5. Bulgarian National Bank Forecast of Key Macroeconomic Indicators for 2019–2021

The BNB forecast of key macroeconomic indicators is based on information published as of 20 December 2019. The forecast employs assumptions of the European Central Bank, the European Commission and the International Monetary Fund on global economic developments and commodity price dynamics in international markets prepared as of 12 December 2019.

In line with the assumption for the global environment, the growth rate of external demand for Bulgarian goods and services is lower in 2019 due to the downward dynamics in global trade, increased uncertainty surrounding international trade conflicts and Brexit, weaker economic activity in Turkey and other major trade partners of Bulgaria. With the exhausted negative contribution of Turkey, in the 2020–2021 period external demand for Bulgarian goods and services is assumed to accelerate its growth. In 2019–2021 petroleum product prices in US dollars are projected to decline from 2018, albeit at a slowing pace. At the same time, the prices of non-energy products in dollars are expected to decline in 2019 and subsequently to increase in 2020 and 2021.

In 2019 Bulgaria's real GDP growth rate is projected to accelerate to 3.8 per cent, mainly reflecting the positive contribution of net exports compared to the negative contribution in 2018. In 2020–2021 real GDP growth is anticipated to stabilise at 3.5–3.6 per cent levels, driven by domestic demand growth and a negative contribution of net exports. Over the projection horizon, a certain change is expected in the structure of domestic demand, involving an accelerating growth rate of investments and a slowdown of the growth rates of private and government consumption. Implementation of large infrastructure projects by the government, acceleration of external demand growth set out in ECB assumptions, as well as long-term downward trends in labour force and increased labour costs are the driving factors for accelerating growth in investments, whereas the expected slowdown in consumption will reflect retained high household savings rates and limited employment growth in the context of negative demographic developments. Compared with the forecast published in Economic Review, issue 2 of 2019, real GDP growth is expected to remain broadly unchanged in 2019 and 2020 and to be higher in 2021.

Annual inflation is expected to gradually decelerate to 2.0 per cent by end-2020 and 1.7 per cent by end-2021, reflecting largely the projected dynamics in international euro oil and food prices. The overall inflation forecast has been revised upwards for 2020 and downwards for 2021.

Risks to the macroeconomic outlook are assessed as oriented towards lower real GDP growth, mainly stemming from the external environment and potentially weaker than projected growth in demand for Bulgarian goods and services. An internal factor creating an uncertainty to the outlook is the dynamics of public investments co-financed by the EU and national budget. Risks to the inflation outlook are assessed as broadly increasing, arising mainly from likely higher inflation in energy products and goods and services with administratively controlled prices. An additional risk to the macroeconomic forecast stems from the stability of GDP data, for which time series is revised by the NSI in the last quarter of each year.

Forecast

The BNB forecast of key macroeconomic indicators is based on data published as of 20 December 2019. ECB, EC and IMF assumptions on global economic developments and international commodity price dynamics as of 12 December 2019 are used in the analysis. Based on these assumptions, global economic growth in 2019 is lower than in 2018 due to subdued global industrial production and investment in combination with the increased uncertainty surrounding foreign trade conflicts and Brexit. Given the anticipated relatively weak growth in 2019, ECB and IMF forecasts for the remainder of the projection horizon point to a gradual acceleration in global economic activity, primarily due to emerging and developing economies, excluding China. A less positive output gap in developed economies, retained downward trends in China's economic growth as a result of trade conflicts with the USA and continuous rebalancing of the economy away from investments and exports toward consumption are expected to be the limiting factors for the global growth in 2020–2021.

Expectations about external demand for Bulgarian goods and services in 2019 point to significant slowdown in growth from 2018, mainly reflecting decreased demand by Turkey and, to a less extent, lower growth in demand by Romania, some euro area countries and China. With the exhaustion of the negative contribution of Turkey, growth in external demand for Bulgarian goods and services is assumed to accelerate in 2020–2021. The baseline scenario for external demand takes into account the impact of foreign trade measures already implemented by the USA but does not include a further escalation of international trade conflicts over the forecast horizon. As regards Brexit, the forecast includes an assumption of an agreed withdrawal and negotiations on future trade relationships.

