MACROECONOMIC FORECAST

SPRING 2022

Ministry of Finance of the Republic of Bulgaria

In 2021, the global economy started to recover from the 2020 downturn caused by the COVID-19 pandemic. The year was marked by economic recovery in the EU, but with cross-country differences, as the level of GDP from 2019 was not reached. The recovery of the global and European economies was accompanied by higher energy costs, supply chain disruptions and sharp price increases. The high level of prices, especially of energy goods, caused inflation acceleration in late-2021 to historically high rates.

The Russian invasion of Ukraine has further complicated the macroeconomic environment in the world, especially in Europe. Real GDP growth in the EU will slow down due to higher prices, lower export to the Russian Federation and Ukraine, postponement of some investments due to high uncertainty, delays/difficulties in the supply of certain raw materials. The hostilities in Ukraine has changed the economic prospects for Bulgaria, as well. Compared to the previous forecast, lower GDP growth is expected in 2022 and 2023, at 2.6 and 2.8%, respectively. The conflict will affect the economy by limiting the purchasing power of households due to higher inflation. Furthermore, lower external demand will lower export and higher uncertainty will result in the postponement of private investment. The influx of refugees in the country, which is already a fact, is assessed as a positive effect on the economy.

The war in Ukraine is expected to have a positive impact on employment growth in Bulgaria mainly in 2022. The unemployment rate will follow a downward trend throughout the forecasting period. In the medium-term, nominal wage dynamics will remain strong, but projections for their real growth have been revised downwards taking into account inflation.

The annual inflation rate will continue to accelerate until the third quarter of 2022, after which it is expected to start slowing down. HICP inflation will reach 10% at the year-end, while its annual average rate of change is expected at 10.4%.

In 2022, the demand for loans will slow down compared to 2021, in line with the deteriorating economic situation and heightened uncertainty. The annual growth of claims on corporations will drop down to 4.6%, while the growth of claims on households will be 9.9%.

In the alternative macroeconomic scenario, a direct shock to the external sector of the economy is expected due to a more significant trade disruption as a result of the military conflict. Real GDP growth is estimated to be lower by 2 pps in 2022 and by 1.5 pps in 2023 as compared to the baseline scenario, while inflation will be higher by 2.9 and 2.2 pps, respectively. Until the end of the forecast horizon, the level of GDP at current prices will be lower compared to the baseline scenario, as the price increase in the country will not compensate for the lost real GDP.

1 External environment. Main assumptions

The macroeconomic forecast is based on the assumption that high uncertainty will persist throughout the year, along with distortions in international trade and supply chains disruptions, surges in commodity prices and especially energy. The European Union will be among the most affected regions in the world, due to more intensive trade and financial exposure to the Russian Federation and Ukraine. The direct effects of the conflict, caused by lower demand from both countries, will be reflected in lower EU export. At the same time, restricted import may result in interruptions and/or delays in the production process, as the Russian Federation and Ukraine provide a significant part of the raw materials for some manufacturers in the EU. The assumption in the baseline scenario is that even if there are supply disruptions and a need for alternative sources, the supply shortfalls will be only temporary and there will be no significant bottlenecks in any sectors. In addition, reduced business confidence and increased uncertainty among investors will weigh on asset prices, tighten financial conditions and investment activity.

The current situation has led to a negative change in the external environment outlook, as the downward revision from the previous forecast is more significant in the current year and only limited in the next one. Economic growth in the EU and globally is expected to slow down to 3.1 and 3.8% in 2022 and 2.2 and 3.3% in 2023, respectively. In 2024, the pace will accelerate slightly, reflecting expected recovery in external demand, before getting close to the long-term averages from the pre-pandemic period in 2025.

The assumption for the BGN/USD exchange rate is based on the pegged exchange rate of the local currency vis-à-vis the euro and a technical assumption for the USD/EUR exchange rate. The latter is assumed to remain unchanged over the projection horizon at the average levels for the ten-working-day period ending on the cut-off date of 17.03.2022. According to this technical assumption, the average annual exchange rate of the euro is expected to depreciate by 6.8% in nominal terms to USD 1.10 in 2022 and to remain at this level until the end of the forecast horizon.

