

5. BULGARIAN NATIONAL BANK FORECAST OF KEY MACROECONOMIC INDICATORS FOR 2017–2019

The BNB forecast of key macroeconomic indicators is based on data published as of 20 June 2017. ECB, EC and IMF assumptions on global economic developments and the dynamics of prices of major commodity groups as of 9 June 2017 are used.

Based on ECB, EC and IMF forecasts in 2017 global economic growth is expected to accelerate on 2016 and subsequently to stabilise in 2018 and 2019. The acceleration will be mostly attributable to developing countries, while growth in advanced economies will slightly accelerate and then stabilise in 2018. Higher economic growth in Bulgaria's major trading partners is expected to boost external demand for Bulgarian goods and services, more strongly pronounced in 2017. Following the presidential and parliamentary elections in some of Bulgaria's trading partners (France, the Netherlands) uncertainty about global economic developments mitigated as compared with the previous forecast and risk of deviation in external environment developments from assumptions incorporated in the forecast are assessed as balanced.

In the first half of 2017 in the process of balancing demand and supply of commodity prices on international markets, USD prices of energy and non-energy inputs increased significantly on an annual basis. This process is expected to continue in the second half of 2017 which will prompt a rise in raw materials prices in 2017 as compared with the previous year. In 2018 and 2019 assessments point to further gradual growth of raw materials prices compared with the 2017 dynamics.

Bulgaria's real GDP growth in 2017 is expected to accelerate to 3.6 from 3.4 per cent in 2016. In the 2018–2019 period growth rate in the economy is expected to remain close to this rate. Domestic demand is anticipated to contribute most strongly to growth over the forecast horizon accompanied by accelerated growth rate of imported goods and services which will be close to that of exports. The contribution of net exports to growth will be low but with a negative sign. Risks to the economic growth outlook in the baseline scenario are assessed as shifted upwards for 2017–2018 and balanced in 2019.

In 2017 inflation will be driven mainly by the increase in international fuel and commodity prices. Administratively controlled prices are also expected to have a positive contribution to the overall inflation, reflecting higher prices of some goods and services which are indirectly affected by fuel prices and the increased excise duty on tobacco products since early 2017. Factors specific for the year, as price decreases in some services (mostly transport and telecommunication services), and further declines in durable goods prices will have a limiting effect on inflation. If the assumptions of a moderate global price rise materialise and the effect of the 2017 specific factors subsides, inflation in 2018–2019 is expected to gradually increase. Risks to the inflation outlook are assessed as balanced and are mainly caused by uncertainty surrounding global food and petroleum price developments and by possible changes in administratively controlled prices. A stronger than projected decline in telecommunication services prices as a result of removed roaming charges from 15 June 2017 may lead to a lower than expected inflation.

Forecast

The BNB forecast of key macroeconomic indicators is based on data published as of 20 June 2017. ECB, EC and IMF assumptions on global economic developments and the dynamics of prices of major commodity groups as of 9 June 2017 are used. On the basis of these assumptions global economic growth in 2017 is expected to accelerate from 2016 underpinned also by the positive developments in the international economic indicators. Higher economic activity in developing countries and cyclical growth improvements in advanced economies will help accelerate growth in 2017. Among developing economies raw materials-exporting countries reported stronger growth rates, with higher international prices of raw materials produced by them boosting economic activity. Economic activity in advanced economies is approaching its potential and positive labour market developments, low financing prices and the expected US fiscal impulse will help accelerate growth in 2017. In 2018 and 2019 global economic growth is expected to almost match 2017 growth: growth in advanced economies will stabilise and that in developing countries will slightly accelerate. The expected global economic activity dynam-

ics will contribute to higher external demand for Bulgarian goods which will increase the growth rate from 2016 over the projection horizon.

The global demand-supply gap in international commodity markets will continue to decrease in the first half of 2017. The average annual prices in US dollars of energy and non-energy prices are expected to increase on 2016 which will be the first price rise from 2012. After the strong year-on-year price rise of raw materials, particularly petroleum and metal prices, in early 2017, the second quarter of the year saw a slower price increase. The slower petroleum price rise was attributable to increased inventories and higher production in the USA. The effectiveness of agreements between OPEC and other major producers of December 2016 and May 2017 for limiting oil production caused doubts, which became a factor limiting the petroleum price rise. The increase in metal prices slowed down in the second quarter of 2017 following the commissioning of new production capacities, while China's demand decreased. In 2018 and 2019 international commodity prices are expected to continue gradually increasing, though at lower rates compared with 2017.

