

Macroeconomic Forecast

April 2021

Table of Contents

| | |
|--|----|
| Introduction | 3 |
| Results of 2020 | 5 |
| Economic activity | 5 |
| Inflationary development | 10 |
| Labor market | 13 |
| Fiscal policy | 14 |
| Monetary policy | 15 |
| Balance of payments | 17 |
| Forecast for 2021–2023 | 17 |
| Consensus of external forecasts | 17 |
| Assumption of the KSE forecast | 18 |
| Baseline scenario | 20 |
| Scenario for increasing the inflow of foreign investment | 22 |
| Scenario of expensive energy | 22 |
| Scenario “IMF refusal” | 23 |

Introduction

World. The long-awaited elimination of the coronavirus pandemic by vaccination is postponed until at least the end of 2021. Accordingly, quarantine restrictions will be canceled slowly and in small steps that will retain the recovery after crisis events occurred in 2020. The EU countries' recovery from the crisis will be the slowest, the growth rates projected by the International Monetary Fund and European Central Bank can be interpreted as those that mean recession in the EU will be over not earlier than by the end of 2023. European countries, the United States, as well as others will try to accelerate their recovery from the crisis due to continued support in terms of both fiscal policy¹ and monetary policy, up-ward movement of interest rates will begin not earlier than the end of 2021, quantitative easing will last at least until mid-2022. The expansionary policies of the world's leading countries are already reflected in commodity markets, the prices at which have been growing significantly since the end of 2020 in anticipation of growing demand and the depreciation of the US dollar.

Economic growth in Ukraine. The major part of growth will occur as process of closing the recession cycle caused by the coronavirus crisis. Apart from that, the economy will grow at a low rate of about 3.5-4.0 %. Only reforms and massive investment can push the economy out of the zone of moderation. The growth of prices for basic export goods, which is ahead of the increase in prices for energy, will become the first factor in the recovery of Ukraine's economy in terms of time. Higher exports and fiscal stimulation will help revive domestic consumption. Starting from the second half of this year, the projected further rise in oil and gas prices will boost inflation and reduce the positive effect of terms of trade. The decline in private investment in 2020 will slightly limit economic activities, the negative effects of which will be contrasted with the positive results of the Large Construction Program. In general, the recovery will be rapid — in 2021, GDP will grow by 4.7 %. Next year, moderate fiscal policy and a slower recovery of the EU economy will lead to low (2.7 %) growth rates. It is expected that the increase in foreign investment inflows in 2021–2022 will cause a stronger impact in 2023–2024, GDP will grow at a rate of 3.7 %.

Driving branches. The crisis has identified sectors that will be the most stable and promising ones in the near future — agriculture, mining and metallurgy, chemical industry and information technologies. Although the results of these sectors show a high potential even without any state support, the Government, for example, strengthens direct support for agriculture, in particular, by easing tax conditions (reducing VAT to 14 %). An additional stimulus could be the promotion of land reform, but it is obvious that this issue will be dragged on for months. A high human potential and skillful use of the tax system will contribute to the continued rapid development of IT, support through special credit programs, such as “5-7-9”, will lead to the development of the product part of the industry and, accordingly, higher incomes. Metallurgy and mining will develop due to a higher external demand and relatively low prices for energy, but their positive effect will be exhausted by the end of 2021.

Labor market. The risk for resumption of business activities may come from an increase in labor migration to the EU and, consequently, the need to raise wages due to reduced labor supply, but this should not be expected until the recovery of economic activities in the European countries to potential levels. Raising of the minimum rate of remuneration will increase enterprise costs and cause raise in output prices, but higher employees' incomes will support demand.

Fiscal policy. Continuation of infrastructure development programs and insufficient growth of state revenues will create the need for additional borrowings in 2021, and, therefore, high actual rates for

¹ The US aid package is 1.9 trillion US dollars.

bonds of an internal state loan (OVDP). The budget deficit in 2021 is set at a level of 5.5 % of GDP. Substantial borrowings are expected to continue in order to support economic development programs, but with a course to gradual normalization of the deficit, as debt service payments is likely to increase due to GDP warrants.

Exchange rate and balance of payments. Attractiveness of government securities for external investors will stimulate the inflow of foreign capital. Together with export earnings, the inflow of FX will contribute to a slight strengthening of the exchange rate in the first half of 2021. Decrease in the exports growth rate and recovery of imports will change the behavior to a moderate devaluation of up to 3 % per year. Thus, by the end of 2023, the hryvnia will reach a level of 31.0 hryvnias per US dollar.

Cooperation with the International Monetary Fund. According to our assessment, the probability of recovering the program with the International Monetary Fund is low. The government focuses mainly on direct support of branches of the economy and their structural transformation, maintaining a high level of budget deficits and paying less attention to judicial and anti-corruption reforms, thus shifting the focus on the measures intended for near future, as compared to the IMF. On the other hand, international reserves are sufficient to service debts in 2021, and the level of free liquidity in the world will remain high that creates opportunities for market borrowings.

Inflation and monetary policy. Growth of energy and food costs will lead to a short-term surge of prices — in 2021, inflation will increase to 7.7 %. Given the relatively inflation-neutral effects of exchange rate fluctuations, the transience of supply shocks and the continued recession, the National Bank will increase the rate rather slowly, and it will reach neutral levels only at the end of 2023. There is a possibility that, in our conditions, maintenance of high money supply (26 % growth in 2020) as a mean of stimulating economic activity will only accelerate inflation, but it is likely that the process will be distributed evenly over the forecast horizon, and inflation will approach the target level already in 2022.

Results of 2020

Economic activity

The service sector was most struck by the coronavirus pandemic scope, in particular, the value added of the hotel industry and sector of other services in 2020 fell by record 29 % and 23 %, respectively. Restrictions on movement, in particular, the almost complete stoppage of transport in the spring of 2020 led to a 16% reduction in value added in the transport sector.

However, the reasons for the decline in activity in the service sector were not only forced restrictions, but also other consequences of the pandemic, primarily the deterioration of income expectations. This affected the consumption pattern and generally reduced spending on leisure and recreation, as well as on long-term commodities.

The crisis hit not only the services sectors, but in other sectors, in particular, in industry, energy and agriculture, rates of decrease were significantly smaller.

Among the industries that have kept growing, it is worth noting construction. Starting from the second quarter, the implementation of the state program entitled Large Construction that consists in the reconstruction and construction of new infrastructural assets. As a result, the volume of production of engineering structures in 2020 increased by almost 15 %. According to the announced plans of the Government, within a period of 2021–2022, the active development of state infrastructure will continue.

There was a decline in the construction of residential and non-residential buildings. This can also be seen as a statistical effect, as the reform of the State Architectural and Construction Inspection of Ukraine led to the cessation of the supply of data on new facilities, as well as hampered the obtaining of permits and commissioning of new facilities. Although housing construction in a third of Ukraine's regions continued to grow, in general, the indicators decreased by 19 %. Worse income expectations reduced the housing demand. However, in the second half of the year, housing construction slowly

Fig. 1. Change in gross value added in the sectors of the economy in 2020

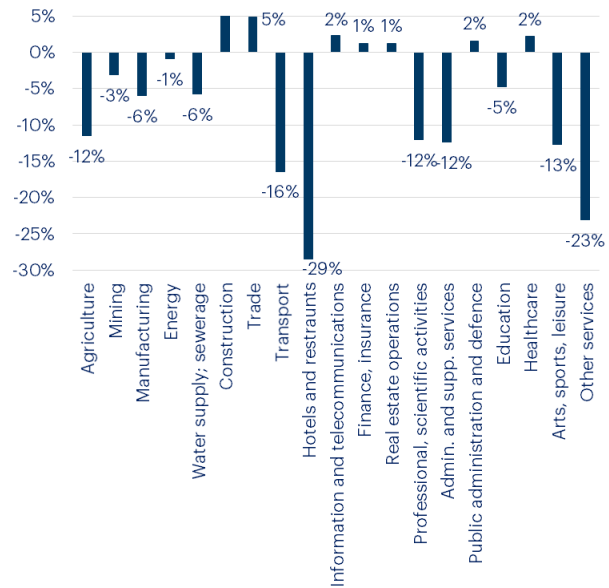
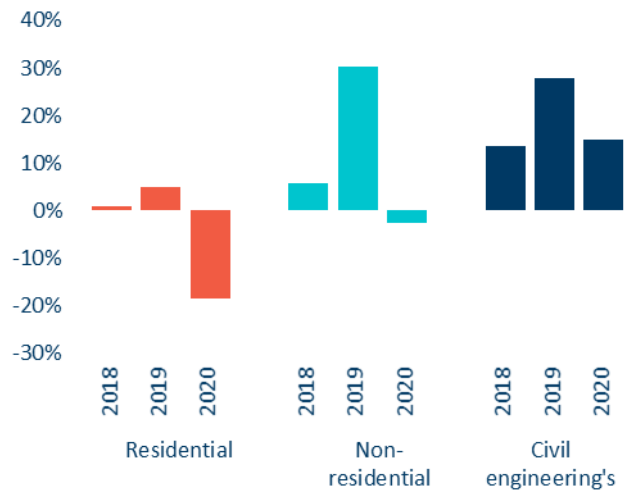


Fig. 2. Dynamics of construction output



emerged from the crisis (in the 4th quarter, it grew by 4.3 % q-o-q, excluding the seasonal factor). Although construction companies, according to the State Statistics Service of Ukraine, remained pessimistic, their activity in 2021 should recover significantly. In particular, the population's interest in the primary housing market should increase due to further growth of income and affordable mortgages — in the case of launching a new government mortgage program (with an interest rate of 7% per annum).

In 2020, industrial production decreased by 5.2 %. At the end of the year, there was already an increase y-o-y (by 4.8 % in December), but this was due to a low base of comparison — some industries were in crisis since 2019. Most domestic industrial producers will have to significantly optimize their activities to compensate for the losses of the previous year.

Manufacturers of general investment products experienced a significant reduction in activity in 2020, while the output of general investment products and means of production in the construction industry decreased the most. A look at the seasonally adjusted indices suggests that the recovery in the production of investment goods was virtually stopped at the level reached in mid-2020. Then the dynamics of output in these industries will depend on the rate of restoration of investment demand. The funds accumulated on the accounts of enterprises (Fig. 11) create an opportunity to intensify investment in the case of normalization of business expectations.

