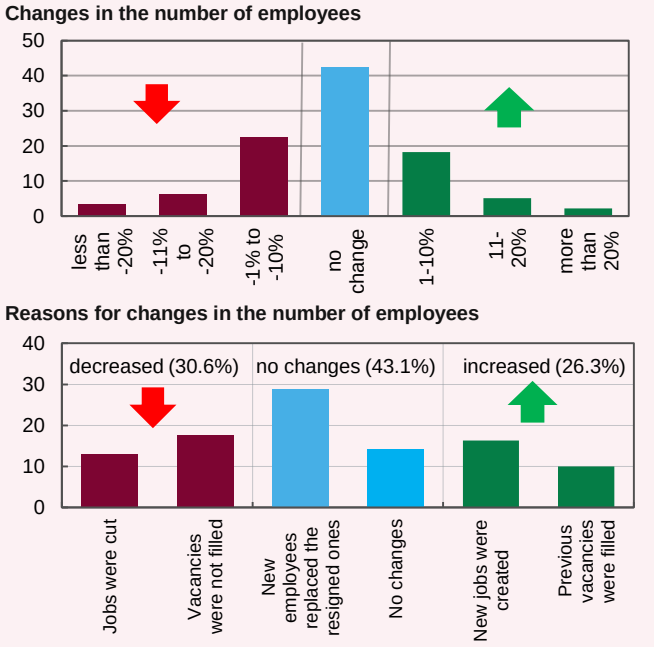
[19] For more details, see the announcement on the website of the Pension Fund of Ukraine (in Ukrainian), and the announcement on the Government portal (in English) and Article 42 of the Law of Ukraine *On Compulsory State Pension Insurance*.

Box 3. Business Outlook Survey: Staff Shortages and Robust Demand for Labor In 2018 Resulted from Economic Growth

In Q1 2019, the NBU included additional questions about the number of staff and vacancies in 2018 in its Business Outlook Survey questionnaire.[20]

Replies to these questions showed that staff numbers at Ukrainian companies had declined in 2018, as indicated by a balance of responses[21] (-6.7%), which was in line with the general downward trend in staff numbers (according to SSSU data). The difficulty of filling existing vacancies was cited as an important reason for that.

Figure 1. Distribution of answers for changes in the number of employees and for reasons of changes in 2018, %



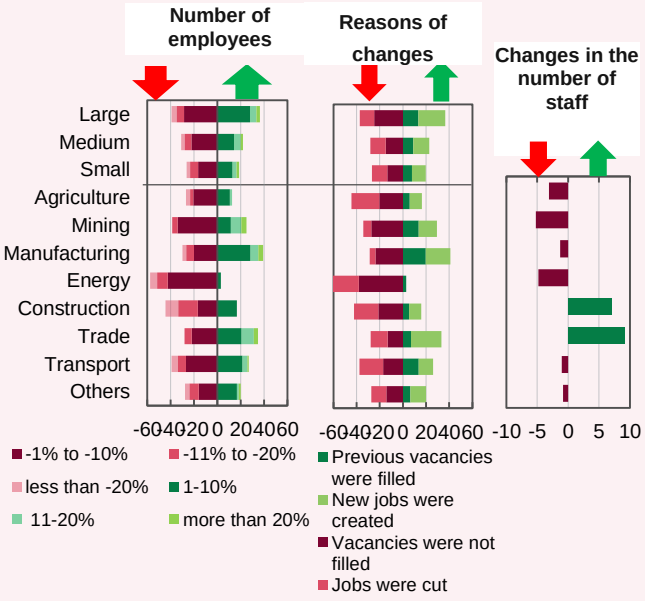
Source: NBU.

Over a fourth of respondents said their workforce had increased. Of these, over 60% attributed the increase to new vacancies that were created due to the establishment of a new business or the expansion of an existing one, with the rest citing the filling of existing vacancies as the reason. These trends signaled a further pick-up in business activity and more robust economic growth. Meanwhile, about 40% of companies reported no change in their staff numbers because of natural staff turnover (new employees replaced the resigned ones).

About 30% of companies said their staff numbers had dropped. Only 13% of respondents cited drops in production output and reductions in the size of their companies as the reasons for this, with the remaining 18% attributing workforce cuts at their companies to difficulties in hiring staff. Labor migration was said to be one of the reasons for the staff cuts, and this was an important factor hampering the development of companies in 2018. These views were mainly concentrated among agricultural, construction and transportation companies.

Energy companies reported the largest reductions in staff numbers, which was in line with the rising number of vacancies at these companies recorded by the SESU, and the decline in staff numbers at these companies recorded by the SSSU. Mining companies cited difficulties in hiring staff as the main reason for staff reductions.

Figure 2. Distribution of answers for changes in the number of employees and for reasons of changes by firm characteristics in, %, and changes in the number of staff by type of activities in 2018, % yoy



Source: NBU, SSSU.

It is noteworthy that while construction companies reported staff cuts in 2018, the SSSU reported a significant increase in staff numbers at these companies. Such trends can largely be explained by changes in the employment structure. NBU estimates based on SSSU data show that the number of people informally employed in the construction sector decreased by 5.4% in 2018. Since the level of informal employment in the construction sector (in proportion to formal employment) is one of the highest in the economy, a relatively insignificant drop in informal employment may have caused a considerable increase in the number of people officially employed in the sector. This same factor, most probably, explains a noticeably larger increase in the number of staff in the trade sector compared to survey results.

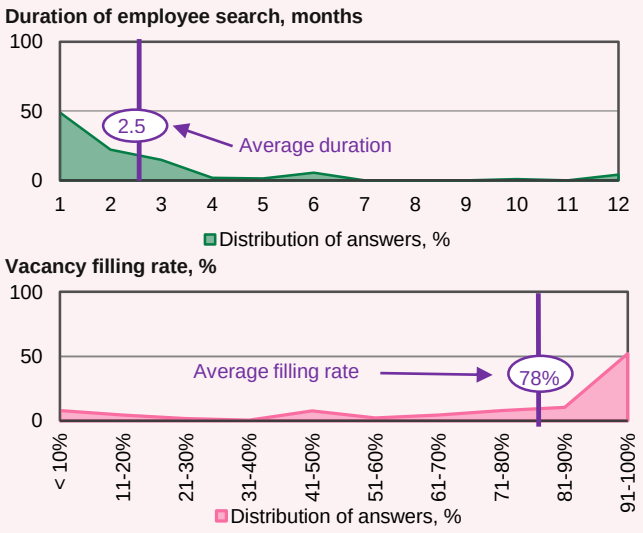
[20] The latest survey was carried out from 4 February through 6 March 2019. About 700 companies in 22 regions took part in the survey (excluding the temporarily occupied territory of Crimea, as well as the temporarily occupied parts of Donetsk and Luhansk oblasts). The sample is representative by all main types of economic activities.

[21] The difference between the percentage of businesses that reported an increase in staff numbers and those that reported a drop in staff numbers. A negative figure indicates the prevalence of adverse trends.

The economic upturn in 2018 had the strongest impact on staff numbers at large companies, in particular, in the manufacturing industry. A greater percentage of large companies, compared to medium and small companies, reported an increase in staff numbers due to business expansion and hiring staff to fill existing vacancies. This matches with results from the regular Business Outlook Survey: as in 2018, on average, small and medium companies had significantly more moderate assessments of their economic and financial conditions.

Although the average time they spend on finding staff to fill their vacancies is the shortest, and the number of vacancies filled is above average in the economy, large companies said they had the biggest difficulties in finding new staff. This may have been due to their greater scale of production and higher nominal demand for labor, as well as there being more effective HR departments at large companies.

Figure 3. Duration of employee search and vacancy filling rate

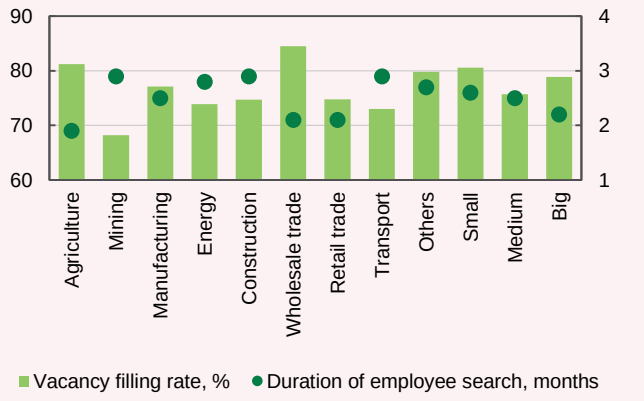


Source: NBU.

On average, vacancies at all businesses take one quarter to fill. Moreover, 49% of respondents find new staff during the first month of searching. A little more than half of respondents (52%) found employees for all vacancies during the year, and on average, all companies have about 8 out of 10 vacancies filled over the course of a year.

Mining, transportation, energy and construction companies had greater difficulties in filling their vacancies than companies in other sectors, and took longer to find staff. Nevertheless, in spite of negative perceptions, agricultural companies found new staff more quickly, and had a reasonably large number of vacancies filled compared to companies in other sectors. All this could signify that Ukrainian businesses have smoothly-running staff searching procedures, and that there was an increase in labor supply in 2018.

Figure 4. Duration of employee search and level of filled vacancies in 2018



Source: NBU.

Although respondents' expectations have been weakening since the middle of 2018, the latest Business Outlook Survey, which was carried out in Q1 2019, showed that respondents continued to report expectations of employment growth over the next 12 months. The weaker expectations may have resulted from somewhat lower labor demand in 2019, which is also in line with the NBU's forecast of slower economic growth. Although businesses reported a slightly weaker impact from shortages of qualified staff on their performance, this indicator has been one of the highest in the last few years.

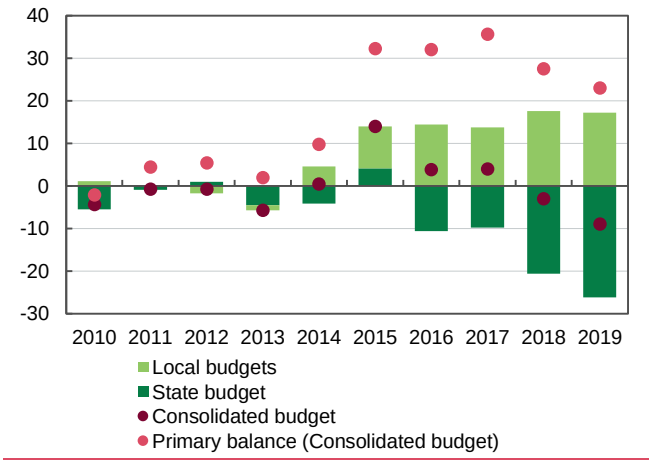
2.4. Fiscal Sector

The government slightly eased its fiscal policy at the beginning of 2019 compared to the last few years. The consolidated budget ran a rather substantial deficit in Q1 2019, while the primary balance, though still positive, decreased. This certain easing of fiscal policy was primarily due to the restrained the revenue growth (10.4% yoy).

The latter was driven by weak hryvnia-denominated imports, among other things due to the strengthening of the hryvnia, the decrease in the production of some excise goods, and the unfavorable effect of the comparison base on certain taxes. At the same time, the steady increase in nominal wages, as well as an improvement in the financial performance of businesses, supported the growth of revenues. Furthermore, a significant contribution (3.7 pp) to the revenue growth was made by temporary factors – funds from the customs clearance of foreign-registered vehicles and from special confiscations. The overall increase in budget expenditures in Q1 was moderate (12.8% yoy), in part due to the reduction in spending, primarily social expenses, in March, following their rapid rise at the start of Q1.

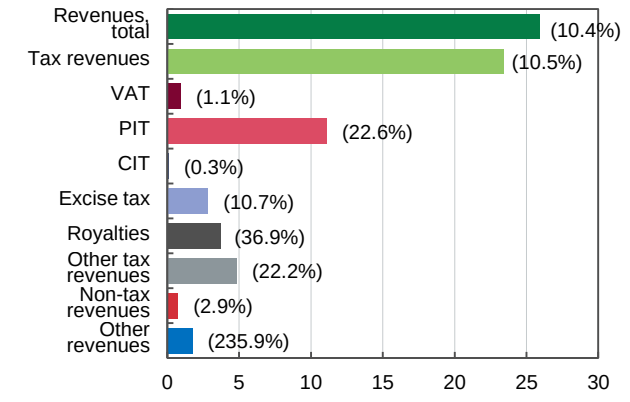
Due to the maintenance of the positive primary budget surplus, and the stronger hryvnia, the ratio of public and publicly guaranteed debt to GDP[22] dropped below 60% in late March 2019 for the first time since 2014.

Figure 2.4.1. Consolidated budget balance in Q1, UAH billion



Source: STSU, NBU staff estimates.

Figure 2.4.2. Consolidated budget revenues, absolute annual change in Q1 2019, UAH billion (% yoy)



Source: STSU, NBU staff estimates.

Balance

In Q1 2019, the government eased its fiscal policy. The consolidated budget deficit, at UAH 8.9 billion, was rather high for this period. Although the primary balance remained positive, it noticeably declined in size. This consolidated budget balance was the result of the rather significant state budget deficit (UAH 26.2 billion).

Revenues

Consolidated budget revenues grew by a rather moderate 10.4% yoy in Q1 2019, as increases in both tax and nontax receipts were modest, despite there being a significant positive contribution from several temporary factors.

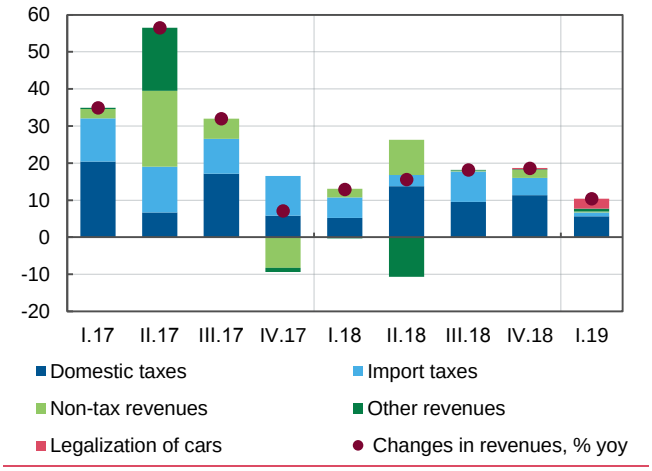
Tax receipts, primarily personal income tax proceeds driven by the growth in nominal wages, formed the basis for revenue growth in Q1 2019, as is usually the case. Corporate income tax receipts remained a significant source of tax revenues against the backdrop of improved financial performance of enterprises, but were little changed in Q1 2019 from last year. This is mainly attributable to the unfavorable comparison base, as a ruling by the Stockholm Arbitration Court in Q1 2018 resulted in Naftogaz of Ukraine NJSC transferring additional funds to the state budget as corporate income tax. Moreover, proceeds from royalties increased, fueled in particular by the hike in natural gas prices for households and heat-and-energy producers in November 2018.

The growth in VAT revenues was also insignificant compared to 2018. On the one hand, this is the result of an increase in VAT refunds (by 34.8% yoy), given the significant outstanding VAT refund claims as of the beginning of the year (UAH 28.7 billion). On the other hand, the small increase in VAT revenues was the consequence of low energy imports, a somewhat stronger hryvnia, and the introduction on 1 January 2019 of tax exemptions for imports of renewable energy equipment.

Meanwhile, excise tax revenues increased at relatively high rates in Q1, despite the decrease in the volume of production

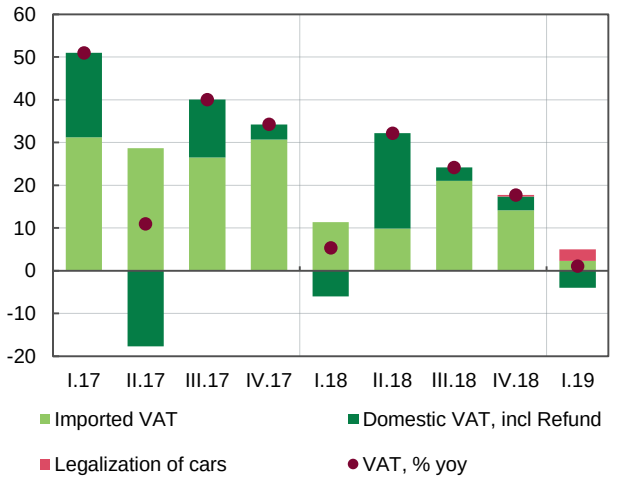
[22] The NBU calculated GDP on a rolling basis based on SSSU data for 2018 and NBU estimates for Q1 2019.

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



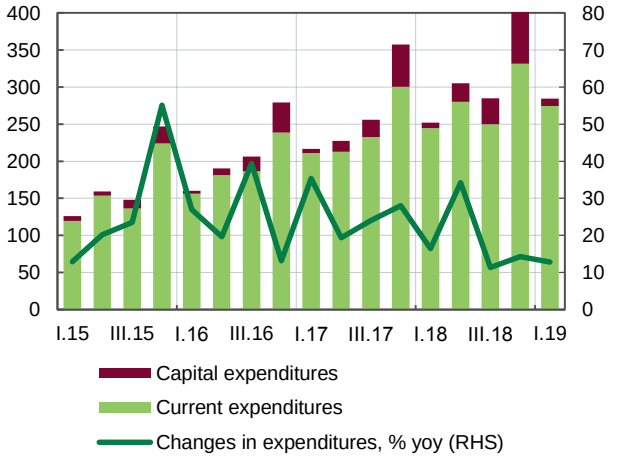
Source: STSU, NBU staff estimates.

Figure 2.4.4. Contributions to annual changes in VAT proceeds, pp



Source: STSU, NBU staff estimates.

Figure 2.4.5. Consolidated budget expenditures, UAH billion



Source: STSU, NBU staff estimates.

of excisable goods (in particular, the output of tobacco products decreased 7.2% yoy in Q1 of 2019). This was primarily due to the temporary effect of the customs clearance of a significant number of foreign-registered vehicles, which also led to an increase in proceeds from international trade duties. Overall revenues from VAT, excise tax, and import duties from the start of 2019 through the end of the grace period for the customs clearance of these vehicles amounted to 4.5% of all tax revenues for Q1 2019, according to NBU estimates.

Nontax receipts were also affected by the grace period for the customs clearance of foreign-registered vehicles. More specifically, vehicle owners voluntarily paid for exemption from fines for the violation of customs regulations during the customs clearance of foreign-registered vehicles. Funds from special confiscations also became an additional source of revenues this year.

Overall, this year's temporary factors have contributed 3.7 pp to the increase in consolidated budget revenues in Q1, the NBU estimates.

Expenditures

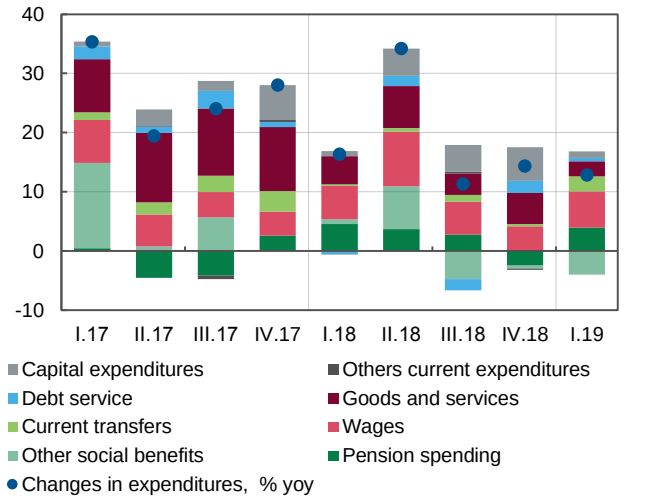
The increase in consolidated budget expenditures in Q1 was quite moderate (12.8% yoy). This moderate growth rate was primarily driven by expenditures incurred in March, which started growing at a significantly slower pace after their growth peaked in early Q1.

Transfers to the Pension Fund of Ukraine were the main driver for these developments. Transfers to the fund rose rapidly at the start of the quarter on the back of a number of factors. First, pensions were paid out in full this year unlike in the past three years, when pensions scheduled for January were partially paid out in December. Second, the government continued to raise pensions for some categories of recipients – military personnel in particular. In March, however, these expenditures declined, despite the indexation of retirement pensions and the payment of part of a one-off pension supplement (out of the funds from the customs clearance of vehicles). This was due to the high comparison base on the back of larger transfers to the Pension Fund in March 2018, including transfers to repay accumulated loans from the single treasury account. Meanwhile, expenses on compensation of employees continued to grow at a fast pace, including due to an increase in allowances for Ukrainian military personnel.

Spending on housing and utility benefits and subsidies for households was less than last year. This was attributed to the decline in the number of subsidy recipients (for more details, see the Section Labor Market and Household Income), and favorable weather conditions.

