# UPDATED MACROECONOMIC FORECAST 2021

## Autumn 2021

Ministry of Finance of the Republic of Bulgaria

The updated Autumn macroeconomic forecast takes into account the revised statistical data series from the National Accounts, which have been published by the National Statistical Institute on 18.10.2021. The assumptions for the international commodity prices until the end of 2021 and for the 2022–2024 period have been revised. The forecast also takes into account the most recent data for the economic development, as well as the strong fourth wave of COVID-19 infections in the country in the autumn months of 2021.

The strong rebound in world and particularly in EU economy in the first half of 2021 is expected to continue into the next year. As the positive base effect after the pandemic fades away, the fiscal stimuli start to ease and fiscal consolidation comes into action, economic growth in EU, as well as on a global scale, is expected to slow down towards the end of the forecast horizon and to be close to their long-term averages.

The forecast is based on the assumption that the implementation of the National Recovery and Resilience Plan (RRP) of Bulgaria will begin in 2022. This will lead to stronger economic growth, all else unchanged. The expected significant investments under the RRP will spur productivity growth in the economy and, correspondingly, income growth.

Revised GDP data pointed to changes in the structure of economic growth for 2021, nevertheless, the real GDP growth forecast has been held unchanged at 4%. In 2022, economic growth will accelerate to 4.6% due to the strong investment increase. Higher projected inflation in 2022, compared to the autumn forecast, will limit to some extent the growth of real disposable income of households. Consequently, the more moderate growth rate of consumption will affect total economic growth for 2022, which is 0.3 pps lower than in the autumn forecast.

In line with the updated assumptions for the international commodity prices, the inflation forecast has been revised upwards, predominantly owing to energy prices. The inflation rate is projected to accelerate to 4.5% at the end of 2021, while the average annual inflation is expected to be 2.4%. Despite the upward correction compared to the previous forecast, end-of-period inflation in 2022 is still assumed to be lower than in 2021, and to stand at 3.1%. This will materialize only under the assumption that international energy prices sustain their high level only until the first quarter of 2022 and decrease afterwards. The annual average inflation in 2022 is projected to be 4.2%.

The strong fourth wave of new COVID-19 cases in the country in the autumn months of 2021 is expected to have a negative impact on the most affected services sectors. The average annual number of employees is now expected to decrease by 0.1% in 2021, while it was assumed to increase by 0.1% in the autumn forecast. The negative impact of COVID-19 on the economy is assumed to fade away toward the end of the forecast horizon, so employment growth will accelerate, also helped by the effect of RRP on employment and unemployment dynamics in Bulgaria.

The current forecast depends on the evolution of the epidemic situation both in the country and globally. An important prerequisite for its fulfilment is the containment of the virus spread and the assumed decline of the effects from the pandemic to the economy.

Persistent global supply chain bottlenecks can spread well into 2022, postponing orders for future periods or even lowering demand. This would have a negative effect particularly on the export-oriented sectors.

Risks to the inflation forecast are considered mainly in the short run and are related to the assumptions for the international prices.

The investments fulfilment under the projects in the RRP and the projects financed by the European funds is a risk to the forecast in the 2022–2024 period.

# 1. External environment. Main assumptions.

The strong rebound in economic activity in the first half of 2021 and the upward trend in most short-term indicators supported the expected robust economic growth in the world and, in particular, in the EU, in the current year. In 2021, the global economy is expected to surpass its pre-crisis levels, and EU GDP to recover a significant part of the loss in 2020. At the same time, it's just become evident in the recent months that the economic growth is losing momentum. The trend is expected to continue in 2022 for many of Bulgaria's trade partners, as COVID-19 related positive base effect is expected to fade away, fiscal stimulus will be phasing out and gradual fiscal consolidation will be underway. In the period 2023-2024, annual GDP growth for both the world and the EU is expected to continue to slow down and converge to its long-term average rates. Those assumptions remain unchanged from the autumn forecasting round.

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 25.10.2021. According to this technical assumption, the average annual exchange rate of the euro in 2021 is expected to be USD 1.19. This indicates a nominal 3.8% appreciation of the single currency, which is 0.6 pps lower than the autumn forecast. In 2022, the exchange rate is expected to decline by 2.1% to 1.16 USD per euro and to remain unchanged until the end of the forecast horizon.