A relatively deep decline by the middle of the year was observed in industries that produce raw materials and other intermediate goods. These goods dominate the aggregate output, so the rapid recovery of domestic and external demand for such products has led to better conditions for domestic industry compared to many developed economies. Restoration of world demand in 2021 will contribute to further acceleration of domestic exports.

At the end of 2020, the external situation for the mining and metallurgical complex significantly improved that provided metallurgists, ore and coke producers with an opportunity to increase their output. In the

Fig. 3. Dynamics of construction of transport facilities

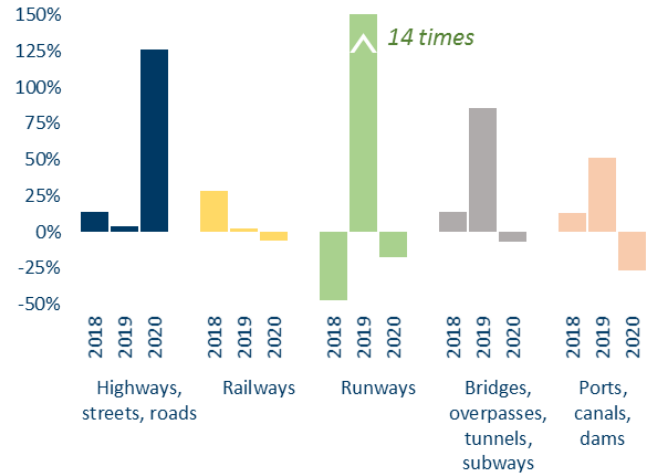


Fig. 4. Industrial production

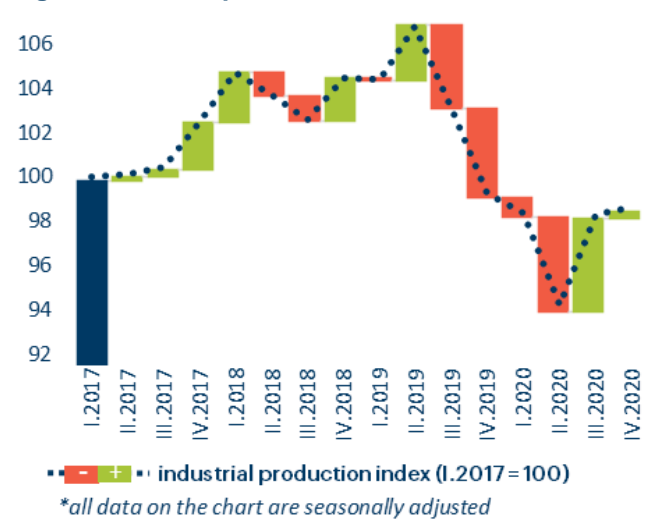
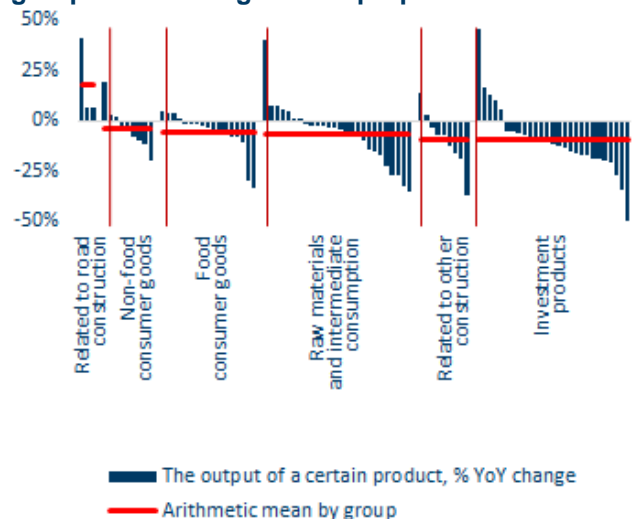


Fig. 5. Output for individual industrial products grouped according to their purpose*



*the grouping was performed according to the estimates of KSE experts

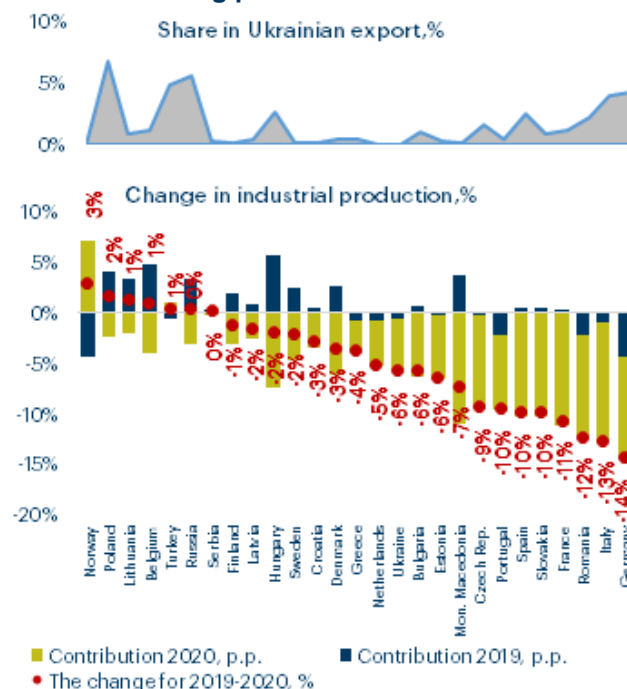
worst case, prices for ore and metals will remain at the level reached, but there is a probability of further upward movement that will stimulate the production of relevant products in Ukraine.

Under conditions of growing incomes of the population, producers of consumer goods experienced a relatively small reduction in output in 2020. However, the industries that supply products for road construction — cement, bitumen, asphalt, a wide range of quarry products, chemicals, etc. — also managed to increase their output.

The grain and legume harvest in 2020 was 65.4 million tons, due to worse weather conditions, it was almost 10 million tons less than last year. High rates of crop production profitability in the past contributed to the investment of farmers in previous years. However, over the last few years, profitability has been declining, and the 2020 harvest was likely only to exacerbate this trend. In addition, taking into account the uncertainty associated with the launch of the land market on 1 July 2021, a decline in investment activity in the agricultural sector is likely to happen. In particular, in January–September 2020, investments of agricultural enterprises fell by 43.2% y-o-y, despite a significant level of funding from program “Affordable Loans 5-7-9 %” (in 2020, 55 % of loans under this program were issued to the segment of agriculture).

In animal husbandry, the crisis expressed by the rapid decline in the cattle population, has been going on for many years. In 2020, the following factors gave impetus to the deepening of the crisis: Firstly, as a result of reducing the consumption of restaurant services by the population, a fall in demand for services of public catering facilities took place; secondly, the reduction of the crop led to the rise in prices of the feed base and even more deteriorated the negative indicators of profitability in the animal husbandry sector; finally, during 2020, simultaneous increase in imports and decrease in exports of meat and edible offal was observed. Another important factor forming farmers' expectations is the approach of the launch of the land market that is likely to lead to further concentration of

Fig. 6. Industrial production in Ukraine and some countries-trading partners in 2019–2020*



*for European countries, except for Ukraine and Russia, the change in industrial production in January–November 2020 compared to the corresponding period of the previous year is shown

Fig. 7. Gross harvest of individual crops in 2019–2020, million tons

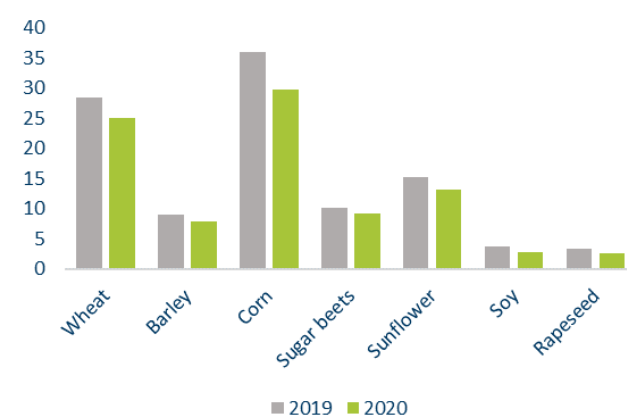
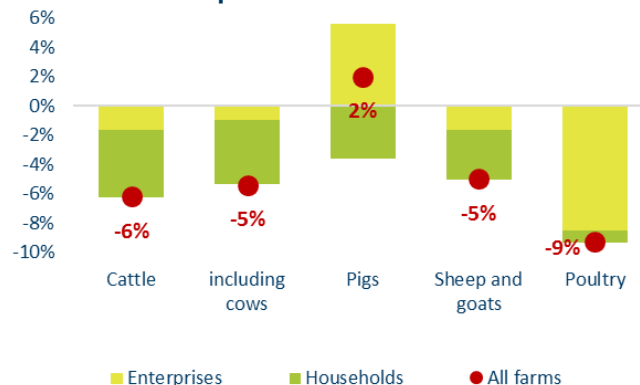


Fig. 8. The number of live-stock animals at the end of 2020 compared to that at the end of 2019



resources on more profitable crop production. In 2020, the growth of livestock was observed only in pig breeding, in particular, due to the recovery of external demand.

Retail trade has been growing almost steadily since 2016. In the second quarter of 2020, strict quarantine measures and caution of the population restrained the consumer activity of the population (see Fig. 10). However, later, demand recovered and the level of retail trade returned to the previously formed trend. As a result, the total retail trade turnover increased by 8.4 % over the year.