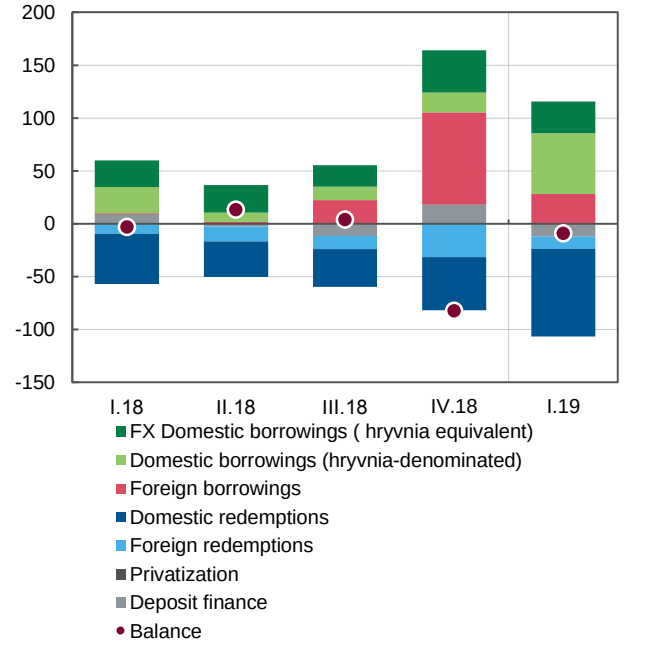
Changes in other expenditures were also diverse. More specifically, expenditures on current transfers almost doubled. Capital expenditures continued to grow quickly, including spending on developing infrastructure. Debt-servicing expenditures increased as well, among other things

Figure 2.4.6. Contributions to annual changes in the expenditures of the consolidated budget, pp



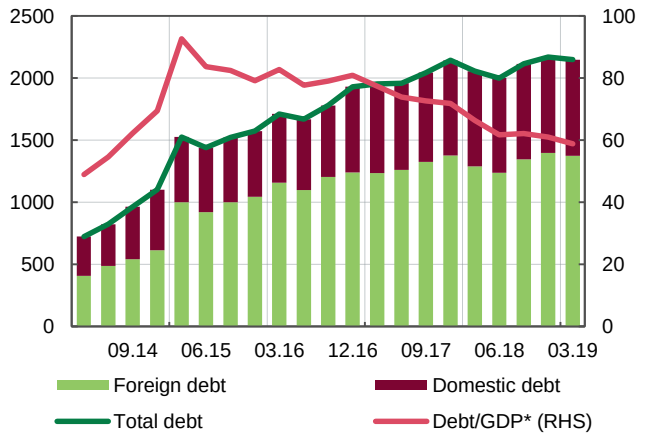
Source: STSU, NBU staff estimates.

Figure 2.4.7. Consolidated budget balance financing, UAH billion



Source: STSU, NBU staff estimates.

Figure 2.4.8. Public and publicly guaranteed debt, UAH billion and % of GDP*



* rolling GDP for 2019 – GDP Q1 2019 NBU estimates.
Source: MFU, SSSU, NBU staff estimates.

due to foreign borrowings in late 2018. At the same time, expenses on goods and services rose only moderately, primarily due to the decrease in spending on research and development and individual projects under government (regional) programs, while other current expenditures decreased.

Financing and Debt

At the beginning of the year, the government borrowed actively, for two reasons: first, to meet this year's tight debt repayment schedule, and second, to finance the budget deficit, given the low proceeds from privatization.

The government borrowed from both the international and domestic markets. This included a co-placement of sovereign Eurobonds and drawing a loan guaranteed by the World Bank. However, borrowing from the domestic market – in both the domestic and foreign currencies – remained the key source of financing for the budget deficit. Short-term securities represented the lion's share of this borrowing. While the debt repayments were high, the amount borrowed exceeded them by a wide margin.

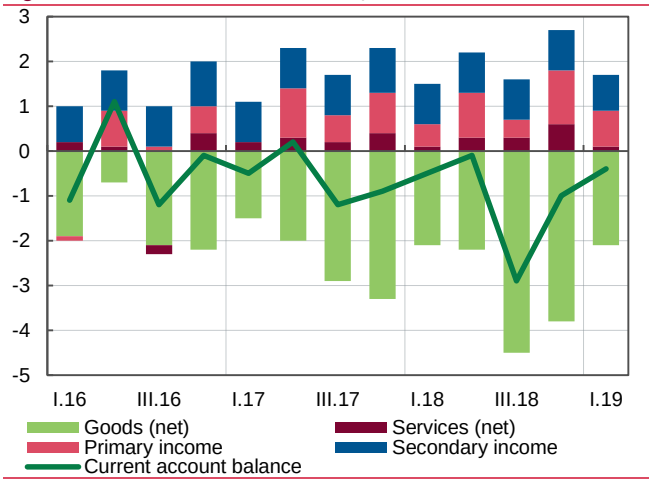
Despite this borrowing, public and publicly guaranteed debt declined by 1.0% since the beginning of the year, to UAH 2,147 billion in late March 2019. The decrease in the debt was driven by repayments on guaranteed debt, including repayments to the IMF. The slight strengthening of the hryvnia was a factor in reducing the debt. Overall, the debt-to-GDP ratio continued to decline (NBU staff estimates put the resulting ratio at 59%).

2.5. Balance of Payments

The current account deficit narrowed further in Q1 2019, to USD 0.4 billion. This, in part, was due to a decline in the deficit on the trade in goods. In addition, a quarter-over-quarter narrowing in the primary income surplus, which is typical for Q1, was smaller compared to last year because of a drop in dividend payments. Last year's bumper harvest of grain and oil crops helped offset a drop in metallurgical exports. Conversely, the growth in imports in goods slowed on the back of a decrease in energy imports and falling prices for some imported consumer goods.

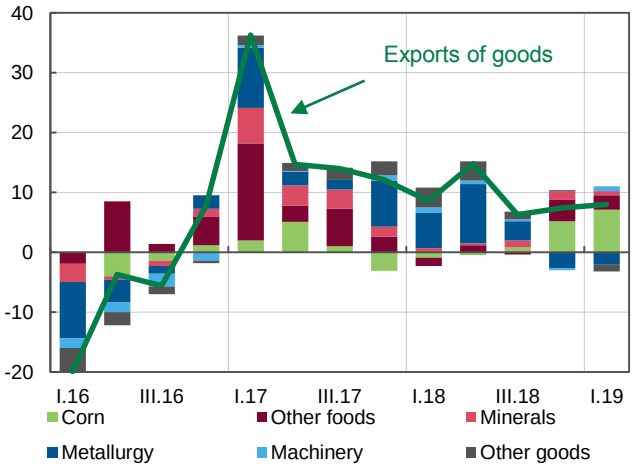
The current account deficit was more than offset by USD 0.8 billion in financial account inflows, which were largely generated by public sector borrowings. The sources of borrowing were official financing and non-residents portfolio investment in hryvnia-denominated domestic government securities. Despite there being net foreign direct investment inflows, the private sector was a net lender for the rest of the world. This mainly resulted from the banking and the real sectors making considerable external debt repayments in March. In spite of the external debt repayments, international reserves were little changed in Q1 2019, thanks to a surplus in the balance of payments (USD 0.3 billion). As of the end of Q1 2019, international reserves totaled USD 20.6 billion or 3.4 months of future imports.

Figure 2.5.1. Current account balance, USD bn



Source: NBU.

Figure 2.5.2. Contribution to annual change in exports, pp



Source: NBU staff estimates.

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Current account

In Q1 2019, exports of goods grew by 8% yoy. As in the previous period, export growth was driven by last year's record harvest of grain and some oil crops. In particular, in Q1 the volume of corn exports reached a new high, causing grain exports to hit a record high as well. This, together with global prices that were slightly higher than last year, pushed the value of these exports up by 1.5 times yoy. Moreover, an increase in the volume of sunflower oil exports, fueled by last year's record harvest of sunflowers, offset a further drop in oilseed prices. As a consequence, the value of sunflower oil exports moved up by 6.4% yoy. Exports of oil-cake residues grew noticeably, buoyed by Asian countries' stronger demand for organic fodder.

Exports of other food products also continued to grow at a fast clip. More specifically, meat exports rose by 21.3% yoy, mainly due to growth in poultry exports to Saudi Arabia after that country imposed restrictions on Brazilian poultry exports. Overall, the growth in food exports sped up to 23% yoy, with the share of these exports in total exports of goods hitting almost 50%.

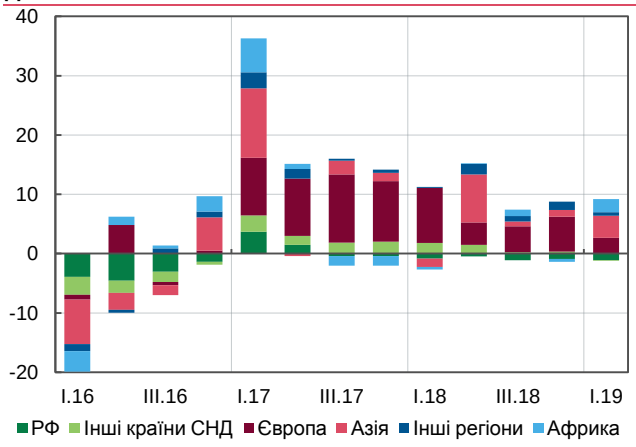
Meanwhile, the growth in exports of goods was dampened by the performance of mining and metals companies. Specifically, ongoing repairs at some of these companies, coupled with a less benign external environment, decreased metallurgical exports by 7.5% yoy. The growth in iron ore exports decelerated to 7.8% yoy in the wake of a cut in iron ore mining and low global prices in late 2018 and early 2019.

Q1 also witnessed a slump in chemical exports, by 18.4% yoy, due to, among other things, repairs and maintenance work at some chemical plants.

The additional restrictions imposed by Russia on Ukrainian exports late last year adversely affected the production, and hence exports, of machinery. Nevertheless, machinery exports were up by 12.5% yoy, due to some exporters shifting to EU and Asian markets.

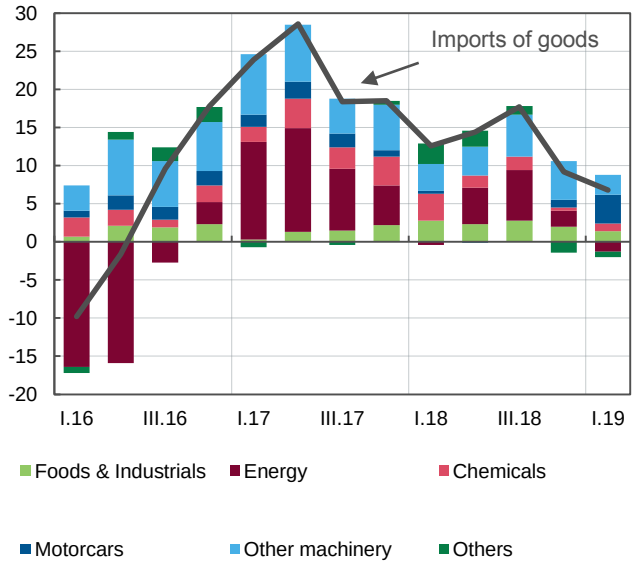
Changes in the commodity composition of exports were reflected in their regional composition. The restrictions on

Figure 2.5.3. Contribution to annual change in exports by regions, pp



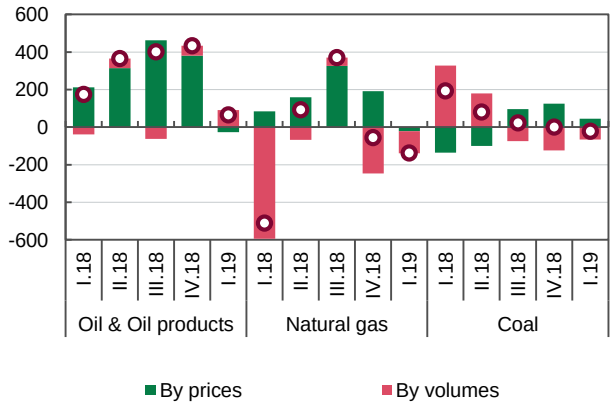
Source: NBU staff estimates.

Figure 2.5.4. Contribution to annual change in imports, pp



Source: NBU staff estimates.

Figure 2.5.5. Absolute annual changes in energy imports, USD m



Source: SFS, NBU staff estimates.

some exports introduced by Russia decreased exports to CIS countries further, with the share of these countries in total exports shrinking to 13.2%. Meanwhile, there was an increase in corn exports to Egypt. This pushed up both exports to African countries and the share of these countries in Ukrainian exports. The growth in exports to Asian countries accelerated, with the share of these countries rising to 31.5%, propelled by larger exports of fat and oil industry products to China and India. That said, European countries remained the largest destination for Ukrainian exports (for more details see Box "Ukrainian Exports to the EU").

The growth in imports in goods slowed in Q1, to 6.8% yoy, mainly due to a reduction in energy imports and falling prices for some imported consumer goods.

The value of energy imports decreased by 6.2% yoy, in particular, because of lower global prices for some energy resources. In addition, the quantity of gas pumped from storages decreased due to favorable weather conditions. As a result of this, natural gas storage inventories in late March exceeded those in the same period last year. The value of gas imports dropped by 23.1% yoy, driven by a dramatic fall in global gas prices, which had still not been fully transmitted to the import prices Ukraine paid in Q1 2019. The volumes of coal imports declined by 8.7% yoy, as some energy-generating companies started to use Ukrainian gas coal, and demand from domestic metallurgical companies dropped. Although rising rapidly in Q1, on average, global oil prices remained lower than last year. This brought about a rapid slowdown in the growth in oil product imports, to 8.3% yoy.

The growth in food and industrial imports decelerated, to 6.6% yoy and 16.7% yoy respectively, driven, among other things, by falling prices for some imported goods (such as citrus fruits and clothes), and by some refocusing on domestic goods.[23]

At the same time, machinery imports, which were up by 24.5% yoy, made a significant contribution to import growth. Imports of motorcars doubled year-over-year, fueled by the customs clearing of previously imported cars, and higher imports by auto dealerships and households when reduced excise tax rates were applied.[24] Imports of electrical equipment, including equipment for alternative energy generation, continued to rise at a fast pace.

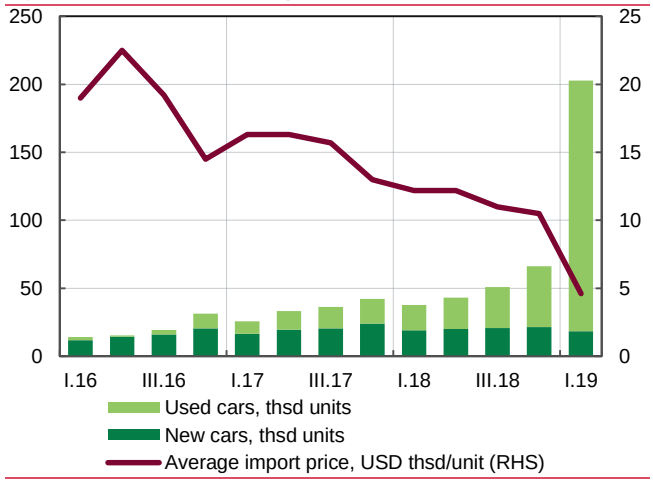
After falling in late 2018 and early 2019, due to additional customs procedures and the temporary delays caused by improvements in the system for analyzing indicative price-related risks, the volume of fertilizer imports grew markedly in Q1, bolstered by the catch-up in imports before the start of the sowing campaign. Overall, chemical imports rose by 4.8% yoy in Q1 2019.

By region, European countries remained the main suppliers of goods to Ukraine, with the share of these countries in total

[23] More specifically, 2018 saw a certain increase in the share of some domestic goods in retail goods turnover. These goods included clothes, furniture, stationary and cultural goods.

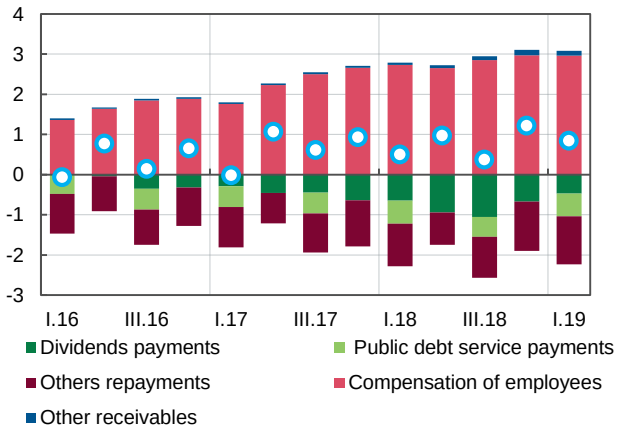
[24] Under Ukrainian Law No.2611-VIII, dated 8 November 2018, a reduced excise tax rate on used cars ceased to be applied on 22 February 2019.

Figure 2.5.6. Motor vehicle imports



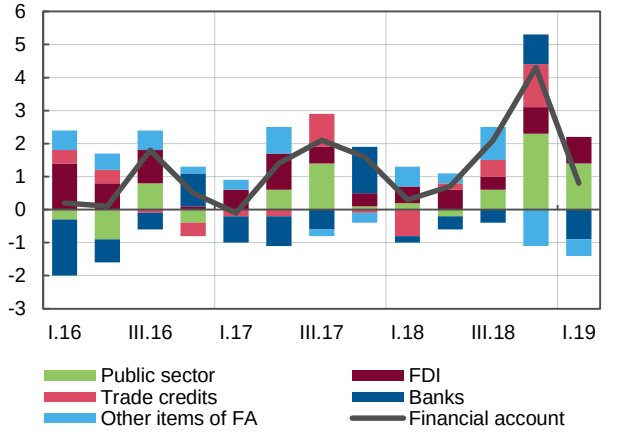
Source: Ukrautoprom, SFS.

Figure 2.5.7. Primary income account, USD bn



Source: NBU.

Figure 2.5.8. Financial account: net external liabilities, USD bn



Source: NBU.

imports rising to 41.2%, due to, among other things, the customs clearing of foreign cars. In contrast, there were declines in the share of imports from Asian countries because of weaker growth in imports of some machinery, and falls in the share of CIS countries, in part, due to a drop in fertilizer imports from Russia.

Despite an increase in gas transit through Ukraine, the growth in exports of services slowed slightly, to 7.1% yoy, mainly due to a drop in exports of manufacturing services on physical inputs owned by others. Among other things, this may have resulted from difficulties experienced by the German car making industry. In contrast to exports, the growth in imports of services accelerated, propelled mainly by imports of travel services. As a result, the balance of trade in services was close to zero.

Dividend payments decreased in Q1 compared to the same period last year. This widened the primary income account surplus compared to last year, despite there being further, albeit less moderate, increases in remittances. The slowdown in remittance growth, to 0.6% yoy, was attributed to weaker growth in remittances from the EU – Poland in particular. This was in line with NBU expectations of a decrease in labor migration intensity due to wage convergence (read more in the Labor Market and Household Income Section).

Financial Account

Financial account inflows totaled USD 0.8 billion and were generated by inflows to the public sector, mainly a loan guaranteed by the World Bank, co-placements of 10-year Eurobonds, and purchases of hryvnia-denominated domestic government bonds by nonresidents.

The private sector was a net lender for the rest of the world, as net foreign direct investment inflows were counterbalanced by external debt repayments by the banking and the real sectors.

Foreign direct investment came in at USD 0.8 billion in Q1 2019, of which over 60% went to the real sector. The mining industry and companies involved in the manufacture of glass and glass products were the main recipients of foreign direct investment. Debt-to-equity operations accounted for 41% of foreign direct investment in the banking sector.

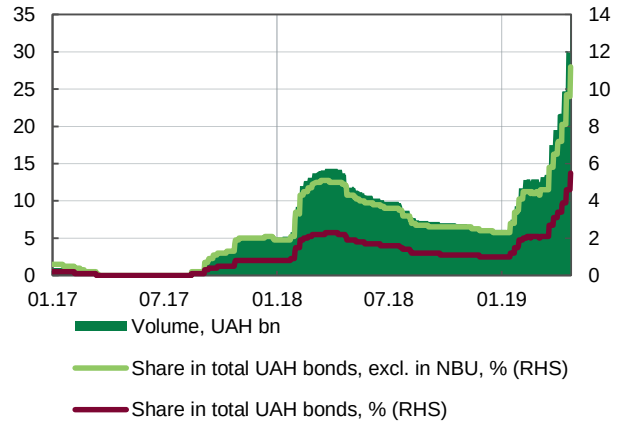
In Q1, the private sector repaid its external liabilities; in particular, scheduled repayments of Eurobonds were made by Oschadbank and Ukrainian Railways JSC. These repayments were the key drivers of the private sector's debt flows – rollover in the sector decreased to 55% in Q1 2019, from 121% in Q4.