According to the latest assumptions of the World Bank, the average price of Brent crude oil in 2021 is expected to be USD 71.8 per barrel, which corresponds to an increase of almost 70% compared to the previous year. In line with the current market expectations, again there is an upward correction not only in 2021, but also in the following year, when prices are expected to keep increasing, up by 5.7% to an average of USD 75.9 USD per barrel. A more significant decline in oil prices is expected in 2023, down by 12.2%, followed by a marginal 0.6% increase in 2024.

Non-energy commodity prices are assumed to go up by 31% on average in dollar terms this year, compared to an expected 24.2% increase in the autumn forecast. This is due to the higher expected growth rate for all major price subgroups. The expectations for 2022 are for a 2.3% decrease in the prices of non-energy commodities, which will continue in 2023 and 2024, down by 3.6% and 1.9% respectively.

External assumptions: difference from the previous forecast

| | **Updated Autumn forecast 2021** | | | | **Autumn forecast 2021** | | | | **Difference from the previous forecast** | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **External environment** | **2021** | **2022** | **2023** | **2024** | **2021** | **2022** | **2023** | **2024** | **2021** | **2022** | **2023** | **2024** |
| World real GDP, % | 6.0 | 4.9 | 3.6 | 3.4 | 6.0 | 4.9 | 3.6 | 3.4 | 0.0 | 0.0 | 0.0 | 0.0 |
| EU real GDP, % | 4.8 | 4.4 | 2.3 | 1.9 | 4.8 | 4.4 | 2.3 | 1.9 | 0.0 | 0.0 | 0.0 | 0.0 |
| USD/EUR exchange rate | 1.19 | 1.16 | 1.16 | 1.16 | 1.19 | 1.18 | 1.18 | 1.18 | -0.01 | -0.02 | -0.02 | -0.02 |
| Oil price, Brent (USD/barrel) | 71.8 | 75.9 | 66.6 | 67.1 | 67.8 | 67.3 | 64.1 | 61.9 | 4.0 | 8.6 | 2.5 | 5.2 |
| Non-energy commodity prices, in USD, % | 31.0 | -2.3 | -3.6 | -1.9 | 24.2 | -2.6 | 0.8 | 0.8 | 6.8 | 0.3 | -4.4 | -2.7 |
| EURIBOR 3month, % | -0.5 | -0.5 | -0.5 | -0.4 | -0.5 | -0.5 | -0.5 | -0.4 | 0.0 | 0.0 | 0.0 | 0.0 |

*Source: MF, IMF, WB, ECB*

The forecast incorporates a probable deterioration in the epidemic situation in the second half of 2021 both in EU and Bulgaria. No severe containment measures are envisaged in the country and the imposed restrictions are expected to lead to a slight slowdown in domestic demand.

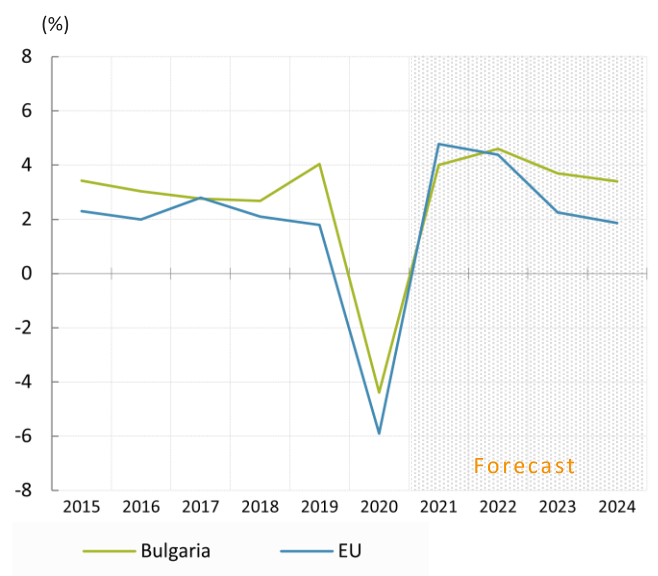
The forecast is based on the assumption that the implementation of the RRP will start in 2022. This will lead to higher growth in domestic demand in the forecast horizon. The stronger growth in consumption and investment will feed into higher growth in import, and respectively, to some deterioration of the contribution of net export to GDP dynamics and lower current account balance. The implementation of the RRP will support stronger growth in the number of employed, in particular in 2022 and 2023, as well as lower unemployment ratio and higher incomes.