Regarding commodity prices, the assumptions about their dynamics are based on the information on the relevant futures. The average price of Brent crude oil in 2022 is expected to be USD 100 per barrel, which corresponds to an increase of 42% compared to the previous year. In line with current market expectations, it is expected to

External assumptions: difference from the previous forecast

	Spring forecast 2022				Forecast in MTBF 2022–2024				Difference from the previous forecast			
External environment	**2022**	**2023**	**2024**	**2025**	**2022**	**2023**	**2024**	**2025**	**2022**	**2023**	**2024**	**2025**
World real GDP (%)	3.8	3.3	3.4	3.3	4.6	3.7	3.3	-	-0.8	-0.4	0.1	-
EU real GDP (%)	3.1	2.2	2.3	1.9	4.4	2.3	1.9	-	-1.3	-0.1	0.4	-
USD/EUR exchange rate	1.10	1.10	1.10	1.10	1.13	1.13	1.13	-	-0.03	-0.03	-0.03	-
Oil price, Brent (USD/barrel)	100.0	90.0	82.9	78.6	78.9	72.3	69.4	-	21.1	17.7	13.5	-
Non-energy commodity prices, in USD (%)	18.9	-6.3	-2.6	-1.3	8.0	-2.9	-1.7	-	10.9	-3.4	-1.0	-
EURIBOR 3month (%)	-0.2	0.8	1.1	1.1	-0.4	-0.1	0.0	-	0.2	0.9	1.1	-

Source: IMF, Bloomberg, own calculations gradually decline in the following years to an average of USD 78.6 in 2025.

Non-energy commodity prices are assumed to go up by an average of 18.9% in dollar terms in 2022. All major subgroups will report a price increase, which is expected to be more significant in fertilizers – 40.5%, metals – 21.3% and food – 15%. In the 2023-2025 period, prices of all non-energy commodities are expected to decline.

The present forecast assumes that as a result of the military conflict in Ukraine, more than 100,000 refugees will remain in Bulgaria, and their monthly expenses will be comparable to the average expenses for the country.

The macroeconomic forecast is based on the expectation that the global health situation will gradually improve and possible new waves of COVID-19 will result in only temporary restrictive measures which will not have a significant negative impact on economic activity.

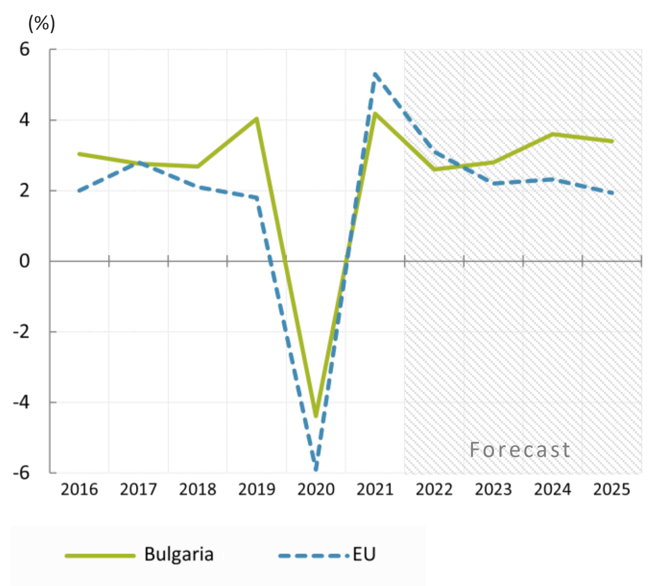
2 Gross Domestic Product

In 2021, the real GDP growth of Bulgaria reached 4.2%, whereas the expectation in the MTBF 2022-2024 was for an increase of 3.7%. The higher growth came on the back of stronger-than-expected increase in consumption.

The Russian invasion of Ukraine changed the economic prospects for Bulgaria in 2022, as well as in the medium term. The military conflict has led to a surge in prices of energy and other key non-energy commodities, which will have a negative impact on households' purchasing power. As a result of the war and the sanctions imposed on Russia there will be difficulties in international trade and supply chains, which will limit the export of goods and investment activity in the country. At the same time, the influx of refugees in the country, which is already a fact, is assessed as a positive effect on the economy.

Bulgaria's GDP growth is expected to reach 2.6% in 2022. Households consumption growth will slow down to 2.4% which will be significantly lower as compared to the reported increase of 8% in 2021, as well as the 3.8% increase, expected in the previous forecast. The psychological effect of the war generates significant uncertainty in consumer confidence, while rising inflation limits the real disposable income of households and their purchasing power. As a result of the increased uncertainty, higher production costs, disrupted supplies and weaker external demand, investment plans are expected to be postponed. This would hamper the recovery of private investment to 2019 levels, after the registered declines in 2020 and 2021. Public capital expenditures are expected to support the growth of gross fixed capital formation, which is projected to reach 7.6%. A positive contribution to GDP growth is expected from public consumption. The strong indirect effect of the conflict in Ukraine on the basis of more moderate demand from Bulgaria's main trading partners, combined with the direct effect – significant restrictions on export to the Russian Federation and