Reserve Assets

The following factors affected international reserves in Q1 2019:

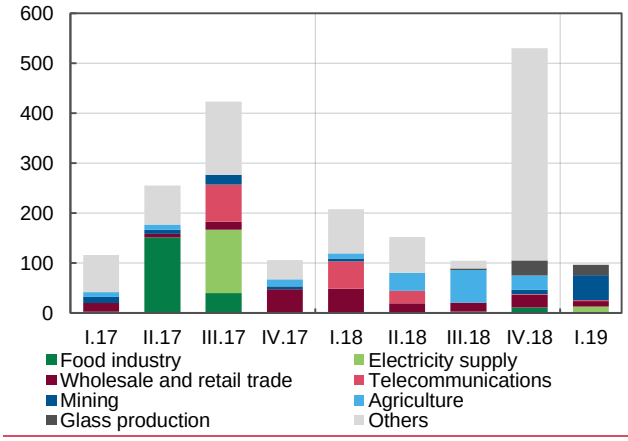
↑ the NBU's net currency purchases on the interbank market (USD 0.6 billion)

Figure 2.5.9. Hryvnia domestic government bonds held by non-residents



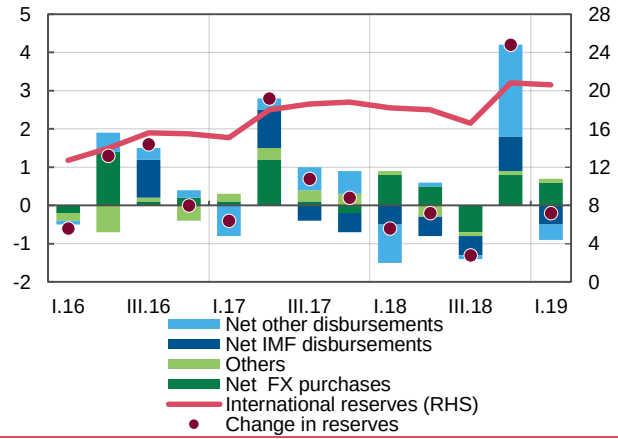
Source: NBU.

Figure 2.5.10. FDI: real sector equity investment by industry, USD m*



* Others include data adjustments.
Source: NBU.

Figure 2.5.11. International reserves and their change by instruments, USD bn



Source: NBU.

↑ the disbursement of official financing, in particular a loan under the World Bank's guarantee (USD 0.6 billion)
↑ repayments of IMF loans (USD 0.5 billion)
↑ the government's FX operations (USD 1 billion): interest and principal payments on the government's FX debt exceeded new borrowing.

As a result, international reserves were little changed in Q1 2019, totaling USD 20.6 billion or 3.4 months of future imports at the end of Q1 2019.

External Sustainability

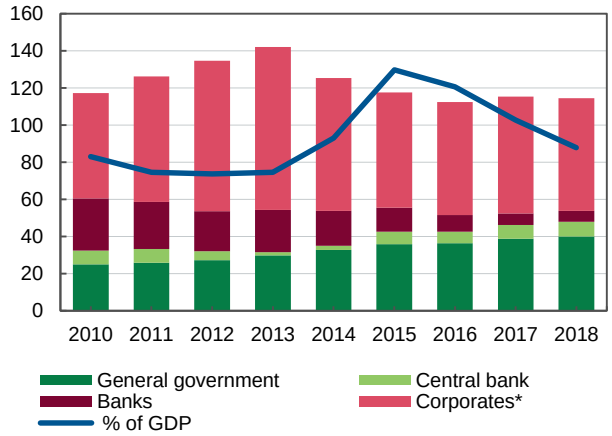
The ratio of gross external debt to GDP dropped further in Q4 2018, to 87.9%. Over the quarter, gross external debt grew, to USD 114.7 billion, mainly due to general government borrowings . More specifically, there was an increase in the government's borrowing via placing Eurobonds and securing loans guaranteed by the World Bank and the EU. The increase in the central bank's net external debt was mainly due to the disbursement of the first tranche under the new Ukraine-IMF cooperation program. While the overall debt of the private sector declined due to a decrease in the debt on short-term trade credits,[25] the external debt of the banking sector remained unchanged.

Short-term debt by remaining maturity had dropped to USD 45.7 billion by the end of Q4, with almost all sectors being responsible for the decrease. In particular, the government debt maturing within the next 12 months shrank by USD 1.6 billion, to USD 3.3 billion, mainly because Eurobonds were repaid over that period. The real sector's debt declined, mainly due to short-term trade credits. This drove down the ratio of short-term debt to the main macroeconomic indicators.

The disbursement of official financing in Q4 2018 helped increase international reserves, to USD 20.8 billion, which improved their adequacy criteria. The ratio of reserves to the IMF's composite measure (ARA metrics) hit 72.6% of the minimum required level – the highest figure since 2012. After dropping over the previous three quarters, the ratio of reserves to short-term debt (the Guidotti-Greenspan criterion) increased to 45.5%.

[25] The reduction of trade credits and advances at the end of 2018 was the result of a change in the formation criteria of the respondents' group of the State Statistics Service survey on Ukrainian enterprises' settlements with non-residents for goods, labor, and services.

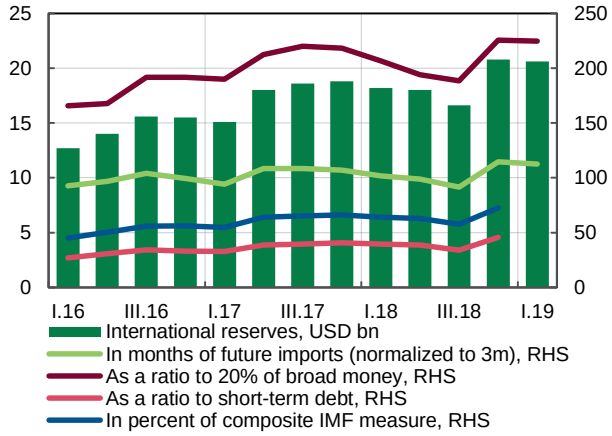
Figure 2.5.12. Gross external debt, USD bn



* Including intercompany lending.

Source: NBU.

Figure 2.5.13. Adequacy criteria of international reserves, %



Source: NBU.

Table 2.5.1. External Sustainability and international reserve adequacy indicators

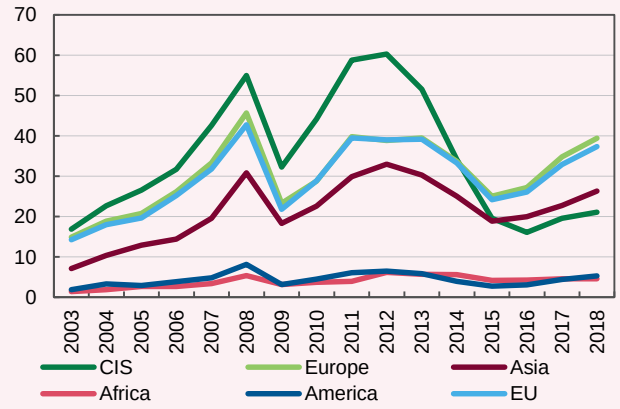
%	IV.16	I.17	II.17	III.17	IV.17	I.18	II.18	III.18	IV.18
External debt/GDP	120.6	115.6	112.3	108.5	102.8	99.2	93.4	90.7	87.9
External debt/exports of goods and services	244.6	230.7	225.3	222.2	214.3	209.2	200.3	197.4	194.0
Short-term debt/gross debt	41.7	40.8	40.9	40.6	40.2	40.1	41.1	42.7	39.9
Short-term debt/GDP	50.2	47.2	45.9	44.0	41.3	39.8	38.4	38.7	35.1
Short-term debt/exports of goods and services	101.9	94.2	92.1	90.2	86.1	83.9	82.3	84.3	77.4
Openness of the economy	105.5	106.4	106.8	104.7	103.6	102.8	101.0	100.6	99.2
Reserves/short-term debt	33.2	32.9	38.6	39.5	40.6	39.4	38.5	34.1	45.5
Reserves/IMF composite measure	56.1	54.7	64.0	65.2	66.1	63.9	63.0	57.7	72.6
Reserves in months of future imports (normalized to 3 months)	99.4	94.1	108.5	108.4	107.0	101.8	98.8	91.6	114.6
Reserves/20% of broad money	191.6	189.8	212.5	219.9	218.3	206.6	194.1	188.4	225.6
Current account/GDP, 12-month rolling	-1.4	-0.8	-1.7	-1.6	-2.2	-2.1	-2.3	-3.5	-3.4

Source: NBU staff estimates

Box 4. Ukraine's Exports to the European Union[26]

In 2018, the EU established its primacy in Ukraine's external trade – goods turnover with EU countries increased by 13.6%, and the share of these countries of total goods turnover rose to 37.5%.

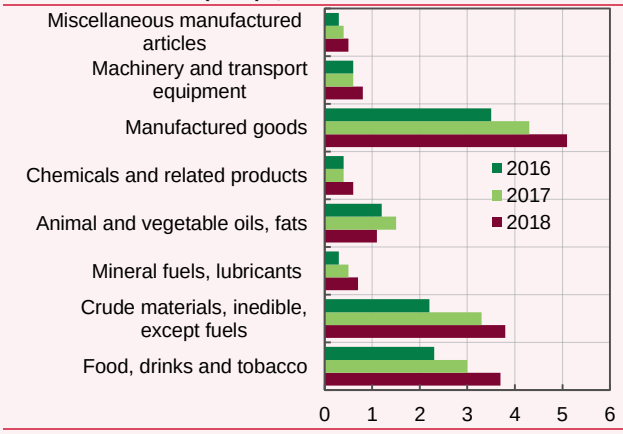
Figure 1. Ukraine's external turnover by regions, USD billion



Source: NBU.

The increase in goods turnover was driven by both exports and imports. Exports of goods to EU countries have been on the rise for three years running (including by 15.6% in 2018, to USD 16.3 billion), hitting the highest level on record. Overall, they contributed 5.5 pp to the total growth in exports of goods in 2018 (9.2% yoy). Imports from EU countries also grew, albeit at a slower pace than exports (by 12%).

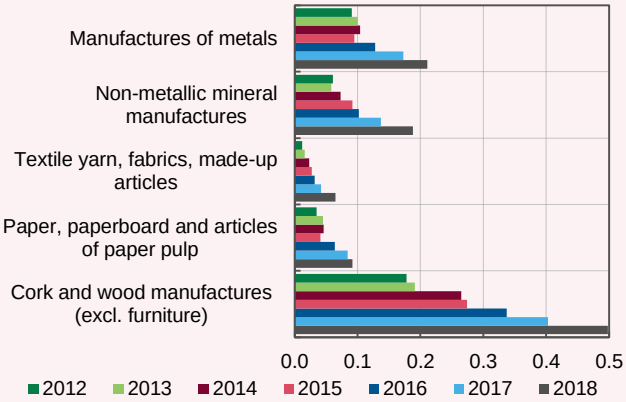
Figure 2. Goods exports to EU countries by Standard International Trade Classification (SITC)[27], USD billion



Source: NBU staff estimates.

Exports to EU countries grew not only in quantitative terms. The composition of exports improved gradually, as the share of finished goods moved up, while that of raw materials shrank somewhat. As in previous years, in 2018 the most robust growth was seen in exports of manufactured goods, with the share of these goods in total exports being the largest, at 31.5%. Iron and steel accounted for about three fourths of exports of this commodity group, and made the main contribution to export growth in 2018. That said, their share in total manufactured goods has declined by 10 pp over the last five years, due to faster growth in other manufactured goods categories. The share of cork and wood manufactures has increased most of all – from 4% in 2013 to 10% in 2018.

Figure 3. Selected manufactured goods exports to EU countries by SITC, USD billion



Source: NBU staff estimates.

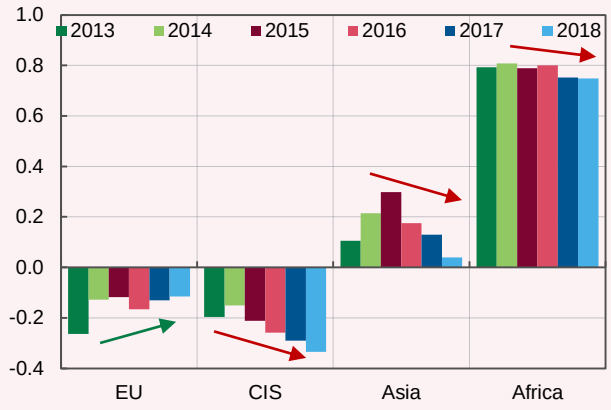
The composition of food exports to the EU has also changed over the last five years, with the share of processed foods rising. In particular, the share of meat and dairy products in total food exports moved up from 1.5% in 2013 to 10% in 2018. These changes were mainly attributed to the gradual implementation of the measures envisaged by the EU-Ukraine Association Agreement. This brought about the most noticeable changes in food exports to the EU compared to other export regions – over the last five years, these exports have risen by USD 1.5 billion, to USD 6 billion. Although export growth was mainly generated by exports of food products that were exported before, new products also appeared in the composition of exports to the EU. This consolidated Ukraine's fourth place among the main exporters of agro and food products to the EU in 2018.

Rising exports to EU countries partially offset the growth in energy and machinery imports. As a result, the deficit in the trade in goods with the EU remained almost unchanged, with trade balances with other regions deteriorating over the last three years.

[26] This analysis has been performed on the basis of BPM6 data that excludes goods undergoing processing by an entity other than the owner.

[27] The goods groupings of SITC reflect the materials used in production, the processing stage, market practices and uses of the products

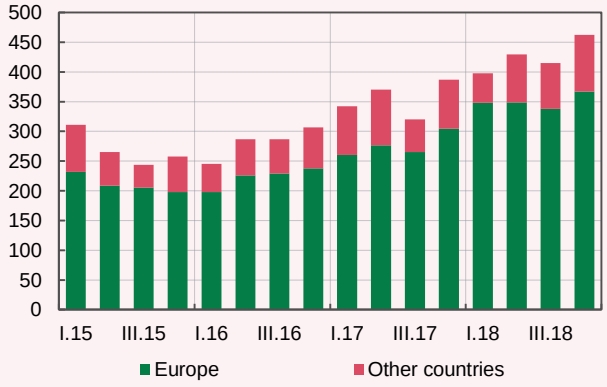
Figure 4. Net trade index[28] by selected regions



Source: NBU staff esimates.

In addition, exports of services to the EU have been on the rise for three years in a row. In 2018, these exports increased by 18%, to USD 5.6 billion, while the share of EU countries in exports of services moved up to 35.6%. The rapid growth in exports of services is due to manufacturing services on physical inputs owned by others, so called tolling services, which can be regarded as the initial stage in the integration of domestic companies into international value-added chains. The mutual removal of tariff and non-tariff barriers to trade in goods and services, and to free movement of capital, as envisaged in the association agreement, has significantly increased Ukraine's attractiveness to European investors as a location for placing toll processing companies. Since 2015, over 200 new companies have been opened in Ukraine, many of which with foreign investments from world-famous car manufacturing companies.

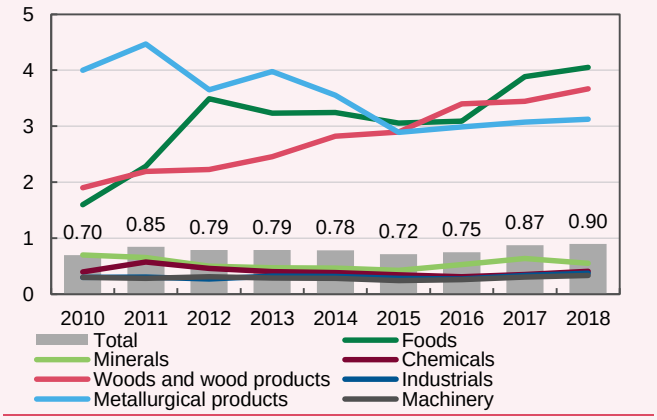
Figure 5. Exports of tolling services by countries, USD m



Source: NBU.

Ukraine is gradually expanding its presence on the European markets, largely due to the EU-Ukraine Association Agreement. Nevertheless, the share of Ukrainian goods in total EU imports remains rather small.

Figure 6. Ukraine in EU goods imports, %



Source: Eurostat, NBU staff estimates.

Therefore, for Ukraine's export potential to be realized further, the initial impetus provided by the liberalization of customs duties needs to be reinforced by other measures, such as the removal of non-tariff barriers to external trade[29], and by more quickly bringing Ukrainian products into line with European standards. Some of these measures are already under way. To that end, Ukraine on 1 January 2019 joined the Regional Convention on pan-Euro-Mediterranean preferential rules of origin in bilateral trade with the EU. It also drew up a draft law to become a party to the Agreement on Conformity Assessment and Acceptance of Industrial Products (ACAA[30]). This allows Ukraine to expect a further increase in, and a change in the quality of its exports to the EU.

[28] The net trade index is calculated as the difference between exports to and imports from a region, divided by the goods turnover with that region.

[29] e. g. Saha et al. (2019).

[30] The draft law of Ukraine No.10183 was registered in the Ukrainian parliament on 25 March 2019. The signing of the ACAA by Ukraine will enable domestic exporters to put CE marks on their products, and to freely trade these products on the EU markets, without having to obtain additional certification for their products. Exporters of products with a high share of added value, such as machinery, are expected to benefit most of all from the agreement.

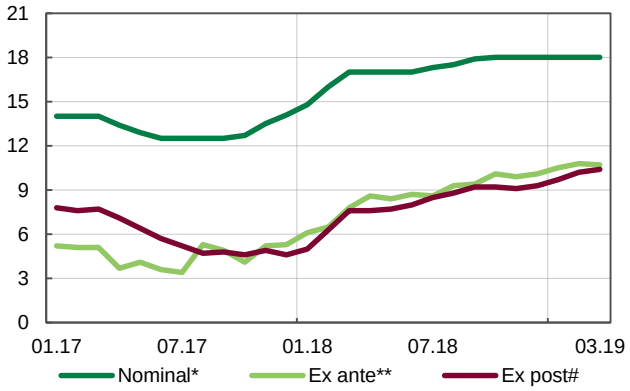
2.6. Monetary Sector and Financial Markets

The NBU Board twice in Q1 2019 decided to keep its key policy rate unchanged, at 18.0% per annum. These tight monetary conditions remain an important prerequisite for gradually reducing inflation to the 5% target in 2020. Although leaving the key policy rate unchanged, the NBU Board said it could cut it in the future, which it did in April. At its meeting on monetary issues held on 25 April, the NBU Board cut the key policy rate by 50 bp, to 17.5%.

At the beginning of 2019, the Ukrainian Index of Interbank Rates (UIIR) decreased on the back of an increase in the banking system's liquidity. As the quarter progressed, the UIIR fluctuated slightly around the lower boundary of the NBU's rates on standing facilities. The UIIR trend and investor expectations of a decrease in the key policy rate led to a decline in medium-term yields of hryvnia securities compared to late 2018. Rates on bank deposits and loans to nonfinancial corporations also slightly decreased.

The FX market remained benign in Q1 2019 – the FX supply from bank customers exceeded demand. The increase in supply was driven by FX proceeds from agricultural companies, an inflow of foreign portfolio investment in hryvnia securities encouraged by their high yields, and quarterly and annual taxes payable to the state budget coming due in March. Moreover, the excess of FX supply over demand was driven by weak growth in imports of goods, smaller volumes of dividends being repatriated abroad, and net FX sales by households. This enabled the NBU to continue increasing its international reserves without hindering the strengthening of the hryvnia exchange rate.

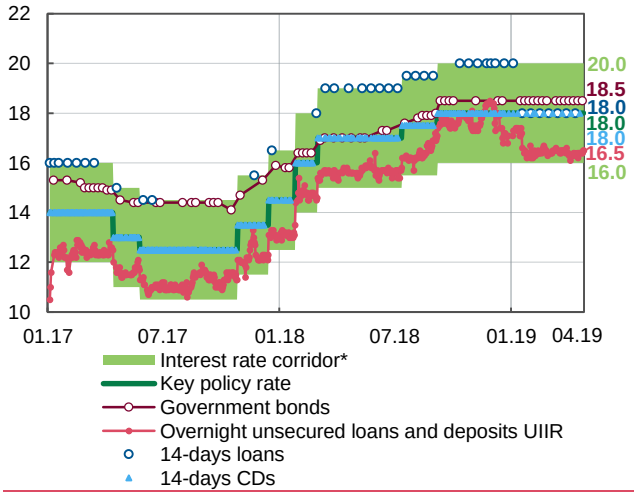
Figure 2.6.1. Real key policy rate, % pa



* Average monthly interest rate on 14-day CDs. ** Deflated by 12-month ahead inflation expectations of financial analysts. # Deflated by annual rate of core inflation.

Source: NBU`s estimates.

Figure 2.6.2. NBU key policy rate, UIIR, and 1-year bond yield on the primary market, % pa



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

Source: NBU.

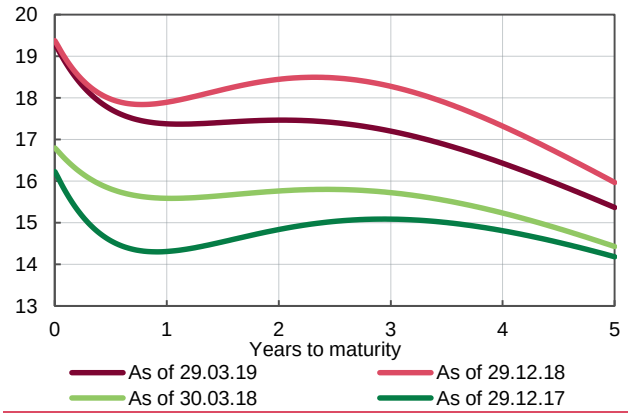
Interest Rates

In Q1 2019, the key policy rate remained unchanged, at 18.0% per annum. The NBU Board saw the main pro-inflationary risks in deteriorated expectations caused by a probable increase in social payments and heightened uncertainty in the wake of the elections, along with less favorable external environment and more volatile global commodity prices. Despite remaining unchanged in nominal terms, the key policy rate increased in real terms, reaching 10%–11% per annum. This was driven by a gradual decline in inflation expectations, a deceleration of inflation early in the year, and other factors. Accordingly, the real rate significantly exceeded the neutral level, which is around 3%–4% per annum, according to the NBU's estimates.