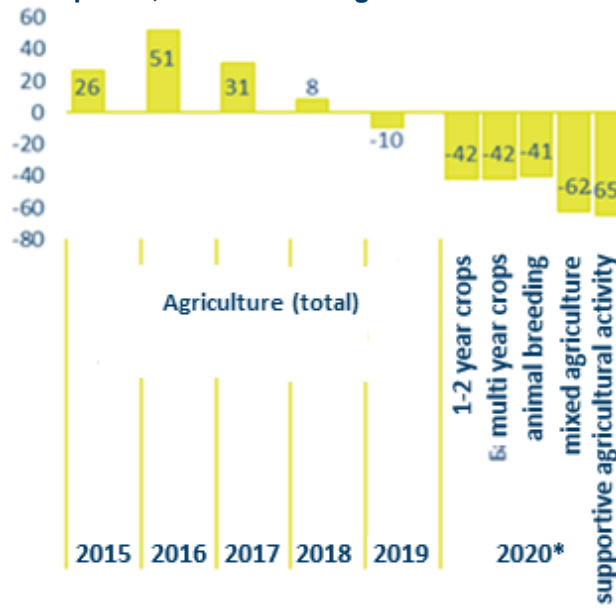
Key support to consumer demand was ensured by the growth of wages and salaries by 10.4 %, as well as government measures aimed at social support for the quarantine period. Rising incomes in conditions of limited mobility have increased the population's propensity to save money (ref. to Fig. 11), in particular, in the form of bank deposits. In 2021, household incomes will continue to grow, and previously accumulated savings will turn into additional demand, if the pandemic end.

There are a number of factors that gave a significant boost to retail sales last year, but, in 2021, they will have the opposite effect. In particular, in the previous year, the possibility of foreign tourism virtually disappeared that redirected expenses on traveling to domestic destinations. In the event of reduced risks of the pandemic this year, the household budget is supposed to be revised in favor of traveling outside Ukraine.

Both in 2020 and in previous years, the growth of retail trade was quite uneven in terms of regions (ref. to Fig. 12). Until 2019, the development of retail trade in poorer regions was apparently limited by labor migration — the population decline hampered the development of trade. On the other hand, as a result of such migration, labor supply was reduced that increased the rate of wages growth in the relevant areas. In 2020, migration processes slowed down, and the rates of wages growth correlated with the productivity of the regions (ref. to Fig. 13).

The passenger transport sector, as the most vulnerable to the epidemiological crisis,

Fig. 9. Capital investments of agricultural enterprises, % annual change



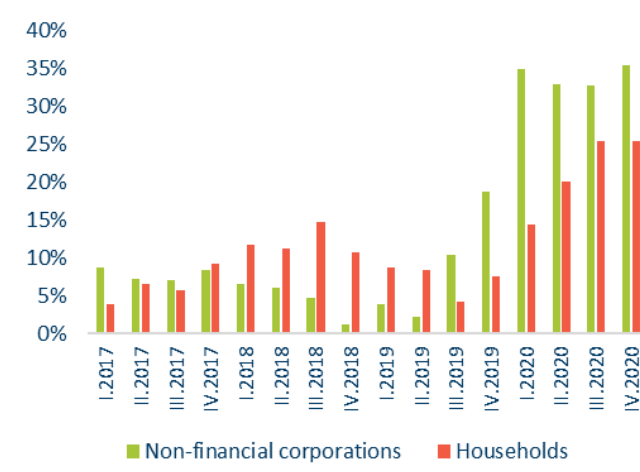
*for January–September 2020

Fig. 10. Dynamics of retail trade



*all data on the graph are seasonally adjusted

Fig. 11. Deposits by non-financial corporations and population, % annual change



remained stagnant at the end of the year. As expected, the accelerated spread of the COVID-19 virus affected the mobility of the population and, accordingly, passenger transportation at the end of the year. In April, passenger turnover was only 5 % compared to the pre-crisis level, and at the end of the year it barely reached half of that level.

In 2020, volumes of cargo turnover decreased by 14.3 %. Turnover of transportation by pipelines declined due to a less volume of gas transportation against the background overfilled underground storage facilities in the EU and Ukraine, but cold January-February 2021 and the resumption of industrial demand are likely to stimulate services of gas transmission by the domestic pipeline. Road freight turnover declined due to the fall in foreign trade with the EU and decline in agrarians' demand for transport services due to lower yields. These factors also is expected to change the direction of influence in 2021. The reduction in another significant volume — rail freight turnover — was also explained by a decrease in transportation of grain crops, as well as the crisis in the domestic coal industry that was affected by a decrease in heat generation. As for industry, significant support for the transport sector was provided by the Large-Scale Construction Program.

Fig. 12. Heat map of retail trade growth for 2016–2020

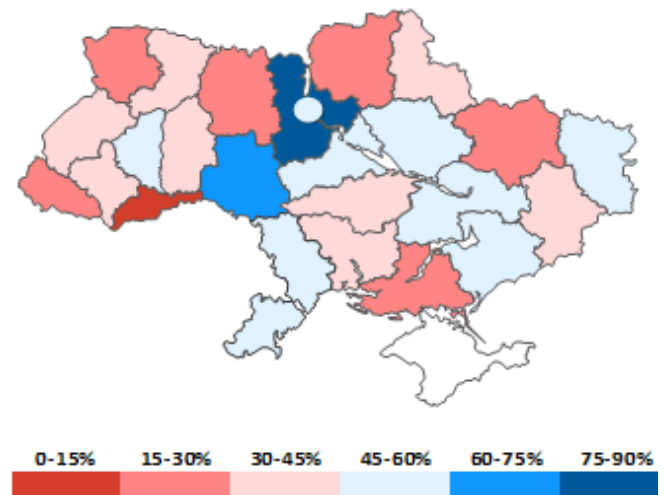


Fig. 13. Change in salaries and wages by regions and GDP per capita in the respective regions

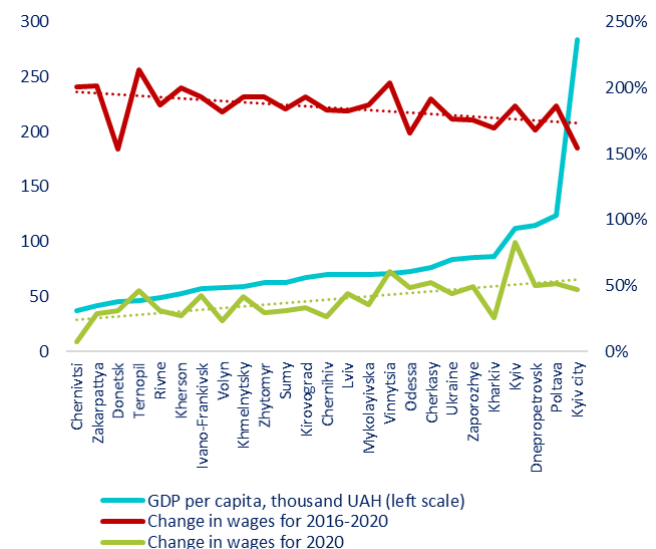


Fig. 14. Transport: passenger turnover

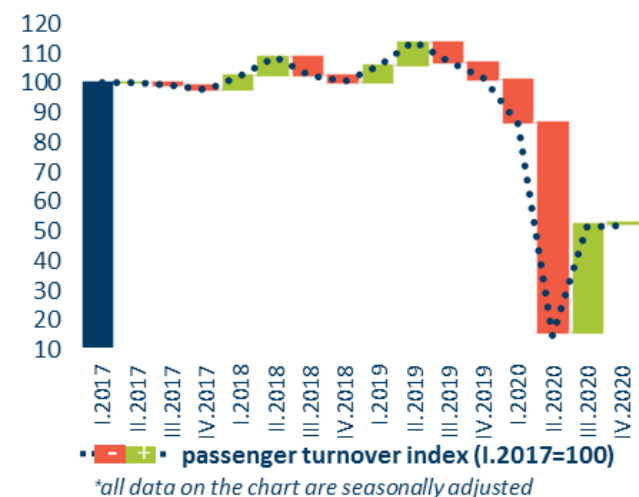
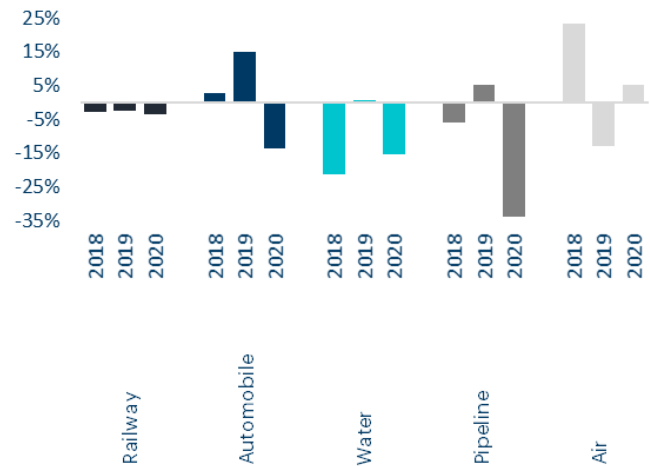


Fig. 15. Transport: cargo turnover



Inflationary development

2020 was a year of a low consumer inflation for most countries. Falling of prices in commodity markets reduced the cost of production of certain consumer goods. Quarantine restrictions limited demand for some services that for the most part restrained rise in their prices. Finally, the population began to save more and changed their views on the usefulness of certain goods, and thus there was a redistribution of inflationary pressure within the consumer basket. At the end of the year, these factors were almost leveled off as the world slowly returned to normal life, the adjustment was observed at commodity markets, and, thus, consumer prices moved upward.

Thus, consumer inflation in Ukraine fluctuated below the target range of the NBU almost throughout 2020 (5 % ± 1 p. p.), but, at the end of the year, the rate accelerated up to 5.0 % (the absolute target of the NBU), and, at the beginning of the new year, it accelerated up to 6.1 % year-on-year.