Real GDP growth

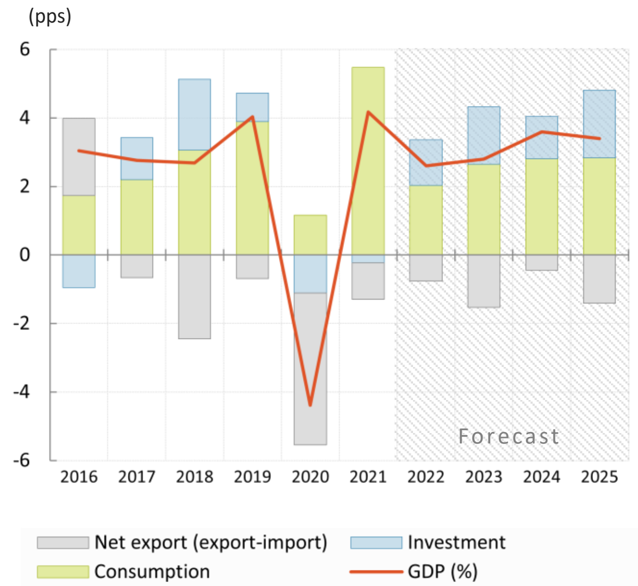


Source: Eurostat, EC, MF

Ukraine, will be reflected in a slowdown in export of goods from Bulgaria in 2022 (3.1%). With regard to international travel, Russian and Ukrainian tourists are expected to be almost completely restricted during the year, and the higher uncertainty and geographical proximity of our country to the conflict will result in a significant slowdown in the growth of visits from other countries. According to the statistical methodology, the expenses of refugees incurred in the country are reported as income from travel of non-residents. As a result, the consumption of refugees from Ukraine in 2022 is expected to be reported as export of services, which will offset some of the negative effects and the overall growth of export of services will slow to 8%. The contribution of net export to GDP growth will be negative.

In 2023, higher growth in domestic demand is expected and, accordingly, a GDP growth of 2.8%. The increase in income combined with the weakening of inflationary pressures will stimulate consumption growth. A slight acceleration in the growth of export of goods is expected, but the pace will remain moderate amid still weak growth in external demand. The export of services will be affected by the gradual resumption of international travel, but also by the exhaustion of the one-time positive effect of the number of refugees entering the country. This will be reflected in lower growth in export of services. The contribution of net export to GDP will remain negative (1.5 percentage points).

GDP growth and contribution by main components



Source: NSI, MF

In 2024-2025, GDP growth will be 3.6 and 3.4%, respectively. Household consumption will grow, supported by declining unemployment and steady income growth. The increase in demand will also have a positive effect on investment activity. With the gradual overcoming of the consequences of the military conflict and the recovery of the external environment, the overall growth of export will increase at the end of the forecast period. Reflecting the recovery in domestic demand, the pace of increase of imports will continue to outpace that of export and the contribution of net export to GDP will be negative.

3 Labour Market and Incomes

In 2021, the employment started to gradually recover to the levels observed during the last pre-crisis year. The unemployment rate remained relatively low (5.3% for 2021) and Bulgaria was among the top 10 EU countries with the lowest values of the indicator.[1] According to Employment Agency data, the number of registered unemployed went down considerably and reached historical lows during the summer months of 2021.

The forecast on employment dynamics in 2022 is mainly influenced by the expected economic growth, as well as

[1] Due to methodological amendments made in the LFS in 2021, the data on employment, unemployment and labour force for 2021 is not comparable with the previous series data.

the flow of Ukrainian refugees seeking temporary protection in Bulgaria. According to our assumptions about 135 thousand Ukrainians will remain in Bulgaria, of which about 55 thousand will have a job for a period of 6 months on average. This inflow of new foreign employees and the increased number of employees among residents determines the employment growth of 1.7% in 2022.

In 2023-2025 period, economic growth will be the main driver of employment growth. It is expected to accelerate and thus to contribute for the increase of the labour demand. According to our assumptions the number of Ukrainians in employment will decrease from about 40 thousand in 2023 to 22 thousand persons in 2025. From 2025 onwards the higher labour demand will be increasingly difficult to be met by transition of unemployed and out-of-labour-force persons to employment. Due to that the economic growth will be realized mainly through labour and total factor productivity increase rather through an increase of the existing jobs.

The unemployment rate will follow a steady downward trend throughout the forecasting period. It is expected to be 5.0% in 2022 and to decrease to 4.2% in 2025.

With the recovery of the labor market in 2021, the real growth of labor productivity moved to positive territory (4%), and the increase in compensation per employee accelerated to 9.5%. These developments have eased the pressure on unit labor costs.