The key policy rate decision and the level of the banking system's liquidity determined the cost of market resources. UIIR, the indicator of hryvnia interbank interest rates for the purpose of interest rate policy, remained practically unchanged in Q1, except for at the beginning of the year. The index fluctuated within the corridor of NBU rates on standing facilities, closer to its lower boundary. The decline seen in mid-January reflected an increase in the liquidity of the banking system. A decrease in the rates on the main refinancing operations, driven by changes in the monetary policy operational design, also contributed somewhat (see the box Implementation of the NBU's Monetary Policy in an Unstable Structural Liquidity Position of the Banking System in the January 2019 Inflation Report).

In Q1, expectations formed in the government securities market that there would be a cut in the key policy rate. This was reflected in a downshift in the middle part of the yield curve compared to late 2018. At the same time, yields on one-year hryvnia domestic government bonds remained practically unchanged during the quarter, while yields on short-term instruments inched higher as the government had to finance its fiscal needs. Overall, real yields on hryvnia-

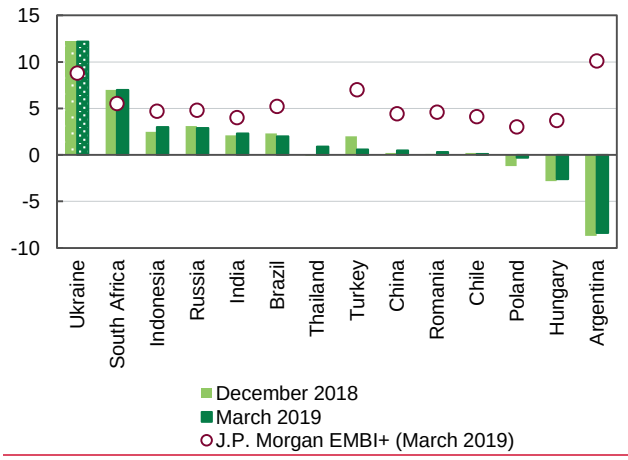
Figure 2.6.3. Zero coupon yield curves for hryvnia bonds on the secondary market*, % pa



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

Source: NBU.

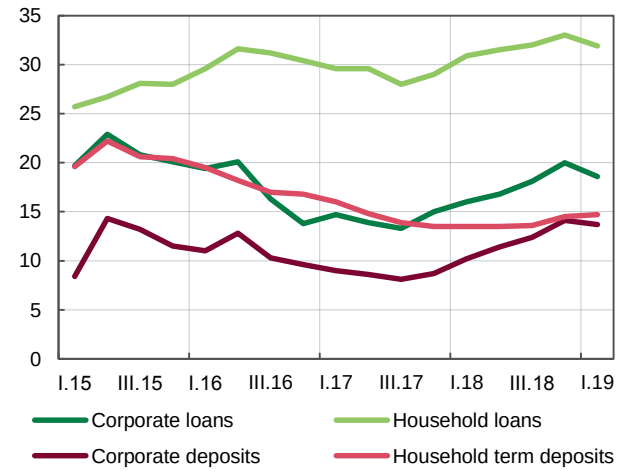
Figure 2.6.4. Real sovereign bond yields* in selected emerging markets, % pa, and sovereign Eurobond spreads in selected emerging markets (EMBI+)



* A difference between average monthly 1-year bond yield on the primary market and inflation forecasts as of end-2019.

Source: DekaBank, Consensus Economics, Thomson Reuters, Bloomberg, NBU`s forecast and estimates.

Figure 2.6.5. Average weighted interest rates on new hryvnia loans (excl. overdrafts) and deposits, % pa



Source: NBU.

denominated securities remained some of the highest among domestic-currency bonds of emerging economies, which, among other things, supported the inflow of foreign portfolio investments.

The international securities depository Clearstream and the NBU established a correspondent relationship on 13 March 2019. This step, and the upcoming launch of the link between the two, will encourage inflows of foreign capital and make Ukrainian securities more attractive and liquid. The government will also benefit from a wider range of financing sources, which will improve the currency structure of the public debt thanks to boosting demand for hryvnia instruments.

The lower cost of resources on the interbank lending market in Q1 2019 led to a decline in bank interest rates on hryvnia loans. Coupled with a sizeable reduction in liquidity risk, this also influenced bank deposit rates. In particular, the weighted average interest rates on nonfinancial corporations' deposits decreased somewhat, especially on overnight deposits and deposits for more than 12 months. The lower yields on deposits over one year may indicate that both corporates and banks expect the key policy rate to be cut in future. At the same time, the weighted average interest rates on hryvnia household deposits grew slightly against the previous quarter, primarily driven by term deposits. Apart from being more inert, as proven by the relatively moderate response of these interest rates to key policy rate changes in previous periods, this also reflected stronger demand for longer-term household deposits (from 6 to 12 months).

FX Market

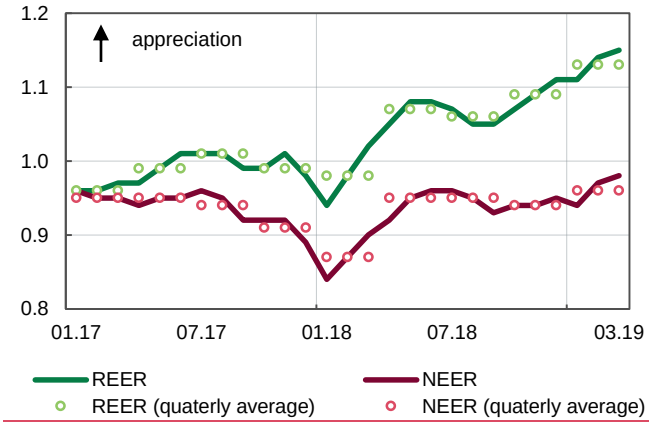
The FX market remained mostly benign in Q1 2019 – the FX supply from bank customers exceeded the demand, owing to:

- stable proceeds from agricultural exports on the back of last year's bumper crops of grain
- inflows of foreign portfolio investment, driven by high yields on hryvnia domestic government bonds
- larger amounts of FX sold by businesses in March as quarterly and annual taxes became due
- weak growth in imports of goods
- smaller amounts of dividends repatriated abroad compared to last year's levels
- net FX sales by households.

However, the FX market grew more turbulent in periods when behavioral factors gained force, and when large market players purchased FX to repay their external debts. The NBU maintained its presence on the FX market, conducting operations to buy and sell FX. At the same time, as conditions on the FX market were generally favorable, the NBU mostly purchased FX in Q1 2019: the balance of central bank transactions on the interbank FX market exceeded USD 600 million. Along with that, in January, the amount of planned FX purchases to replenish international reserves[31] increased to USD 15 million per day in Q1 and Q2 2019, up

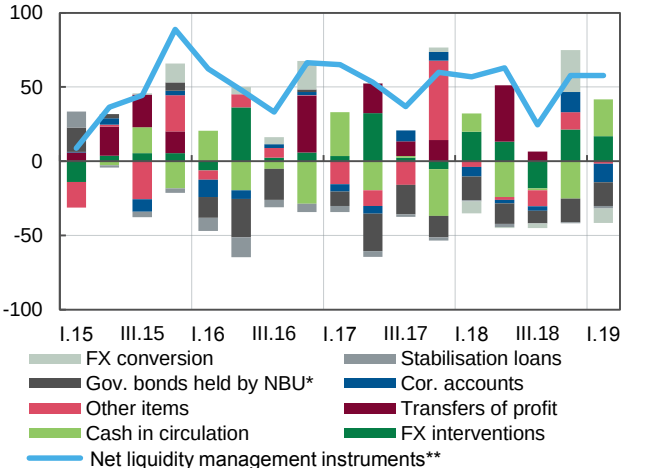
[31] In April 2018, the NBU launched regular announcements of the size of its daily FX purchases to replenish international reserves in order to make its FX interventions more transparent.

Figure 2.6.6. Hryvnia REER and NEER indices, 12.2016=1



Source: NBU`s estimates.

Figure 2.6.7 Determinants of the banking system liquidity, UAH bn

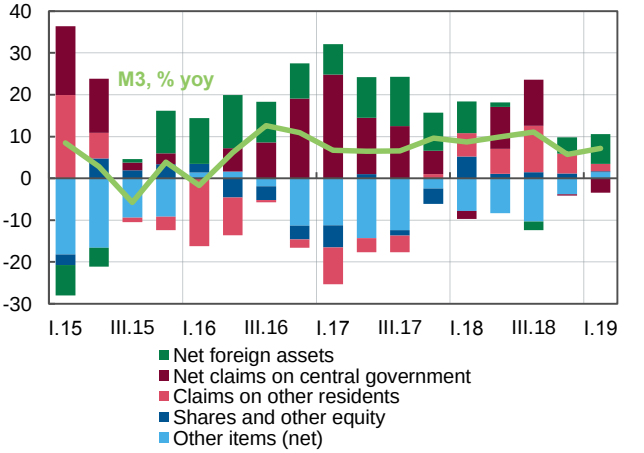


* Difference between government bond purchases to the NBU portfolio and government debt repayments, including interest payments.

** Difference between the stock of CDs and short-term refinancing loans.

Source: NBU.

Figure 2.6.8 Annual change in M3 breakdown by corresponding items, pp



Source: NBU.

from USD 10 million in Q2–Q4 2018. Therefore, most of the NBU's FX purchases were made with the aim of replenishing international reserves. The NBU's role in preventing excess volatility of the hryvnia exchange rate has been thus gradually decreasing.

The appreciation pressures that dominated the FX market also had an impact on the hryvnia. The official UAH/USD exchange rate appreciated in Q1 2019 by an average of 2.3% qoq and by 1.6% ytd. The UAH/EUR exchange rate also strengthened, by 2.8% qoq and by 3.6% ytd. On the other hand, most of the currencies of Ukraine's MTPs depreciated against the US dollar. As a result, in March 2019, the hryvnia strengthened against the basket of currencies of Ukraine's MTPs compared to December 2018 (by 2.9% in nominal terms and 4.2% in real terms) and March 2018 (by 8.0% yoy and 12.9% yoy, respectively).

Base Money and Liquidity

In Q1 2019, the banking system maintained a substantial liquidity surplus. Moreover, the level of liquidity, expressed as the sum of the average daily balance on the banks' correspondent accounts and in NBU certificates of deposit, increased both quarter-on-quarter and year-on-year.

The higher liquidity compared to year-end was driven by a decrease in the amount of cash outside of the banks (by almost UAH 24.7 billion, or by 6.2% qoq), the peak of which usually comes in January. In addition, the FX channel was also a source of liquidity – the positive balance of NBU transactions on the interbank FX market was UAH 16.9 billion.

Liquidity was absorbed by government transactions due to its large fiscal needs, in particular the need to finance the foreign currency debt, including the external debt. The net impact of government transactions is estimated at UAH 29.2 billion.[32] Moreover, the banks' repayments of previously received refinancing loans (UAH 4.7 billion) and transactions by bank liquidators and the DGF (UAH 2.4 billion in total) also absorbed liquidity.

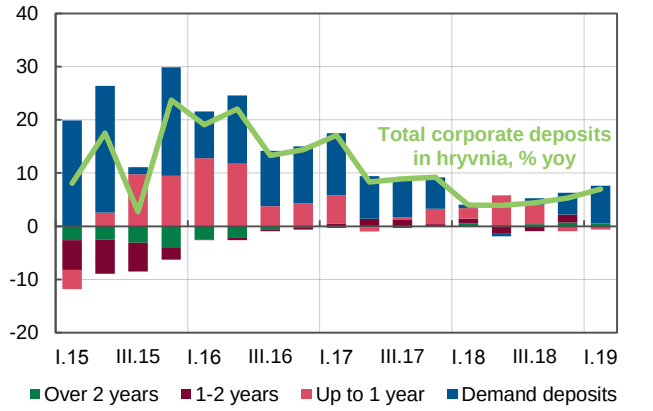
As of the end of Q1 2019, the reduction of cash volumes exceeded the growth in banks' correspondent accounts quarter-on-quarter, and resulted in a contraction of the monetary base by 2.8% ytd. Annual growth of cash slowed to 7.8% in March 2019.

Along with the usual decrease in cash in the post-holiday period, the decline was also driven by the continued general trend of weakening demand. In Q1 2019, the ratio of M0 to GDP dropped to 9.5%[33] from more than 10% in the same period of 2018. In addition to a decrease in cash payments, in Q1 2019, the share of cash transactions in the total amount of card-based transactions also declined.

[32] The influence of fiscal factors on the growth in banking system liquidity is estimated based on the following key factors: the government's net FX purchases from the NBU, the government payments on securities held by the NBU, and the increase in the balances on the single treasury account.

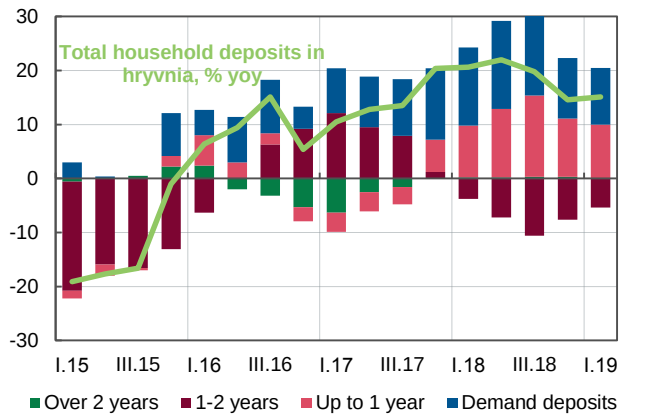
[33] Nominal GDP in Q1 2019, as estimated by the NBU.

Figure 2.6.9. Annual change in hryvnia deposits of nonfinancial corporations, breakdown by maturity, pp



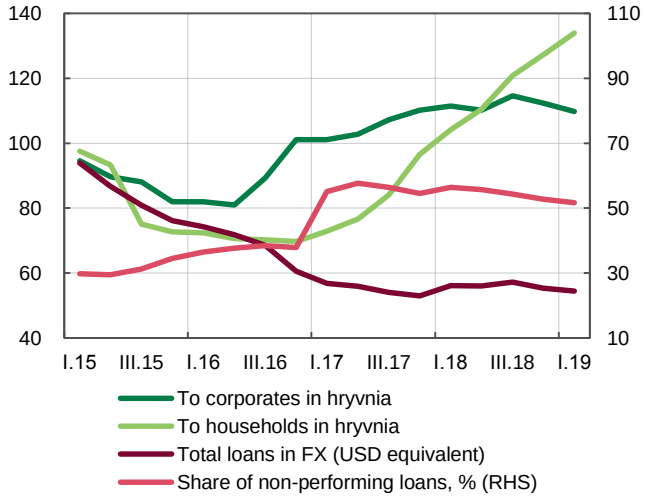
Source: NBU.

Figure 2.6.10. Annual change in hryvnia household deposits, breakdown by maturity, pp



Source: NBU.

Figure 2.6.11. Loans, IV.2014=100



Source: NBU.

Money Supply and Its Components

Hryvnia bank deposits continued to grow in Q1 2019. The slowdown in the annual growth of hryvnia deposits to 9.7% in March, down from 10.1% in December 2018, was caused by a decrease in the stock of the general government sector deposits.

Deposits of nonfinancial corporations grew in annual terms (to 7.0% in March, from 5.3% in December 2018). This was driven by year-on-year growth in the stock of deposits across all maturities, except for deposits for less than one year.

In March, the annual growth rates of hryvnia household loans also increased (to 15.1% versus 14.6% as of the end of December 2018), fueled by further growth in wages and the attractiveness of domestic-currency deposits, due to the stronger hryvnia and slower inflation.

In contrast, FX deposits (in USD equivalent) continued to decrease (down by 1% yoy).

Owing to the increase in hryvnia deposits, the annual growth in the money supply accelerated to 7.2% yoy in March 2019 (versus 5.7% as of the end of 2018).

Loans

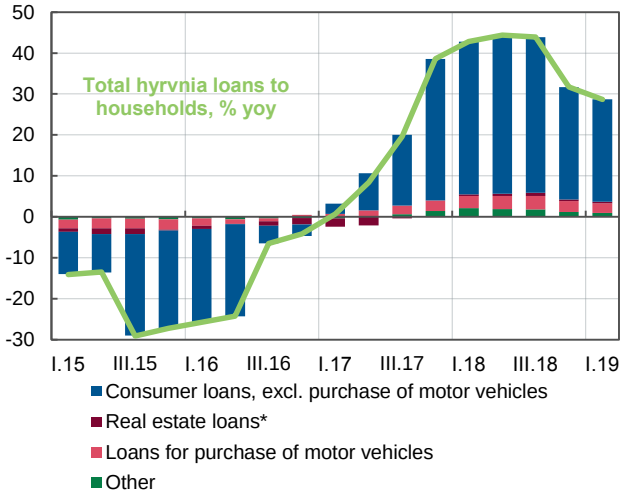
The banks' lending activity generally remained high in early 2019, although it weakened slightly, reflecting a corresponding trend in the real sector. Hryvnia household loans continued to grow at a fast pace (28.7% yoy). As in previous periods, demand for consumer loans remained strong. Car loans and other consumer loans increased rapidly. Volumes of mortgage loans remained small. According to the Lending Survey, the approval rate for mortgage applications has been practically unchanged for five consecutive quarters. Mortgage lending, similarly to overall lending, is limited by factors external to the banking system (the protection of creditor rights, large amounts of problem debts, etc.).

The total stock of hryvnia loans issued to nonfinancial corporations declined by 1.6% yoy, mostly on the back of repayments and write-offs of previously provisioned assets in late 2018 and early 2019. Loans issued to nonfinancial corporations with no defaults over the crisis period continued to grow rapidly (by 17% yoy in March 2019). At the same time, lending activity weakened at the start of the year, which could reflect a decrease in demand for corporate loans, among other things due to lower business activity early in the year and the payment of large VAT refunds.

As a result, the total stock of hryvnia loans grew by only 4.5% yoy as of the end of Q1 2019 (versus 7.6% yoy at the end of 2018). Total stock of FX loans (US dollar equivalent) declined (by 3.0% yoy).

At the same time, the banks are optimistic about the prospects for corporate and retail lending, forecasting that their credit portfolios will grow over the next 12 months.

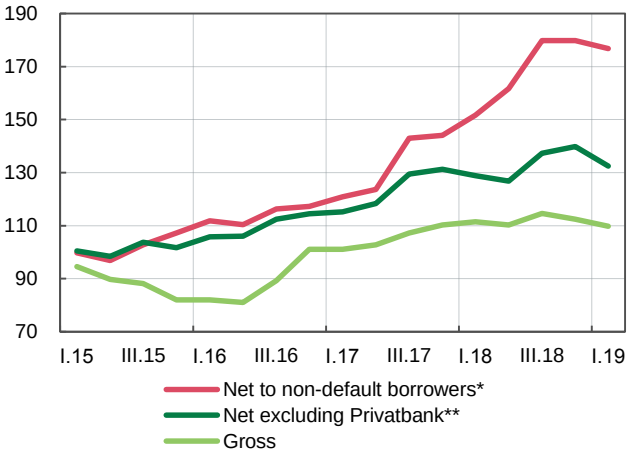
Figure 2.6.12. Annual change in hryvnia household loans, breakdown by loan type, pp



* Includes loans for purchase, development, or reconstruction of real estate.

Source: NBU.

Figure 2.6.13. Hryvnia loans to nonfinancial corporations, IV.2014=100



* Loans over UAH 2 m to businesses that have not defaulted since 2014.

** PrivatBank was excluded from the calculation of net loans due to the significant formation of reserves after its nationalization.

Source: NBU.

Box 5. New System of Foreign Exchange Regulation and FX Liberalization

In early 2019, the NBU approved eight regulations that form the basis of the country's new foreign exchange regulation system, and which bring NBU regulations into line with the Law of Ukraine *On Currency and Currency Operations*.

The new law came into effect on 7 February 2019. It replaced the old legal framework, which consisted of over 50 documents. In addition, the NBU continued to ease FX regulation by further loosening currency restrictions on businesses and households (see Table 1).