Nevertheless, consumer inflation in Ukraine had its own peculiarities. In the consumer basket of Ukrainians, the main place (42 %, ref. to Fig. 19) is occupied by food products that is not typical for developed economies and many developing economies. Thus, inflation in Ukraine strongly depends on the performance of agrarians. Low yields in crop

Fig. 16. Annual consumer inflation in some countries

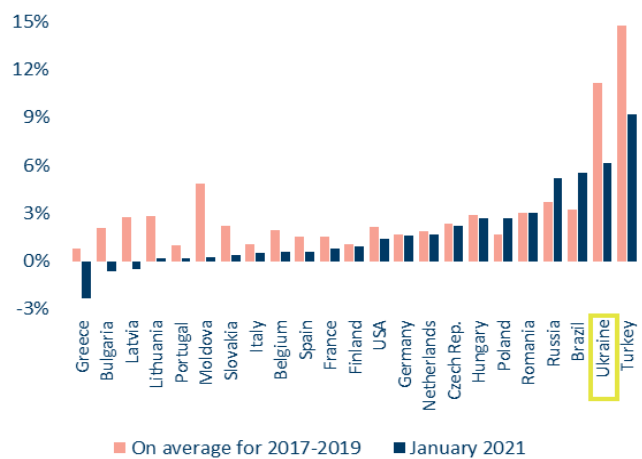
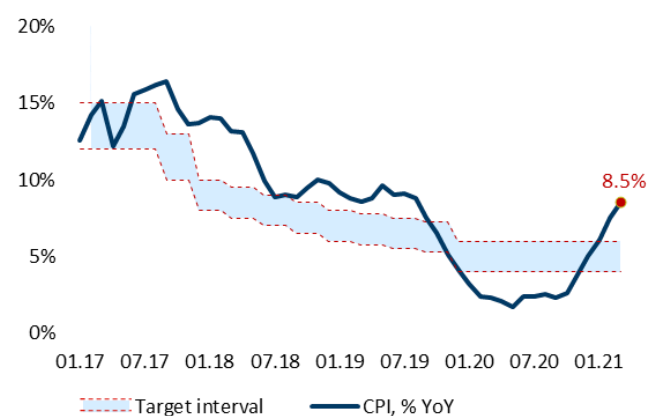


Fig. 17. Annual consumer inflation and the target range of the NBU



production in 2020 with a small time lag began to move up prices for a wide range of food products. As of January, sugar, eggs and sunflower oil were by 55 %, 52 % and 26 % (respectively) more expensive than a year ago. At the same time, the rise in the price of eggs was also associated with worse harvest, as it led to a sharp rise in the price of animal feed basis. In the case of favorable conditions for crop production, closer to the end of 2021, we can expect correction of prices for products with extreme inflation values.

Inflation of non-food goods and services mostly had a common explanation with other countries. In particular, the above-mentioned recovery of world prices for energy products has dramatically changed the price picture among housing and communal services — after a significant decline at the middle of the year, those prices were among the leaders by their growth (18 % year-on-year). A wide range of services became more expensive, but due to the large weight of consumption, gas and electricity inflation became most noticeable (35 % and 37 %, respectively).

The rise in gas prices for household consumers could have been much higher, if not for the administrative measures of the Government that practically froze the price by the end of the heating season at a level of 6.99 hryvnias per cubic meter. However, in the future there are high risks of a sharp rise in the price of gas for the population that is associated with the return to market pricing mechanisms in this market. Forward prices for gas on the TTF hub indicate that there are expectations that prices in Europe will remain high for the next two years. In addition, the projected recovery of global industry in 2021 will not allow prices to fall significantly in the middle of the year, when a usually low demand causes a correction in gas prices. Thus, according to our estimates, in the absence of new mechanisms to curb gas prices for the population, in the short term, there is a potential for a gas inflation of up to 50 % (Fig. 21).

In 2020, there was a surge in demand for certain goods and services for medical purposes. In addition, due to increased risks,

Fig. 18. Contribution to annual consumer inflation, p. p.

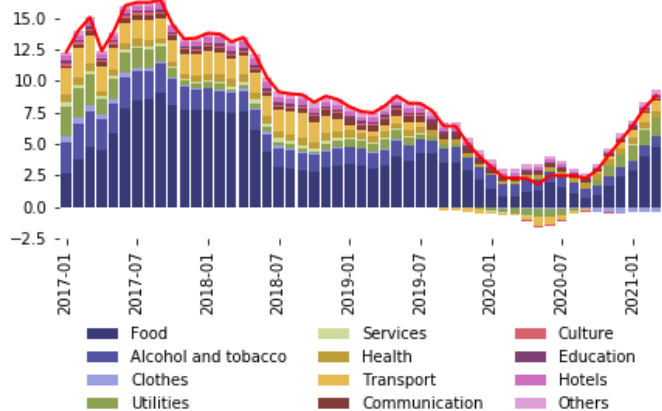


Fig. 19. Weight structure of the consumer basket for calculating inflation in January 2020 and 2021

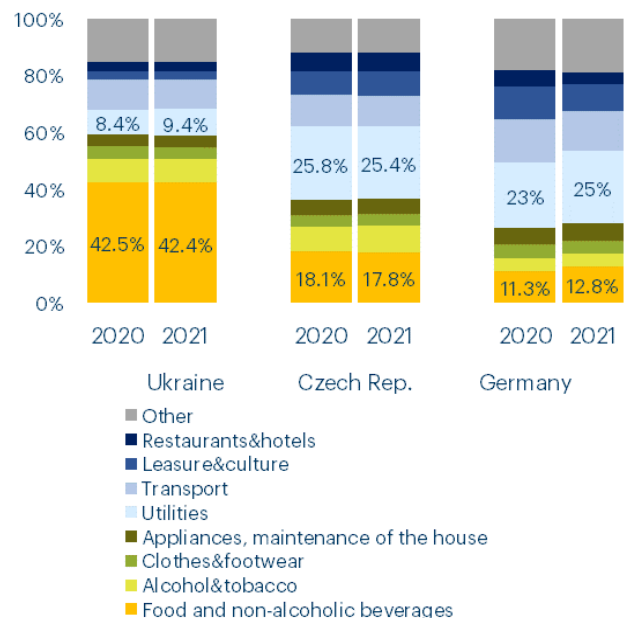
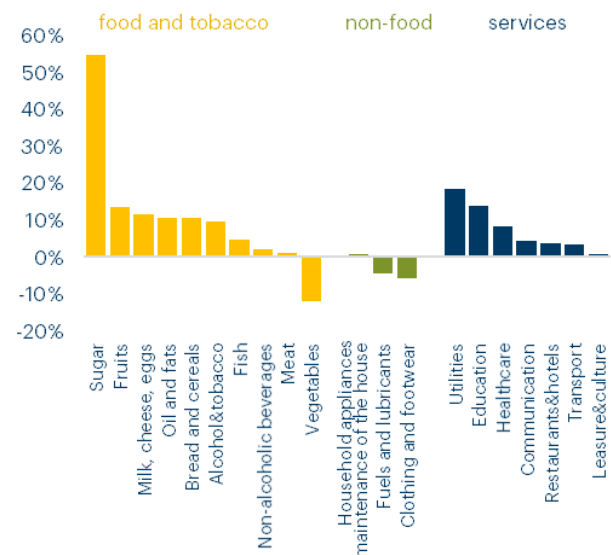


Fig. 20. Annual change in prices for certain product groups in January 2021



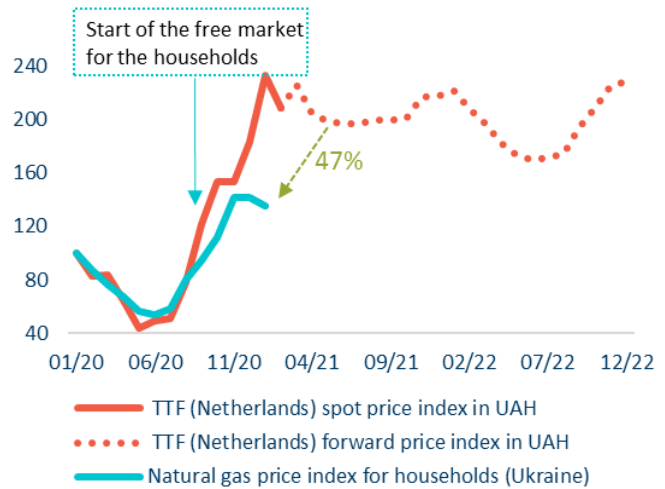
wages of health care workers grew the most in the economy (by 54 % in by 2020). As a result, prices for services and goods in this sector as of January 2021 grew by 8.2 % year-on-year.

The revision of the consumption structure at the personal level caused by personal caution and quarantine restrictions led to a sharp drop in demand for services. The businesses of the service sector found themselves in a situation where demand was not enough even to cover fixed costs that forced them to rise prices. The hotel and restaurant business was practically the only area that emerged from the difficult situation due to lower wages.

In the new living conditions, households spent less on clothing and footwear, so sellers of such goods were forced to lower prices in order to attract customers — the seasonally adjusted index of the cost of clothing and footwear moved almost steadily down, and reduction of prices was 5.7 % year-on-year. If we assume a rapid and successful vaccination in 2021, the population will be able to return to normal consumer behavior that means a resumption of demand and prices for clothing and footwear.

In the regional context, the highest inflation was observed in the Luhansk region, Kherson region, and Cherkasy region (Fig. 23). Prices in the Vinnytsia region, Ternopil region, and Zhytomyr region grew at the lowest rates. Regional differences in inflation were mostly due to the dynamics of prices for fruits and vegetables.

Fig. 21. Indices of prices for natural gas on the European stock exchange and in Ukraine (01.2020 = 100)



Source: KSE calculations based on data provided by the State Statistics Service of Ukraine and Powernext.

Fig. 22. Seasonally adjusted price indices, 01.2020 = 100

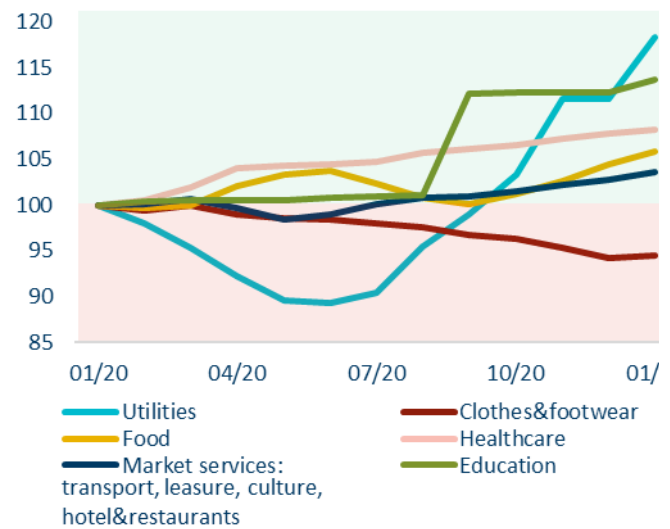
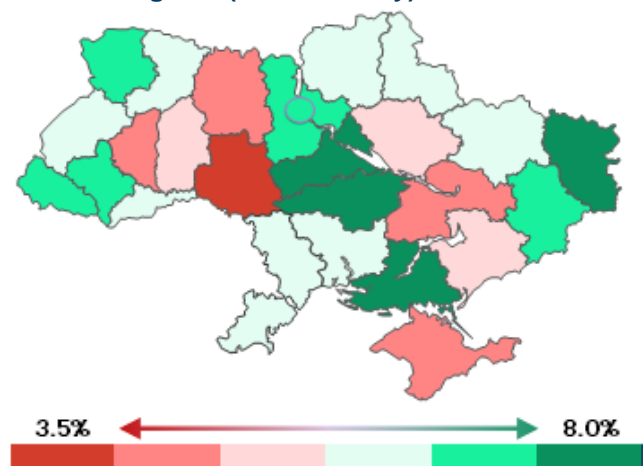


Fig. 23. Heat map: annual consumer inflation in different regions (as of January)



Labor market

Drop in overall economic activity, periodic quarantine restrictions led to an increase in unemployment to 10 % (seasonally adjusted indicator as of the 3rd quarter of 2020).