## 2. Gross domestic product

The forecast takes into account the revised GDP data published by the NSI on 18 October 2021, according to which the nominal value of GDP has been revised upwards for the period 2010-2020. In 2020, the increase was BGN 1.3 billion. The real GDP growth for the period 2013-2018 has been reduced from an average of 2.8% before the revision to an average of 2.1% after that, due to lower growth of households' consumption. In 2020, the real decline in GDP has been revised from 4.2% to 4.4%, with lower growth in consumption, greater decrease in export and smaller decrease in investment and import. For the first half of 2021, real GDP growth stood at 3.4%[1]

Compared to the autumn forecast, real GDP growth in 2021 has been held unchanged at 4%, though components contribution changed in accordance with the data revision. Domestic demand growth is expected to slow down toward the end of the year and the negative contribution of net export will shrink. The increase in household consumption will slightly decelerate in the second half of 2021 due to the deterioration in the epidemic situation in the country, which began in September 2021. As a result, real growth in private consumption will reach an average of 5.9% for the year, standing at 7.4% in the first half. Fixed capital investment is forecast to decline by 2.1% in 2021. The expected slowdown in domestic demand will be reflected in similar import dynamics, while export is expected to slightly accelerate. This will be based on stronger export of services during the active tourist season, stable foreign demand and a rebound in export of certain commodity groups, following a temporary decline in 2020 (e.g. cereals). Both export and import of goods are projected to recover to their 2019 levels before the end of the current year.

Real GDP growth

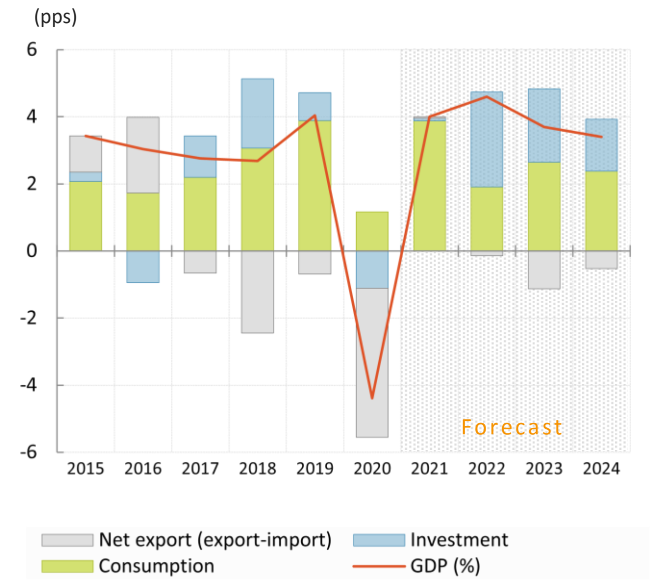



*Source: Eurostat, MF*

[1] Not seasonally adjusted data

GDP growth will accelerate to 4.6% in 2022, driven by investment growth of nearly 14%. Compared to the Autumn forecast, the overall growth is lower by 0.3 pps. Public investment will be supported by the allocation of funds under the RRP. Private co-financing under the RRP will also stimulate private investment. The latter will increase also due to improved expectations related to reduced uncertainty among economic agents and strong demand. Given the high growth of private consumption in 2021 and the slight slowdown in real disposable income growth in 2022, household consumption is expected to increase at a more moderate rate in 2022, up by 3%. In line with the expected lower growth of international trade and economic activity in our main trading partners, the growth of export of goods will slow down compared to the previous year. The growth rate will also be lower for export of services, but will remain significant in view of the continued recovery of international tourism. The dynamics of import of goods and services will be determined on the one hand by the more limited growth of demand for raw materials from export-oriented industries, along with a more moderate increase in consumption, and on the other hand from the significant increase in investment. The overall growth rate of import will decrease; however, it will remain higher than that of export. As a result, the contribution of net export to GDP will be negative.