In 2019 energy prices declined on an annual basis in both US dollars and euro due to the weaker global economic activity, decreased international trade and market participants' concerns about potential negative effects of foreign trade conflicts on global economic activity. This average annual decline in 2019, however, was partly limited by the significant price rise in energy raw materials at the close of the year. The December 2019 agreement between OPEC and other non-OPEC producers on further oil production cuts in the first quarter of 2020 was the driver for the increase. Assumptions of subdued global demand in 2020–2021 will determine continuous oil price declines in dollars and euro.

Non-energy prices experienced divergent dynamics in both dollars and euro over 2019, reflecting the appreciation of the US dollar against the euro. A decrease in dollars was recorded in both metal and food prices. The fall in metal prices reflected factors such as the trade conflicts between the USA and China and subdued growth of global industrial output. Prices were also affected by weaker global demand. There was a divergent dynamics across index sub-components. High yields in the USA and the EU had a negative effect on wheat prices. Concurrently, meat prices rose significantly, probably reflecting the spread of African swine fever worldwide. Prices of non-energy products are expected to increase both in US dollars and euro over the rest of the projection horizon. Food prices are forecast to exhibit the most significant increase, which will be more strongly pronounced in 2020, after which food prices are expected their growth to slow down.

In 2019 Bulgaria's real GDP growth rate is projected to accelerate on 2018, reflecting mainly the positive contribution of net exports compared to its negative contribution in 2018. Growth in exports of goods and services over 2019 is expected to slow down compared with 2018 amid weaker external demand and a temporary decline in production of metals and petroleum products.[91] Concurrently, overall imports of goods and services is anticipated to decrease resulting both from projected slower investment growth and lower imports of services due to temporary factors. The contribution of domestic demand to real GDP growth in 2019 is expected to increase, reflecting stronger growth in private consumption amid favourable labour market developments. The investment activity and government consumption is projected to continue contributing positively to domestic demand growth in 2019. Higher fixed capital investment will be mainly driven by the projected relatively strong rise in public investment reflecting both the implementation of projects co-financed by EU funds and higher government investment. At the same time, the subdued external demand and the uncertain international environment will be a factor limiting corporate investment activity. Given the observed rise in current budget expenditures on wages, healthcare and, to a lesser degree, on maintenance in the January–November 2019 period, the contribution of government consumption to GDP growth for the year is expected to remain positive.

Between 2020 and 2021 real GDP growth is expected to stabilise at 3.5–3.6 per cent and to reflect the increase in domestic demand, while net exports will have a negative contribution to the change in the real GDP due to the projected higher growth of domestic demand compared with external demand growth. Over the period, a certain change is expected in the structure of domestic demand, involving

[91] For details, see Chapter 3, Exports and Imports of Goods and Services Section.

an acceleration of the growth rate of investments and a slowdown of the growth of private and government consumption. High saving rates maintained by households and limited employment growth in the context of negative demographic developments in Bulgaria will contribute to the private consumption slowdown. The implementation of large infrastructure projects financed by the national budget and higher absorption of EU funds in the final phase of the current EU funding cycle are expected to support investment activity. In addition, private investment growth is projected to be also supported by the assumptions for accelerated growth of external demand and the long-term decrease in labour force and an increase in labour costs. Following the reported strong increase in government non-interest expenditure in January–November 2019, the growth rates of maintenance and health costs are expected to be slower in 2020 and 2021, which will be the major factor behind the projected slowdown in government consumption growth.

Expected stronger growth of exports of goods in 2019 compared with imports and the projected favourable terms of trade (measuring the change between prices of exported and imported goods) will result in a significant decrease in the balance of payments trade deficit as a percentage of GDP compared with 2018. This will be the main factor behind the projected strong rise in the current account surplus as a percentage of GDP compared with 2018. The surplus is expected to gradually decrease as a share of GDP in the rest of the projection horizon, reflecting primarily the higher deficit on the net primary income account and the trade deficit. The strong economic activity in Bulgaria is expected to boost corporate profits and payment of dividends to non-residents, which would result in a higher deficit on the net primary income account over 2020 and 2021.