In 2017 real growth in Bulgaria is expected to accelerate on 2016 and to reach 3.6 per cent on an annual basis. Domestic demand, reflecting the upward dynamics of private and government consumption and gross fixed capital formation, is projected to contribute most strongly to growth. As a result of increasing demand for goods and services, the change of inventories will have a neutral contribution to growth. With the acceleration of growth rates of imported goods and services amid the high growth rate of exports, the contribution of net exports will decrease from 2016 and will be slightly negative.

Economic growth of Bulgaria is expected to remain at over 3 per cent in the projection horizon. GDP is anticipated to increase by 3.4 per cent in 2018 and retaining its upward trend to reach 3.5 per cent growth in 2019. Over the whole period domestic demand will remain the main driver of growth. Private consumption will continue to contribute most strongly to growth and driven by households' increasing disposable income and improving labour market conditions it will be further growing over the forecast period. The positive sentiment of firms, expected enhanced demand for goods and services and high capacity utilisation rate create conditions for boosting private investment which will gradually increase until 2019. Government consumption and investment are also expected to increase between 2018 and 2019 mainly as a result of the planned wage increase in the education sector projected by the government in the latest medium-term budget forecast and due to the projected increase expenditure under EU programmes. The expected high rates of external demand growth will contribute to the acceleration of export growth. Driven by these factors annual growth rates of imports of goods and services will also accelerate on an annual basis. As a result, net exports will have a neutral contribution to overall economic growth.

In 2017 real exports of goods and services are expected to slow down on the high 2016 growth rates. Growth in exports of services will be attributable to improvements of economic activity in countries important for our tourism but it will remain lower than growth in 2016 due to the high prior year base. Growth in exports of goods is projected to slow down compared with 2016 despite the higher external demand due to expected lower growth in exports of food products as a result of rich harvest and high results of exported cereals in 2016. In 2018 and 2019 real exports of goods and services are expected to accelerate on 2017 driven by the increasing external demand. Real growth rate of imported goods and services will also accelerate in 2017 in line with the increasing domestic demand. In 2018 and 2019 growth of imports is projected to remain at a level close to that in 2017. As a result over the projection horizon net exports is expected to have a slightly negative contribution to GDP growth, most strongly pronounced in 2017.

If the forecast of unfavourable terms of trade (measuring the change in prices of exported goods against the change in prices of imported goods) for Bulgaria in most of the projection horizon (2017–2019) and of higher growth rate of real imports of goods compared with that of exports materialises in 2017, the balance of payments current account trade deficit is expected to gradually increase as a percentage of GDP in the 2017–2019 period compared with 2016. In 2017 services trade is expected to report a larger surplus as a percentage of GDP from 2016 due to projected slow growth in imports of services, while at

the same time exports of services will increase more strongly than imports of services due to anticipated higher earnings from tourism. Between 2018 and 2019 the surplus in services trade as a percentage of GDP is expected to stabilise. Enhanced economic activity in Bulgaria is expected to boost companies' profits which will result in a gradual increase in the payments of dividends to non-residents, and correspondingly, in a rise in the deficit of the balance of payments primary income account over the forecast horizon. In 2017 net transfers on the balance of payments secondary income account are expected to decrease as a percentage of GDP compared with 2016 and to remain close to this in the 2018–2019 period, their dynamics reflecting the projected absorption of EU funds. As a result of the component dynamics, in the 2017–2019 period the balance of payments current account balance will remain positive, and by the end of the forecast horizon will gradually contract as a percentage of GDP.