In the medium-term, nominal wage dynamics will remain strong, but real projections when accounting for inflation have been revised downwards. In 2022, the nominal growth of compensation per employee is set at 8.1% and reflects the expected labour demand, rising minimum incomes and some second-round effects from the high rates of inflation in the country. The private sector wage growth is expected to play a leading role and this effect will be more pronounced from the second quarter of the year onward, consistent with the implementation of higher minimum wage. The latter is expected to have

Unemployment and participation rates

Source: NSI, MF

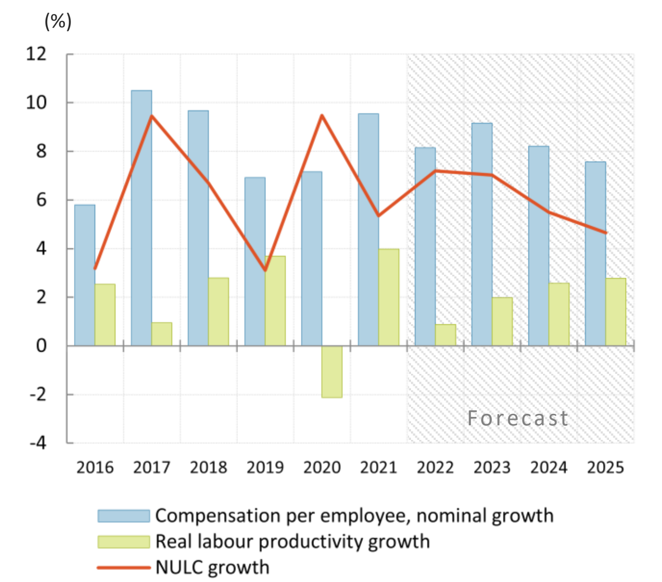
both direct and indirect impact (by updating the insurance thresholds for economic activities and professions). The nominal wage adjustment due to inflation is expected to lag behind for a year and the influence of inflation on wage growth is expected to be stronger in 2023.

The slowdown of compensation per employee in 2022 as compared to 2021 will be mainly due to the lower contribution of public sector. Another factor that is expected to limit the average growth of compensation per employee is the inclusion of Ukrainian refugees in the labor market. It is assumed that they will be employed in activities with relatively lower than the country's overall productivity and wages, which, other things being equal, will lead to lower average wage growth.

In 2022, the real growth of compensation per employee is expected to decline when accounting for inflation in the country. With the gradual acceleration of labor productivity growth in 2023, labor demand and the expected effect of rising prices, compensation per employee will accelerate to 9.2%. In the period 2024-2025, this rate will remain high, but it is projected to decelerate gradually to 8.2 and 7.6%, respectively. Thus, a partial rebound of real compensation per employee growth is foreseen in 2023, and only in 2024-2025 the real dynamics of labour income will accelerate to the rates observed in the period before 2021.

The slowdown in economic activity in 2022 and 2023 will reflect the lower contributions of labor productivity, as productivity growth is projected to converge towards historical average rates in the last two years of the forecast period. Real productivity growth is estimated at 2.1% on average in 2022–2025, which together with the expected increase in compensation per employee will result in nominal unit labour costs (ULC) increase of an annual average rate of 6.1%. Real ULCs are projected to grow by an annual rate of 0.9% on average.

Labour incomes, productivity and unit labour costs (ULC)



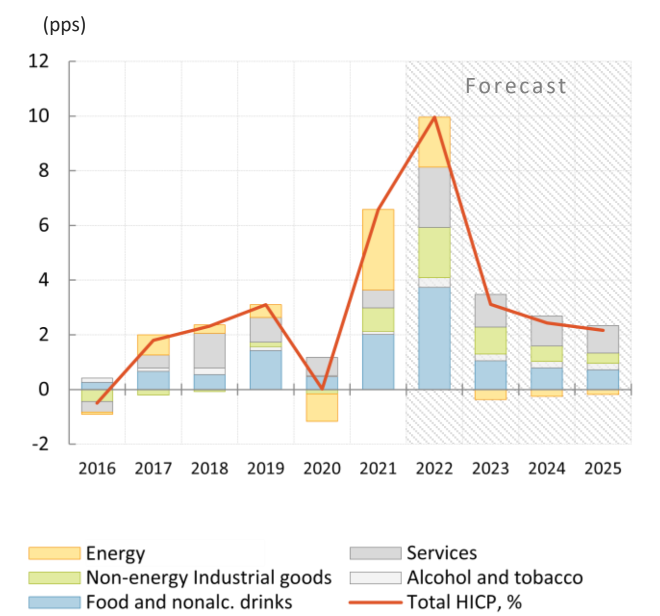
Source: NSI, MF

4 Inflation

The annual inflation rate in Bulgaria has been accelerating since the beginning of 2021, and continued to gain speed in the first few months of 2022. It reached 8.4% yoy as measured by the HICP in February 2022. The main pro-inflationary factor behind its dynamics was the surge in commodity prices on world markets, especially energy and food. With the unfolding of their direct and indirect effects, core inflation[2] also rose to 5.7% yoy.

