MACROECONOMIC FORECAST

Autumn 2023

INSTITUTE FOR ANALYSIS AND FORECASTING

Global activity decelerated in the first half of 2023, with a more pronounced slowdown in the EU. The trend is expected to continue until the end of the year amid high interest rates and elevated inflation. EU real growth is now expected to be lower (at 0.8%) than in the spring forecast, while the GDP deflator is higher (6%). External demand is still expected to gradually improve from 2024, mainly driven by EU member states. International commodity prices will decrease until the end of the forecast period.

On 19.10.2023, the National Statistical Institute published revised statistical data series from the National Accounts. The most significant change in the reported numbers was for 2022 with the nominal value of GDP being higher by BGN 2.4 bn and real GDP growth revised from 3.4 to 3.9%. For the first half of 2023 Bulgaria's real GDP was up by 2%. In the second half of the year, growth is projected to slow down, standing at 1.8% for the whole year. Economic growth will accelerate to 3.2% in 2024 supported by domestic demand and is expected to average 3% in 2025–2026.

The employment growth estimate of 1.2% for 2023 has been revised upwards with a major contribution from employment in services. The labour demand will remain high until the end of the forecasting period, but the labour supply growth will be limited due to the negative population growth in the country. Along with the employment growth, the unemployment rate is expected to go down steadily albeit at a relatively low rate.

The forecast for the increase in the nominal compensation per employee in 2023 has been revised to 14.3% due to the revision of the data from the National Accounts. Its growth will remain high in 2024 (up by 11.2%), together with the expected acceleration of real productivity growth, as well as in line with the rise of the minimum wage in accordance with the adopted normative changes.

There has been a clear disinflation trend in the country since the last quarter of 2022. The annual average HICP inflation rate in 2023 is projected at 9.1%. In the coming years, inflation will continue to decelerate in line with the expected downward dynamics of international commodity prices. The annual average inflation will narrow to 4.8% in 2024 with the end-of-period inflation rate standing at 3.3%.

Current account balance is expected to remain positive in 2023 with a surplus at 1.7% of projected GDP. This will reflect more favourable real export than import dynamics, supported by positive terms of trade. The current account balance is expected to lower gradually over the following years. The capital account balance will be above the average of recent years, reflecting inward transfers under the RRP. The overall Balance of Payments dynamics implies a sustainable external position and a stable level of international reserves.

Claims on the private sector are forecast to grow by about 9.7% yoy in 2023. Demand for credit from households is expected to slow down, but to remain relatively high (at 11.9%), supported by the strong increase in income. Factors for the cooling off of the credit market are the gradual increase in interest rates and the macroprudential measures, set by the BNB. Annual growth of claims on non-financial corporations will be 8.3% at end-2023. By the end of the forecast period credit to households will further decelerate, along with expected slowdown in households' consumption and lower nominal growth of compensation of employees. Bank deposits will continue to increase with relatively fast pace throughout the forecast period.

Risks to the forecast are related to the unstable geopolitical situation – Russia's invasion of Ukraine and recent events in the Middle East. Restricted supply of some raw materials remains a viable risk, which can lead to higher international prices and/or another round of supply chain disruptions. If inflation stays elevated globally for a longer period, the tightened monetary policy of leading central banks might be also extended thus reducing external trade as well as domestic demand of Bulgaria.

Taking into account the potential geopolitical risks, an alternative macroeconomic scenario has been developed, in which an increase in the prices of some internationally traded goods and a more unfavourable dynamic of external demand is assumed. As a result of the simulation, inflation in the country will be higher compared to the baseline scenario by 1.3 pps in 2024 and by 1.1 pps in 2025. The economic growth will be lower by 0.5 pps in the period 2024–2026, as the level of GDP at both constant and current prices in the alternative scenario will remain permanently below that in the baseline throughout the projection period. •

1. External environment. Main assumptions

In the first half of 2023, economic growth slowed down globally, and especially in the EU. The suppressed economic activity among Bulgaria's main trading partners is expected to continue in the second half of 2023, with high reference interest rates and elevated inflation. In a revision to the spring forecast, now the forecast on EU GDP growth in 2023 has been lowered (0.8%), while current expectations are for a higher deflator (6% compared to 5.4% previously). External demand is expected to gradually improve from 2024, mainly among the EU Member States. Towards the end of the forecasting horizon, a slight increase in global GDP growth, a slowdown in inflation and a decrease in interest rates are expected.

In the first half of 2023, the international prices of energy commodities followed a downward trend, at the end of the first six months they decreased by an average of 27.3% in dollar terms, according to data from the World Bank. Among the main factors for this were expectations for a slowdown in global economic activity and the high gas storage level after the warmer winter season. In the middle of the year, this trend reversed and their accumulated appreciation as of September compared to June 2023 was almost 24%. Non-energy commodity prices followed similar trend, albeit of a lesser magnitude, driven predominantly by the base effects in connection with the outbreak of the war in Ukraine in early 2022.

The assumptions for commodity prices are based on the relevant futures, with a cut-off date of 5.10.2023. The average price of Brent crude oil in 2023 is projected at 84.4 USD per barrel, down by 15.5% over the previous year, it will stabilise at this level in 2024, after which it will gradually decrease in the following two years to $75.6 per barrel in 2026. Natural gas prices for Europe are expected to decrease by 68% in 2023 to an average of 42.8 euro/MWh. In 2024, the price of this commodity will go up by 9% to 46.6 euro, after which it will decline to 44.7 euro in 2024 and to 37 euro in 2025. In 2023, the prices of non-energy commodities in dollar terms will ease by an average of 6.6%, and will continue to decline until the end of the forecasting horizon led by the foreseen downward dynamics in food prices.