The number of the unemployed (seasonally adjusted) grew even in the third quarter, when the economy was in the process of recovery, and, therefore, some employers laid off workers on the background of unjustified expectations of a rapid and complete correction in demand for their products and services. And again, the unemployed remained inactive, they were in no hurry with the search for job against the background of the sustained pandemic.

A feature of the crisis in 2020 was the simultaneous release of labor force and rise in wages. There is no doubt that certain contribution was made by the increase of the minimum wage by the Government that occurred twice a year and amounted to a total of 20 % (at the beginning of 2021, the minimum wage was increased by another 20 %) . In addition to increased wages, it is worth to note the growth of some other incomes, in particular, social protection of the unemployed, retirees was strengthened. At the end of the year, the Government provided a one-time financial assistance in the amount of 8,000 hryvnias to employees, who lost part of their salaries due to the introduction of quarantine restrictions. Surcharges for medical workers for work on the COVID-19 liquidation were also introduced. High risks for certain categories of health workers and growing demand for medical goods and services explained the largest increase in wages in the health sector (Fig. 26).

A specific impact of the coronavirus crisis explained the dynamics of wages and salaries in other sectors. Some sectors were forced to suspend their activities, and some sectors even increased their activities. The risk of falling ill in case of frequent physical contact could be the reason for higher wages and salaries in certain service sectors. On the other hand, employers in the air transport sector and hotel and restaurant sector were

Fig. 24. Unemployment rate according to the methodology of international labor organization (in % of the labor force aged from 15 to 70 years)



Fig. 25. Rates of growth of the average wages and salaries

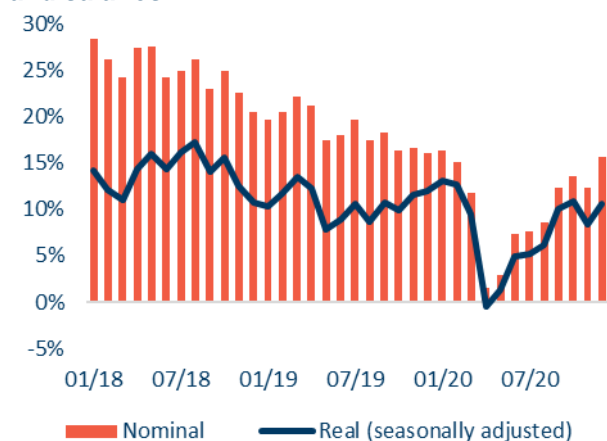
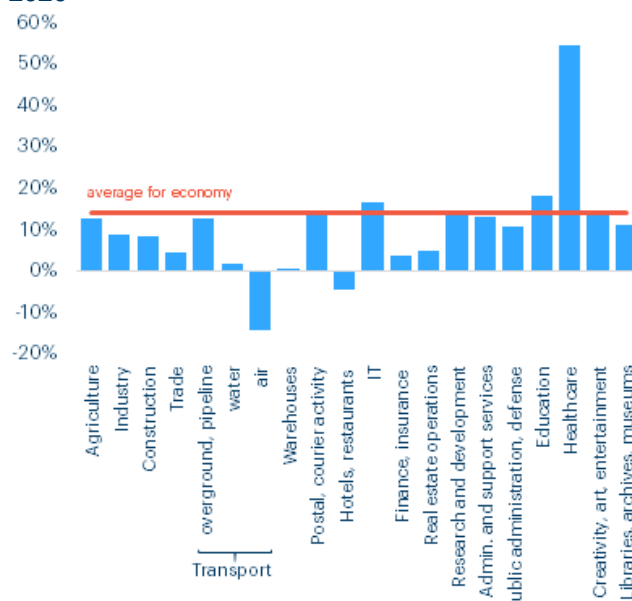


Fig. 26. Annual change in wages and salaries by sectors of the economy in the fourth quarter of 2020



the only ones that were forced to reduce wages and salaries.

Fiscal policy

Last year also became the time of challenges and opportunities for fiscal policy. The drop in economic activity reduced budget revenues, and the government increased expenditures to stimulate the economy, hence the deficit grew to 5.3 % of GDP.

The response to the spread of coronavirus in Ukraine was the creation of a special coronavirus fund to cover the expected high health care costs. As it turned out, the need for funding for medicine was greatly exaggerated, the funds were redirected to programs aimed at stimulation of the economy, in particular, infrastructure projects. At the same time, the Government resorted to business support programs, such as compensation for part of salaries and wages due to the stoppage of enterprises' activities, portfolio guarantees (the state covered up to 80 % of the loan), payments for individual entrepreneurs and the unemployed, etc. These measures required large-scale current expenditures that, based on results of 2020, were by 17 % higher than in the previous year.

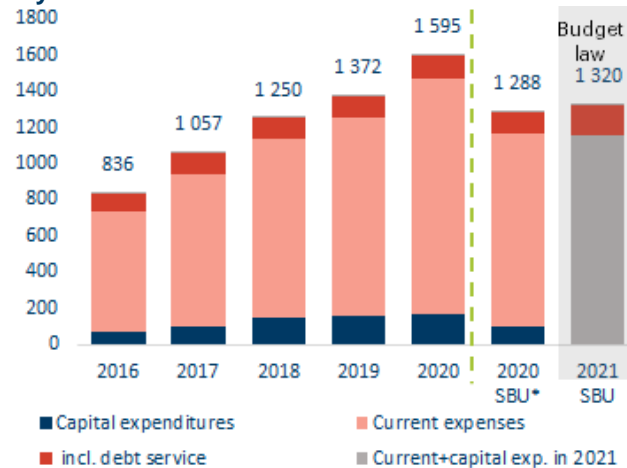
Capital expenditures were reallocated to infrastructure development projects, they generally increased less than current ones (by 8 %), and record expenditures on renovations of roads and man-made facilities became the largest part of them.

The economic downturn reduced some tax revenues, but the moderate devaluation of the hryvnia and more efficient administration of tax revenues made it possible to compensate for the losses. As a result, the consolidated budget revenues increased by 7 %.

The deficit increased from 81 billion hryvnias in 2019 to 217 billion hryvnias in 2020. In relation to GDP, the growth was also significant — from 2 % to 5.3 %, respectively. The scale of the coronavirus crisis and crisis-fighting is reflected by the indicator of the primary balance that changed in recent years from a surplus to a significant deficit (Fig. 29).

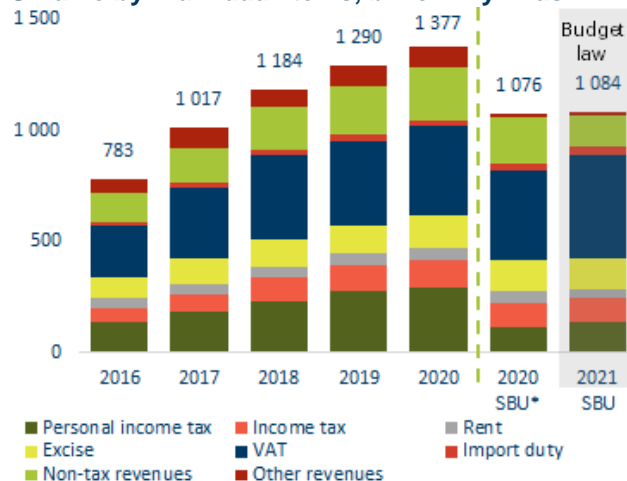
Respectively, the high deficit led to an increase in public debt — its level, including

Fig. 27. Expenditures of the consolidated budget of Ukraine by economic classification, billion hryvnias



*State budget of Ukraine

Fig. 28. Revenues of the consolidated budget of Ukraine by individual items, billion hryvnias

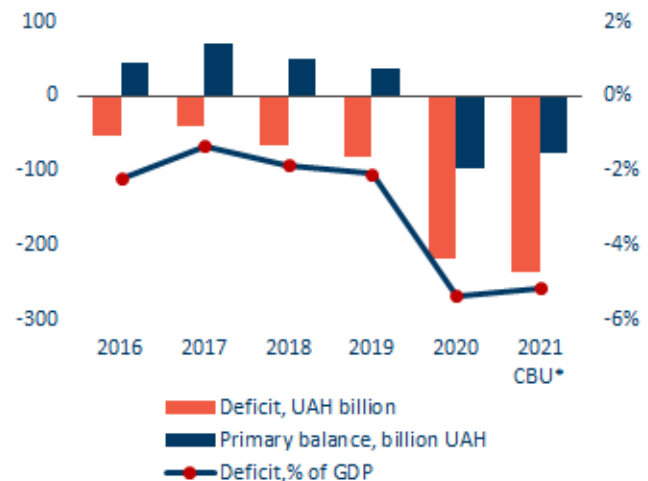


*State budget of Ukraine

the guaranteed one, rose at the end of 2020 to almost 63 % less guaranteed level amounted to 56.8 %.

Taking into account adopted Law “On the State Budget of Ukraine for 2021”, the priorities of the budget policy in the current year have not changed significantly compared to last year. The Coronavirus continues to spread, and the only way to stop is vaccination that requires significant expenditures for purchasing vaccines and provision health care services in general. It is expected that expenditures on medicine will increase by 36.8 % compared to 2020. Measures aimed at supporting areas of the economy vulnerable to the current crisis are still relevant. Expenditures on the ongoing program of road infrastructure development will remain virtually unchanged.