Employment in the total economy will slightly accelerate its growth rate in the 2017–2018 period to reach 0.7 per cent. Positive labour market developments are expected to encourage the inclusion of the population in the labour force due to strengthening economic activity and the positive sentiment of firms and households. Towards the end of the forecast horizon the negative demographic developments are expected to prompt a stall in employment growth. Unemployment rate will decline throughout the forecast horizon, albeit at a moderate pace at the end of the period. As a result of the expected slow employment growth, labour productivity will largely follow the real GDP dynamics. The growth rate of real compensation *per* employee will gradually approach labour productivity growth, and nominal unit labour costs will grow at rates close to 2 per cent over the forecast horizon.

The observed substantial annual increase in global oil and food prices in euro in international markets in early 2017 will prompt an increase in the HICP in the following quarters and at the end of 2017 annual inflation is expected to reach 1.5 per cent. This trend will be further influenced by the indirect effects of higher fuel prices on some services with administratively controlled prices such as natural gas supply, heating and electricity. Raised tobacco excise duties since early 2017 is also expected to have a low positive contribution to overall inflation. Factors specific for the year related to the price decreases in some services such as telecommunication and air transport, and the further declines in durable goods prices will have a limiting effect on inflation. In line with international price developments and if the assumption of a subsiding effect of the 2017-specific factors materialises, inflation is expected to follow a pattern of a gradual increase in the 2018–2019 period, reaching 1.7 per cent at the end of the forecast horizon.

Funds attracted from the non-government sector in the banking system are expected to grow between 6 and 7 per cent in the 2017–2019 period. Over the forecast horizon interest rates on deposits are expected to remain low which will result in moderate growth in deposits. Lending rates will continue to reflect mainly the current interest rate cycle in the euro area and expectations about the continued uncertainty reduction in the economy and hence, the related decline in Bulgaria's risk premium. Against the background of relatively low lending rates and improved macroeconomic environment, demand for loans from the non-government sector is expected to continue to increase. Over the forecast horizon a gradual increase in loans to both firms and households is projected. Loans extended under the National Programme on Energy Efficiency of Residential Buildings will continue to contribute most significantly to the dynamics of loans to households in 2017, while in 2018 this contribution is expected to decline substantially.

Forecast Revisions

Compared to the forecast published in the Economic Review, issue 4 of 2016, real GDP growth has been revised upwards for both 2017 and 2018.

By final use component, positive sentiment and accelerated disposable income growth materialised in higher than expected private consumption growth in the first quarter of 2017, which underpins most of its upward revision for 2017. A higher volume of government investment and gross fixed capital formation has been projected respectively *vis-à-vis* the previous forecast for 2017–2018. The upward revision in external demand assumptions entails higher growth of goods and services exports for 2017 and

2018. These components' dynamics suggest also a stronger increase in goods and services imports as compared to the previous forecast.

Our inflation expectations for the 2017–2018 period have been revised upwards. The upward revision in the 2017 forecast reflects mainly the higher than expected inflation in the food group over the first five months of the year driven by increasing international prices of food and higher agricultural production costs. In addition, the current forecast takes into account the effect of the increase in some administratively controlled prices of the end of March and early April 2017 for which no information was available in December 2016. The forecast for energy product prices for the end-2017 and 2018 was revised slightly downwards, while that for food prices was revised slightly upwards, reflecting the changes in the assumptions of the oil, food and commodity price developments on international markets. Due to the slower than expected decline in core HICP components deflation since early 2017 underpinned by the further falls in some services prices (air transport) and in some durables prices (automobiles), our core inflation projection for the end of 2017⁷⁸ was revised slightly downwards.

GDP and Inflation Forecast Revisions (20 June 2017 *vis-à-vis* 15 December 2016)

Annual rate of change	Forecast as of 20 June 2017			Forecast as of 15 December 2016			Revision (percentage points)		
	2016	2017	2018	2016	2017	2018	2016	2017	2018
GDP at constant prices	3.4	3.6	3.4	3.4	2.8	2.9	0.0	0.8	0.5
Private consumption	2.1	3.5	2.8	2.1	2.5	2.6	0.0	1.0	0.2
Government consumption	0.6	1.9	2.1	0.3	1.7	1.7	0.3	0.2	0.4
Gross fixed capital formation	-4.0	6.2	6.3	-1.5	5.6	4.1	-2.5	0.6	2.2
Exports (goods and services)	5.7	5.1	5.3	5.7	4.7	5.0	0.0	0.4	0.3
Imports (goods and services)	2.8	5.4	5.3	3.2	5.0	4.7	-0.4	0.4	0.6
HICP at end of period	-0.5	1.5	1.6	-0.8	1.2	1.4	0.3	0.3	0.2
Core inflation	-2.1	0.1	1.5	-2.1	0.3	1.1	0.0	-0.2	0.4
Energy products	-0.2	3.6	1.7	0.2	8.1	4.3	-0.4	-4.5	-2.6
Food	0.9	3.3	2.3	0.0	1.6	1.7	0.9	1.7	0.6
Goods and services with administratively controlled prices and tobacco products	1.4	1.9	0.9	1.3	1.1	0.9	0.1	0.8	0.0