The technical assumption for the USD/EUR[1] exchange rate with daily data as of 05.10.2023 foresees a nominal

Table 1: External assumptions: difference from previous forecast

External environment	Autumn forecast 2023				Spring forecast 2023				Difference from the previous forecast			
	2023	**2024**	**2025**	**2026**	**2023**	**2024**	**2025**	**2026**	**2023**	**2024**	**2025**	**2026**
World real GDP, %	3.0	2.9	3.2	3.2	2.8	3.1	3.2	3.2	0.1	-0.1	0.0	0.0
EU real GDP, %	0.8	1.4	2.1	2.0	0.7	1.8	2.1	1.9	0.1	-0.4	0.0	0.0
USD/EUR exchange rate	1.07	1.06	1.06	1.06	1.06	1.06	1.06	1.06	0.01	-0.01	-0.01	-0.01
Oil price, Brent (USD/barrel)	84.4	84.5	79.1	75.6	82.2	77.4	73.3	70.0	2.2	7.1	5.8	5.6
Non-energy commodity prices, in USD, %	-6.6	-1.9	-1.2	-0.7	-10.6	-2.1	-1.4	-0.6	4.0	0.2	0.1	-0.1
EURIBOR 3month (%)	3.4	3.7	3.1	2.6	3.3	3.3	2.8	2.3	0.1	0.4	0.3	0.3

Source: IMF, WB, ECB, Bloomberg, own calculations

[1] An average USD/EUR exchange rate is calculated based on data for the last ten business days as of the date of the assumptions and is fixed for the days until the end of the forecasting horizon.

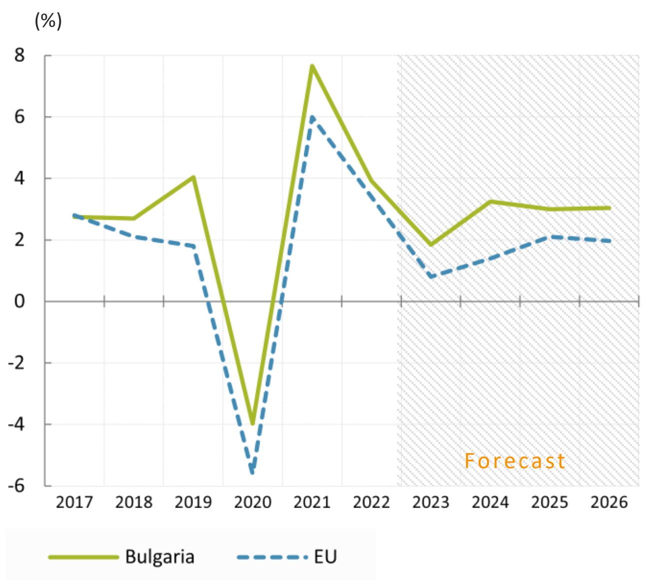
appreciation of the single European currency by 2% to 1.07 dollars for one euro in 2023 over 2022. In 2024, the average annual exchange rate will decrease by 1.7% to 1.06 dollars per euro and will remain at that level until the end of the forecasting horizon.

2. Gross domestic product

The revised GDP data published by NSI on 19 October 2023 were taken into account in the forecast. According to them, the nominal value of GDP for 2022 was revised up by BGN 2.4 bn mostly on the back of higher investments. In real terms, GDP growth was revised from 3.4% to 3.9%. For the first half of 2023, real GDP growth stood at 2%, being 1.9% before the revision, and was driven by consumption and net exports. In the second half of 2023, GDP growth is expected to slow down slightly and reach 1.8% for the whole year. The decrease in the consumer confidence indicator in August and September and the weaker growth of retail trade in July and August signal a slowdown in the growth of household consumption in the second half of the year. Investments in the economy for the whole 2023 will decrease due to the negative contribution of change in inventories, while GFCF will increase supported by public capital spending. Net export will make a major positive contribution to GDP growth. Expectations of suppressed economic activity in the country's main trading partners until the end of the year will continue to limit exports. At the same time, the negative base effects in trade with individual goods, observed in the first half of the year, will gradually wear off, and an activation of trade with grain and oil is also expected. As a result, a small growth in the total export of goods and services will be reported for the year. The described dynamics of domestic demand and exports will lead to an improvement in imports in the second half of the year, which recorded a real decline in the first half of 2023.