In line with current market expectations, prices of crude oil and non-energy commodities are assumed to continue on the increase in 2022, which will start to slow down in the second half of the year. Accordingly, the headline rate will continue to accelerate until the third quarter of the year, after which it will begin to slow down, and inflation at the end of 2022 will reach 10%. Food prices are expected to go up by 16.4% yoy in December and will contribute the most. Energy goods will also make a positive contribution, with the increase in transport fuel prices expected to reach 25.1% at the end of the year. Core

End-of-period HICP Inflation Rate contributions by main components



Source: Eurostat, MF

[2] The total index excluding unprocessed food and energy.

inflation will also accelerate, due to the expected side effects of the accelerated rise in energy prices and disruptions in supply chains. Services prices will go up by 8.1% at the end of 2022, and those of non-energy industrial goods – by 6%. The average annual inflation in 2022 is projected to be 10.4%.

In the period 2023-2025, prices of all major commodities are expected to decline. Besides, the observed second round effects will deplete, and thus the inflation rate in the country is also expected to continue to decelerate to 3.1% at the end of 2023, 2.4% in 2024 and 2.2% in 2025. Energy goods will have a negative contribution due to the expected decrease in international crude oil prices, which will lead to cheaper automotive fuels.

The annual average inflation in 2023 is projected at 5.1%, and will keep slowing down to 2.7% in 2024 and 2.3% 2025.

5 Balance of Payments

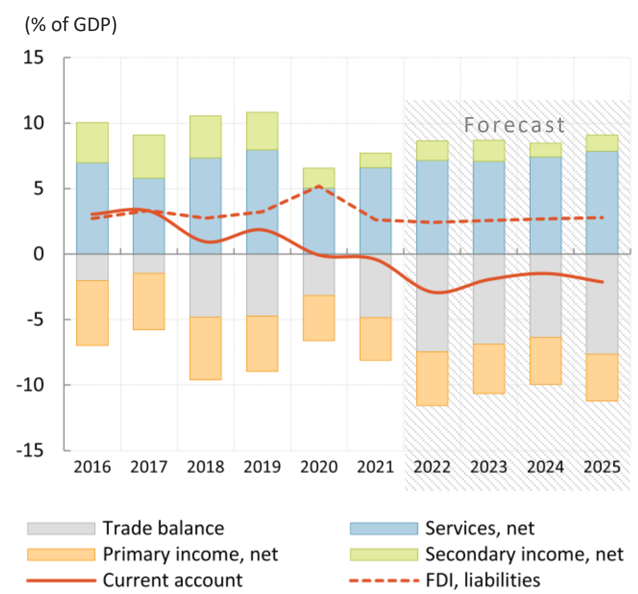
In 2022, the current account deficit is expected to increase to 2.9% of projected GDP. The larger trade deficit will contribute the most, and it will reflect both higher real growth in import as compared to export and stronger import prices (driven by surging energy and other commodity prices).

International travel started to recover in 2021 and preliminary data for the winter season of 2022 showed a positive trend. However, the conflict in Ukraine has worsened the tourism outlook. Thereof, the forecast for *Services* dynamics reflects two opposite effects – on the one hand, limited increase in travel receipts in the country, due to the conflict, and the treatment of refugee spending as export of services, on the other. The expected effect on the balance of payments from the influx of refugees is reflected also in both income articles. The funds that the state provides as aid, resp. payments to non-residents from General government, are recorded under Secondary income. It is assumed that these payments will be fully covered by EU funds, which are also recorded in the same article, netting out the effect.

In the following years, the current account balance will continue to be determined mainly by the dynamics in the trade balance. In 2023–2024, an improvement is expected, driven by positive terms of trade (higher relative prices of export to import). The real growth in import will continue to outpace that of export, and the deviation will be more significant in 2025, when the supply of military equipment is expected.

After one year of stay in the place of refuge, refugees will no longer be considered as non-residents by the statistic, meaning there will be a one-off negative adjustment in export of services. Accordingly, balance on Services will dip to 7.1% of GDP. Apart from the refugee effect, tourism visits will continue to increase in 2023, and in 2024-

Current account and FDI



Source: BNB, MF, NSI

2025 are expected to reach and exceed pre-pandemic levels. The repayment of investment income will lower the balance of primary income, but the ratio to GDP will remain almost unchanged (around 3.6-3.8% of GDP). The funds from the National Recovery and Resilience Plan (NRRP) and incoming transfers from the European Social and Investment Funds at the end of the 2014-2020 programming period are expected to form the Secondary Income surplus. Additional contribution is expected from gradual increase in remittances reflecting expected improvement in economic activity globally at the end of the forecast period.