Fig. 29. Balance of the consolidated budget of Ukraine



*Consolidated budget of Ukraine

Monetary policy

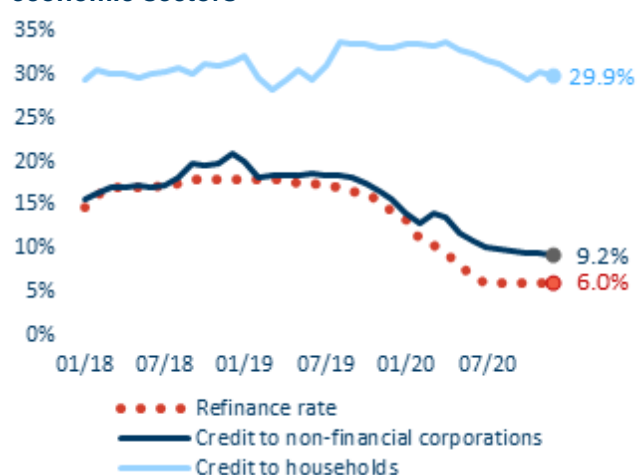
The inflow of foreign currency (partly due to government external borrowing) and the expansion of the Government's domestic credit accelerated the increase in hryvnia issuance. Thus, as of January 2021, the amount of cash in circulation was by 39 % higher than a year ago. Broad money supply (M3) increased by 25% year-on-year. This can be viewed as an inflationary risk, but the repayment of external debt in 2021 should partially narrow the monetary aggregate.

The growth of monetary aggregates was fully consistent with the change in the NBU's monetary policy (in the form of a key policy rate) from a tight one in 2019 to a stimulating one in 2020. For several months (within a period from December 2019 to June 2020), the policy rate was reduced from 13.5 % per annum to 6.0 % per annum — and it remained at this level from the middle of 2020. A low inflation has also strengthened confidence in the need to lower rates. However, banks' lending rates were virtually unresponsive to the change in the policy, while deposit rates fell well below the discount rate by reflecting an increase in risks of lending and larger deductions in provisions to cover risks and

Fig. 30. Monetary aggregates, % annual change



Fig. 31. Interest rates on new loans granted to economic sectors



losses of loans of past periods. Thus, interest rates on consumer loans fell only to about 30 % per annum, while interest rates for businesses were more sensitive to monetary easing — they fell to about 9 % per annum.

In 2020, the hryvnia depreciated against the US dollar and the euro after a significant strengthening in 2019 that was also consistent with the easing of monetary policy. At the beginning of 2021, the hryvnia devalued against the US dollar by 17 % compared to the beginning of 2020. Devaluation of the latter also led to a greater devaluation of the hryvnia against the euro — by 28 %. By allowing the exchange rate to move flexibly, the National Bank of Ukraine intervened into the foreign exchange market rather sparingly, except for March last year, when mood of panic threatened to turn into an excessive devaluation. According to our estimates, the depreciation in 2020 returned the actual effective exchange rate of the hryvnia to the equilibrium value.

However, lower lending rates failed to contain the decline in demand for loans. At the end of 2020, bank loans to businesses and households declined at the same rate — about 3 %.

Under conditions of uncertainty about the future, economic participants increased their propensity to save. All sectors, with the exception of the general government sector, increased their deposits in the bank accounts. At the end of 2020, corporate and retail deposits of the population were by about a quarter higher than last year. Deposits of individual entrepreneurs increased significantly (by 64 %), partially explained by the growing number of such entrepreneurs.

Fig. 32. Exchange rates of the hryvnia to the US dollar and euro



Fig. 33. Volumes of bank loans granted to economic sectors, billion hryvnias

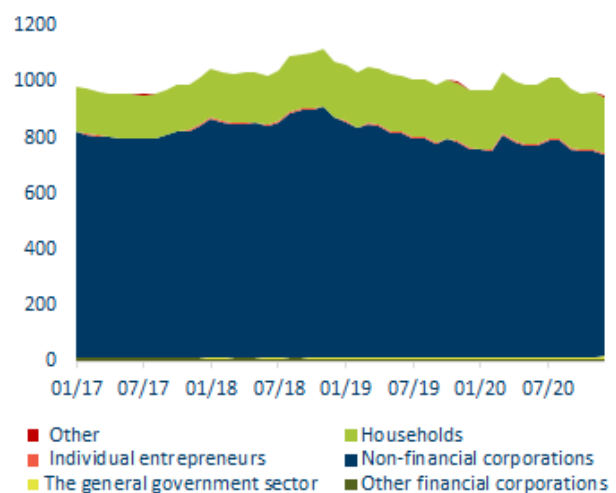
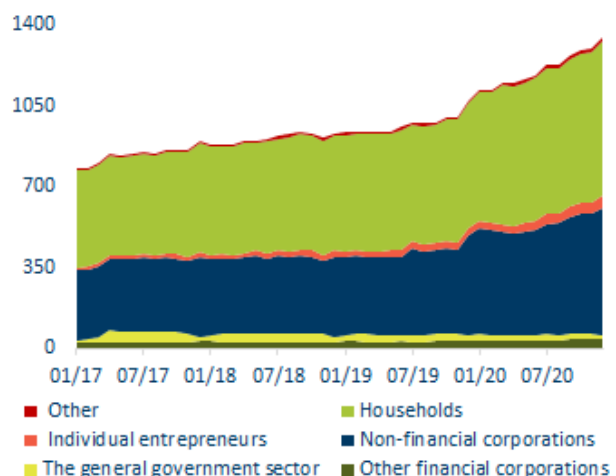


Fig. 34. Volumes of bank deposits attracted from economic sectors, billion hryvnias



Balance of payments

The shrink of domestic demand had a positive effect on the balance of goods and services. The reduction in both consumer import and investment import led to a reduction in the negative balance of trading with in goods, in particular, in the second quarter of 2020, the balance narrowed to almost zero. The closure of borders led to the cessation of tourism and, correspondingly, to a significant improvement in the balance of services.

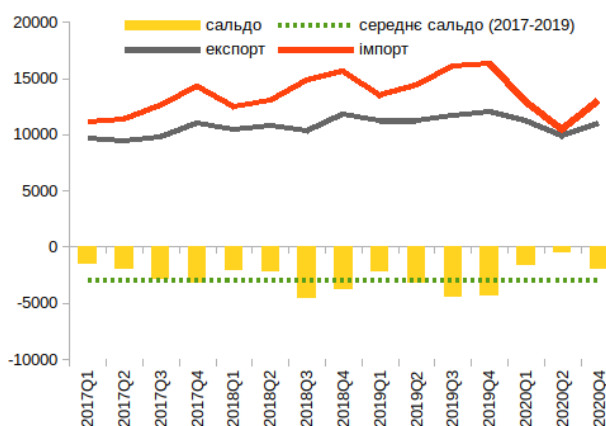
The reduction in investment payments contributed to the improved balance of primary income, taking into account the relatively constant year-on-year incomes from wages and salaries.

Despite the economic crisis, incomes from migrant workers also remained high that helped keep the income balance at a level not lower than in successful years.

The payment of public debts in the middle of the year led to an increase in the negative contribution of portfolio investments. The balance of foreign direct investment in the second half of the year was insignificant for the overall balance.

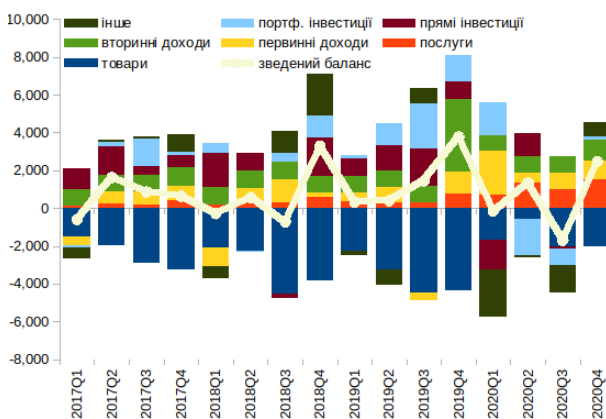
On the whole, in 2020, external flows turned out to be in surplus that contributed to the growth of international reserves of the National Bank of Ukraine. At the end of January 2021, they amounted to 28.8 billion US dollars or (according to the NBU) about 4.7 months of imports.

Fig. 35. Foreign trade with goods



Data source: the National Bank of Ukraine

Fig. 36. Contributions to the balance of payments



Data source: National Bank of Ukraine

Forecast for 2021–2023

Consensus of external forecasts

Economic development: According to the consensus, in 2021, GDP will grow by 4.2%. The restoration of external demand will support exports, and fiscal and monetary incentives will intensify private consumption.

Inflation: The CPI growth in 2021 (year-on-year) is expected to be at a level of 7.7%. Raising of social standards and rise in prices for energy sources are the key risks.

Exchange rate of the hryvnia to the US dollar: 27.0 UAH/USD (fact) and 28.5 UAH/USD — the average exchange rates in 2020 and 2021, respectively. The probable strengthening of the exchange rate in the first half of 2021 against the background of improved balance of payments will be replaced by devaluation in the second half of the year.

Consolidated budget deficit: 4.8 % of GDP in 2021 due to the restoration of sustainable economic growth and limited opportunities for financing the deficit.

Refinancing rate of the NBU: a growth from 6.0 % at the end of 2020 to 7.5 % at the end of 2021 due to the tightening of the NBU monetary policy in response to accelerated inflation.