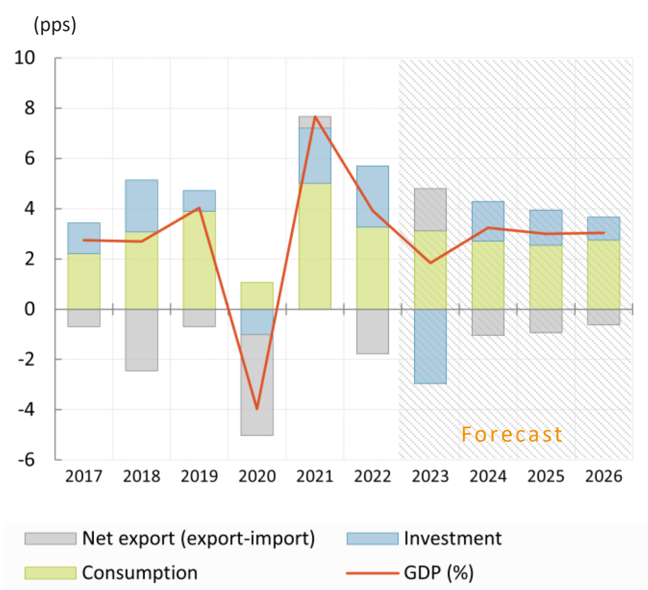
In 2024, GDP growth will accelerate to 3.2% due to investments increase in the economy. High growth of public investments and activation of private investment activity is expected. The change in inventories is assumed to have a

Fig. 1: Real GDP growth



Source: Eurostat, IAF

Fig. 2: GDP growth and contribution by main components



Source: NSI, IAF

neutral contribution to GDP growth. Weaker growth in employment and consumer credit will be reflected in a slowdown in household consumption growth. The improvement in the external environment will support exports, but imports growth will outpace that of exports as a result of strong domestic demand. The contribution of net exports will be negative.

In 2025 and 2026, GDP will increase by 3%. A slowdown in domestic demand growth is expected due to weaker growth in public spending and private consumption caused by lower income growth. Exports growth will be in line with the assumptions of an increase in external demand. A gradual slowdown in export and import growth rates and a reduction in the negative contribution of net exports to GDP growth are expected.

3. Labour market and incomes

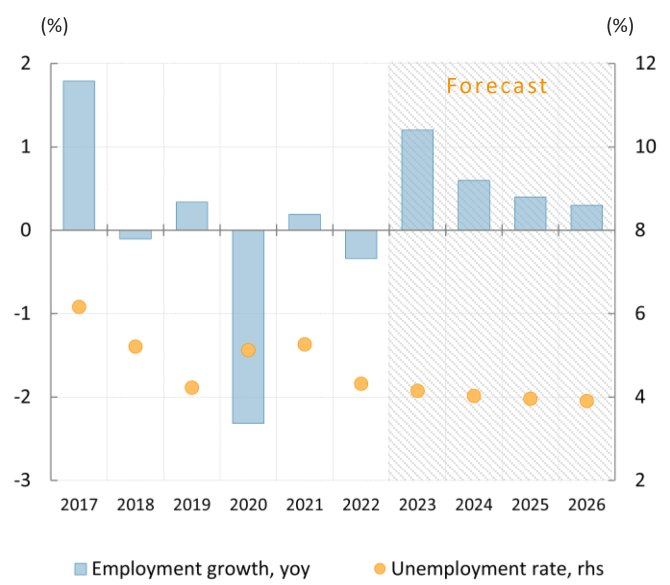
In the first half of 2023, the number of people employed in the economy reported relatively high growth. According to the revised National Accounts (SNA) data the employment increased by 1.7% compared to the first half of 2022. Almost all economic sectors had positive contribution to this process. In this context, our estimate for the employment growth in 2023 has been revised upwards (compared to the spring forecast) and the number of employed is expected to increase by 1.2%. Employment growth in services will account the most, but agriculture and construction are also expected to have a positive contribution to employment growth in 2023.

During the 2024-2026 period, Bulgarian economy is seen to return to annual GDP growth rates at around 3%, however, we expect employment growth to decelerate to 0.6% in 2023 and 0.3% in 2026. We expect labour demand to remain high, but the possibilities for an extensive increase in the labour supply are assessed as ever more limited, mainly due to the unfavourable demographic processes in the country. The employment rate (population 15-64) is expected to reach about 75% at the end of the forecast period.

Along with the increase in employment, the unemployment rate is expected to follow a steady trend of decrease. However, the decrease is expected to be relatively low, as the opportunities for transition from unemployment to employment are increasingly limited without additional measures to increase the prospects for the long-term unemployed to find a new job. Generally, the latter lack specific skills and their degree of education is rarely higher than elementary. According to the forecast, the unemployment rate in 2023 will be 4.2% and by the end of the forecasting period it will decelerate to 3.9%. The relatively small decline in the unemployment rate in the 2024-2026 period means that the projected employment growth is expected to happen mostly by people coming back to the labour force or people coming from other labour markets.

The nominal growth of the compensation per employee was raised in 2023 mainly because of the reported lower