In 2019 total economy employment is expected to rise on an annual basis, with the services sector again contributing the most. In 2020 and 2021 employment growth is projected to remain weak and to subside due to negative demographic developments in Bulgaria. The increase in the labour force participation rate, supported by the continuous increase in labour income and the average retirement age, is projected to partly offset the decline in the working age population. The unemployment rate is foreseen to decrease to 4.3 per cent on average in 2019 and to further decrease at slowing pace for the rest of the projection horizon, reaching 3.8 per cent in 2021. Labour productivity growth is projected to almost match that of real GDP due to the expected stabilisation in the employment level. Over 2019 the growth rate of compensation *per* employee is expected to moderate but to remain relatively strong. In 2020 it is forecast to accelerate due to the undertaken measures for increasing remunerations in the education sector and higher public sector wages projected in the 2020 budgetary framework. The growth of total economy wages is projected to slow down in 2021 as a result of the expected slower rise in the public sector wages and weaker labour productivity growth. Nominal unit labour costs are expected to follow closely the dynamics of compensation *per* employee.

Annual inflation is expected to decelerate to 2.0 per cent by end-2020 and 1.7 per cent by end-2021, reflecting mainly the expectations for the international euro oil and food price dynamics in euro. Over the projection horizon, core HICP components are expected to have a significant and gradually, increasing positive contribution to overall inflation mainly due to the upward dynamics of services prices during the continuing process of nominal and real convergence. The food group is expected to have a substantial though decreasing positive contribution to overall inflation mainly under the influence of higher meat prices. Increases in the prices of electricity and heating as announced by the Energy and Water Regulatory Commission (EWRC)[92] since the third quarter of 2019, as well as the increases in water supply prices[93] in 2020 are the major factors behind the expected low positive contribution of administratively controlled goods and services prices to overall inflation.

Over the forecast period non-government sector's deposits are expected to grow at an annual rate of around 8.0 per cent. This dynamics will reflect the continued growth in household disposable income. Despite historically low interest rates on deposits, we expect corporations and households to retain high

[92] For more details see the EWRC press release of 1 July 2019.
[93] For more details see the EWRC press release of 23 December 2019.

savings rate. However, due to the lack of sufficiently safe alternatives of bank deposits, these savings would contribute to the further increase in the resources attracted by banks. The sustained high inflow of deposits in the context of enhanced competition in the banking sector, favourable macroeconomic environment and persistently strong domestic demand amid low lending rates are projected to stimulate credit activity. Over the projection horizon non-government sector's credit is expected to grow at a rate of around 7.5 per cent, with growth rates of household loans outpacing loans to non-financial corporations. Concurrently, the downward trend in the annual growth rate of financial corporations' loans is expected to continue. Factors which are likely to limit overall credit growth are banks' policies to sell credit portfolios and to write-off non-performing loans, and the measures undertaken by the BNB with regard to the countercyclical capital buffer rate.

Forecast Revisions

Compared with the forecast published in Economic Review, issue 2 of 2019, real GDP growth is expected to remain broadly unchanged in 2019 and 2020 and to be higher in 2021. This reflects mainly changes in the assumptions about the external environment developments and fiscal policy parameters, inclusion of newly available data, and revision of NSI national accounts data in October resulting in changed composition of GDP growth over the forecast horizon.[94]

Slightly higher growth rate in real GDP over 2019 is attributable mostly to the stronger downward revision in imports compared to exports of goods and services, which leads to a positive revision of net exports' contribution to GDP growth. The revision in exports reflects mainly the assumptions of lower growth rates in external demand, while the weaker imports dynamics stems from changes in the structure of projected GDP and the effect of temporary factors in the second and third quarters of the year. Stronger than projected GDP growth *vis-à-vis* the previous projection is also driven by an upward private consumption revision which reflects largely the lower growth rate in final consumption expenditure of households in 2018 due to a revision of time series. The weaker external demand, increased uncertainty surrounding the external environment and further deterioration of the business climate of the industry in the second half of 2019 are the main factors behind the slight downside revision in private investment growth. Compared to the previous projection, public investment is expected to have a lower contribution to GDP growth in 2019 owing to a reallocation of part of expenditures for large infrastructure projects towards the end of the forecast horizon. The acceleration in public sector wage growth and healthcare expenditures over the second half of 2019 is the main factor for the slight upward revision of government consumption to GDP growth.