Table 1. FX liberalization in the early 2019

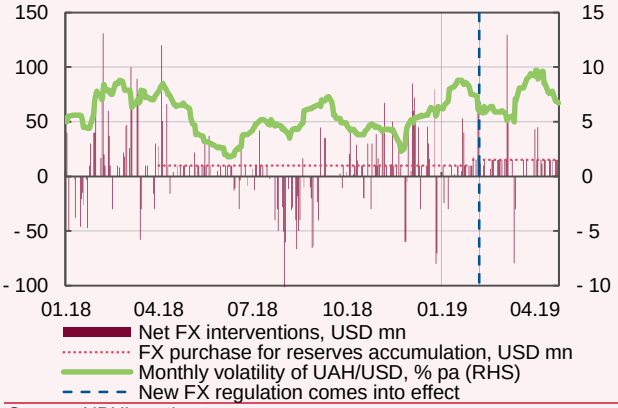
	Description
Cancelled	FX supervision for export-import operations up to UAH 150k
	Individual licenses on FX operations
	Sanctions in form of ceasing foreign trade activity
	Limit on early repayments on foreign debt
	Registration of the loans from abroad
	Double control in cases when customs declaration is received by another bank
Allowed	Free account opening abroad for corporates
	Settlements in FCY on FX-denominated government bonds
	Banks' FX SWAPS with residents and non-residents
	Non-deliverable FWDs and FWDs for debt operations hedging
	Cross-border movement of FX cash and precious metals by corporates
	FCY payments for life insurance
	FCY accumulation by corporates on external debt repayments
	Unlimited investment of banks in investment class securities
	Investment and giving loans to residents from non-resident banks` LORO accounts
	Investments in Ukraine also in currencies of the 2nd group of Currency Classifier
Increased	Max period of closing export/import contracts – up to 365 days
	Limit on FCY transfer abroad by individuals without account opening up to UAH 150k per year
	Limit on the precious metal purchase by individuals and corporates up to the equivalent of UAH 150k per day – with no limitations for specialized corporates
Decreased	Requirement of mandatory sale of foreign currency earnings by exporters from 50% to 30%
Eased	Non-residents corporates' operations by accounts, opened in Ukraine
	Cross-border movement of currency values – unified obligatory declaring for all types with value from EUR 10k and more

Source: NBU.

The new law had practically no effect on the performance of the FX market. The monthly volatility[34] of the hryvnia exchange rate continued to decrease until mid-March (see Figure 1), while its value for the whole Q1 2019 was broadly in line with the previous year's figure. Heightened volatility seen in late March was largely due to tensions before the first round of the presidential election. Overall, in Q1 2019, the average monthly volatility of the UAH/USD exchange rate was about 7%, compared to 5% in 2018. In Q1 2019, it was within the range considered acceptable for emerging economies – 2%–7% (see Box Hryvnia Exchange Rate Volatility in the July 2016 Inflation Report).

There was also no adverse effect on the cash FX market (see Figures 2, 3). The rise in demand for FX seen during the first few days after the new currency law came into effect was transitory, driven mainly by exchange rate movements afterwards. In particular, the significant appreciation of the hryvnia exchange rate in mid-March led to a rise in demand for foreign currency, and a decrease in its supply from households.

Figure 1. NBU's FX interventions and volatility of exchange rate



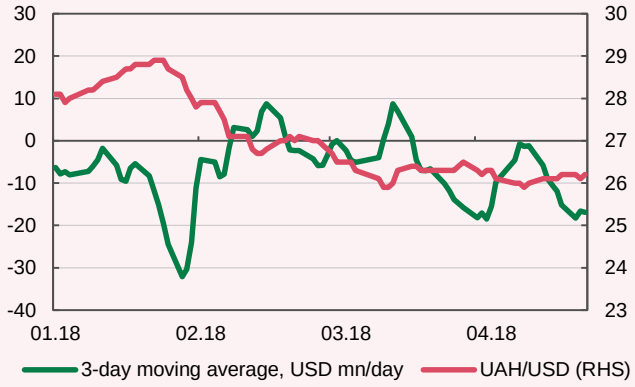
Source: NBU's estimates.

Household demand for online purchases of FX was also low. In March the share of online FX purchases and sales, conducted in test mode, remained insignificant compared to total FX purchase/sales, as evidenced by the banks preliminary statistical reports.

Therefore, the new currency law did not have any negative impact on the FX market, while providing market participants with new opportunities. In the long-term, FX liberalization is expected to help increase the depth of the FX market, and decrease the NBU's presence on it.

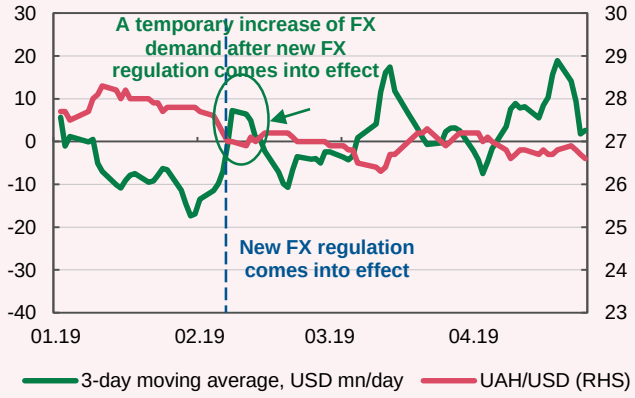
[34] The standard deviation of changes in the official exchange rate over 20 consecutive business days in annual terms.

Figure 2. Net purchase of FX cash by households in 2018 (3-day moving average)



Source: NBU.

Figure 3. Net purchase of FX cash by households in 2019 (3-day moving average)



Source: NBU.

The NBU's ultimate goal is to remove all existing restrictions and to gradually transition to the free movement of capital. International experience shows that FX liberalization should be gradual and consistent. One of the main reasons for ineffective liberalizations in emerging markets was the removal of all restrictions simultaneously (see Table 2).

Table 2. Evaluation of global experience of liberalization

Liberalization	Successful	Unsuccessful
Quick	Czech Republic, Georgia, Mexico: export liberalization, then imports; financial market instruments development.; transition to a floating exchange rate	Argentina, Iceland, Israel (1977): removal of all restrictions on current and capital operations; debt crisis, macro-and political instability
Gradual	Poland, Hungary: liberalization of trade relations; the abolition of the permissive and declarative nature of all FX transactions	Kazakhstan: liberalization aimed at short-term stabilization of demand and supply; crisis, external shocks and the system unreadiness before reforming
Long	Chile, Israel (1987-2005), South Korea: combining liberalization with restrictions on capital movements for the time of crisis; gradual liberalization of FDI, other flows; structural reforms	Ukraine (1991-2015): a regulated and excessively bureaucratic system of currency regulation, consisting of 56 legal acts

Source: EasyBusiness, Centre for Economic Strategy, USAID.

In this light, when the new law came into effect, the NBU published its currency liberalization roadmap. The roadmap envisages passing a raft of laws to enhance the quality of the regulation of the non-bank financial market ("split" draft law), and to prevent unproductive capital outflow from the country (BEPS draft law).

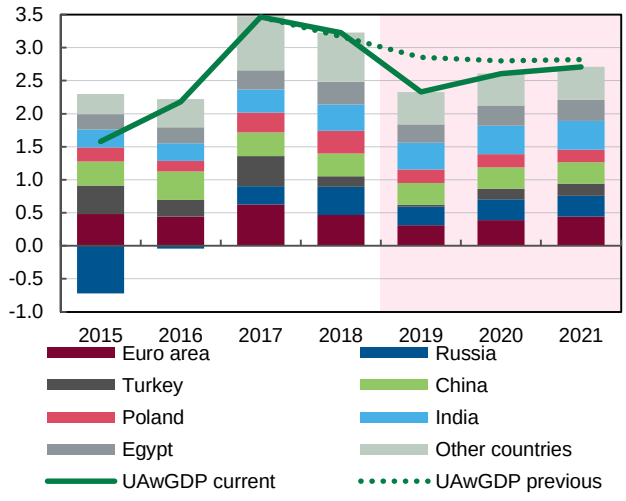
The roadmap has no clearly defined deadlines – the faster a benign macroeconomic and financial environment emerges, the sooner the central bank will lift FX restrictions, and vice versa. The NBU's decisions in this regard will mainly be based on its assessment of macroeconomic indicators (GDP growth rates, inflation dynamics), FX market conditions, financial stability, and external market conditions. At the same time, with the new system of FX regulation, NBU retains the right to implement FX safeguard measures, in particular, if signs appear that there is financial instability in the banking system, a deterioration of Ukraine's balance of payments, or the emergence of circumstances threatening the stability of the banking and (or) financial system of the state.

Part 3. Macroeconomic Forecast

3.1. Forecast Assumptions

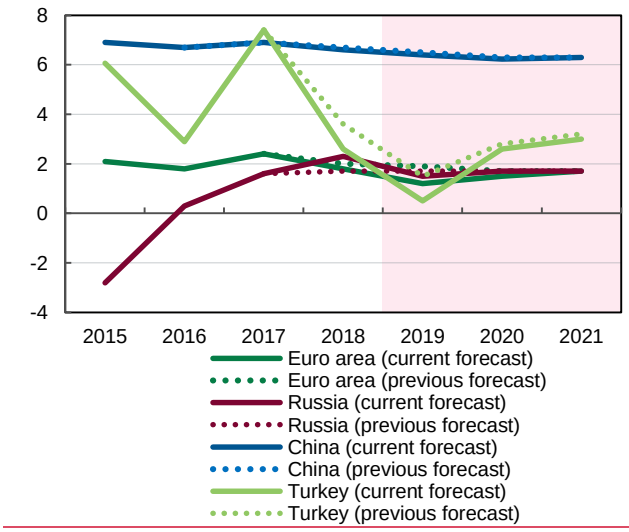
Following rapid growth over the last two years, the global economy is expected to see a major slowdown in 2019. Rising geopolitical tensions and protectionist measures will dampen demand and put the brakes on global trade growth. The euro area and some emerging markets – Turkey in particular – will suffer the most from these factors. At the same time, global growth will stabilize in 2020–2021 as countries gradually adapt to the new geo-economic conditions. As a result, the weighted average indicator of economic growth in Ukraine's main trading partners was revised downwards for the entire forecast horizon, and notably for 2019, to 2.3%. The growth in global commodity prices will be sluggish due to weak demand. The leading central banks will maintain loose monetary policies in view of the slower economic growth and risks of deflation. Thus, the global financial markets will remain benign for emerging markets.

Figure 3.1.1. Contributions of Ukraine's MTPs to annual GDP growth (UAwGDP), % yoy, pp



Source: NBU staff estimates based on IMF.

Figure 3.1.2. Real GDP of selected Ukraine's MTPs, % yoy



Source: NBU staff estimates.

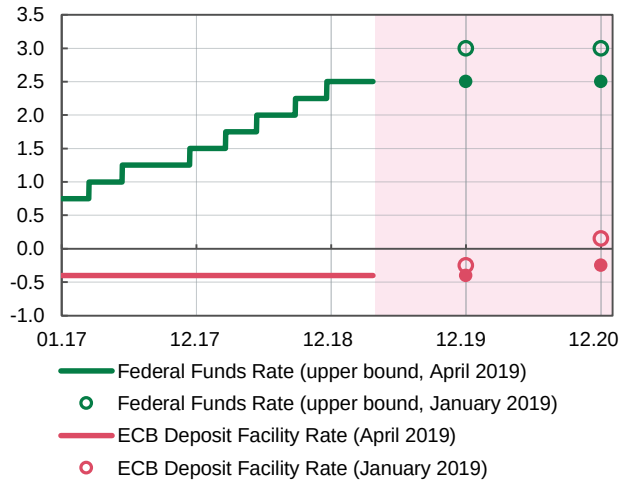
Economic growth in the United States will gradually slow, due to the fading of the positive effects of tax stimuli, and because of protectionist measures. On the other hand, the economy will still grow in excess of its potential level, driven by favorable financial and labor markets. Due to the expectations of slower economic growth both in the United States and worldwide, the Fed will have to ease its monetary policy more than expected. The financial markets currently expect the federal funds rate to remain unchanged in 2019 and H1 2020. The Fed's balance sheet should stop declining in September 2019, which will also have a soothing effect on the market.

The Euro Area's economy will grow slower amid uncertainty over Brexit and a deterioration in foreign trade conditions. That said, economic growth in Germany, Europe's largest economy, will slow significantly as a result of the indirect effect of a decline in trade with China, since the trade war between the United States and China has limited China's purchasing power, and due to a drop in exports to the United States driven by increased import duties on some European goods. Problems in the domestic car industry, which account for the lion's share of Germany's industrial production and exports, remains another factor.

The economic slowdown in Germany will affect the economies of Ukraine's main trading partners (MTPs), particularly in the euro area and Central and Eastern Europe (CEE). There will be a twofold impact for CEE countries, through foreign trade, and through EU financing funds for these countries. This is due to Germany being the largest contributor to the EU budget (19% of all contributions). Meanwhile, economic growth in the CEE countries will be boosted by reasonably steady consumer demand, underpinned by rising employment and wages in previous periods.

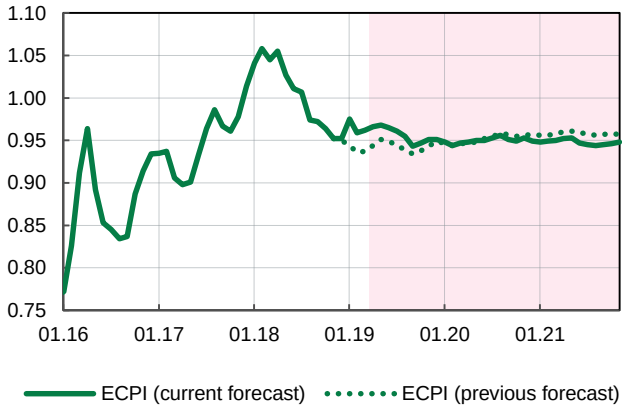
Under these conditions, inflation in the Euro Area will remain below the target range. In response, the ECB will continue to provide support to the economy by reinvesting profits from securities, conducting longer-term refinancing operations, and keeping its interest rate low. No changes in the key rate are expected to come before the middle of 2020.

Figure 3.1.3. Market expectations for the Fed funds rate and the ECB deposit facility rate according to Bloomberg Economics' quarterly review, %



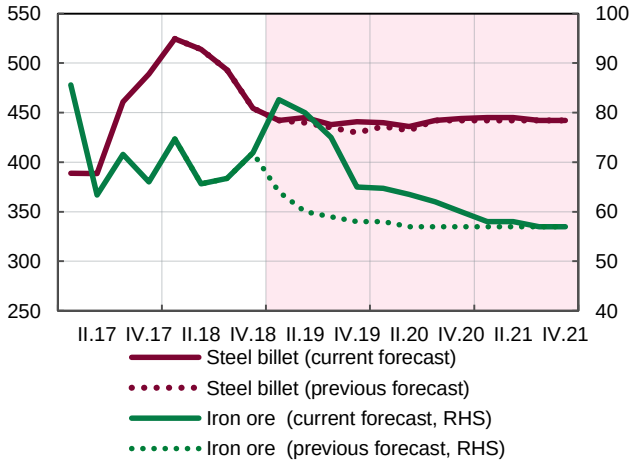
Source: official web-pages of central banks, Bloomberg.

Figure 3.1.4. External commodity price index (ECPI), Dec 2004 = 1



Source: NBU staff estimates.

Figure 3.1.5. Global prices of ferrous metals and iron ore*, USD/MT, quarterly average



Source: Thomson Reuters, NBU staff estimates.

The global trade slowdown will also limit economic growth in the CIS countries, such as Russia, Belarus, and Kazakhstan. The Turkish economy may be affected as well, primarily due to a decrease in foreign trade with the euro area, which is Turkey's largest trade partner and foreign investor. Internal political problems in the country amid growing inflationary and depreciation pressures will be additional factors.

Asian countries, such as China and India, will remain in the lead in terms of economic growth. Although China is expected to see the slowest pace of economic activity in the last 30 years, the country will remain one of the main drivers of the global economy. The Chinese economy will be supported by fiscal and monetary stimuli, in particular tax cuts and increased expenditure on infrastructure projects (road and railway infrastructure).

Price rises will be curbed by weaker external demand and global trade slowdown. As a result, the global price environment for Ukrainian exporters, as expressed by the external commodity price index (ECPI), will remain close to the current level over the forecast horizon. The small increase in the ECPI compared to the previous forecast for 2019 was largely due to a revision of iron ore prices.

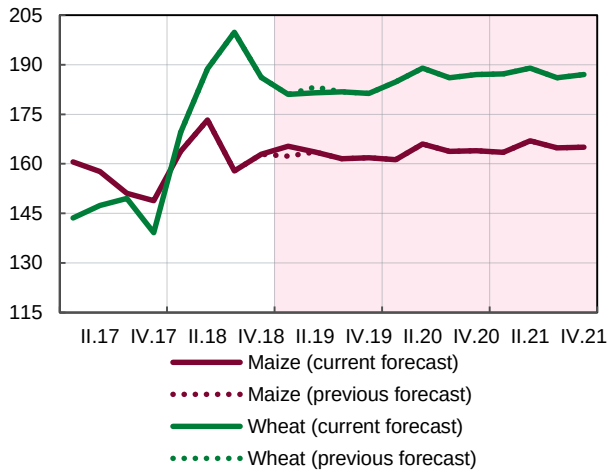
Global iron ore prices will remain relatively high in 2019, despite there being a downward trend. The prices will be supported by a global shortage of iron ore caused by a decline in production capacity at Vale company, one of the world's leaders, as a result of a serious accident. Higher demand from China and weather-related interruptions in the supply of iron ore from Australia will be additional factors pushing up prices. However, as Rio Tinto and BHP Billiton increase their production and China provides less state support to infrastructure projects, prices will gradually go down.

Global steel prices are expected to be little changed on their current level. Demand for steel is projected to keep rising in 2019 and 2020, although at a moderate pace of 1.3% and 1%[35] respectively – due to the slower pace of global economic growth. That said, China's domestic demand for steel will remain relatively stable in 2019 and will gradually decline in 2020 as the effect of the government's stimuli wanes. Despite relatively weak global demand, high input prices will prevent steel and steel product prices from falling.

Global grain prices will increase gradually over the forecast horizon on the back of faster growth in global consumption and changes in weather conditions. Global grain output in the 2018/19 marketing year is expected to decline by 4% yoy,[36] due to significantly lower harvests in Russia, the EU, Australia, and Turkey. This will be partially offset by better harvests in the United States, Canada, Argentina, and India. As a result, with consumption volumes being only slightly changed, wheat inventories will drop by 2.2% yoy in the 2018/19 marketing year. Moreover, wheat prices will continue

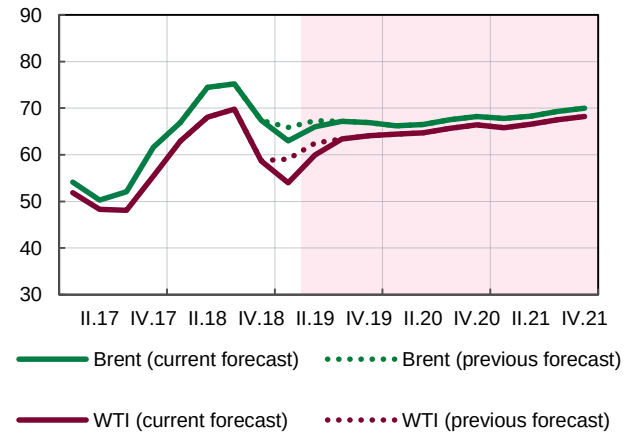
[35] World Steel Association, April 2019.
[36] USDA projections, April 2019.

Figure 3.1.6. Global grain prices, USD/MT, quarterly average



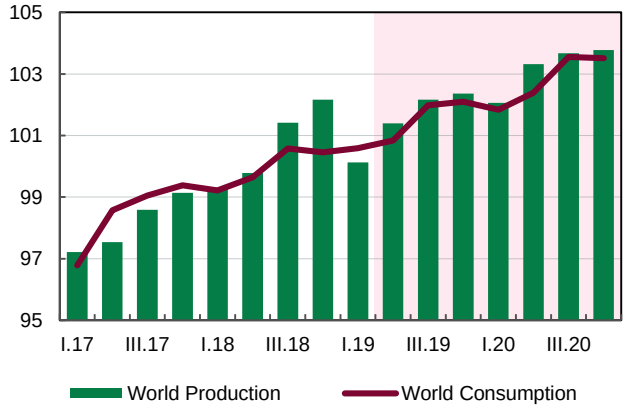
Source: NBU staff estimates.

Figure 3.1.7. Brent and WTI crude oil prices, USD/bbl, quarterly average



Source: Thomson Reuters, NBU staff estimates.

Figure 3.1.8. Global consumption and production of crude oil and other liquids, Mbbl/d



Source: U.S. Energy Information Administration, April 2019.

to rise due to unfavorable weather in Australia, one of five world's largest wheat exporters.[37]

In the meantime, the global corn production will grow by 2.9% yoy in the 2018/19[38] marketing year, with consumption rising by 4.3% yoy – a record high that will exceed output. However, sufficient carry-over stocks will offset the difference between output and consumption. As a result, prices will fluctuate within a narrow range, moving up gradually.

Despite the temporary divergent trends in global prices for crude oil and natural gas, they are expected to follow the same path in future. After an increase in early 2019, global oil prices are expected to hover between USD 60 and USD 70 per barrel. Oil prices will be supported by a decrease in supply from OPEC+ countries and U.S. sanctions against Iran and Venezuela. At the same time, demand for oil will remain high, rising by 1.2–1.5 bbl/day in 2019. Its growth will slow in subsequent years as oil consumption declines, largely owing to an increase in the share of electric cars, especially in China.

Having dropped sharply, global prices for natural gas will stabilize and then follow an upward trend. Demand for liquefied natural gas is expected to grow by more than 20% by the end of 2020.[39] Demand is growing the fastest in China, where imports of natural gas increased by 40% yoy in 2018. At the same time, the growth in supply will accelerate, primarily driven by production in the United States and Russia, joined by Australia and Qatar.