Fig. 3: Employment growth and unemployment rate

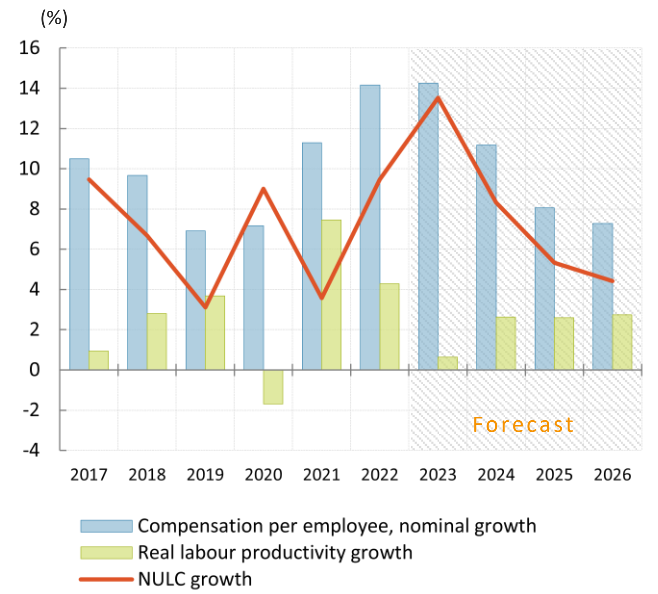


Source: NSI, IAF

base in 2022, due to the data revision, which pointed to lower wage growth in the industrial sector. According to the preliminary data, the increase in the compensation per employee for the whole economy was 18.4% and after the revision it declined to 14.2% in 2022. This resulted in a more substantial surge in this indicator for the first half of 2023. Another factor which is anticipated to contribute to the higher growth of the compensation per employee is the higher wage costs in the public sector in 2023. Similar to the spring forecast, the growth of compensation per employee in the private sector will decelerate in the second half of the year due to the containment of inflationary processes in the country and the growth of the economic activity. The nominal growth of the indicator for the whole year is expected to reach on average 14.3%. Labour income growth rate will remain high in 2024 (11.2%) in line with the expected acceleration in real productivity growth. A higher contribution is also anticipated from the rise in the minimum wage in line with the adopted legislative changes. In 2025 and 2026, the nominal growth of the compensation per employee will fall more significantly to 8.1% and 7.3%, respectively.

In the period 2023–2026, the growth of the real labour productivity is projected to remain close to the spring forecast. A more substantial slowdown is expected in 2023 when the indicator will report a 0.6% increase, after which it will recover to rates in the range of 2.5–3.0%. The recovery in the labour productivity growth, together with the decelerating labour income at the end of the forecasting period will also limit the increase in nominal unit labour costs to around 4.4% in 2026. The former will rise in real terms at a rate of about 2.3% on average per year throughout the entire forecasting period.

Fig. 4: Labour income, productivity and unit labour costs (ULC)



Source: NSI, IAF

4. Inflation

Since the last quarter of 2022, there has been a clear disinflation trend in the country, thus the annual HICP inflation rate decelerated to 6.4% in September 2023. The observed slowdown in the inflationary processes has been predominantly driven by the downward dynamics in international commodity prices in the first half of 2023, as well as base effects from the accelerated price increases in the previous year. In this context, all major HICP components reported a slowdown in their rates of inflation except for alcohol and tobacco, after the higher excise duty stakes on cigarettes entered into force in March 2023. Food accounted the most for the annual increase in the headline rate in September 2023, followed by services and non-energy industrial goods, while the contribution of energy goods was negative. Core inflation[2] eased to 7.6% yoy due to a slowdown in the inflation rate in transport and catering services, as well as durable consumer goods.

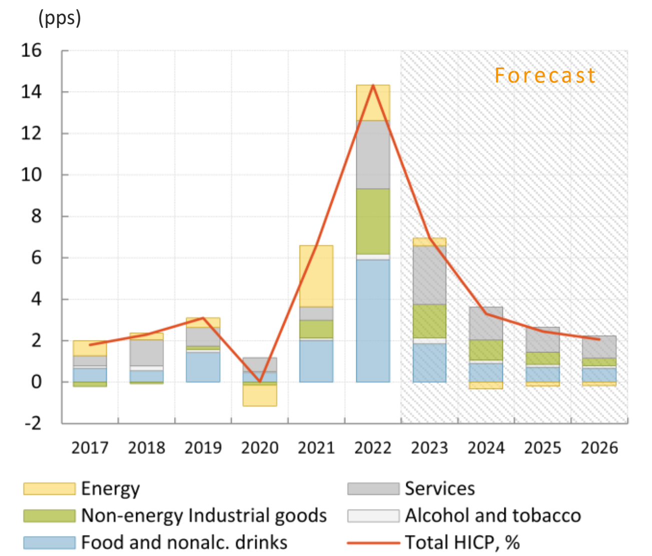
[2] Core inflation includes services and non-energy industrial goods

Inflation at the end of 2023 is projected at 6.9%, while the annual average inflation rate is expected to be 9.1%. Core inflation and services in particular will report the highest inflation rate and thus will account the most to the end-of-period inflation rate. Energy goods are also expected to have a low positive contribution. Among the drivers behind this are the expected increase in transport fuel prices in line with the crude oil futures at the end of the year, as well as the hike in electricity prices, up by 4.4% on average in July as well as the withdrawal of the reduced VAT rate for central heating and gas supply for households.

In the coming years, inflation will continue to gradually slow down, especially with the expected dynamics of international prices. Average annual inflation is forecast to narrow to 4.8% in 2024, with end-of-period inflation expected to be 3.3%. Energy commodities will have a negative contribution to inflation in line with the expected lower prices of transport fuels. The contribution of services and food will shrink significantly, but will continue to a leading contribution to inflation.

In 2025 and 2026, end-of-period inflation will continue to decelerate, to 2.4% and 2.1%, respectively. The negative contribution of energy goods will persist, while the expected decrease in international commodity prices until the end of the forecasting horizon will lead to a slowdown in the rate of inflation of food, non-energy industrial goods and services. However, due to the projected increase in domestic demand, as well as in labour costs, the components of core inflation will continue to have a substantial contribution to the headline inflation in the country. The annual average inflation rate will be 2.8% in 2025 and 2.2% in 2026.