Source: the BNB.

Risks to the Forecast

Risks to the economic growth outlook are for higher than expected growth in the 2017–2018 period and balanced for 2019. Following the presidential and parliamentary elections the uncertainty about global economic developments in some of Bulgaria's trading partners (France and the Netherlands) mitigated as compared with the previous forecast and risks stemming from the external environment are assessed as balanced. As regards private consumption and investment risks for the whole forecast horizon are also balanced. In terms of government consumption and investment, risks for the 2017–2018 period are for a higher than expected growth and balanced for 2019.

In case of more favourable than expected developments in external and domestic environment, economic activity in Bulgaria could be higher *vis-à-vis* the baseline scenario. Oil prices, which irrespective of their upward dynamics still remain at a low level, the low cost of financing, high capacity utilisation rate and current positive sentiment observed in Bulgaria, remain preconditions for higher than projected consumption and investment. Given that the absorption rate of funds under EU programmes accelerates compared with the projected one and a more substantial part of the expected overperformance of tax revenue is used to fund additional wage, health care and operating costs exceeding the one projected

⁷⁸ For more information on core inflation dynamics, see Section 4, Inflation.

by the government, it is likely to have higher government investment and consumption in 2017 and 2018. Stronger than expected global growth could result in higher external demand for Bulgarian goods and services.

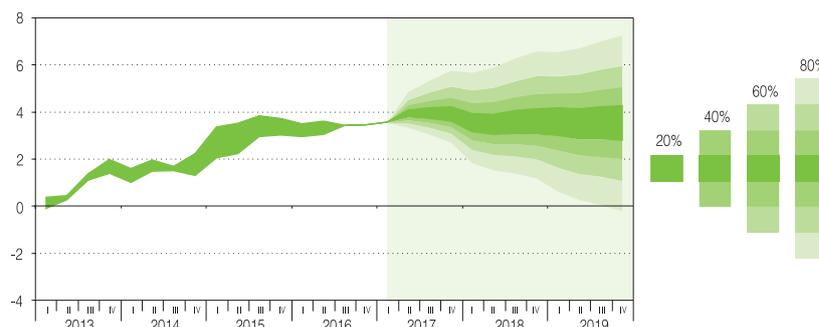
On the other hand, there remains uncertainty surrounding negotiations over Brexit, uncertainty about the future US fiscal and monetary policy, the forthcoming elections in Germany and political instability in Italy, which could exert a limiting effect on investment decisions of firms and consumer sentiment of households and on the external demand for Bulgarian goods and services. This is likely to result in weaker than expected increase in the private components of domestic demand and exports and hence, in a lower than expected real GDP growth.

The uncertainty over the outlook for a particular indicator may be graphically illustrated by means of the so-called fan chart. Chart bands, shaded in a particular 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 GDP growth). Each interval widens by an increase in a projected horizon, reflecting an increasing uncertainty regarding a more distant future. The fan chart on the annual GDP growth shows for example that there is a 60 per cent probability for real GDP growth to range from 3.3 to 4.5 per cent over the year.

Risks to the inflation outlook are assessed as balanced and are mainly caused by uncertainty surrounding global food and petroleum prices developments and by possible changes in administratively controlled prices. A stronger than projected decline in telecommunication services prices as a result of removed roaming charges from 15 June 2017 may lead to a lower than expected inflation. The balance of risks regarding inflation outlook is graphically shown in the fan chart of the expected annual rate of inflation at the end of the period. It shows that there is a 60 per cent probability for annual HICP growth to range from 0.4 to 2.6 per cent at the end of 2017.