GDP growth and contribution by main components




*Source: NSI, MF*

In 2023 and 2024, economic growth will slow down to 3.7 and 3.4%, respectively. Household consumption will increase by about 4%, supported by declining unemployment, steady growth in income and credit. Export will also have a lower contribution to GDP growth in both years due to the slowdown in external demand. The contribution of net export to GDP growth will remain negative. RRP funds will continue to stimulate the economy through higher investment, however, their growth is expected to be more moderate than in 2022, when the implementation of the plan starts.

## 3. Labour Market and Incomes

In 2021, the average annual number of employees will decrease by 0.1% compared to 2020. In the previous forecast the expected annual employment growth was positive (0.1%), while now we expect a decrease due to the very strong fourth wave of COVID-19 infections in the autumn months of 2021 and its anticipated negative impact on the most affected economic sectors. In the 2022–2024 period, we forecast an acceleration in employment growth mostly due to the depletion of the negative impact of COVID-19 on the economy; and the impact of RRP on employment and unemployment dynamics in Bulgaria. However, the employment growth in 2022 is also revised downward by 0.2 pps compared to the previous forecast given the lower GDP growth forecast in 2022. Moreover, the employment growth in 2022 is expected to be somewhat constrained by possible job optimization in the government administration, and in 2023 and 2024 – by the unfavourable demographic dynamics.

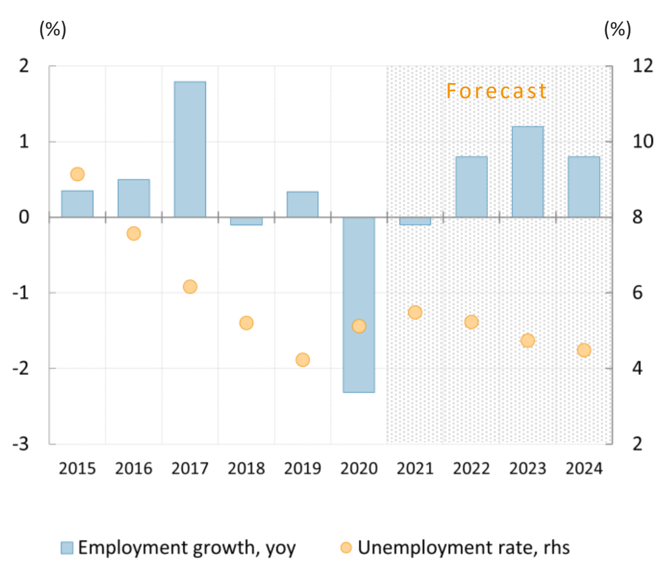
The unemployment rate dynamics largely corresponds to the expected employment dynamics. The indicator is forecast to decline from 5.5% in 2021 to 4.5% in 2024. In the last year of the forecast horizon, the unemployment rate will be close to the natural rate of unemployment and any further reduction (due to the inflow of funds under the RRP) will be limited and not sustainable (with the end of the inflow of funds under the RRP, the unemployment rate will increase back to its natural level, ceteris paribus).

The nominal growth of compensation per employee for the whole year is set at 7.6% and has also been revised down from 8.8% in the autumn forecast. The adjustment follows the reported lower wage increases in both industry and services due to the revised GDP figures by income approach. The current projections for the medium-term wage outlook remain unchanged.

In 2022, the expected significant increase in the country's economic activity and labour demand will contribute to strong wage dynamics in the private sector. However, the upward trend for the whole economy will be less pronounced due to limited contribution of the public sector. This trend will continue until the end of the forecast period and the private sector is expected to have a leading role in the overall wage growth. Compensation per employee is estimated to grow by a nominal 7.7% in 2022. In the period 2023–2024, this rate is expected to decelerate slightly but it will remain above 7% per annum. These developments will be supported by the expected further increase in productivity, prices and positive labour market prospects. The revised autumn projections also include the estimated impact of the RRP, as the accumulated effect on wages is estimated to be more profound in the last two years of the forecast horizon.