[37] In Australia, the sowing season starts in late April. The Australian Bureau of Meteorology estimates that the probability of El Niño weather conditions in 2019 in Australia has grown from 50% to 70%.
[38] USDA projections, April 2019.
[39] Royal Dutch Shell. LNG Outlook 2019.

3.2. Inflation developments

Inflation will decline to 6.3% by the end of this year and will reach the target range by early next year. It is expected to meet the medium-term target of 5% in late 2020. This will be mainly the result of tight monetary conditions and a restrained fiscal policy. The other major factors behind the further decline in inflation also include:

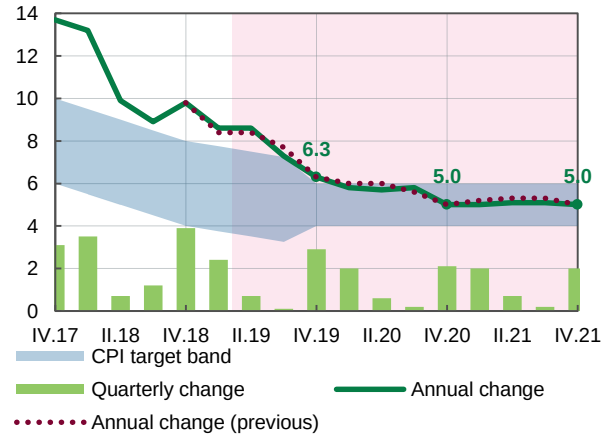
- slower growth in wages, which are gradually converging with wages in neighboring countries amid less intense migration processes
- the appreciation of the hryvnia seen in Q1 2019, which will dampen growth in the prices of nonfoods
- a drop in global gas prices, which will pass through to domestic prices
- a larger supply of both domestic and imported food products.

Core inflation will continue to slow (to 5.0% in 2019 and 3.7% in subsequent years), primarily due to weaker pressures from aggregate demand. Although services prices will still be the fastest growing component of the core CPI, their growth will slow markedly, as wage growth decelerates. Low imported inflation, coupled with the moderate volatility of the hryvnia exchange rate, will put downward pressure on both core inflation and raw food prices.

Raw food prices will rise rather moderately over the entire forecast horizon (by 3% – 4%), thanks to the expected widening in the supply of these products, including imported foods, on the domestic market. This is also expected to restrain the growth in the prices of the processed foods that are among the components of the core CPI.

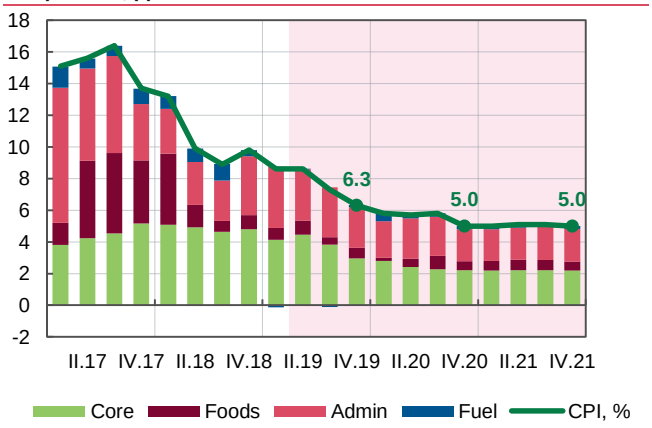
Administered prices will be the fastest-growing inflation component. These prices will be up by 13.9% in 2019 and by about 10% in the medium-term, as some tariffs are raised to match market levels, and higher excise taxes are imposed on alcohol and tobacco products. After reaching import parity level in 2019, domestic gas prices for households will be determined by global price movements and the hryvnia exchange rate.

Figure 3.2.1. CPI, %



Source: SSSU, NBU staff estimates.

Figure 3.2.2. Contributions to annual CPI growth by main components, pp



Source: SSSU, NBU staff estimates.

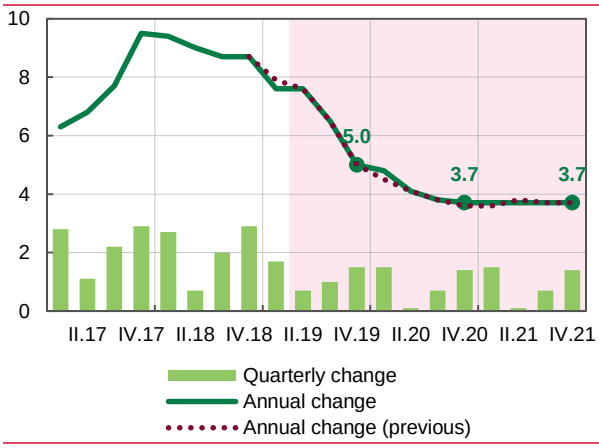
Core inflation will continue to slow (to 5.0% in 2019 and 3.7% in the years to come), primarily due to tight monetary and fiscal policies, which will reduce pressures from aggregate demand. This will also be the result of the gradual deceleration in wage growth amid less intense labor migration, due to the smaller gap between wages in Ukraine and abroad.

Although the cost of market services, which strongly depends on wages, will continue to be the fastest-growing core CPI component, its growth will decelerate significantly. Imported inflation (such as clothes, footwear, and household appliances) is expected to be low because of the moderate volatility of the exchange rate. Second-round effects from drops in food and fuel prices will also help bring core inflation down.

Food price inflation will be rather moderate over the entire forecast horizon (by 3% – 4% each year), thanks to the expected widening in the supply of foods, including imported foods, on the domestic market. The higher output of the agricultural sector, driven by past investments and improved productivity, will curb food price inflation and decrease its volatility in the medium term.

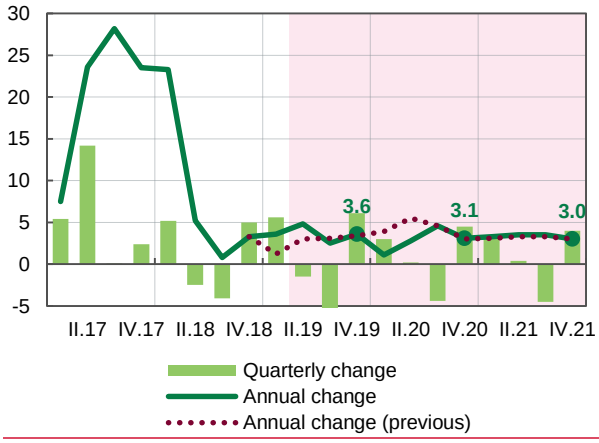
Administered prices will be rising at the fastest pace over the forecast horizon, reflecting increases in some tariffs to market levels, and higher excise taxes. These prices will be up by 13.9% in the current year, with the main contribution made by an increase in tobacco prices (by about 19%), resulting from a higher excise tax on these products. With falling gas prices on the EU spot market, gas prices for households are expected to achieve import price parity as early as this year,

Figure 3.2.3. Core inflation, %



Source: SSSU, NBU staff estimates.

Figure 3.2.4. Raw food inflation, %



Source: SSSU, NBU staff estimates.

Figure 3.2.5. Administered price inflation, %

Source: SSSU, NBU staff estimates.

enabling the introduction of the market-based pricing mechanism for gas prices for households in the short-term.

Forecasts of administered price increases in 2020 and 2021 have been revised downward, to 9.9% and 9.7% respectively, from 11.1% and 10.3% in the previous forecast, because of lower global gas prices in the hryvnia equivalent, which will determine domestic gas prices for households, and, consequently, the prices of central heating and hot water supplies. Tobacco products will continue to be the largest contributor to administered price inflation, as the prices of these products rise, driven mainly by further excise tax growth. Alcohol prices are expected to rise by 6% – 9% annually over the forecast period. Higher utility and public transport prices, driven by wage increases for the providers of these services, will also make a significant contribution to administered price growth.

With rather stable oil prices on the global markets, 2019 fuel prices, which are expected to rise by only 3.4%, are regarded as a factor restraining headline inflation. Further annual increases in fuel prices are expected to be about 5%, provided there are no changes to excise tax rates.

Although the inflation forecast has remained unchanged over the entire forecast horizon compared to that published in the previous Inflation Report, some of its components have been revised. The forecast for 2020 – 2021 administered price growth has been revised downward, due to lower global gas prices in the hryvnia equivalent. The core inflation forecast for the next year has been revised from 3.6% to 3.7%, as prices of market services are expected to rise at a slightly faster pace (about 6%).

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

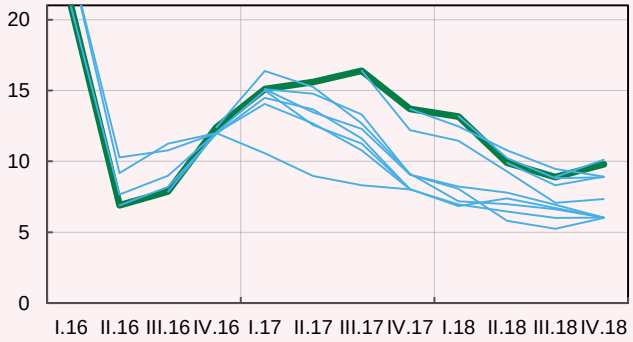
Since monetary instruments affect inflation and other macroeconomic variables with a significant time lag, the conduct of monetary policy under the inflation targeting regime is based on macroeconomic forecasts. Understandably, uncertainty is an inherent attribute of any macroeconomic forecast, with the actual indicators almost always deviating from the forecast ones. That said, the ability of a central bank to anticipate future trends is one of the most important elements of a successful monetary policy.

In this light, the NBU has introduced the practice of carrying out annual assessments of its macroeconomic forecasts, in particular in order to identify any bias or systematic errors, check its ability to forecast a trend reversal, and to see how accurate its forecasts are over time, and compared to those produced by other institutions.

This box presents the key findings regarding the characteristics of forecasts of key variables. These variables are the CPI, GDP, and the current account balance.

The central bank's inflation forecasts have high accuracy, especially the short-term ones made in 2016 and 2018 (Figure 1). The actual annual CPI change in H2 2017 and 2018 closely tracked the quarterly profile of the forecast. Nevertheless, the unexpected spike in food prices seen in 2017, together with considerable pressures from wages due to faster-than-expected migration, caused inflation to deviate noticeably from its projected trajectory in 2017. Even so, the pace at which inflation decreased from late Q4 2017 is very close to the forecasts.

Figure 1. Forecast history: CPI (2016-2018), % yoy



Source: NBU.

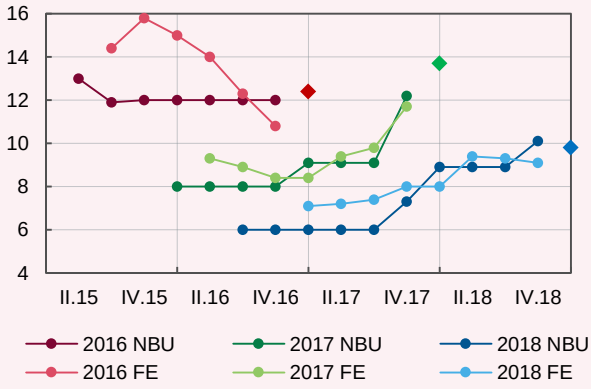
A separate analysis was done for year-end forecasts given that the objectives are set out in the Monetary Policy Guidelines for the end of the year (Figure 2).

There were almost no revisions of the NBU's 2016 CPI forecasts, with only negligible forecast errors. Consensus forecasts produced by market participants (FE[40]) in 2015 – 2016 were much more pessimistic.

Although the NBU twice revised upward its forecast for year-end inflation in 2017 (in Q1 and Q4 2017), the forecast was still below the actual figure. As mentioned above, the forecast errors were mainly due to unexpected shocks. FE's consensus forecasts were very close to the NBU's forecasts, evidencing that the inflation shocks were unexpected for most forecasters.

The NBU's inflation forecast for 2018 was also revised upward several times, mainly in H2 2017. In 2018 the revisions were marginal and resulted from higher-than-expected increases in some administered prices (such as public transport fares, tobacco prices, and gas and water supply prices), as well as from more rapid wage growth than predicted. Market participants also expected somewhat lower inflation in 2017 – 2018.

Figure 2. Forecast history: CPI (2016-2018), eoy, %



Source: NBU.

The NBU also compared its forecasts with those made by other leading institutions (such as the Ministry of Economics, Alfa Bank Ukraine, ICU, Dragon Capital, Raiffeisen Bank Aval, J.P. Morgan, OTP Bank, Goldman Sachs, the IMF) and consensus forecasts produced by FE, Consensus Economics (CE)[41], and the NBU's surveys of financial analysts. The forecasts were rated using the mean absolute errors of individual forecasts (MAE[42]). The accuracy of individual forecast was calculated as the difference between the mean error of that forecast and the mean error of all institutions' forecasts. Zero values in the figures indicate that the accuracy of a forecast corresponds to the average accuracy of all forecasts; positive values indicate above-average errors, while negative values show below-average errors.

Since the forecasts were made at different points in time, adjusted mean absolute errors were calculated for these

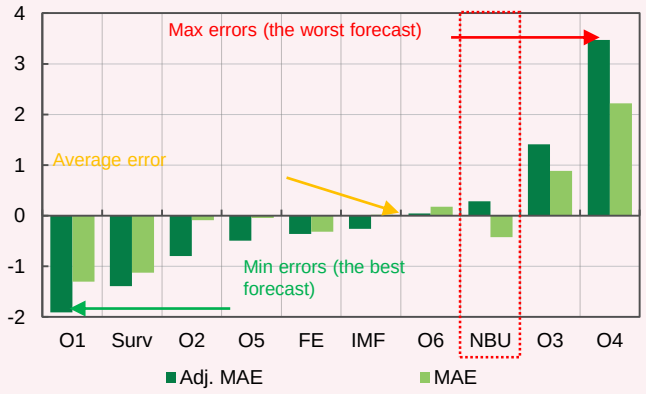
[40] Focus Economics is a company that carries out surveys of financial market participants with regard to macroeconomic indicators. Usually about 30 organizations participate in surveys of the Ukrainian economy (https://www.focus-economics.com/).

[41] Consensus Economics is a leading global company that conducts macroeconomic surveys (https://www.consensuseconomics.com/).

[42] Mean Absolute Error.

forecasts (Adj. MAE[43]) in order to account for time differences (the earlier a forecast was made, the greater could be the error). Adjusted mean absolute errors are calculated by multiplying these errors by specific weights that increase as the period of time between the making of a forecast and the release of the actual data decreases.[44,45]

Figure 3. Forecast rating: CPI (2016-2018), eop, %



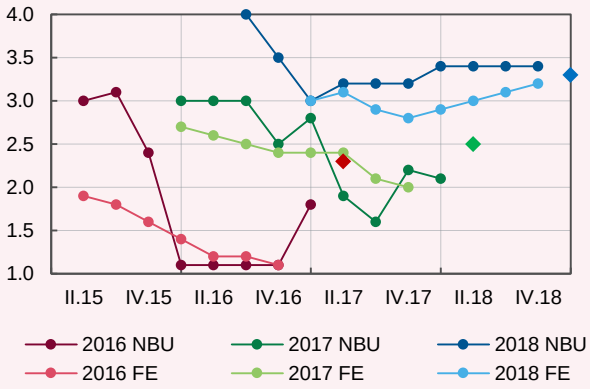
Source: NBU staff estimates.

The accuracy of the NBU's inflation forecasts is average compared with other organizations, and does not differ significantly from forecasts made by the IMF and FE (Figure 3). The unadjusted errors of the NBU's CPI forecasts are below-average, with adjusted errors being slightly above-average.

The NBU's real GDP forecasts were also reasonably accurate, especially those for 2018 (Figure 4). In 2016 – 2017, these forecasts were revised in both directions due to both external shocks (such as trade wars, changes in China's industrial output, changes in oil and metal prices, and trade sanctions) and internal shocks (such as more robust wage growth, the halting of trade with non-government controlled areas, and changes in expectations for the harvest). The NBU's GDP forecast for 2018 was very close to the outturn, and turned out to be more correct than the more pessimistic consensus forecasts.

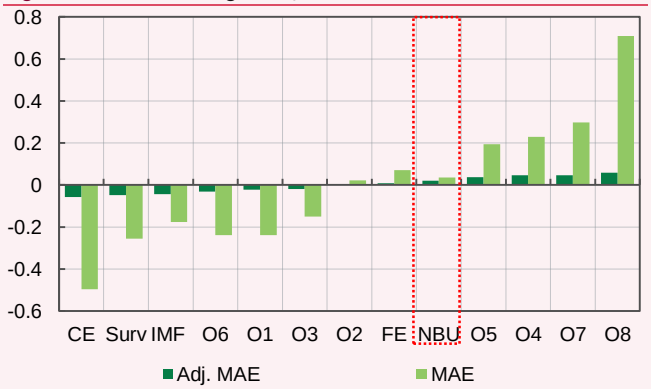
The accuracy of the NBU's GDP forecast is average compared to the forecasts produced by the other institutions mentioned, and is time invariant (Figure 5). The adjusted errors for the forecasts by the other institutions mentioned do not differ greatly, with the consensus forecasts being the most accurate.

Figure 4. Forecast history: GDP, %



Source: NBU staff estimates.

Figure 5. Forecast rating: GDP, %



Source: NBU staff estimates.

Current account forecasts were rather volatile, due to the Ukrainian economy being open, commodity-based and vulnerable to external shocks (Figure 6). Brexit, trade tensions between China and the United States, crises in Turkey and other events had a rather significant impact on the economies of Ukraine's main trading partners, and, consequently, caused upward and downward revisions of Ukraine's balance of payments forecasts.

In 2016 – 2017, the actual figures of the current account deficit[46] generally exceeded forecasts. This mainly resulted from more rapid growth in machinery imports. The forecast of the current account deficit for 2018 was revised upward and downward several times, in response to unexpected shocks. These included sharp fluctuations in energy prices, the record grain harvest, and the Russian blockade of the Kerch strait. In addition, 2018 saw considerable revisions of data on the amounts of remittances from labor migrants.

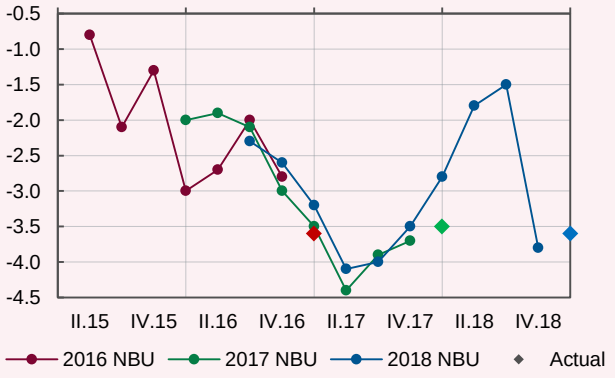
[43] Adjusted Mean Absolute Error.

[44] Detailed methodology of estimations can be found in Anderson M.K., Aranki T., Reslow A. Adjusting for Information Content when Comparing Forecast Perfomance, 2016; Evaluation of the Riskbank's forecast, 2018.

[45] 01-08 – Encoded names of organizations mentioned above.

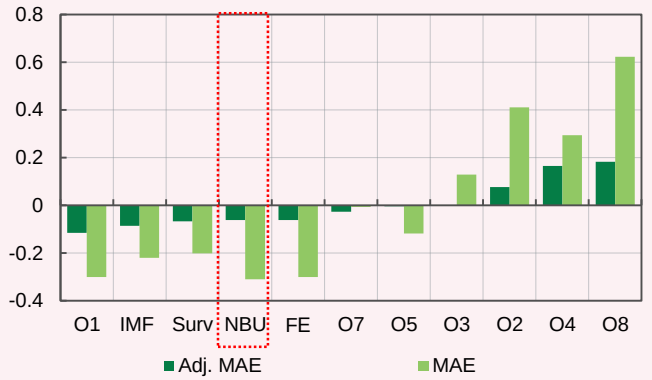
[46] Actual current account values mean the first available official data (without any further revision).

Figure 6. Forecast history: Current account balance, % GDP



Source: NBU staff estimates.

Figure 7. Forecast rating: current account balance, % GDP



Source: NBU staff estimates.

Despite there being substantial revisions and, for the most part, underestimations of the size of the deficit, the accuracy of the NBU's forecasts of the current account balance is greater compared to the forecasts produced by most other institutions (Figure 7). When unadjusted for the timing effect, the errors generated by the NBU forecasts are smaller than those of all other institutions, with adjusted errors also being relatively small.

In general, NBU forecasts and consensus forecasts (which tend to be more accurate than individual forecasts) are very close, with forecast errors often resulting from unexpected shocks.

A comparison between the accuracy of the NBU's forecasts (of inflation, GDP, and the current account balance) and the accuracy of projections by the region's other central banks (the Czech Republic, Serbia, Poland, and Hungary) shows that the forecast accuracy is comparable [47].

[47] CPI and GDP were normalized by average values of these indicators for corresponding country.

3.3. Demand and Output

Ukraine's economic growth will slow to 2.5% in 2019 (compared with 3.3% in 2018), only to speed up again to 2.9% in 2020 and 3.7% in 2021.