Fig. 5: End-of-period inflation (HICP) and contributions by main components



Source: Eurostat, IAF

5. Balance of payments

In 2023, the current account balance has been improving with a major contribution from trade in goods. The positive balance is expected to extend until the end of the year with the surplus reaching 1.7% of projected GDP. The improvement in the balance will reflect a pronounced nominal decline in the import of goods, while export will be close to its last year level. This will be due to more favourable dynamics of real export compared to import, supported by positive terms of trade. The expected full recovery of tourism services to pre-2020 levels and the increase in the export of information, communication and other business services will lead to an increase in the surplus on services to 6.7% of GDP. The higher repaid investment income will push up the primary income deficit, while inward transfers from the EU will support the secondary income surplus. Compared to the spring forecast, the trade balance and respectively the balance on the current account are expected to improve due to a stronger drop in real import and more positive terms of trade.

From 2024, a shift in trade with goods towards a gradual deterioration in the trade balance and the current account is expected. The forecasted higher real growth in import than export will underpin the widening of the trade deficit. Moreover, the legally imposed changes in the regional structure of import of crude oil (and its processing) and the related adjustment of the import prices to the Brent prices will form negative terms of trade. Import deflator will surpass the export deflator more so in 2024 and to a lesser extend in 2025. As a result, the nominal growth rate of goods import is expected to be stronger than export next year, and the deviation will gradually decrease towards the end of the forecasting period. Growth in foreign tourist receipts will remain relatively high, with the surplus in trade in services around 7% of GDP in 2024-2026. The overall deficit on income articles will be about 2% of GDP.

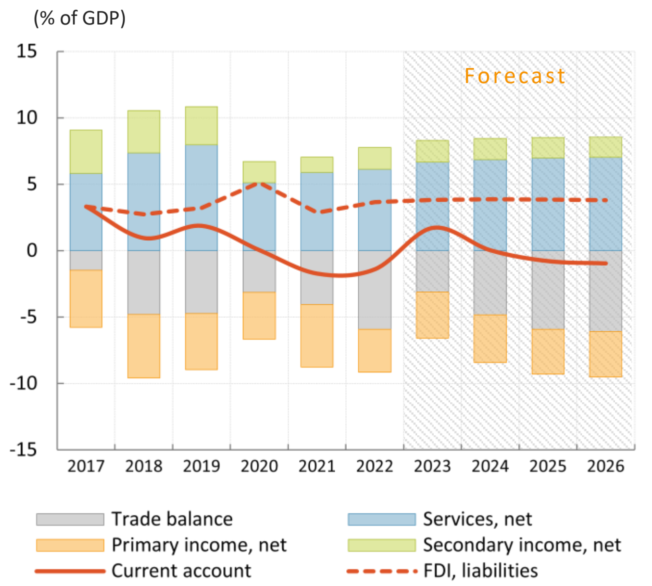
As a result of all of the above, a balanced current account is expected in 2024, and a negative balance in the following years, with a deficit reaching 1% of GDP in 2026.

Throughout the forecast period the capital account balance will be above the average in the recent years, reflecting inward transfers under the RRP. Foreign direct investment annual inflow is expected at about 3.9% of GDP.

6. Financial sector

In 2023, the annual growth in claims on the private sector has been decelerating, reaching 10.6% yoy at end-August, down from 12.5% at end-2022. Credit to non-financial corporations contributed the most to the slowdown, while demand from households also remained high. A slight deceleration was reported in consumer loans, with an annual growth of 10.8% at end-August, compared to 12.3% at end-2022. Housing loans continued to grow at double-digit rates, the pace reaching 18.7%, up from 17.9% at the end of the previous year. Still low interest rates, income dynamics, and rising house prices continued to support strong demand for loans for house purchase.

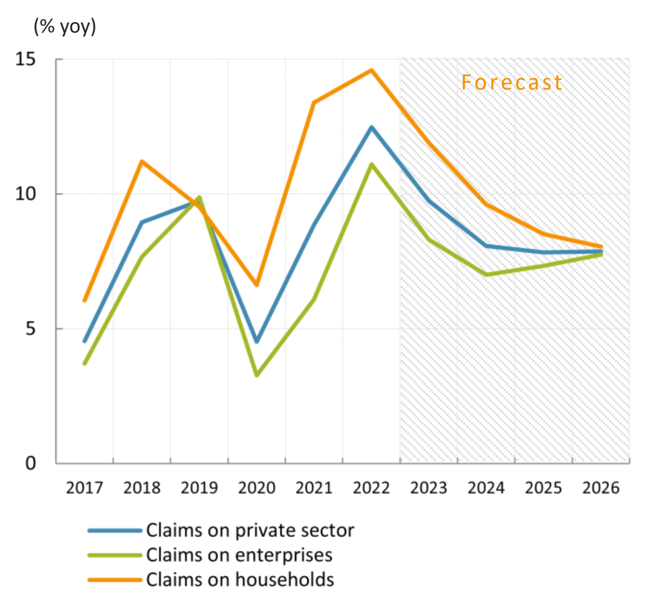
Fig. 6: Current account components and FDI



Source: BNB, NSI, IAF

The overall dynamics of the Balance of payments implies a sustainable external position and a stable level of international reserves.

Fig. 7: Claims on the private sector



Source: BNB, IAF

Credit growth to non-financial corporations dropped from 10.4% at end-2022 to 6.1% at end-August. was The lower overdraft growth contributed to the slowdown, following weaker demand for working capital from corporations. Demand for overdraft was the main driver of loans to NFCs in 2022 due to higher commodity prices.