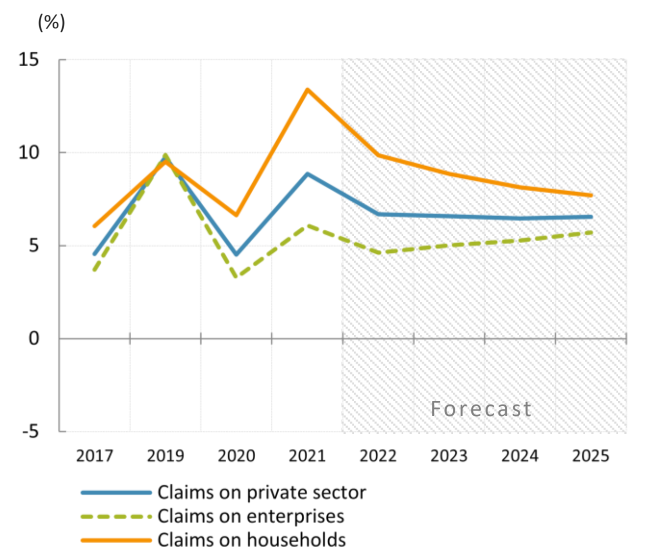
6 Monetary Sector

Demand for credit remained high and the annual growth of private sector credit has been accelerating since 2021 despite the pandemic environment. At the end of February 2022, it amounted to 9.7% yoy compared to 8.7% yoy at the end of the previous year. Both loans to non-financial corporations and households contributed to the upward trend, but the acceleration in the latter was significantly higher in 2021.

In view of the current dynamics and the new situation caused by the conflict in Ukraine, the expectations for the development of private sector credit have been revised compared to the previous forecast. In 2022, demand for credit will slow down compared to 2021, in line with the expected deterioration of the economic situation and increased uncertainty. Claims on enterprises[3] will slow down to 4.6% yoy at the end of 2022 due to negative effects on investment activity, and those of households – to 9.9% yoy. In total, the growth of private sector claims in 2022 is expected to be around 6.7% yoy.

Factors for slowing down the growth of credit to households in 2022 will be the expected lower growth of consumption and compensation of employees. Limitations to credit growth from the supply side may come as a result from the announced by the BNB increase in the level of the countercyclical capital buffer as of October 2022 and again in the beginning of 2023[4]. Despite the forecasted slowdown in loans for house purchase, their growth rate will remain relatively high, as the real estate purchase is seen as a major alternative form of investment in an environment of low interest rates and high inflation. Credit to households will continue to decelerate towards the end of the forecasting period but to remain at elevated levels in line with the dynamics in compensation of employees. Claims on households will expand by 8.9% at the end of 2023 and by 7.7% in 2025.

Claims on private sector



Source: BNB, MF

[3] Data refer to non-financial and financial enterprises from the BNB monetary statistics.

[4] The BNB Governing Council increased the level of the countercyclical capital buffer applicable to local credit risk exposures to 1.0% as of October 2022 and to 1.5% from January 1, 2023, which will be in force also in the second quarter of 2023.

In the 2023-2025 period, credit to NFCs will gradually accelerate in line with the expected recovery of private investment, which in turn would be supported by the NRRP. Total claims on non-financial corporations will grow by 5% yoy in 2023. Its growth rate will reach 5.3% yoy in 2024 and 5.7% yoy in 2025.

Total claims on the private sector will increase by 6.6% yoy in 2023, and by the end of 2025 their growth rate will come down slightly to 6.5% yoy.

The annual growth of money supply slowed down to 10.7% at the end of 2021, from 13.6% at the end of August, which reflected the slowdown in deposit growth from both households and non-financial corporations. In 2022, we expect savings propensity to be more prominent in the context of the uncertainty caused by the conflict in Ukraine, but their growth will continue to decelerate troughout the forecasting horizon.

Deposits in the banking system will continue to grow at a relatively high pace till the end of 2022, reflecting the increased uncertainty. At the end of 2022, the growth of money supply will slow down to 9.7% yoy.

In 2023-2025 the growth rate of money supply will continue to gradually slow down along with the increase in investment activity in the country. Towards the end of the forecast period M3 will grow by 9.4% yoy.

7 Risks

The military conflict in Ukraine has significantly worsened economic expectations. The situation is changing rapidly, posing sizable negative risks to the EU and Bulgarian growth. The choice of a realistic scenario is difficult and the forecast is subject to a number of assumptions.

Wider disruption in energy supply from the Russian Federation would have greater economic consequences, but they are difficult to estimate at this stage. Insufficient supply of basic raw materials will disrupt domestic production as well as production in major trading partners, which may be reflected in limited exports, deteriorating financial performance of companies, rising unemployment, reduced investment activity. In addition, the shortage of raw materials will fuel higher-than-expected prices, limit disposable income and further reduce consumption.