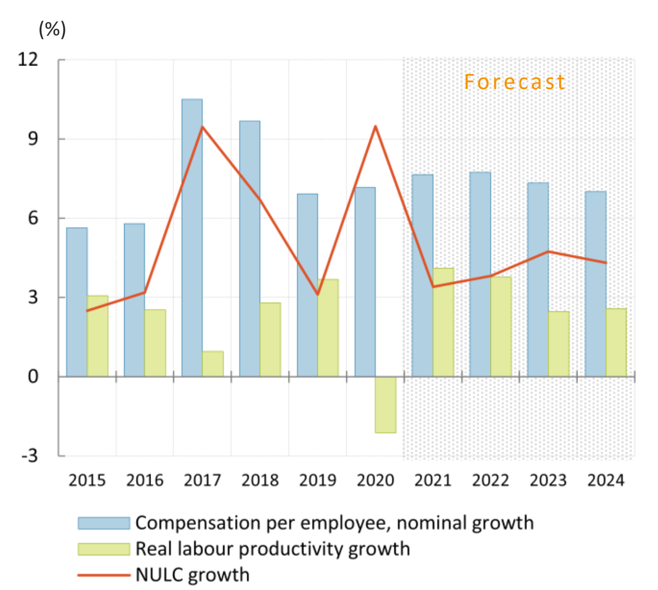
In 2021, real productivity growth is estimated at 4.1%, bringing GDP per employed at constant prices to its pre-crisis 2019 level. The expected productivity and wage dynamics will contribute to a strong downward adjustment of the nominal and real unit labour costs as early as 2021. In 2022-2024, real labour productivity growth is set at 3% per annum and the improved productivity dynamics will continue to partially offset the expected increase in compensation per employee. Thus, the share of compensation of employees in the gross value added will gradually increase. The latter is expected to result in moderate increases in nominal unit labour costs, up by 4% per annum. •

Unemployment and participation rates




*Source: NSI, MF*

Labour incomes, productivity and unit labour costs (ULC)




*Source: NSI, MF*

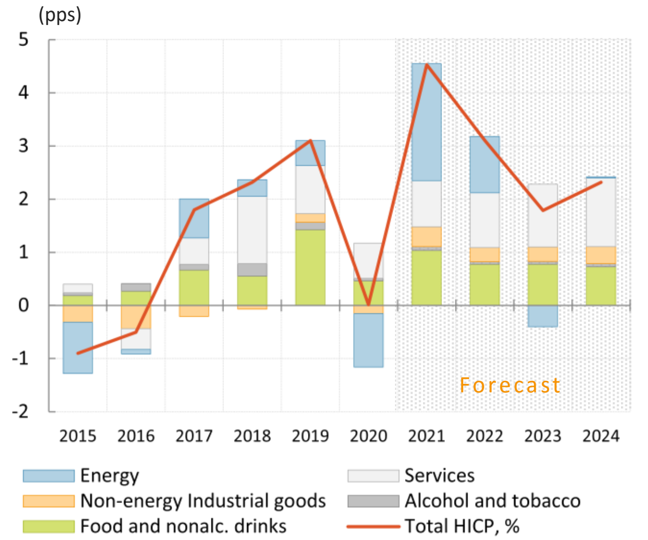
# 4. Inflation

Since the beginning of the year, the annual inflation rate in Bulgaria has been accelerating to 4% in September (according to HICP). The main factor behind its dynamics was the surge in commodity prices on world markets, and especially those of energy and food.

The headline rate is expected to continue accelerating and reach 4.5% yoy at the end of 2021 in line with the assumptions for a stronger rise in oil and non-energy commodity prices, as well as the recent hikes in the administrated prices of natural gas, electricity and heating energy. Energy will have the largest contribution, with prices of transport fuels expected to go up by almost 32% yoy in December 2021. The food prices increase will also accelerate to 4.5% by the end of the year, not only caused by the upsurge in relevant international prices, but also the poor harvest due to bad weather conditions in the summer. Services are also expected to make a positive contribution with a price increase of 2.7% yoy as of December. This will be due to increased domestic demand, as well as indirect effects of more expensive fuels and food. The average annual inflation in 2021 is projected to be 2.4%.