In 2023, the growth of total claims on the private sector is forecast at 9.7%. Demand for credit from households is expected to slow down, but will remain high. The annual growth of claims on households at end-2023 will be 11.9% versus 14.6% a year earlier, supported by strong income growth. Factors for the cooling off of the credit market are the gradual increase in interest rates and the macroprudential measures, set by the BNB. The annual growth of claims on corporations[3] at end-2023 will be around 8.3% against 11.1% at end-2022.

In the period 2024–2026, credit to households will continue to decelerate along with expected slowdown in households' consumption and lower nominal growth of compensation of employees. The expected rise in interest rates as a result of strengthening the transmission of the ECB's monetary policy and keeping them at higher levels will also contribute to the credit slowdown. The growth of claims on households will decline from 9.6% in 2024 to 8.5% in 2025 and 8% in 2026.

Credit demand from corporations will further ease next year, in line with the expected private investment dynamics. Growth in corporate claims will be around 7% at end-2024. In the period 2025–2026, their annual growth is expected to accelerate in the context of stronger absorption of NRRP funds. The growth of total claims on enterprises is expected at 7.3% at end-2025, and 7.8% at end- 2026. Overall, claims on private sector's growth will slow from 8.1% in 2024 to 7.9% at the end of the forecast horizon.

Bank deposits will continue to increase with relatively fast pace throughout the projection period. At end-2023, the money supply growth is expected to lower to 9.8%. The slowdown will continue in 2024–2026 and the M3 growth will reach 8.9% at the end-2026. •

7. Risks

Geopolitical tensions related to Russia's invasion of Ukraine and recent events in the Middle East are a major risk factor with possible significant negative effects to the EU and Bulgaria's economy. Possible implications include a restricted supply of raw materials which, in turn, could result in higher international prices and/or disruption in global supply chains. This might lead to persistent higher inflation and a prolonged monetary tightening by leading central banks, which will have a negative impact on both foreign trade and domestic demand in Bulgaria.

This forecast is based on the assumption for a smooth transition in the supply of energy commodities for domestic processing. If such a timely restructuring is not achieved, there might be a stronger hike in energy prices and disruptions in production process. This would have a pronounced negative effect on the production and export of goods in Bulgaria.

With regard to the inflation forecast, risks are predominantly on the upside. They are related to a possible increase in the prices of main commodities traded on the international markets, given the expected decrease, which would lead to a higher inflation in the medium term as compared to the baseline scenario. This could lead to weaker growth in real disposable income of households and limit consumption growth.

A deterioration in financing conditions may have a stronger negative effect on investment and consumption

[3] Data refer to financial corporations and non-financial corporations from the Monetary Survey of the BNB.

than expected. The forecast is made assuming a zero contribution of the change in inventories in 2024, but it is possible to observe a significant negative contribution which, if not offset by another component (as seen in 2023 with a drop in imports which had a favourable effect on net exports and on GDP, respectively), would further reduce GDP growth.

Table. 2: Main economic indicators

	Actual Data *		Projections			
	2021	2022	2023	2024	2025	2026
International Environment						
World real GDP growth(%)	6.3	3.5	3.0	2.9	3.2	3.2
EU real GDP growth (%)	6.0	3.4	0.8	1.4	2.1	2.0
USD/EUR exchange rate	1.18	1.05	1.07	1.06	1.06	1.06
Crude oil, Brent (USD, bbl)	70.4	99.8	84.4	84.5	79.1	75.6
Non-energy commodity prices (in USD, %)	32.7	7.1	-6.6	-1.9	-1.2	-0.7
EURIBOR 3month (%)	-0.5	0.3	3.4	3.7	3.1	2.6
Gross Domestic Product						
Nominal GDP (mln BGN)	138 979	167 809	191 182	205 849	217 811	231 357
Real GDP growth (%)	7.7	3.9	1.8	3.2	3.0	3.0
Consumption	6.5	4.2	4.1	3.5	3.3	3.6
Gross fixed capital formation	-8.3	6.5	0.6	9.6	7.9	4.9
Export of goods and services	11.2	11.6	0.5	4.0	4.1	3.9
Import of goods and services	10.7	15.0	-1.9	6.0	5.8	5.0
Labour Market and Prices						
Employment growth (SNA, %)	0.2	-0.3	1.2	0.6	0.4	0.3
Unemployment rate (LFS, %)	5.3	4.3	4.2	4.0	4.0	3.9
Compensation per employee (%)	11.3	14.2	14.3	11.2	8.1	7.3
GDP deflator (%)	7.1	16.2	11.9	4.3	2.7	3.1
Annual average HICP inflation (%)	2.8	13.0	9.1	4.8	2.8	2.2
Balance of Payments						
Current account (% of GDP)	-1.7	-1.4	1.7	0.0	-0.8	-1.0
Trade balance (% of GDP)	-4.1	-5.9	-3.1	-4.8	-5.9	-6.1
Foreign direct investments (% of GDP)	2.9	3.6	3.8	3.9	3.8	3.8
Monetary Sector						
Money M3 (%)	10.7	13.2	9.8	9.6	9.2	8.9
Claims on enterprises (%)	6.1	11.1	8.3	7.0	7.3	7.8
Claims on households (%)	13.4	14.6	11.9	9.6	8.5	8.0

** The forecast is based on statistical data up to 11 October 2023, except for GDP and employment data, which was published on 19 October 2023.*

Source: NSI, BNB, IMF, Eurostat, WB, ECB, IAF

8. Alternative Scenario

Geopolitical conflicts in various parts of the world create a high degree of uncertainty, which increases the risk of a sudden rise in the prices of energy and food. There is also a risk of market fragmentation, which will reduce the supply chain efficiency and lead to higher prices of internationally traded goods, keeping the interest rates higher for longer. Higher prices will limit the real disposable income of households, which along with higher credit servicing costs will reduce real consumption. Keeping higher interest rates for longer than expected could have a negative impact on corporate investment as well as public sector spending. As a result, the EU economy would contract in 2024 and GDP growth in 2025 would be lower compared with the baseline scenario. Considering these potential risks, the alternative macroeconomic scenario considers an increase in the prices of some internationally traded[4] goods and a more unfavourable external demand than the baseline scenario.