Fig. 37. GDP growth forecast

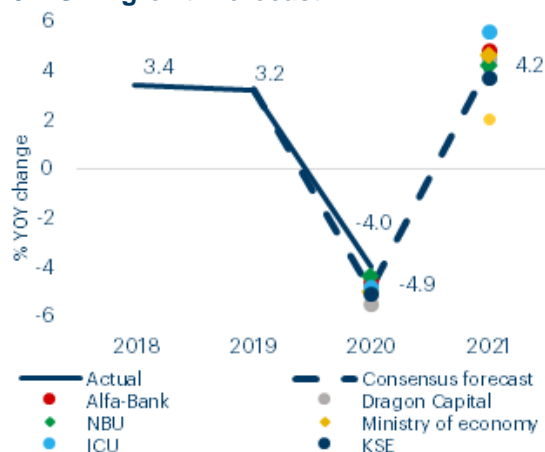
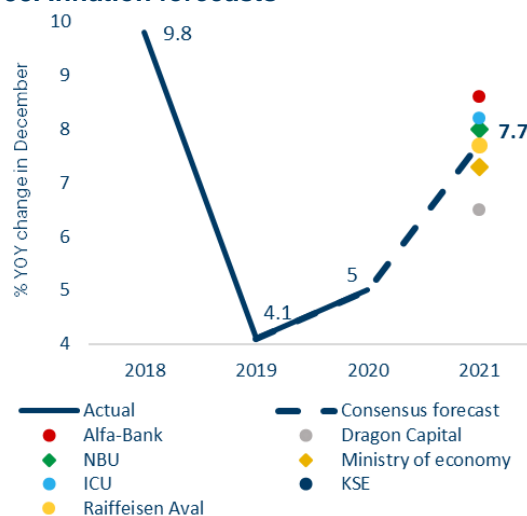


Fig. 38. Inflation forecasts

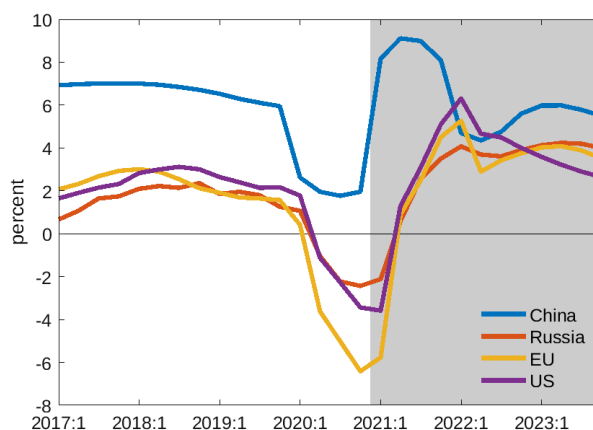


Assumption of the KSE forecast

Generous monetary and fiscal measures will help restore demand in major countries-trading partners to the previous levels, however, delays in vaccination will curb this process of recovery. Much of the recovery will be in 2021, starting from 2022, the pace of development will decrease.

The recovery of the European Union will be the slowest and last for three years, that will in turn restrain economic growth in Ukraine. According to the IMF, in 2021, China's GDP will increase by record 8.2 %, the United States' GDP — by 5.1 % (according to the Conference Board), the EU's GDP — by 5.0 %.

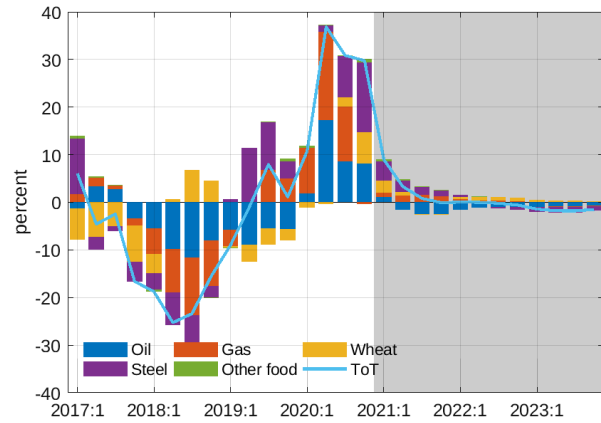
Fig. 39. The average annual rate of the change in GDP of countries-trading partners



Source: model approximation of data from the IMF, the European Commission and world think tanks

The sharp rise in prices of metals and grain crops starting from the second half of 2020 with a relatively smaller increase in oil prices creates favorable trade conditions for Ukraine in 2021. In the future, the impact of raw material prices will be negligible.

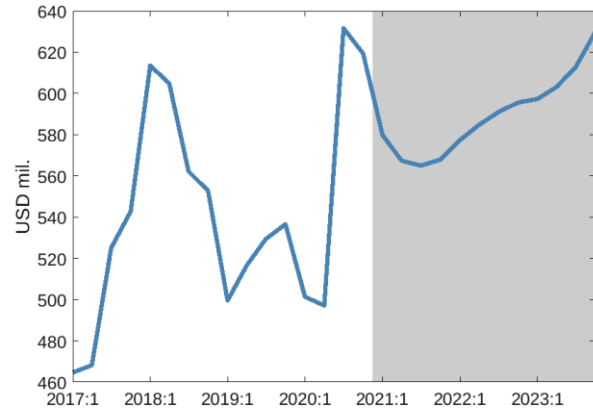
Fig. 40. Contributions to the indicator of conditions for trade



Source: According to the National Bank of Ukraine, own calculations

Contribution of labor migration to the EU as a result of quarantine, as well as a fall in business activity in the EU will restrict the further growth of remittances from abroad that significantly supported the economy in 2017–2019. The number of remittances in 2021 excluding inflation will slightly decrease in actual measurements.

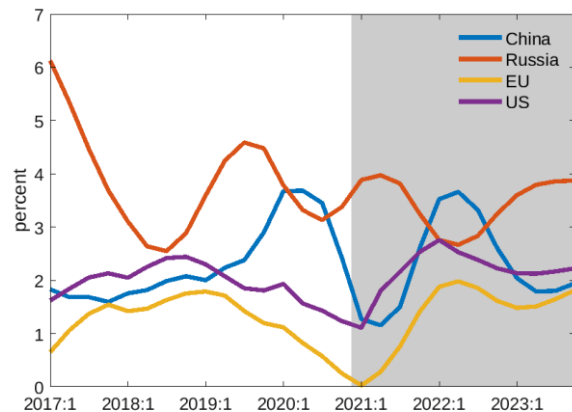
Fig. 41. Private money remittances to Ukraine



Source: history — according to the NBU, forecast — own calculations

The return of normal inflation in the United States and Eurozone and the acceleration of price growth in China are expected by the end of 2021. These processes and the devaluation of the US dollar against world currencies in 2021 will stimulate the acceleration of foreign inflation for Ukraine that will also increase due to higher prices for imported energy sources.

Fig. 42. The average annual rate of inflation of countries-trading partners



Source: model approximation of data from the IMF, the European Commission and world think tanks

Baseline scenario

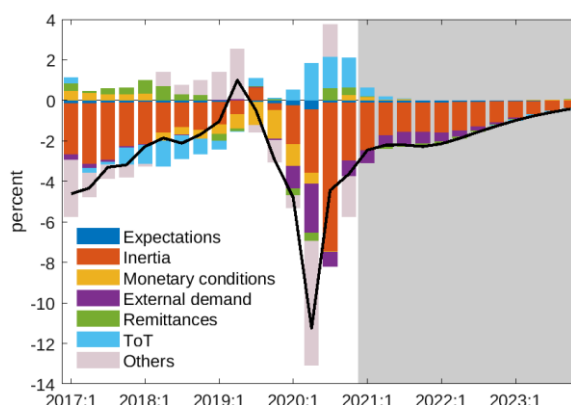
Economic activity. Improved terms of trade in the second half of last year, recovery from a shock caused by the Covid-19 pandemic and harsh spring lockdowns on external and domestic demand helped ease the crisis — a drop in the GDP in 2020 already decreased up to 4 % compared to a 5 % consensus forecast at the end of the year. Monetary conditions, the character of which changed to mild ones since the third quarter of 2020, positively contributed to the growth, but they played a secondary role. Assistance in the form of remittances to Ukraine turned out to be relatively neutral that is rather a pleasant surprise taking into account a significant downturn in the EU economy.

The gradual recovery of the world from the coronavirus crisis and domestic fiscal stimuli (it is planned to have a deficit of 5.5 % of GDP) will help revive economic activity, thus, in 2021, GDP will grow by 4.7 %. However, the growth will be subdued due to a significant drop in investment in 2020 and, consequently, the reduction in the potential of the Ukrainian economy.

The slow recovery of the European countries will restrain the development of the economy in 2022, respectively, GDP will increase by only 2.7 %, but long-term effects of infrastructure projects and a stronger inflow of foreign investment will contribute to accelerating the growth in 2023 up to 3.7 %.

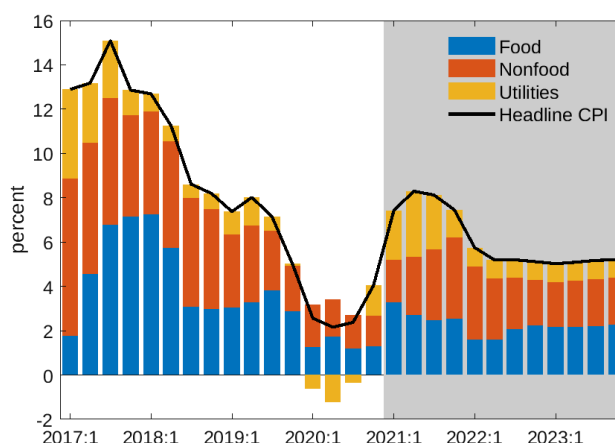
Inflation. A highest demand for food in the world and a regional shortage in supply of individual food products will result in higher prices for food compared to those in 2020. Abolishment of preferential tariffs for electricity and the cap on the gas price starting from the second quarter will create a larger contribution of prices for housing and communal services to the consumer inflation. The mentioned shocks of the supply will be of temporal nature, but they will stimulate inflation that is supposed to increase in 2021 up to 7.7 %. In subsequent years, inflation will remain at a level of about 5 % (the target level of the National Bank of Ukraine) as a result of expected moderate

Fig. 43. Factors of the economic cycle (GDP) in Ukraine



Source: own calculations

Fig. 44. Contributions to consumer inflation



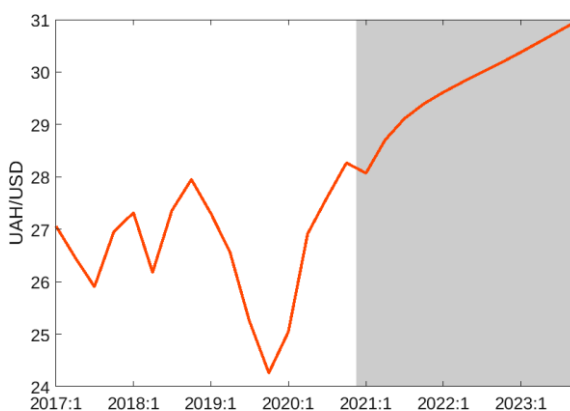
Source: according to State Statistics Service of Ukraine, own calculations

growth of prices for energy sources and a low devaluation of the exchange rate.