The main factors that might act as a drag on economic growth in 2019 will be:

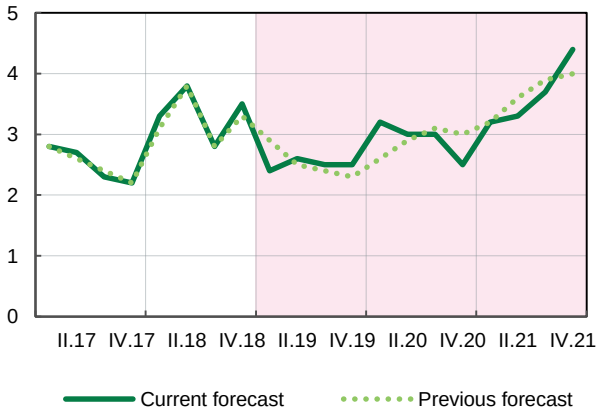
- sluggish external demand, resulting from slower growth in the economies of Ukraine's main trading partners
- a tight fiscal policy due to the need to repay large volumes of public debt
- the sufficiently tight monetary conditions required to reduce inflation to its mid-term 5% target
- poorer grain and oilseed harvests compared to the record 2018 harvest
- the political uncertainty arising from the presidential and parliamentary elections, which is slowing investment activity.

In part, these factors will be counterbalanced by improved terms of trade resulting from lower gas prices and higher global iron ore prices.

Although private consumption will remain the main driver of economic growth, it will decelerate to 4.7% in the current year on the back of weaker growth in real household income, such as wages, pensions and remittances from abroad. Investment growth will also decelerate, to 5.7% in 2019, due to the increased political uncertainty arising from the presidential and parliamentary elections in the current year, only to speed up again next year. In contrast to 2018, export growth will be bolstered by the recovering metals industry, while being restrained by weaker demand from the EU and Turkey. Nevertheless, growth of imports will outpace that of exports, driven by both investment and consumer demand. The contribution of net exports to GDP will remain negative.

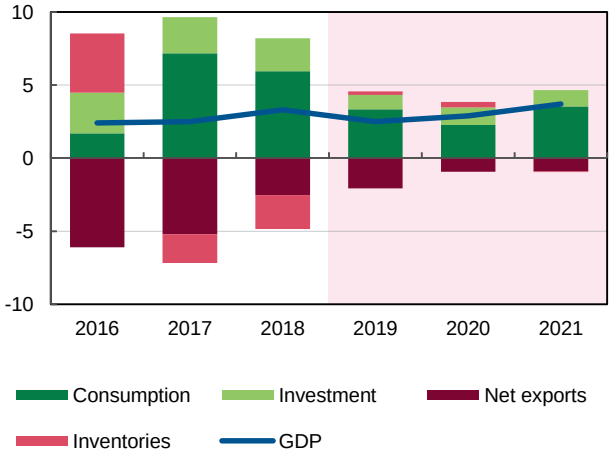
Real GDP growth will accelerate to 2.9% in 2020 and 3.7% in 2021. The growth will be propelled by a gradual easing of monetary policy, which will boost domestic demand, and by a pick-up in investment activity as the political situation stabilizes. Economic growth will be dampened by a decrease in gas transit to European countries, due to the construction of bypassing gas pipelines.

Figure 3.3.1. Real GDP, % yoy



Source: SSSU, NBU staff estimates.

Figure 3.3.2. Contributions to real GDP growth, pp



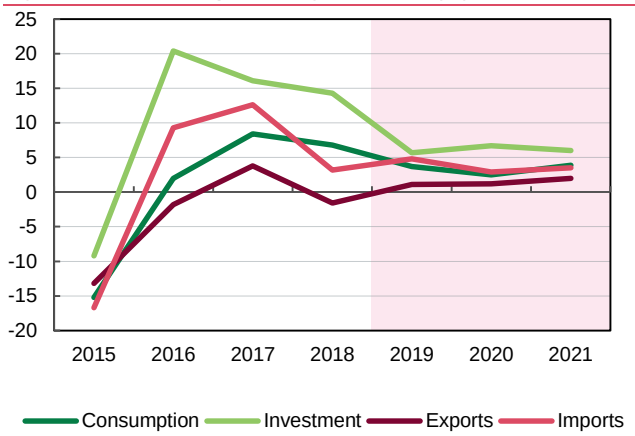
Source: NBU staff estimates.

Although private consumption will continue to be the main driver of economic growth, its growth will gradually decelerate, as household wages rise at a slower pace. More specifically, the minimum wage and wages in the public sector are expected to grow moderately on the back of a restrained fiscal policy. The cooling of the EU economy and the shrinking wage gap (including due to the rapid growth in Ukrainian wages seen in previous years) labor migration will decrease in intensity, which, in turn, will lower growth rates of remittances from abroad. Although slowing, private consumption growth will continue to outperform GDP growth over the forecast horizon, and will, to some extent, be determined by an eased monetary policy and a pick-up in lending.

Investment growth will also decelerate, to 5.7% in 2019, due to the increased political uncertainty arising from the presidential and parliamentary elections in the current year. Tight monetary conditions, together with ongoing increases in the share of business expenses on wages, will restrain investment activity in the current year.

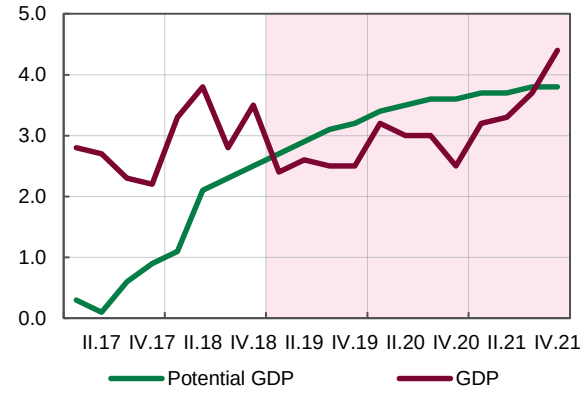
Investment activity will speed up somewhat in 2020 – 2021, thanks to the expected stabilization of the political situation, an easing in monetary policy, and a rebound in lending. Nevertheless, the overall growth in capital investment will be lower (ranging between 6% to 7% annually) compared to the last few years, as Ukraine gradually attains its pre-crisis investment levels. More specifically, equity investment is expected to rise to about 20% of GDP in 2021. As before, buoyant investment activity will be supported primarily by the

Figure 3.3.3. GDP components by end use, % yoy



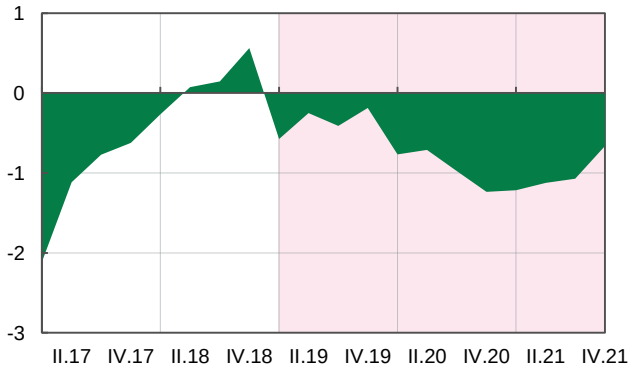
Source: SSSU, NBU staff estimates.

Figure 3.3.4. Actual and potential GDP, % yoy



Source: SSSU, NBU staff estimates.

Figure 3.3.5. Output gap, % of potential GDP



Source: NBU staff estimates.

export-oriented sectors (such as agriculture and manufacturing industry), as well as sectors that depend on increased capital expenditures from the budget (such as road construction).

Although the contribution of net exports to GDP will remain negative over the entire forecast period, it will shrink – primarily due to gradual increase in export volumes. Exports are expected to rise by 1.1% in the current year, buoyed mainly by an increase in metallurgical exports, as metallurgical output recovers after some plants complete repairs. However, growth will be depressed, due to weaker demand from EU countries and Turkey. Growth in export volumes will remain sluggish in 2020–2021, as gas transit to European countries declines.

Import volumes are expected to grow by 4.8% in the current year, propped up by both consumer and investment imports. Increases in real household income will continue to support the still robust demand for consumer imports. Investment import growth will be largely fueled by imports of machinery and equipment. In 2020 – 2021, import growth will slow to 2.9% and 3.5% respectively, due to, among other things, a drop in gas imports. In the medium-term, the share of gas imports will diminish, thanks to improved energy efficiency, lower needs for the technical gas used in gas transit, and a gradual increase in the domestic production of energy resources.

Potential GDP and the Cyclical Position of the Ukrainian Economy

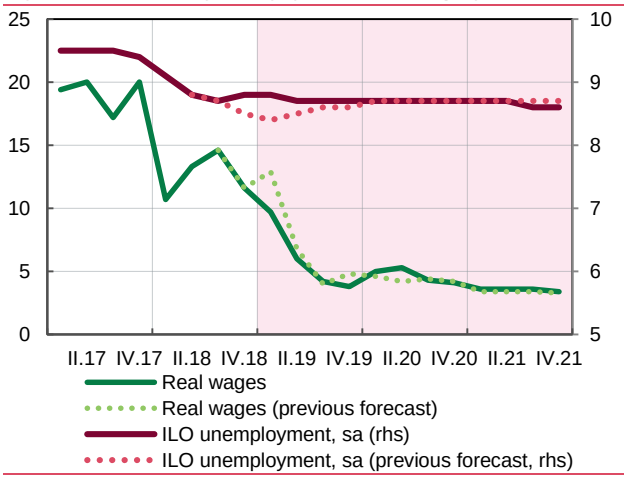
Potential GDP growth will continue to accelerate in 2019 – 2021, from the current level of around 2.5% to about 4% in 2021. The growth will mainly be driven by an improvement in total factor productivity.

In contrast to the previous year, the contribution of capital to potential GDP growth will become positive starting in early 2019, owing to an increase in the share of capital investment. This will ramp up production, as fixed assets will be replaced more quickly than they are depreciated.

However, the negative contribution of the workforce will remain the main impediment to potential GDP growth over the entire forecast horizon. This will be due to shortages in qualified staff, especially blue-collar workers, as well due to the natural decline in the population. That said, the negative contribution of the workforce will be smaller than in previous years, because of less intense labor migration, resulting from wage convergence and the saturation of the labor market.

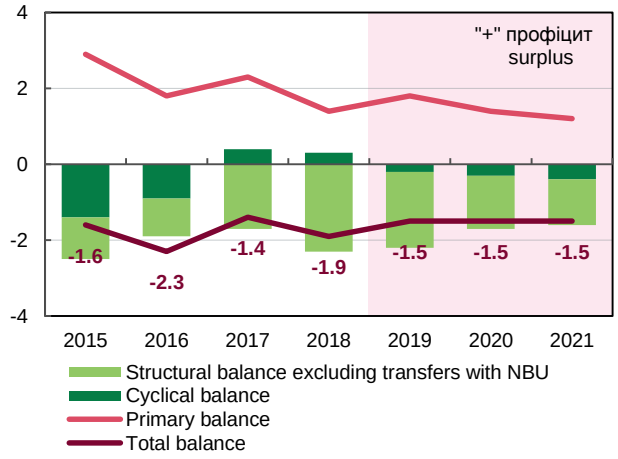
Q2 to Q4 2018 witnessed a positive GDP gap on the back of better terms of trade, a pick-up in consumer and investment demand, and a record corn harvest. In 2019, Ukraine is expected to return to a negative output gap, which in 2020 – 2021 will widen to about 1% of potential GDP, due to subdued domestic and weak foreign demand.

Figure 3.3.6. Real wages, % yoy and ILO unemployment sa, %



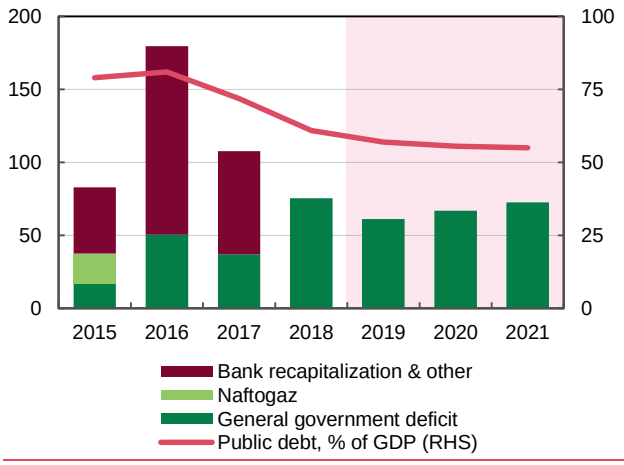
Source: SSSU, NBU staff estimates.

Figure 3.3.7. Consolidated budget, % of GDP



Source: STSU, NBU staff estimates.

Figure 3.3.8. Broad public sector deficit, UAH bn, & public debt, % of GDP



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

Household Income and Unemployment

The unemployment rate is expected to hit 8.7% (according to ILO methodology) over the entire forecast horizon, which is close to the estimated natural rate of unemployment. The rather high natural rate of unemployment is determined by structural factors, such as job seekers not meeting the qualification criteria set by employers, as well as migration processes.

The slowing of migration processes (due to the gradual saturation of the Polish labor market amid the cooling of the EU economy), and the smoothing out of labor market imbalances will reduce the upward pressure on wage growth. In this light, the growth in the average nominal wage will decelerate to below 9% by the end of the forecast horizon. In real terms, wage growth is expected to slow to about 4%, which will be in line with labor productivity growth in the economy and, consequently, create no additional inflationary pressures.

Fiscal Policy

Fiscal policy is expected to curb aggregate demand over the entire forecast horizon. The structural deficit of the consolidated budget will narrow every year, while the overall deficit is projected to be 1.5% of GDP, mainly due to the government's limited ability to expand public debt when debt payments peak. The continued fulfillment of Ukraine's obligations under the cooperation program with the International Monetary Fund remains a key assumption of the macroeconomic forecast. Apart from securing direct financing from official lenders, this will also enable Ukraine to retain access to the international capital markets, and decrease the risk premiums included in the rates on new borrowing.

Increases in social payments and the monetization of utility subsidies that have already taken place in Q1 2019 will not put any significant additional pressures on demand. Although the effects of these factors are insignificant individually, their combined impact on inflation expectations could be substantial, should inflation expectations deteriorate on the back of greater uncertainty arising from the presidential and parliamentary elections.

Government expenditures are expected to rise by 10.4%, with social expenditures up by about 12%. Although this will markedly slow the growth in capital expenditures, these expenditures will remain at about 3.5% of GDP. The tax revenues of the general government will be up by 11%, driven mainly by increases in the individual income tax and the single social contribution, resulting from the still significant growth in nominal wages.

A restrained fiscal policy will cause a constant primary surplus in the consolidated budget (over 1% of GDP a year) throughout the forecast horizon, which together with high nominal GDP growth and the low volatility of the exchange rate, will reduce public and publicly guaranteed debt further.

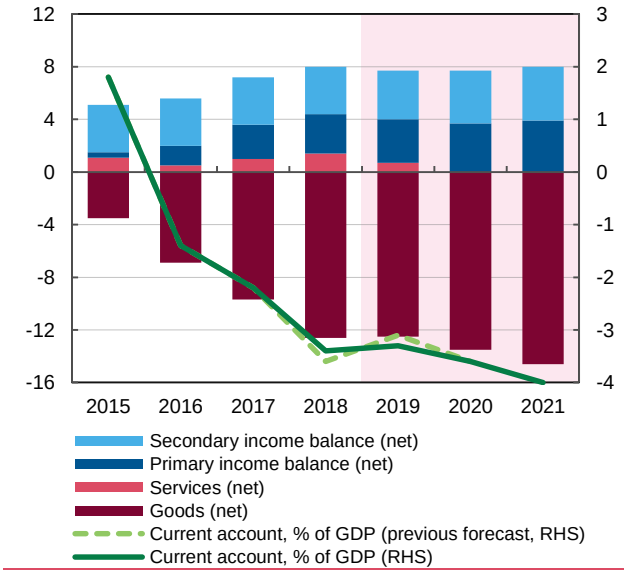
3.4. Balance of Payments

The current account deficit in 2019 will remain at the previous year's level of 3.3% of GDP, as a result of counterbalancing factors. Export proceeds from last year's record harvest of corn and the effects of favorable terms of trade, arising mainly from lower energy prices, will be offset by an economic slowdown in Ukraine's main trading partners, which will affect exports and remittances from labor migrants. The current account deficit will widen over the forecast horizon (hitting 4% in 2021), due to a decrease in gas transit and weak demand from Ukraine's main trading partners, as well as more robust growth in domestic investment demand.

With persistently high real interest rates, investment and debt inflows to the private sector in 2019 – 2021 will be the main sources of financing for the current account deficit. Meanwhile, a key assumption of the macroeconomic forecast is that Ukraine will continue to fulfill the commitments it assumed under the latest IMF cooperation program, and receive official financing. This will improve access to the international capital markets, and will help maintain non-residents' appetite for hryvnia-denominated domestic government bonds, and, consequently, finance the repayment of external public debt in 2019 – 2021.

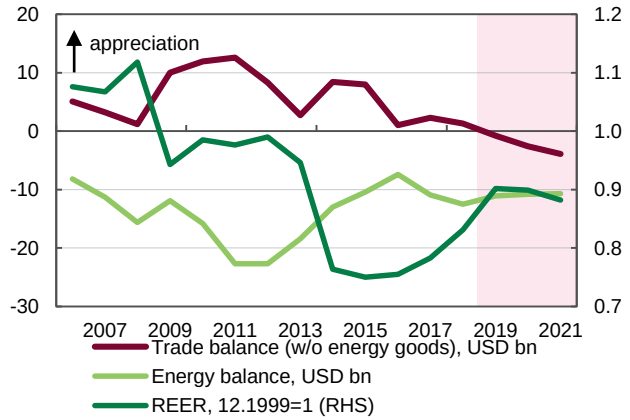
As a result, international reserves will hover at around USD 21–22 billion over the forecast horizon.

Figure 3.4.1. Current account, USD bn



Source: NBU staff estimates.

Figure 3.4.2. REER and trade balance



Source: NBU staff estimates.

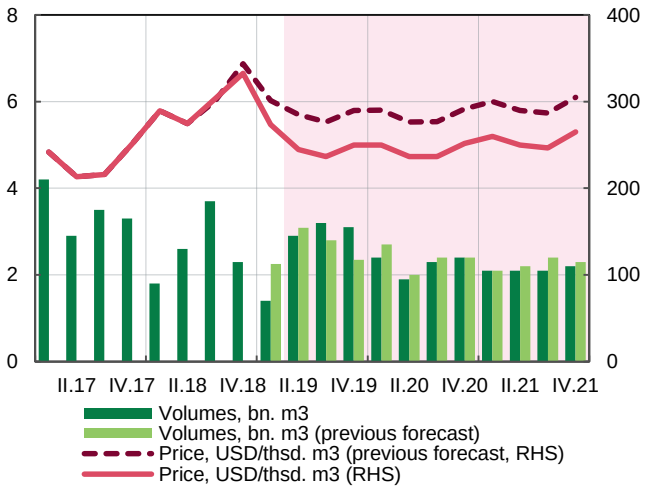
The current account deficit in 2019 will remain at the previous year's level, through the action of counterbalancing factors. Better terms of trade, mainly on the back of falling energy prices and the record corn harvest in 2018, will counterbalance the impact from the weaker growth in the economies of Ukraine's main trading partners – especially the EU and Turkey. The latter factor will affect exports of goods and gas transportation services, as well as remittances. The current account deficit will widen in 2020 - 2021, due to a dramatic decrease in gas transit, and depressed demand from Ukraine's main trading partners. Nevertheless, the widening will be restrained by a gradual weakening in the real effective exchange rate (REER) of the hryvnia.

In 2019–2021, the growth in exports of goods is expected to slow to 2%–3% (compared to 9% in 2018), on the back of low external demand and falling prices for iron ore and ferrous metals. In 2019, exports will mainly be driven by the large volumes of grain exports resulting from the record harvest of corn and sunflowers. In 2020 - 2021, export growth will be mainly propped up by metals and machinery exports.

The growth in imports of goods will slow in 2019 – 2021, with both energy and non-energy imports contributing to the slowdown. In 2019, energy imports will shrink, primarily due to lower gas and oil prices. Energy imports will continue to decline in 2020–2021 due to smaller volumes of gas imports because of increased local production, a decrease in household consumption, and lower needs for technical gas. A deceleration of the growth in non-energy imports to 5%–6% in 2019 – 2021 (from 13% in 2018) will result from slower growth in imports of consumer goods due to weaker household income growth. Investment imports will also be rather depressed in 2019 on the back of uncertainty due to the presidential and parliamentary elections. However, it will start to speed up in 2020, despite a drop in investment in alternative energy.

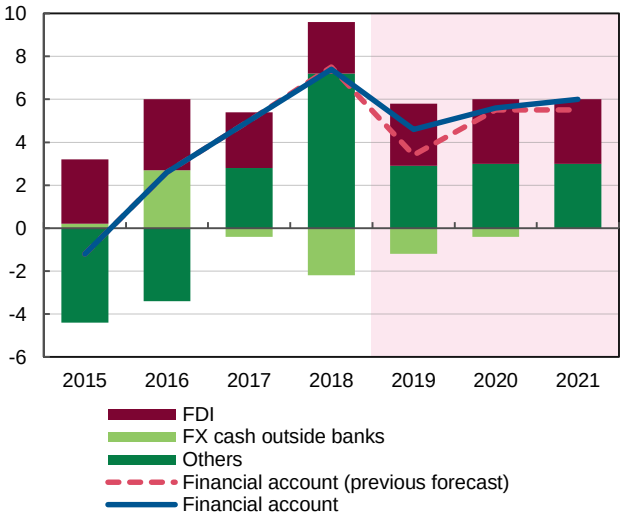
The surplus in the trade in services is expected to persist in 2019, as ongoing growth in IT services will be counterbalanced by a fall in proceeds from gas transportation, due to falls in both tariffs and transit volumes.