Compared to the previous forecast, real GDP growth is expected to be lower in 2020 and higher in 2021, reflecting a revision in the composition of economic growth. For the two years of the projection period the positive contribution of domestic demand to GDP growth is expected to increase, while the less favourable external environment is expected to have a larger limiting effect on the exports of goods and services. These developments are the drivers of the downward revision in the exports of goods and services and the upward revision in imports, leading to a stronger negative contribution of net exports to GDP growth. As regards domestic demand components, total investment growth in the 2020–2021 period is revised upwards as a result of the expected further progress in implementing infrastructure projects co-financed by EU and national funds. Private consumption in 2020–2021 is expected to grow faster compared to the previous forecast, reflecting more favourable financing conditions of households and improved consumer confidence. An additional factor behind the upward revision in both private and government consumption are public sector wage increases projected in the 2020 budgetary framework.

Revisions of expected overall inflation in 2020 and 2021 reflect mainly the changes in the assumptions about international food and oil prices in euro over the projection horizon, with one-off factors in the

[94] Revisions were published on the NSI website on 17 October 2019 according to the NSI schedule for statistical survey results and refer to the period from the first quarter of 1995 to the second quarter of 2019. The revisions relate to additional data inputs within the comprehensive annual statistical reporting and methodological changes.

group of unprocessed food affecting food inflation in 2020[95]. The upward revision of projected core inflation in 2020 reflects to a large extent the anticipated higher growth of private consumption, and the indirect effects of higher than previously projected food prices on services' prices. Downward revisions of overall inflation in 2021 are mainly driven by assumptions of lower international oil and food prices in euro. The downward revision of the assumptions for food and oil prices had both direct impact on the projected lower inflation of food and energy products and indirect impact on the lower inflation of services.

GDP and Inflation Forecast Revisions (20 December 2019 *vis-à-vis* 24 June 2019)

Annual rate of change, per cent	Forecast as of 20 December 2019				Forecast as of 24 June 2019				Revision (percentage points)			
	2018	2019	2020	2021	2018	2019	2020	2021	2018*	2019	2020	2021
GDP at constant prices	3.1	3.8	3.5	3.6	3.1	3.7	3.6	3.4	0.0	0.1	-0.1	0.2
Private consumption	4.4	5.4	4.3	4.3	6.4	4.0	3.9	3.7	-2.0	1.4	0.4	0.6
Government consumption	5.3	4.9	4.0	3.8	4.7	4.8	3.5	3.5	0.6	0.1	0.5	0.3
Gross fixed capital formation	5.4	3.0	6.0	7.1	6.5	7.2	5.3	3.6	-1.1	-4.2	0.7	3.5
Exports of goods and services	1.7	0.6	2.9	3.0	-0.8	4.6	3.4	3.6	2.5	-4.0	-0.5	-0.6
Imports of goods and services	5.7	-0.4	4.5	4.5	3.7	5.8	4.0	3.8	2.0	-6.2	0.5	0.7
HICP at end of period**	2.3	3.1	2.0	1.7	2.3	2.6	1.9	2.1	0.0	0.5	0.1	-0.4
Core Inflation	2.5	1.8	2.2	2.5	2.5	2.5	2.1	2.8	0.0	-0.7	0.1	-0.3
Energy products	1.0	4.1	-4.9	-1.3	1.0	2.5	-2.7	0.0	0.0	1.6	-2.2	-1.3
Food	2.4	6.2	5.5	2.8	2.4	5.0	4.5	3.4	0.0	1.2	1.0	-0.6
Goods and services with administratively controlled prices and tobacco products	2.3	2.1	0.1	0.1	2.3	0.2	0.1	0.1	0.0	1.9	0.0	0.0

* The forecast as of 20 December 2019 is based on NSI revised GDP data for the period between the beginning of 1995 and the second quarter of 2019.
** Actual data on inflation for 2019 is reported.

Source: the BNB.