Exchange rate. The growth of world demand for food and limited supply in the 2020/2021 marketing year due to arid conditions, contributes to the acceleration of Ukrainian exports. Demand for metals was also unusually high. Another component of trade, imports, fell significantly in 2020 and will recover slowly. As a result, the trade balance narrows to values that are not typical for Ukraine. Therefore, even the usual inflow of capital will contribute to a small strengthening in the first quarter of 2020. A stronger recovery of imports and more moderate exports in the second half of the year will turn the course towards devaluation. At the end of 2021, the exchange rate of the hryvnia to the US dollar will be 28.9 hryvnias per US dollar, after which it will depreciate annually at a rate not exceeding 4%. The current scenario of the forecast provides for the lack of a significant pressure on the rate related to management of the external debt that is quite likely to happen taking into account the gold and foreign currency reserves accumulated as of the beginning of 2021 (approximately 29 billion US dollars). But since the US dollar will continue to devalue against the major world currencies, this will also depreciate the hryvnia.

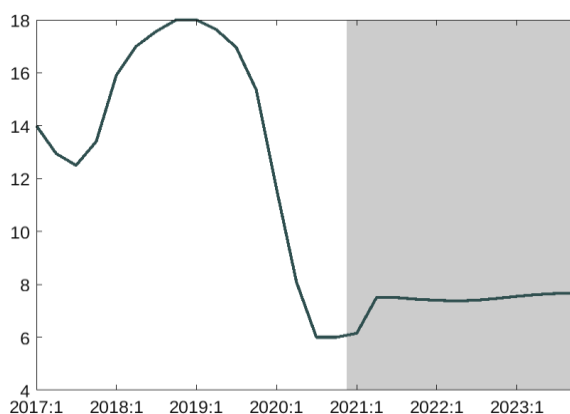
Monetary policy interest rate. Shortness of the inflationary shock in 2021 and lack of substantial pro-inflationary factors will mean the possibility for the NBU to gradually increase the interest rate to a neutral level by creating a small, but sufficient contribution to economic recovery.

Fig. 45. Exchange rate, UAH/USD



Source: According to the National Bank of Ukraine, own calculations

Fig. 46. Key rate of the National Bank of Ukraine



Source: According to the National Bank of Ukraine, own calculations

Scenario for increasing the inflow of foreign investment

This scenario provides for the annual receipt of three billion US dollars distributed evenly between agriculture, industry and the information technology sector (one billion for each sector). The idea of the scenario is to increase a potential GDP (a new, more productive capital). Compared to the baseline scenario, additional growth of GDP will reach 0.3 percentage point in 2021, 0.6 percentage point in 2020 and 1.0 percentage point in 2023.

The inflow of investments will contribute to a slower depreciation of the hryvnia, respectively, the nominal exchange rate at the end of 2023 will be stronger, but a comparatively low — only 0.3 %. The effects will be virtually invisible in terms of inflation and interest rates.

Fig. 47. GDP growth

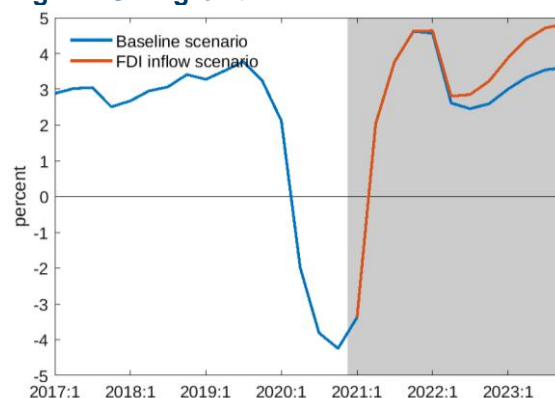
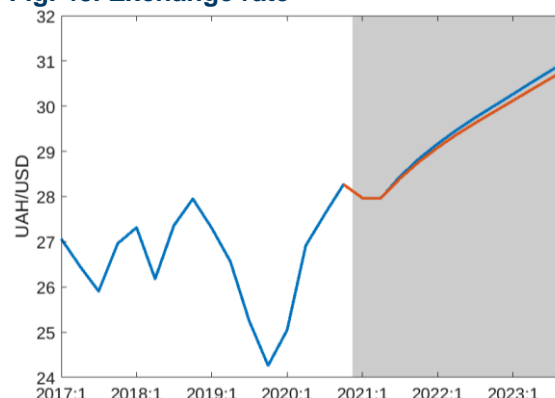


Fig. 48. Exchange rate



Scenario of expensive energy

The scenario assumes the rise in oil and gas prices by 10 % starting from the second half of 2021. This causes a slowdown in economic activity due to trade conditions and the energy component in inflation. GDP rates will be lower in 2021 by 0.1 p. p., in 2022 — by 0.4 p. p., but in 2023 it will be higher by 0.1 p. p. due to the rapid recovery after the shock.

The rise in oil and gas will lead to a significant increase in inflation compared to the baseline scenario — by 1.7 p. p. in 2021, while by 2023, inflation rates will become equal.

Higher inflation will necessitate further depreciation of the nominal exchange rate, as a result of which the hryvnia will become cheaper by 2 % at the end of 2023 (31.5 hryvnias per US dollar compared to an exchange rate of 31.0 hryvnias per US dollar envisaged by the baseline scenario).

Fig. 49. Change in GDP

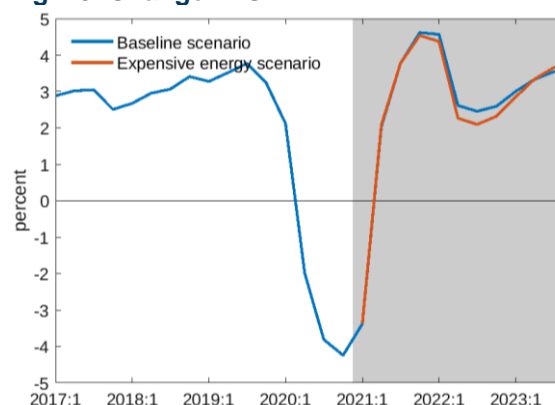


Fig. 50. Inflation

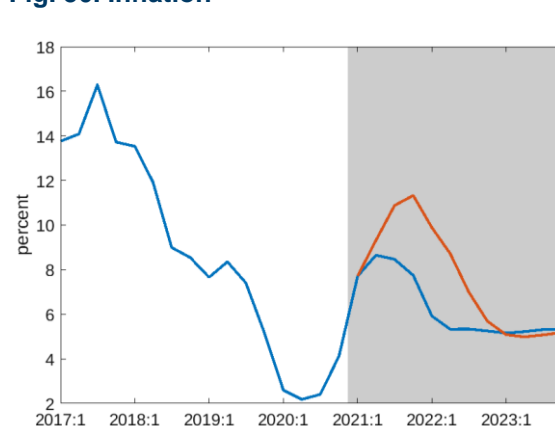
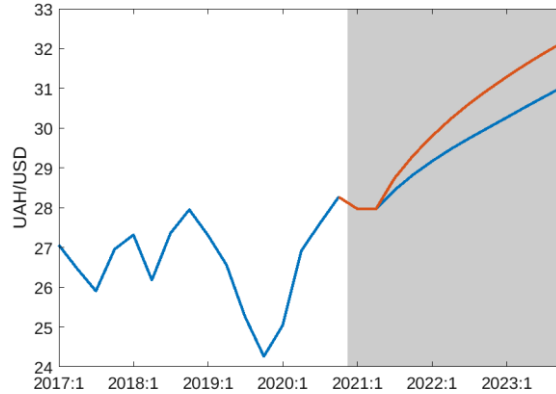


Fig. 51. Exchange rate



Scenario “IMF refusal”

The scenario envisages a direct refusal of the IMF (as opposed to delays in the subsequent stages of the program) to cooperate, which will lead to an increase in the risk premium. This fosters devaluation and increases interest rates, reduces the inflow of foreign investment. GDP rates will be lower in 2021 by 0.4 p. p., in 2022 - by 0.3 p. p., in 2023 by 0.3 p. p. Inflation will be higher by 0.5 p. p. in 2021, but lower consumer demand will lead to lower inflation in 2022 and 2023 - by 0.2 p. p. Additional depreciation of the nominal exchange rate will amount to UAH 0.7 over three years (or at the end of 2023 the exchange rate will be UAH 31.7 per US dollar compared to UAH 31.0 in the baseline scenario).

Fig. 52. Change in GDP

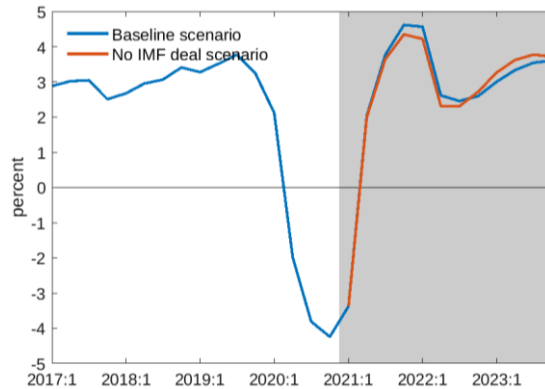


Fig. 53. Inflation

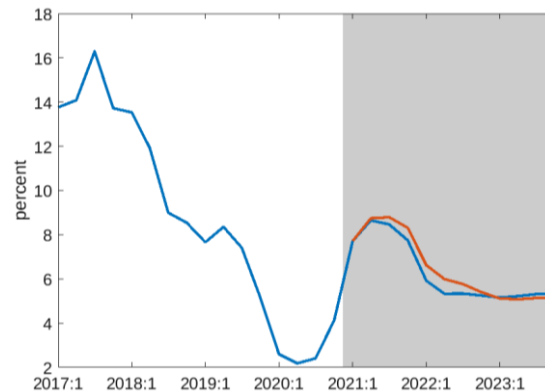


Fig. 54. Exchange rate