As a result of the simulation, inflation in the country will be higher than in the baseline scenario by 1.3 pps in 2024 and by 1.1 pps in 2025. At the same time, the increase in international prices of food, energy commodities, and metals has a stronger effect on the import prices index than on export, i.e. negative terms of trade will lead to a lower GDP deflator in 2024 compared to the baseline scenario. In a response to the higher inflation in the euro area, the ECB will have to raise its key interest rate further in 2024, and keep it higher than in the baseline scenario in 2025. This will also be reflected in an increase in the interbank interest rate EURIBOR.

The higher costs of living and for repayment of existing and new loans will reduce the purchasing power of the population, which will be reflected in lower household consumption in the entire forecast period. The uncertain external environment, the more expensive raw materials, and higher interest rates will limit investment activity, while the effect will come with a lag compared to the other GDP components. Weaker investment activity will lead to slightly weaker labour demand and slower income growth than in the baseline scenario, which in turn will also have a negative impact on household consumption.

Table. 3: External assumptions of the alternative scenario (difference from the baseline scenario)

	2023	2024	2025	2026
World real GDP (pps)	0.0	-0.7	-0.3	0.0
EU real GDP (pps)	0.0	-1.0	-0.5	0.0
USD/EUR exchange rate (%)	0.0%	0.0%	0.0%	0.0%
Crude oil, Brent (USD/bbl, %)	0.0%	22.5%	20.2%	0.0%
Metals (in USD, %)	0.0%	12.2%	10.6%	0.0%
Food (in USD, %)	0.0%	20.9%	21.0%	0.0%
EURIBOR 3м. (pps)	0.0	0.75	1.0	0.0

Source: IAF

[4] A method based on the risk-neutral density of the probability distribution of the options value for the selected commodity groups was used to estimate the price shocks of international commodities. From the distribution thus made, the 75th percentile was drawn, the value of which is compared with the value of the corresponding commodity in the baseline scenario, the deviation between the two being taken as a price shock.

Table. 4: Main macroeconomic indicators (difference from the baseline scenario)

	2023	2024	2025	2026
Gross Domestic Product				
GDP level current prices [%]	0.0%	-0.9%	-0.7%	-1.1%
Real GDP level [pps]	0.0	-0.5	-0.5	-0.5
Consumption	0.0	-0.1	-1.0	-1.0
Gross fixed capital formation	0.0	0.7	-2.6	-1.5
Export of goods and services	0.0	-1.4	0.0	-0.2
Import of goods and services	0.0	-0.7	-1.0	-1.1
Labour Market and Prices				
Employment level (SNA)[%]	0.0%	-0.2%	-0.3%	-0.5%
Unemployment rate (LFS) [pps]	0.0	0.1	0.2	0.2
Compensation of employees [%]	0.0%	-0.2%	-0.1%	-0.2%
GDP deflator [pps]	0.0	-0.4	0.6	0.1
Annual average HICP inflation [pps]	0.0	1.3	1.1	-0.6
Balance of Payments				
Current account in % of GDP [pps]	0.0	-1.2	-0.6	0.3

Source: IAF

The assumptions for a less favourable external environment in the period 2024-2025 will adversely affect the growth of export of goods and services. Import of goods and services will also be lower than in the baseline scenario, as a result of weaker domestic demand and export. The negative contribution of net export to GDP growth will increase in 2024 but will be more favourable in the last two years of the forecast period compared to the baseline scenario. The current account balance will follow the trends in foreign trade and import and export price dynamics, leading to a deterioration in the balance in 2024 and 2025, a slight improvement thereafter.

GDP growth will be lower by 0.5 pps than in the baseline scenario throughout the forecast horizon. The level of GDP at both constant and current prices in the alternative scenario will remain permanently below that in the baseline throughout the projection horizon.

9. Other institutions forecasts for GDP growth and inflation in Bulgaria

The following section summarizes the latest forecasts of various institutions for real GDP growth and annual average inflation rate in Bulgaria. These forecasts are not fully comparable, as they were prepared at different points in time and are based on different methods and assumptions. Information is available for the time of their publication, but not for the time of preparation. A forecast prepared at a later stage has an information advantage.