The risks to the inflation forecast are mainly on the upside and are related to the uncertainty for the military conflict resolution and the resulting likelihood of a continuing rise in international prices of key internationally traded commodities (oil and natural gas, food, metals, fertilizers). Another factor that can further contribute for the inflation acceleration in the country are the upward inflation expectations, which are influenced by the rise in price of essential goods – incl. food and energy.

The estimated economic impact of the influx of refugees is subject to assumptions on the number of people, the length of their stay and average spending. Any deviation from these assumptions represents a risk to the accuracy of the forecast. From a technical point of view, if the statistical treatment of the refugees differs from the one described in the text above, dynamics in certain economic indicators will be different, even if the forecast scenario remains plausible.

The risks associated with the pandemic, i.e. a possible new variants of the virus and a reintroduction of restrictions, are still valid, although data from the last year do not show a significant negative effect to the economic activity.

There are also positive risks to the forecast. Easing geopolitical tensions could lead to a significant slowdown in inflation and thus have a positive effect on economic activity. The uncertainty caused by the conflict may dissipate faster than expected, without significantly slowing down consumption and investment. If the conflict is resolved in the short term, foreigners visits in Bulgaria might increase at a higher pace during the summer tourist season, supporting GDP growth.

MAIN ECONOMIC INDICATORS	ACTUAL DATA*		PROJECTIONS			
	2020	2021	2022	2023	2024	2025
International Environment						
World real GDP (%)	-3.1	6.0	3.8	3.3	3.4	3.3
EU real GDP (%)	-5.9	5.3	3.1	2.2	2.3	1.9
USD/EUR exchange rate	1.14	1.18	1.10	1.10	1.10	1.10
Crude oil, Brent (USD, bbl)	42.3	70.4	100.0	90.0	82.9	78.6
Non-energy commodity prices (in USD, %)	3.3	32.7	18.9	-6.3	-2.6	-1.3
EURIBOR 3month (%)	-0.4	-0.5	-0.2	0.8	1.1	1.1
Gross Ddomestic Product						
Nominal GDP (mln BGN)	119 951	132 744	147 403	160 789	172 760	183 493
Real GDP growth (%)	-4.4	4.2	2.6	2.8	3.6	3.4
Consumption	1.5	7.0	2.6	3.3	3.6	3.7
Gross fixed capital formation	0.6	-11.0	7.6	9.0	6.0	9.9
Export of goods and services	-12.1	9.9	4.1	4.0	5.8	4.6
Import of goods and services	-5.4	12.2	5.4	6.1	6.5	6.8
Labour Market and Prices						
Employment growth (SNA, %)	-2.3	0.2	1.7	0.8	1.0	0.6
Unemployment rate (LFS, %)	5.1	5.3	5.0	4.8	4.4	4.2
Compensation per employee (%)	7.2	9.5	8.1	9.2	8.2	7.6
GDP deflator (%)	4.2	6.2	8.2	6.1	3.7	2.7
Annual average HICP inflation (%)	1.2	2.8	10.4	5.1	2.7	2.3
Balance of Payments						
Current account (% of GDP)	-0.1	-0.4	-2.9	-1.9	-1.5	-2.1
Trade balance (% of GDP)	-3.2	-4.9	-7.5	-6.9	-6.4	-7.6
Foreign direct investments (% of GDP)	5.2	2.6	2.4	2.6	2.7	2.8
Monetary Sector						
M3 (%)	10.9	10.7	9.7	9.5	9.6	9.4
Claims on enterprises (%)	3.3	6.1	4.6	5.0	5.3	5.7
Claims on households (%)	6.6	13.4	9.9	8.9	8.1	7.7

** The forecast is based on statistica data up to 23 March 2022, unless noted otherwise*

Source: MF, NSI, BNB, IMF, Bloomberg

8 Alternative scenario

One of the main risks associated to the military conflict in Ukraine is the escalation of geopolitical tensions and more substantial disruption of international trade, incl. the emergence of serious disturbances in supply chains. For countries that are geographically closer to the conflict, this risk is more pronounced. Therefore, the alternative scenario consideres a direct shock to the external sector of the economy from trade disruption in the region. It is represented by the assumption for a significant reduction in imports, lower production and lower export.

In addition, it is assumed that the complicated geopolitical situation, the difficulties in the supply of raw materials and rising food prices will lead to a greater number of refugees in the country (about 400 thousand people).

The Russian invasion of Ukraine has put significant pressure on rising international commodity prices. In the alternative scenario, the shock on commodity prices intensified. It is assumed that they will grow at a higher rate in 2022, but also that the rise will continue in the period 2023-2025.