The annual average HICP increase in 2022 is projected to be 4.2%, and inflation at the end of the year will decelerate to 3.1%. The upward correction compared to the autumn forecast is largely due to the change in the assumptions for international prices and, accordingly, the stronger expected contribution of energy prices to the end-of-period inflation. This largely owes to the assumption for a further rise in crude oil prices instead of the previously expected slight decline which will result in higher domestic prices of transport fuels. In addition, there is a technical assumption for a hike in administered energy prices. The contribution of core inflation components is also expected to increase due to both stronger domestic demand and second-round effects from the higher energy prices.

End-of-period inflation rate (HICP) and contribution by main components




*Source: Eurostat, MF*

Energy will have a negative contribution in 2023 due to the expected downward dynamics of international prices. As a result, end-of-period inflation is expected to decelerate to 1.8% in 2023 and slightly reaccelerate thereafter to 2.3% in 2024. Until the end of the forecast horizon, core inflation will continue to accelerate under the influence of the stronger domestic demand. The average annual inflation will be 2.0–2.1%.

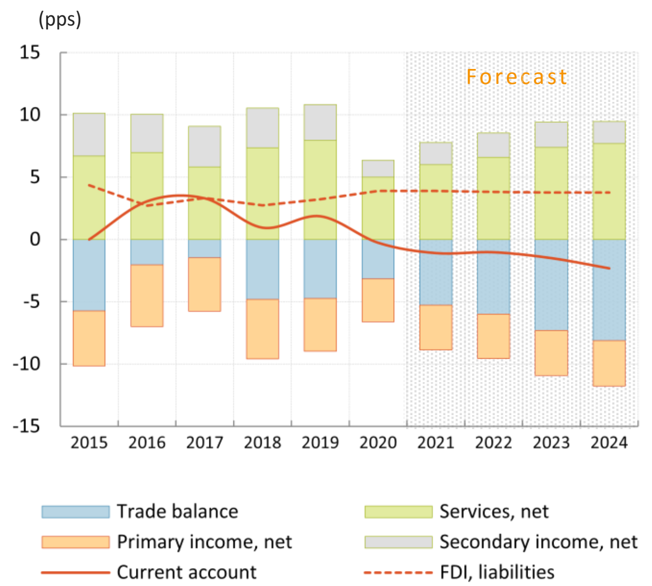
# 5. Balance of payments

The deficit in trade of goods is expected to continue on the increase until the end of the year which will be a major factor for the negative current account balance of 1.1% of projected GDP in 2021. In the remaining months of the year, the nominal growth rates of import and export of goods will remain high, due to the upward dynamics of international prices and active foreign trade. Import growth for the year (27.9%) is expected to be higher than that of export (24.3%), which will result in higher deficit in trade of goods at 5.3% of projected GDP. Given the significant decline in 2020, there will also be a significant increase in both export and import of services, and particularly of transport and travel services. The surplus in services will increase to 6% of GDP, but the levels reached in most subgroups will remain lower than in 2019. Flows on primary and secondary income are beginning to recover. The rising repayment on investment income will lead to an increase in the primary income deficit, and inward transfers from EU will support the growth of the secondary income surplus.

In 2022, in line with the significantly lower expected growth of international prices and more moderate economic growth of Bulgaria's main trading partners, the nominal growth rates in trade of goods are also assumed to be significantly lower. Import will continue to outpace export, supported by higher investment activity. As a result, the trade deficit is expected to widen further to 6% of GDP. During the year, receipts from foreign tourists will continue to increase, supporting stronger services surplus, up to 6.6% of GDP. The incoming grants from the Recovery and Resilience Facility will feed into higher surplus on secondary income and thereof lower overall deficit on income articles. The current account deficit will remain almost unchanged at 1% of GDP.

In 2023-2024, the nominal growth of import of goods will continue to outpace that of export and will contribute to a further widening in the trade deficit. Export of services will reach and surpass the pre-pandemic level in 2023,

Current account components and FDI




*Source: BNB, NSI, MF*

driving up the services surplus. The balance of primary income will remain unchanged, but the surplus on secondary income will edge down in 2024 due to the end of the period for repayment of European funds under the 2014-2020 multiannual financial framework and the gradual launch of projects under the new financial framework. The current account deficit will increase slightly as a ratio to GDP to 1.5% and 2.3% of GDP in 2023 and 2024 respectively.