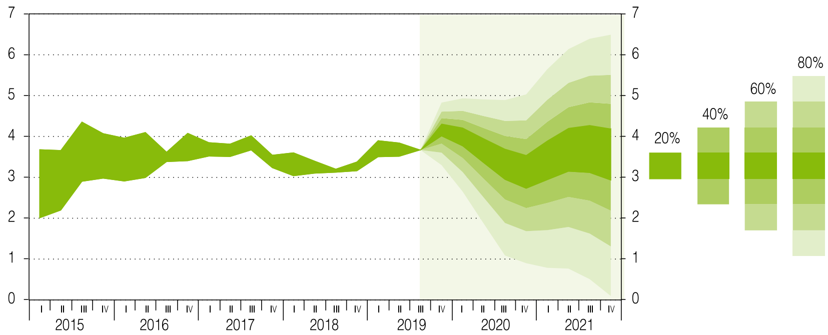
Risks to the Forecast

The balance of risks to the baseline scenario of the macroeconomic forecast is assessed as oriented towards lower real GDP growth, with major risks stemming from weaker external demand and lower public investment.

Assessments of the external demand outlook point that risks of lower than projected external demand prevail. These risks arise from the possibility for a lower economic growth in some of Bulgaria's most important trading partners compared to the baseline scenario, the UK leaving the EU without a deal and the US and China introducing further protectionist trade measures.

Expected Annual Rate of Change in Real GDP

(per cent)



Note: The fan chart shows expert views of the forecasters on the uncertainty around the projected value based on probability distribution. The reporting period includes revised GDP growth estimates, with the latest reporting periods revised on fewer occasions, thus narrowing the band. The middle band of the chart, depicted in the darkest colour, includes the central projection and the probability distribution shows a 20 per cent probability for the actual value to fall in this band in each of the quarters. If neighbouring bands (in the same brighter colour) are added to the middle band, there would be a 40 per cent coverage of the probability mass. Thus, by adding each same colour couple of bands, the probability for the value to fall there would be increased by 20 percentage points to reach 80 per cent. The probability for the value to remain outside the coloured part of the chart is 20 per cent based on the distribution chosen.

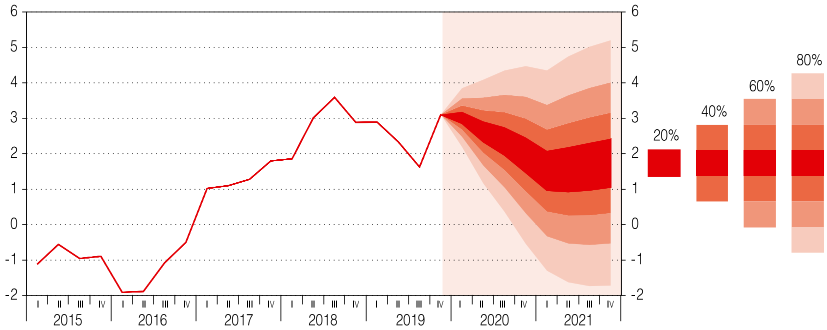
Source: the BNB.

[95] For more information, see Chapter 4.

While risks to domestic demand for public investment are assessed as balanced for 2019, possible subsequent delays in the implementation of government investment projects co-financed by EU or national funds continue to pose risks of lower domestic demand growth over the 2020–2021 period. Domestic demand higher than projected in the baseline macroeconomic forecast would materialise in case of a potential stronger rise in labour income in the total economy, which may also result in higher growth rates of private consumption. Currently, these risks of higher than projected economic growth are assessed as relatively less likely than the downside risks. An additional risk to the macroeconomic outlook stems from the stability of GDP data for which time series are revised by the NSI in the last quarter of each year.[96]

Expected Annual Rate of Change in Inflation at the End of the Period

(per cent)



Notes: The fan chart shows expert views of the forecasters on the uncertainty around the projected value based on probability distribution. The middle band of the chart, depicted in the darkest colour, includes the central projection and the probability distribution shows 20 per cent probability for the actual value to fall in this band in each of the quarters. If neighbouring bands (in the same brighter colour) are added to the middle band, there would be a 40 per cent coverage of the probability mass. Thus, by adding each same colour couple of bands, the probability for the value to fall there would be increased by 20 percentage points to reach 80 per cent. The probability for the value to remain outside the coloured part of the chart is 20 per cent based on the distribution chosen.