Figure 3.4.3. Gas imports



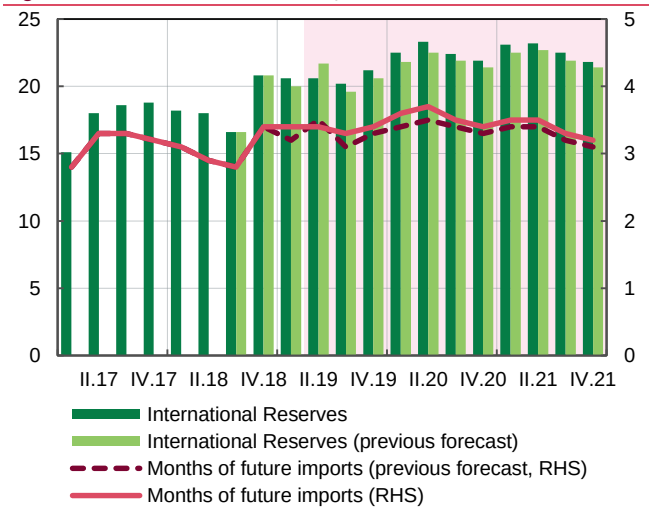
Source:NBU staff estimates.

Figure 3.4.4. Financial account: net inflows, USD bn



Source: NBU staff estimates.

Figure 3.4.5. International reserves, USD bn



Source: NBU staff estimates.

However, the surplus in the trade in services is expected to drop to zero in 2020-2021, due to a nearly twofold reduction in gas transit volumes after pipelines bypassing Ukraine become operational.

Remittances from labor migrants are expected to grow at a significantly slower rate in 2019–2021, as migration processes decline in intensity because of continuing wage convergence, the saturation of the labor market, and the slowdown of the EU and Russian economies.

In 2019 – 2021, dividend payments will remain at the level of 2018, as capital flows are liberalized further and companies deliver reasonably good financial results.

Over the entire forecast horizon, the current account deficit will be largely financed through debt and investment inflows to the private sector. In 2019, these inflows will be restrained by political turbulence, while being stimulated by high interest rates. Debt inflows are expected to rise in 2020 - 2021, as Ukraine's political uncertainty abates and as the country continues to cooperate with the IMF.

The growth in FX cash outside banks is expected to slow dramatically in 2019 – 2021, on the back of continued de-dollarization processes, supported by lower inflation expectations, high interest rates in national currency, and moderate volatility of the exchange rate.

In 2019–2021, official financing along with Eurobond placements and domestic borrowing will finance the repayment of external public debt worth about USD 20 billion. In contrast to previous years, the amount of hryvnia-denominated domestic government bonds held by non-residents is expected to rise in 2019 – 2020, thanks to attractive bond yields and lower exchange rate volatility.

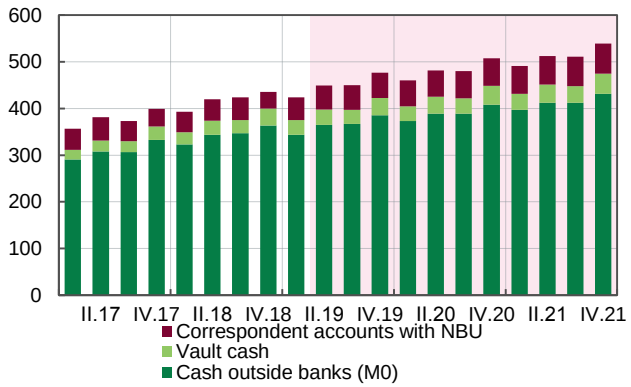
A slight deficit in the overall balance of payments over the forecast horizon will be financed with net inflows from the IMF. As a result, international reserves will fluctuate in the USD 21–22 billion range over the next few years. By the end of 2021, they will cover 3.2 months of future imports, and the ratio of reserves to the IMF's composite measure will stand at about 74%.

3.5. Monetary Conditions and Financial Markets

Lower inflation pressures are expected to provide conditions for a gradual monetary policy easing. Despite a fall in nominal interest rates amid improved inflation expectations, real rates will remain relatively high. This will ensure sufficiently tight monetary conditions to bring inflation to its target in 2020. The NBU's next policy moves will be contingent on whether inflationary risks materialize and whether inflation expectations improve. If the NBU sees an increase in risks to financial stability or the central bank's independence, it may halt key policy rate cuts.

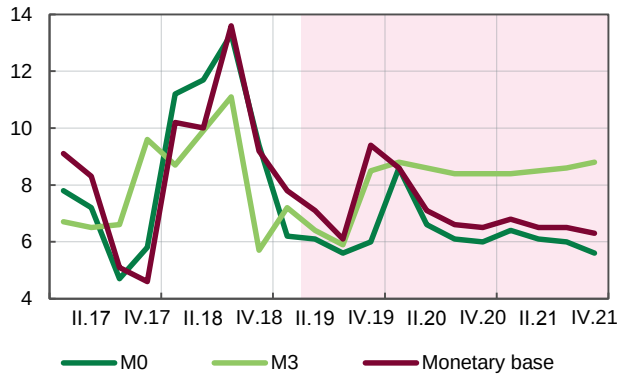
The NBU estimates that the banking system will face a liquidity deficit in late 2020. The main factors behind the narrowing liquidity will be the government's payments of external public debt over the next two years, and an increase in currency in circulation amid growing transaction demand. This will have a bearing on the NBU's main liquidity management operations – the banks' need for refinancing loans will increase, while the placement volumes of the NBU's certificates of deposit will decrease.

Figure 3.5.1. Monetary base (components), UAH bn



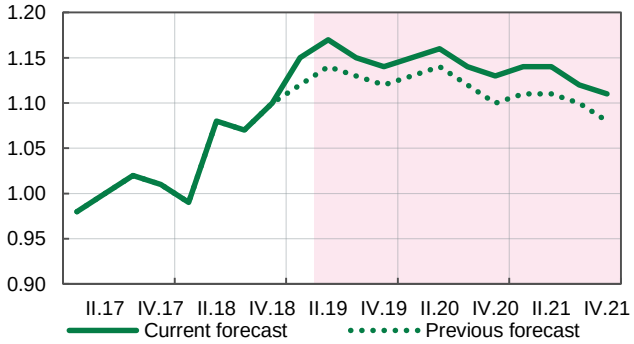
Source: NBU.

Figure 3.5.2. Monetary indicators, % yoy



Source: NBU.

Figure 3.5.3. Hryvnia REER index, IV.2016=1



Source: NBU.

The growth in transaction demand for cash will be to some extent counterbalanced by the further development of cashless payments. Cash will increase at a slower pace compared to nominal consumer expenditures, while the ratio of M0 to GDP will drop further. The NBU estimates that this ratio will amount to 9.7% in late 2019 and move down to 9.1% in 2021. Coupled with growth in the banks' correspondent accounts, this will expand the monetary base by around 9% in 2019, and by about 6% in 2020 and 2021.

High real interest rates persisting into 2019 and 2020 will encourage growth in domestic currency savings. Deposits are expected to grow at a higher pace in annual terms (9%–10%) than cash (6%). As a result, the money supply is expected to grow by 8%–9% over the forecast horizon. A resumption of lending by the banks will also support the growth of the money supply in the economy. However, the growth in lending will be modest, owing to persistently high institutional risks and a large share of nonperforming loans. Improving inflation and depreciation expectations will help decrease the dollarization of deposits and loans.

The gradual narrowing of the liquidity surplus of the banking system and the transition to liquidity deficit at the end of 2020 will be driven by an increase in cash in circulation and the significant repayments of public external debt. The government's external debt payments may be financed through government domestic borrowing, and continued FX purchases. This may be partly offset by the central bank's interventions to replenish international reserves. Under such conditions, the NBU's main liquidity management operations (either provision or absorption) will depend on the structural liquidity position in the banking system.

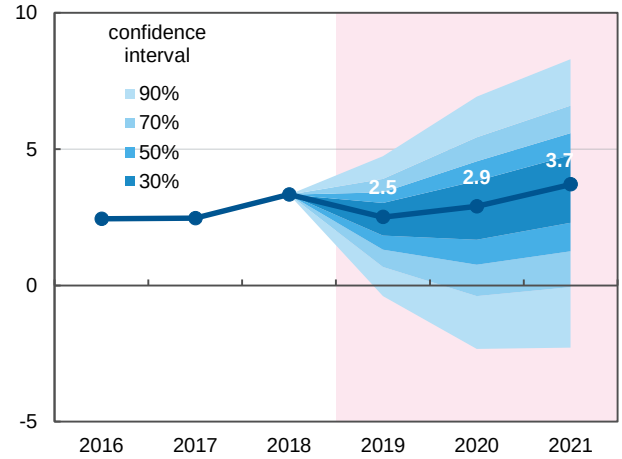
Lower inflationary pressures will be accompanied by an easing of monetary conditions, which in turn will contribute to a weakening of the hryvnia REER in 2020–2021. The key policy rate will decline in real terms from the current 10%–11% to its equilibrium level of 3%–4%[48] in 2021.

[48] Hrui A., Lepushynskyi V., Nikolaychuk S. Neutral Real Interest Rate in a Small Open Economy: Application to Ukraine // Visnyk of the National Bank of Ukraine, No. 243, 1/2018.

3.6. Risks to the Forecast

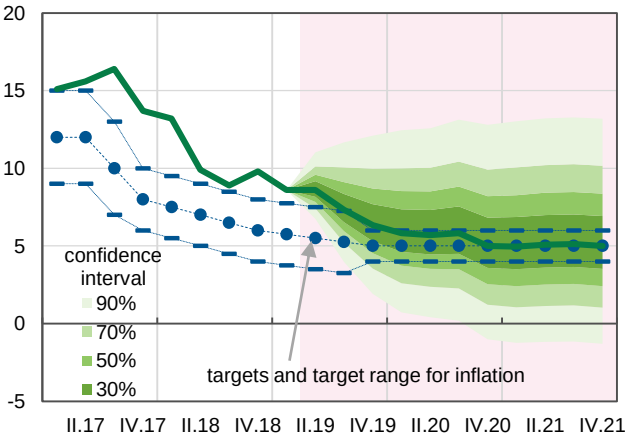
The usual increase in uncertainty during the presidential and parliamentary elections poses the main domestic risk to the baseline scenario of the macroeconomic forecast. Elevated uncertainty may affect the financial market and inflation expectations.

Figure 3.6.1. Real GDP Forecast, % yoy



Source: NBU staff estimates.

Figure 3.6.2. 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.

One of the ways in which this risk may materialize is if the parliament fails to pass the state budget by the end of the year due to the parliamentary elections and delays in the formation of a new government. The risk could also manifest itself as an increase in social spending fueled by politicians' pre-election campaign initiatives, such as significantly raising social standards – the minimum wage in particular. Above all, if the increase in social standards outpaces the growth in labor productivity, inflation expectations will go up. The uncertainty about inflation developments arises also from the government's continued administration of gas and electricity prices for households, and the timing for transitioning to market pricing.

The worsening of external conditions, which will result if the global economy goes into recession, and a decrease in world commodity prices pose serious risks to the baseline scenario. Risks of a sharper slowdown in the global economy have been on the rise recently, with a flare-up in geopolitical conflict, continued uncertainty over Brexit, a sharp slowdown in the euro area, and heightened volatility in the financial markets. Changes in external conditions will affect current account inflows, the ability of the government and the private sector to borrow from the international capital markets, and nonresident demand for hryvnia-denominated domestic government bonds.

There continue to be significant risks of an escalation of the military conflict, both in eastern Ukraine and in the Sea of Azov, and risks related to the potential introduction of new trade restrictions by Russia. These risks are having a significant impact on the country's investment climate and risk premiums, as well as on inflation and exchange rate expectations.

On top of that, substantial uncertainty remains regarding the volume of gas transit through Ukraine from 2020 onward, as pipelines bypassing the country are being built to deliver gas to Europe.

Macroeconomic forecast (April 2019)

Indicators	2016	2017	2018	2019						2020						2021					
				I	II	III	IV	current forecast	forecast 1.2019	I	II	III	IV	current forecast	forecast 1.2019	I	II	III	IV	current forecast	forecast 1.2019
REAL ECONOMY, % yoy, unless otherwise stated																					
Nominal GDP, UAH bn	**2385**	**2984**	**3559**	797	907	1107	1160	**3970**	3965	880	995	1212	1255	**4342**	4336	959	1084	1325	1383	**4750**	4744
Real GDP	**2.4**	**2.5**	**3.3**	2.4	2.6	2.5	2.5	**2.5**	2.5	3.2	3.0	3.0	2.5	**2.9**	2.9	3.2	3.3	3.7	4.4	**3.7**	3.7
GDP Deflator	17.1	22.1	15.4	10.4	9.0	8.0	8.0	8.9	8.9	7.0	6.5	6.0	5.5	6.3	6.3	5.5	5.5	5.5	5.5	5.5	5.5
Consumer prices (period average)	13.9	14.4	10.9	-	-	-	-	8.0	8.1	-	-	-	-	5.7	5.7	-	-	-	-	5.1	5.2
Producer prices (period average)	20.5	26.4	17.4	-	-	-	-	9.5	9.6	-	-	-	-	7.4	7.3	-	-	-	-	7.8	7.8
Consumer prices (end of period)	**12.4**	**13.7**	**9.8**	8.6	8.6	7.3	6.3	**6.3**	6.3	5.8	5.7	5.8	5.0	**5.0**	5.0	5.0	5.1	5.1	5.0	**5.0**	5.0
Core inflation (end of period)	5.8	9.5	8.7	7.6	7.6	6.5	5.0	5.0	5.0	4.8	4.1	3.8	3.7	3.7	3.6	3.7	3.7	3.7	3.7	3.7	3.7
Non-core inflation (end of period)	17.5	19.4	10.7	10.0	10.0	8.2	8.1	8.1	8.1	7.2	7.8	8.5	6.6	6.6	6.9	6.5	6.7	6.8	6.6	6.6	6.8
raw foods (end of period)	1.2	23.5	3.3	3.6	4.8	2.5	3.6	3.6	3.4	1.1	2.8	4.6	3.1	3.1	3.0	3.3	3.5	3.5	3.0	3.0	3.0
administrative prices (end of period)	34.6	16.1	18.0	18.7	17.0	16.8	13.9	13.9	13.6	12.8	13.3	12.4	9.9	9.9	11.1	9.8	9.7	9.7	9.7	9.7	10.3
Producer prices (end of period)	**35.7**	**16.5**	**14.2**	8.9	10.7	8.7	8.2	**8.2**	8.2	9.7	7.2	6.2	7.6	**7.6**	7.6	7.6	8.0	8.0	7.3	**7.3**	7.3
Nominal wages (period average)	23.6	37.1	24.8	19.5	15.1	12.6	10.3	14.2	15.6	11.2	11.3	10.4	9.6	10.6	10.9	8.8	8.7	8.8	8.6	8.7	8.7
Real wages (period average)	9.0	19.1	12.5	9.7	6.0	4.2	3.8	5.8	7.0	5.0	5.3	4.3	4.1	4.6	4.5	3.6	3.6	3.6	3.4	3.5	3.5
Unemployment (ILO)	9.4	9.5	8.8	-	-	-	-	8.7	8.5	-	-	-	-	8.7	8.7	-	-	-	-	8.7	8.7
FISCAL SECTOR																					
Consolidated budget balance, UAH bn	**-54.8**	**-42.1**	**-67.8**	-	-	-	-	**-61.5**	-61.4	-	-	-	-	**-67.2**	-67.2	-	-	-	-	**-73.6**	-73.5
% of GDP	-2.3	-1.4	-1.9	-	-	-	-	-1.5	-1.5	-	-	-	-	-1.5	-1.5	-	-	-	-	-1.5	-1.5
Public sector fiscal balance (IMF methodology), UAH bn	**-50.3**	**-37.0**	**-75.4**	-	-	-	-	**-61.2**	-59.6	-	-	-	-	**-66.9**	-63.7	-	-	-	-	**-72.6**	-70.9
% of GDP	-2.1	-1.2	-2.1	-	-	-	-	-1.5	-1.5	-	-	-	-	-1.5	-1.5	-	-	-	-	-1.5	-1.5
BALANCE OF PAYMENTS (NBU methodology)																					
Current account balance, USD bn	-1.3	-2.4	-4.5	-0.4	-1.2	-2.2	-1.0	-4.9	-4.5	-1.1	-1.5	-2.2	-0.9	-5.8	-5.6	-1.1	-1.7	-2.3	-1.5	-6.7	-6.2
Exports of goods and services, USD bn	46.0	53.9	59.1	14.9	15.0	15.1	15.8	60.8	61.4	14.5	14.9	15.6	16.6	61.7	62.2	15.0	15.4	16.2	16.9	63.6	64.5
Imports of goods and services, USD bn	52.5	62.5	70.3	16.9	17.9	18.7	19.2	72.7	73.2	17.6	18.2	19.3	20.0	75.1	75.7	18.2	19.0	20.1	20.9	78.2	78.8
Financial account, USD bn	-2.6	-5.0	-7.4	-0.8	-0.5	-2.4	-0.7	-4.6	-3.4	-2.0	-2.3	-0.8	-0.5	-5.6	-5.5	-1.9	-1.8	-1.2	-1.0	-6.0	-5.5
BOP overall balance, USD bn	**1.3**	**2.6**	**2.9**	**0.3**	**-0.7**	**0.2**	**-0.3**	**-0.3**	-1.1	**0.9**	**0.8**	**-1.3**	**-0.5**	**-0.1**	-0.1	**0.8**	**0.1**	**-1.1**	**-0.5**	**-0.7**	-0.7
Gross reserves, USD bn	**15.5**	**18.8**	**20.8**	**20.6**	**20.6**	**20.2**	**21.2**	**21.2**	20.6	**22.5**	**23.3**	**22.4**	**21.9**	**21.9**	21.4	**23.1**	**23.2**	**22.5**	**21.8**	**21.8**	21.4
Months of future imports	3.0	3.2	3.4	3.4	3.4	3.3	3.4	3.4	3.3	3.6	3.7	3.5	3.4	3.4	3.3	3.5	3.5	3.3	3.2	3.2	3.1
MONETARY ACCOUNTS (Qumulative since the beginning of the year)																					
Monetary base, %	13.6	4.6	**9.2**	-2.8	3.2	3.3	9.4	**9.4**	10.7	-3.5	1.0	0.7	6.5	**6.5**	6.5	-3.2	1.0	0.7	6.3	**6.3**	6.2
Broad money, %	10.9	9.6	**5.7**	-1.9	1.0	3.5	8.5	**8.5**	8.9	-1.6	1.1	3.4	8.4	**8.4**	8.5	-1.7	1.2	3.6	8.8	**8.8**	8.5
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

CD	Certificate of deposit
CEE	Central and Eastern Europe
CGO	Central Geophysical Observatory named after Boris Sreznevsky
CIS	Commonwealth of Independent States
CIT	Corporate income tax
Core CPI	Core consumer price index
CPI	Consumer price index
DGF	Deposit Guarantee Fund
ECB	European Central Bank
EU	European Union
FAO	Food and Agriculture Organization
FDI	Foreign direct investment
Fed	Federal Reserve System
FX	Foreign exchange
GDP	Gross domestic product
GFCF	Gross fixed capital formation
GVA	Gross value added
IKSO	Index of Key Sectors Output
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
NEER	Nominal effective exchange rate
NERC	The National Commission for State Regulation in the Energy and Utilities
NJSC	National Joint Stock Company
OECD	Organisation for Economic Co-operation and Development
OPEC	Organization of the Petroleum Exporting Countries
PFU	Pension Fund of Ukraine
PIT	Personal income tax
PMI	Purchasing Managers' Index
PPI	Producer price index
REER	Real effective exchange rate
Russia	Russian Federation
SAEE	State Agency of Energy Efficiency and Energy Saving of Ukraine
SBA	Stand-by Arrangement
SESU	State Employment Service of Ukraine
SFSU	State Fiscal Service of Ukraine
SSSU	State Statistics Service of Ukraine
STA	Single Treasury Account
STSU	State Treasury Service of Ukraine
TPP	Thermal Power Plant
UIIR	Ukrainian Index of Interbank Rates
US	United States of America
USDA	United States Department of Agriculture
VAT	Value-added tax
VRU	Parliament of Ukraine

bcm	billion cubic metres
bn	billion
bp	basis point
E&O	errors and omissions
EUR	euro
m	million
M0	cash
M3	money supply
mom	in monthly terms; month-on-month change
pa	per annum
pp	percentage point
qoq	in quarterly terms; quarter-on-quarter change
RHS	right-hand scale
RUB	Russian ruble
sa	seasonally adjusted
thsd	thousand
UAH	Ukrainian hryvnia
USD	US dollar
yoy	in annual terms; year-on-year change
ytd	year-to-date