During the forecast period, the balance on the capital account will be above the recent years average, due to the effect of incoming grants under the RRP. Regarding the financial account, the excess of assets over liabilities flows will gradually decrease and in 2024 net financial inflows are expected. The dynamics of liabilities will be determined by the repayment and refinancing of external government debt and the inflow of foreign direct investment. The latter are expected to reach about 3.8-3.9% of GDP.

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

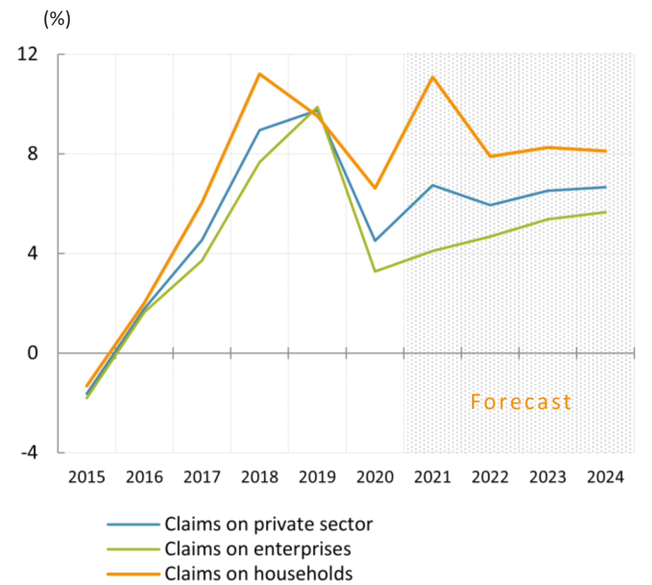
# 6. Monetary sector

The annual growth of the credit to the private sector accelerated to 7.6% at the end of September. This was the result of higher growth rates of credit to households (up by 11.8% compared with 6.6% at the end of 2020), as well as some positive base effect following the slowdown of private credit, which started in April 2020. Low interest rates contributed to higher demand for consumer loans (up by 9.9%) and loans for house purchase (16.2%), the latter being also influenced by the continuing increase in real estate prices. Loans to non-financial corporations grew at a slower pace (up by 4.1% at end-September compared with 3% at end-2020).

In 2021, corporate credit will accelerate in line with the expected stronger economic activity. Still its growth will remain restricted by the slow recovery in private investment. Regarding households, the expected higher demand for loans will be supported by rising consumption, construction activity and housing market. The annual increase in claims on corporations1 is projected to be around 4.1%, and in claims on households – 11.1%. Total growth of claims on the private sector in 2021 is expected to be 6.7%, up from 4.5% at the end of 2020.

In 2022, the growth of credit to households is expected to slow down, reflecting the end of the private moratorium on loan repayments to banks, expectations for cooling off of the housing market along with slower growth in the compensation of employees and consumer expenses. It will accelerate again slightly in 2023 in line with the expected higher domestic demand. Loans to non-financial corporations will speed up in 2022–2023, along with the recovery of private investment, supported by the RRP.

Claims on the private sector




*Source: BNB, MF*

The projected growth in claims on corporations at the end of 2022 is about 4.7%, and that of claims on households will accelerate to 7.9%. Total claims on the private sector will increase by 5.9 and 6.5% in 2022 and 2023, respectively. In 2024, claims on corporations are expected to increase by 5.7%, and the claims on households – by 8.1%.

Deposits in the banking system will continue to grow at a relatively high pace till the end of 2021, reflecting the still high uncertainty. At the end of 2021 the growth of money supply will accelerate to about 13.3%, up from 10.9% at end-2020. In 2022-2024 the growth rate of money supply will gradually begin to slow down. M3 is expected to increase by 12.8 in 2022 and by 11.9% at the end of 2024.

# 7. Risks

The current forecast depends on the development of the epidemic situation both in the country and globally. It is based on the assumption that the spread of the virus will be relatively low and the impact of the pandemic on economic activity will be declining. In case of strong tightening of containment measures, a weaker economic recovery may be observed in 2021. Any deviation from the expected stabilisation of the health situation could also lead to significant deviations from the outlook over the entire forecast horizon.