Table. 5: Real GDP growth, %

	2023	2024	2025	Publication date
DSK Bank	1.7	2.1	2.7	18.10.2023
The Vienna Institute for International Economic Studies (wiiw)	1.0	1.5	2.5	11.10.2023
UBB Part of KBC Group	1.8	2.3		06.10.2023
Eurobank	1.7	2.5		05.10.2023
World bank (WB)	1.4	2.7	3.3	05.10.2023
International Monetary Fund (IMF)	1.7	3.2	2.9	05.10.2023
ING Bank	1.7	3.1	3.5	05.10.2023
UniCredit Bulbank	1.9	2.8		29.09.2023
European Bank for Reconstruction and Development (EBRD)	1.6	2.6		27.09.2023
Raiffeisen research	1.7	2.5		21.09.2023
Moody's	1.4	2.9		08.08.2023
Bulgarian National Bank (BNB)	1.0	3.2	4.0	26.07.2023
Scope Ratings	1.6	3.0		18.07.2023
Organization for Economic Co-operation and Development (OECD)	1.9	3.2		07.06.2023
Standard & Poor's (S&P)	1.3	3.3	3.0	29.05.2023
European Commission (EC)	1.5	2.4		15.05.2023
Fitch Ratings	1.3	2.6		12.05.2023
Economic Research Institute at BAS	1.7	3.4	3.1	05.05.2023
Institute of Economics and Policies	1.0	2.6		15.03.2023
Min	**1.0**	**1.5**	**2.5**	
Max	**1.9**	**3.4**	**4.0**	
Average	**1.5**	**2.7**	**3.1**	
Institute for Analysis and Forecasting	**1.8**	**3.2**	**3.0**	

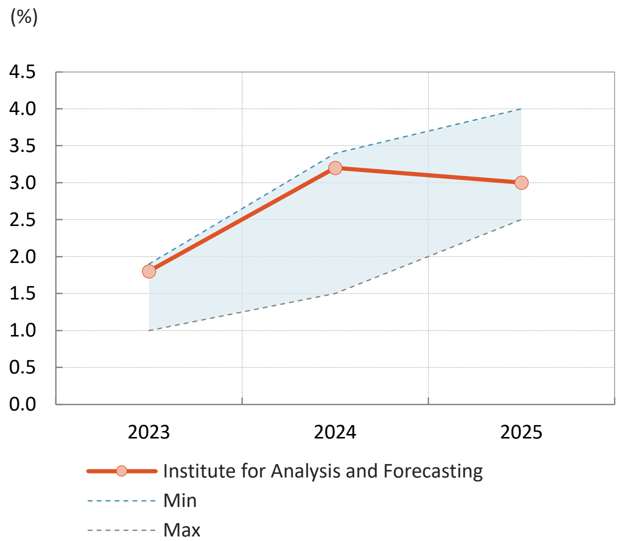
Source: publications of the respective institutions

Table. 6: Annual average inflation, %

Harmonised Index of Consumer Prices (HICP)	2023	2024	2025	Publication date
DSK Bank	8.4	3.1	2.8	18.10.2023
The Vienna Institute for International Economic Studies (wiiw)	9.0	7.0	5.0	11.10.2023
UBB Part of KBC Group	9.0	5.0		06.10.2023
International Monetary Fund (IMF)	8.5	3.0	2.1	05.10.2023
Bulgarian National Bank (BNB)	8.7			26.07.2023
Scope Ratings	9.3	3.8		18.07.2023
Standard & Poor's (S&P)	9.5	5.0	2.8	29.05.2023
European Commission (EC)	9.4	4.2		15.05.2023
Fitch Ratings	9.6	4.0		12.05.2023
Economic Research Institute at BAS	9.0	4.0	2.7	05.05.2023
Institute of Economics and Policies	7.5	4.0		15.03.2023
Min	**7.5**	**3.0**	**2.1**	
Max	**9.6**	**7.0**	**5.0**	
Average	**8.9**	**4.3**	**3.1**	
Institute for Analysis and Forecasting	**9.1**	**4.8**	**2.8**	
Consumer price index (CPI)				
Eurobank	9.6	4.1		05.10.2023
World bank (WB)	9.8	5.6	4.2	05.10.2023
ING Bank	9.9	4.6	4.9	05.10.2023
UniCredit Bulbank	9.8	4.0		29.09.2023
Raiffeisen research	9.6	3.9		21.09.2023
Organization for Economic Co-operation and Development (OECD)	9.5	4.4		07.06.2023

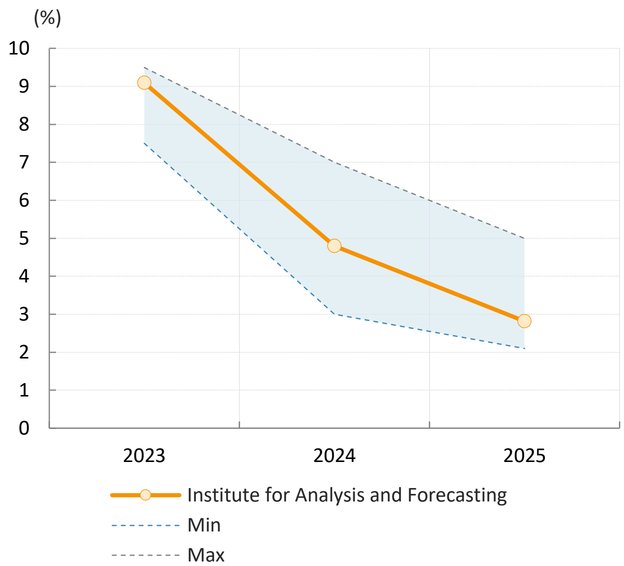
Source: publications of the respective institutions

Fig. 8: Range of forecasts for real GDP growth



Source: publications of the respective institutions

Fig. 9: Range of forecasts for annual average HICP



Source: publications of the respective institutions

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