Risks to the balance of payments outlook are assessed as balanced. The major source of uncertainty to the balance of payments projection is the external environment and in particular commodity price

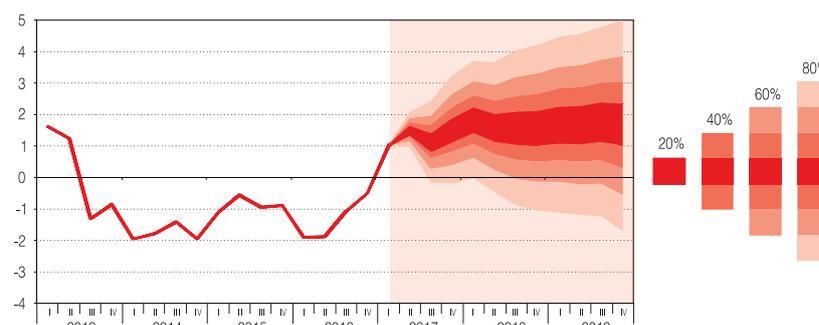
Fan Chart of the Expected Annual Rate of Change of Real GDP



Note: The fan chart shows the expert views of the forecasters on the uncertainty around the projected value based on probability distribution. The reporting period shows revisions of GDP growth estimates. 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.

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



Note: The fan chart shows the 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.

developments on international markets which once reflected in the terms of trade could have a significant impact on the balance of trade or current account.

Uncertainty about the monetary sector forecast is reported with regard to the impact of the National Programme on Energy Efficiency of Residential Buildings on the growth rate of loans to households.

Forecast of Key Macroeconomic Indicators for 2017–2019

(per cent)

	2015	2016	2017	2018	2019
<i>Annual rate of change</i>					
GDP at constant prices	3.6	3.4	3.6	3.4	3.5
Private consumption	4.5	2.1	3.5	2.8	2.9
Government consumption	1.4	0.6	1.9	2.1	1.9
Gross fixed capital formation	2.7	-4.0	6.2	6.3	6.7
Exports (goods and services)	5.7	5.7	5.1	5.3	5.3
Imports (goods and services)	5.4	2.8	5.4	5.3	5.4
HICP at end of period	-0.9	-0.5	1.5	1.6	1.7
Core Inflation	-0.3	-2.1	0.1	1.5	2.0
Energy	-10.5	-0.2	3.6	1.7	3.0
Food	0.9	0.9	3.3	2.3	2.1
Goods and services with administratively controlled prices and tobacco products	-0.7	1.4	1.9	0.9	0.0
Employment	0.4	0.5	0.7	0.7	0.5
Unit labour costs	2.3	0.2	1.8	1.8	1.8
Labour productivity	3.3	2.9	2.9	2.8	3.0
Unemployment rate (share of labour force, per cent)	9.1	7.6	6.9	6.3	5.9
Claims on non-government sector	-1.6	1.8	4.7	4.0	5.5
Claims on corporations*	-1.6	0.6	4.0	4.3	5.7
Claims on households	-1.3	2.0	6.1	3.4	5.1
Deposits of the non-government sector	10.6	7.0	6.0	6.6	7.0
<i>Share of GDP</i>					
Balance of payments current account	-0.1	4.2	2.2	1.4	1.1
Trade balance	-5.8	-3.9	-4.3	-4.4	-4.5
Services, net	6.6	7.3	7.5	7.6	7.6
Primary income, net	-4.6	-2.5	-3.6	-4.3	-4.6
Secondary income, net	3.6	3.3	2.6	2.6	2.5
<i>Annual rate of change</i>					
External assumptions					
External demand	1.9	2.9	4.2	3.8	3.8
Average annual Brent crude oil price (in USD)	-47.1	-15.9	21.4	3.7	3.2
Average annual price of non-energy products (in USD)	-16.5	-3.9	6.4	2.2	2.8
Brent crude oil price at the end of period (in USD)	-42.9	15.3	7.8	4.9	1.7
Price of non-energy products at the end of period (in USD)	-18.9	7.4	3.3	3.6	2.5

* Data refer to non-financial corporations.

Source: the BNB.