Source: the BNB.

The uncertainty over the outlook for a particular indicator may be graphically illustrated by means of a fan chart. Chart bands coloured with a specific colour set an interval in which with a certain probability the projected value is expected to fall (for further details see the note to the chart on real GDP growth). Each interval widens with the increase in the forecast horizon, reflecting the increasing uncertainty further into the future. The fan chart on annual real GDP growth shows for example that with a probability of 60 per cent it is expected to range from 2.5 to 4.5 per cent for the second quarter of 2020.

The risks to the inflation forecast are for higher projected values. Higher than projected international oil prices in euro due to an escalation of the conflict between the USA and Iran could result in higher than expected inflation in energy products, some services groups and goods and services with administratively controlled prices. Risks to the food inflation forecast are assessed as balanced. Risks to the core inflation forecast are assessed as balanced both in terms of household demand, as well as unit labour costs.

The balance of risks regarding inflation is graphically shown in the fan chart, which suggests, for example, that with a probability of 60 per cent annual inflation in consumer prices is expected to range between 1.7 and 3.6 per cent during the second quarter of 2020.

With regard to the non-government sector's deposits and loans, risks of higher than projected growth prevail. Higher than expected growth in labour income due to growing uncertainty in the external and domestic environment could lead to an increase in the savings rate in the economy. If lending rates continue to decrease, housing market prospects remain favourable and private consumption grows at a higher rate than projected, there are risks for stronger than expected demand for loans by households.

[96] Revisions of historical data on GDP growth over the period from the beginning of 2015 to the second quarter of 2019 are presented in the fan chart of the annual rate of change of GDP.

BNB Forecast of Key Macroeconomic Indicators for 2019–2021

(per cent)

	2017	2018	2019	2020	2021
Annual rate of change					
GDP at constant prices	3.5	3.1	3.8	3.5	3.6
Private consumption	3.8	4.4	5.4	4.3	4.3
Government consumption	4.3	5.3	4.9	4.0	3.8
Gross fixed capital formation	3.2	5.4	3.0	6.0	7.1
Exports of goods and services	5.8	1.7	0.6	2.9	3.0
Imports of goods and services	7.4	5.7	-0.4	4.5	4.5
HICP at end of period*	1.8	2.3	3.1	2.0	1.7
Core Inflation	0.3	2.5	1.8	2.2	2.5
Energy products	6.9	1.0	4.1	-4.9	-1.3
Food	2.7	2.4	6.2	5.5	2.8
Goods and services with administratively controlled prices and tobacco products	2.6	2.3	2.1	0.1	0.1
Employment	1.8	-0.1	0.2	0.2	0.1
Unit labour costs	8.7	6.3	2.7	5.6	4.0
Labour productivity	1.7	3.2	3.7	3.3	3.6
Unemployment rate (share of labour force, per cent)	6.2	5.3	4.3	3.9	3.8
Claims on non-government sector	4.5	8.9	7.7	7.7	7.7
Claims on corporations**	1.5	6.4	5.5	5.7	5.9
Claims on households	6.1	11.2	9.6	9.9	10.0
Deposits of the non-government sector	6.2	7.3	8.0	7.8	7.9
Share of GDP					
Balance of payments current account	3.5	5.4	8.5	4.5	3.4
Trade balance	-1.5	-3.3	-0.7	-1.4	-1.9
Services, net	5.8	6.3	6.6	6.4	6.3
Primary income, net	-4.4	-1.2	-0.8	-3.8	-4.0
Secondary income, net	3.5	3.5	3.4	3.3	3.1
Annual rate of change					
External assumptions					
External demand	6.9	3.0	1.0	2.2	2.8
Average annual Brent oil price (in USD)*	23.5	30.7	-9.9	-5.0	-4.7
Average annual price of non-energy products (in USD)*	7.9	4.1	-3.6	3.8	2.6
Brent oil price at the end of period (in USD)*	22.7	9.6	-7.0	-4.4	-3.1
Price of non-energy products at the end of period (in USD)*	5.4	-1.1	0.8	5.1	2.3

* Actual data for 2019 is reported.

** Data refer to non-financial corporations.

Source: the BNB.