Assumptions for the increase in prices of basic commodities in the alternative scenario*

	2022	2023	2024	2025
Oil price, USD/barrel	130	130	115	100
Non-energy commodity prices, in USD [%]	25.4	18.1	17.0	14.9
Food [%]				
– Cereals	14.2	14.2	14.2	12.8
– Oilseeds	17.9	13.0	16.0	13.5
Metals [%]	60.0	40.0	-	-

** Change in % compared with the previous year, except for the oil price. FAO simulations have been used for food and fertilizers*

Source: MF

The price of crude oil is assumed to further increase above the baseline scenario and remain at a higher level in the medium term. There is an additional price increase of 30% in natural gas prices in 2022. As regards food prices, the limited supply of cereals and oilseeds from the Russian federation and Ukraine will largely affect their prices, as it can only be partially compensated by other producers in the EU, USA, Canada and other countries. The capacity of many of these alternative sources to increase production and supply might be further limited by the high production costs associated with rising energy and fertilizer prices. This could also lead to more limited use of fertilizers, which will reduce yields and lead to a higher risk for the harvest in the coming years. This, in turn, would keep international food prices high for longer. Regarding metals, a significant increase in their price is also assumed in 2022 and 2023, given the significant share of ores and metals in the export of the Russian Federation and Ukraine and the expected interruptions in their extraction and production.

These assumptions translate to higher inflation, mainly in 2022 and 2023, 2.9 and 2.2 pps above the baseline scenario, respectively.

In the alternative scenario, a decline in import of goods is expected in 2022, which is by 8.7 pps lower compared to the baseline scenario. The supply chains disruptions will have a negative impact on production in the country, on the execution of orders and investment plans. As a result, gross fixed capital formation is expected to decline, fueled by the greater uncertainty.

The difficulties related to logistics and restrictions in the production of certain products will lead to a decline in export of goods and the annual growth rate will deteriorate by 5.3 pps. At the same time, in line with the baseline scenario, the higher number of refugees will be reflected in a one-off increase in export of services in 2022 (deviation of 2.3 pps). The growth of household consumption will be limited by lower growth in real disposable income and employment. In this scenario, the negative effects are expected to continue in the first quarter of 2023 and gradually subside. As a result of the described effects, the real GDP growth will be lower by 2 pps in 2022 and by 1.5 pps in 2023. In the first two years, a higher GDP deflator is expected, which will not compensate for the loss in real terms. As a result, the level of GDP at current prices will be lower compared to the baseline scenario, which will be maintained until the end of the forecast period.

In the alternative scenario, a larger flow of refugees is assumed to enter the country, but fewer of them are expected to find employment on the labor market. In the baseline scenario, about 35 thousand refugees on average are expected to start working in 2022, while their number will be about 10 thousand in the alternative scenario. As a result of the lower growth of the Bulgarian economy, the total employment in the country is expected to be lower compared to the baseline scenario, with the largest difference expected in 2023 (by 1.6% lower employment in the alternative scenario compared to the baseline). In the following years, these differences will diminish and employment in the two scenarios will gradually converge.

The main differences in the balance of payments between the two scenarios are in trade with goods. The increase in international prices will be reflected in a significant increase in the nominal growth rates of import and export of goods, despite the decrease in traded quantities. Estimates point to similar deflators, and real decline in import in 2022, which will lead to an improvement in the trade deficit. In the 2023–2024 period, the positive terms of trade will be maintained with the growth of import outpacing the growth of export.

Main macroeconomic indicators (difference from the baseline scenario)

	2022	2023	2024	2025
GROSS DOMESTIC PRODUCT				
GDP level current prices [%]	-0.7%	-1.2%	-2.0%	-1.9%
Real GDP growth [pps]	-2.0	-1.5	0.0	0.0
Consumption	-1.9	-0.6	0.2	0.0
Gross fixed capital formation	-18.2	-2.4	-0.6	2.4
Export of goods and services	-3.8	-2.8	-0.4	0.2
Import of goods and services	-8.0	-2.4	-0.3	0.3
LABOUR MARKET AND PRICES				
Employment level, (SNA) [%]	-1.3%	-1.6%	-1.4%	-0.9%
Unemployment rate, (LFS) [pps]	0.7	0.7	0.6	0.4
Compensation of empoyees [pps]	-2.1	-1.5	0.0	0.0
GDP deflator [pps]	1.4	1.1	-0.9	0.0
Annual average HICP inflation [pps]	2.9	2.2	-0.3	0.0
BALANCE OF PAYMENTS				
Current account in % of GDP [pps]	2.4	1.8	1.1	1.2

Source: own calculations