As regards the external environment, the main negative risk stems from persistent supply chain bottlenecks that can spread well into 2022, constraining supply and lowering external demand. This could have a negative impact on export-oriented sectors.

The risks to the inflation forecast are mostly in the short run and are related to the assumptions for the international commodity prices. They could materialise through a continuing accelerated increase in the price of natural gas and crude oil, as well as of electricity on the free market until the end of 2021 and the beginning of 2022.

Risks in the 2022–2024 period stem also from the expected realisation of the investments under the projects in the RRP and the projects financed by the European funds. Delays in the launch of RRP projects would have a negative impact on GDP growth in 2022. •

# UPDATED AUTUMN MACROECONOMIC FORECAST 2021

| MAIN ECONOMIC INDICATORS | ACTUAL DATA* | | PROJECTIONS | | | |
|---|---|---|---|---|---|---|
| | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
| **International Environment** | | | | | | |
| World real GDP (%) | 2.8 | -3.4 | 6.0 | 4.9 | 3.6 | 3.4 |
| EU real GDP (%) | 1.8 | -5.9 | 4.8 | 4.4 | 2.3 | 1.9 |
| USD/EUR exchange rate | 1.12 | 1.14 | 1.19 | 1.16 | 1.16 | 1.16 |
| Crude oil, Brent (USD, bbl) | 64.0 | 42.3 | 71.8 | 75.9 | 66.6 | 67.1 |
| Non-energy commodity prices (in USD, %) | -4.2 | 3.0 | 31.0 | -2.3 | -3.6 | -1.9 |
| EURIBOR 3month (%) | -0.4 | -0.4 | -0.5 | -0.5 | -0.5 | -0.4 |
| **Gross Ddomestic Product** | | | | | | |
| Nominal GDP (mln BGN) | 120 395 | 119 951 | 128 483 | 138 833 | 147 460 | 155 092 |
| Real GDP growth (%) | 4.0 | -4.4 | 4.0 | 4.6 | 3.7 | 3.4 |
| Consumption | 5.1 | 1.5 | 5.0 | 2.4 | 3.4 | 3.1 |
| Gross fixed capital formation | 4.5 | 0.6 | -2.1 | 14.8 | 10.3 | 6.8 |
| Export of goods and services | 4.0 | -12.1 | 10.0 | 8.0 | 6.5 | 5.1 |
| Import of goods and services | 5.2 | -5.4 | 10.2 | 8.3 | 8.3 | 5.9 |
| **Labour Market and Prices** | | | | | | |
| Employment growth (SNA, %) | 0.3 | -2.3 | -0.1 | 0.8 | 1.2 | 0.8 |
| Unemployment rate (LFS, %) | 4.2 | 5.1 | 5.5 | 5.2 | 4.7 | 4.5 |
| Compensation per employee (%) | 6.9 | 7.2 | 7.6 | 7.7 | 7.3 | 7.0 |
| GDP deflator (%) | 5.2 | 4.2 | 3.0 | 3.3 | 2.4 | 1.7 |
| Annual average HICP inflation (%) | 2.5 | 1.2 | 2.4 | 4.2 | 2.0 | 2.1 |
| **Balance of Payments** | | | | | | |
| Current account (% of GDP) | 1.9 | -0.3 | -1.1 | -1.0 | -1.5 | -2.3 |
| Trade balance (% of GDP) | -4.7 | -3.2 | -5.3 | -6.0 | -7.3 | -8.1 |
| Foreign direct investments (% of GDP) | 3.2 | 3.9 | 3.9 | 3.8 | 3.8 | 3.8 |
| **Monetary Sector** | | | | | | |
| Money M3 (%) | 9.9 | 10.9 | 13.3 | 12.8 | 12.2 | 11.9 |
| Claims on enterprises (%) | 9.9 | 3.3 | 4.1 | 4.7 | 5.4 | 5.7 |
| Claims on households (%) | 9.5 | 6.6 | 11.1 | 7.9 | 8.3 | 8.1 |

** The forecast is based on statistica data up to 25 October 2021, unless noted otherwise*

*Source: NSI, BNB, IMF, Eurostat, WB, ECB, MF*