

## 5. BULGARIAN NATIONAL BANK FORECAST OF KEY MACROECONOMIC INDICATORS FOR 2018–2020

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This issue of *Economic Review* includes the BNB forecast of key macroeconomic indicators for the 2018–2020 period. It is based on information published as of 18 December 2018 and employs European Central Bank (ECB), European Commission (EC) and International Monetary Fund (IMF) assumptions of global economic developments and international commodity price dynamics as of 14 December 2018.

Based on ECB, EC and IMF forecasts, in the 2018–2020 period the growth rate of external demand for Bulgarian goods and services is expected to slow down compared with that reported in 2017. The base-line scenario for external demand does not include new global foreign trade protectionist measures, and a prolonged slowdown in the growth in Germany, the main trading partner of Bulgaria. International prices of energy products in US dollars and in euro are anticipated to rise in 2019 from 2018, followed by a decline in petroleum product prices in 2020 driven by growing supply and slowing demand. Non-energy product price projections in US dollars point to a slight decline in 2019 and recovering growth in 2020.

Over the projection horizon, Bulgaria's economic activity will continue growing in terms of domestic demand, while net exports' contribution is expected to be negative. In 2018 real GDP growth will decelerate compared to the previous year due to lower exports of goods, while private consumption and public investment growth will exceed that in 2017. Real GDP growth is expected to accelerate in 2019 and 2020, compared to 2018, as a result of the reduced negative contribution of net exports, offsetting the projected slower domestic demand. Real GDP growth is expected to be lower over the forecast horizon than projections published in the *Economic Review*, issue 2 of 2018.

The annual inflation, mainly driven by international oil and food prices in euro, is expected to accelerate slightly at the end of 2019 before moderating gradually to 2.1 per cent at the end of 2020. The overall inflation forecast in 2019 has been revised upwards, while a lower inflation rate is expected for 2020 *vis-à-vis* the previous forecast.

Risks to the macroeconomic outlook are assessed as oriented towards lower real GDP growth, mainly stemming from the external environment, including the uncertainty about economic growth in some trading partners important for Bulgaria, the possibility of the UK leaving the EU without a deal, and the potential introduction of additional protectionist trade measures. An internal factor creating uncertainty to the outlook is dynamics of public investment co-financed by the EU and the national budget. Potential delay in the implementation of large infrastructure projects would impede GDP growth in 2019, and may at the same time lead to higher public investment in 2020. Risks to the inflation outlook are assessed as balanced.

### Forecast

The BNB forecast of key macroeconomic indicators is based on data published as of 18 December 2018. ECB, EC and IMF assumptions on global economic developments and the dynamics of international prices of major commodity groups as of 14 December 2018 are used. Based on these assumptions global economic growth in 2018 is expected to remain close to growth reported in 2017 but with significant differences across countries and regions. These differences reflect the subdued economic activity in some advanced economies, negative effects of the global foreign trade protectionist measures already implemented or discussed to be introduced in the future and worsened expectations about growth in some developing economies as a result of geopolitical conflicts and the impact of tightened US monetary policy. In 2019 and 2020 global growth is expected to slow down from 2018 with the closure of positive output gaps in some advanced economies. This will partly reflect the normalisation of the monetary policy of some leading central banks and the exhausted economic effect of the US fiscal stimulus.

Between 2018 and 2019 growth of external demand for Bulgarian goods and services is expected to slow down due to the unfavourable economic situation in Turkey, the uncertainty surrounding Brexit, expected lower growth in Italy and the impact of the foreign trade tariffs introduced by the USA. With the

weakening of the negative contribution of Turkey growth of external demand for Bulgarian goods and services is anticipated to increase in 2020 but to remain lower than in 2017. The baseline scenario of external demand takes into account the impact of the foreign trade tariffs introduced by the USA but it does not include a further escalation of international trade conflicts during the forecast period and prolonged slowdown in the economic growth in Germany.<sup>1</sup>

Year-on-year prices of energy products increased significantly in 2018 in US dollars and in euro which was attributable to both enhanced oil demand and oil production cuts under the agreement between OPEC and other large oil producing countries. The expectations of lower supply of petroleum products following the US sanctions related to Iran's nuclear programme additionally pushed up international oil prices. Despite the weaker oil demand and exemptions for some countries from the sanctions imposed by the USA against oil imports from Iran the oil price in 2019 is expected to slightly increase compared with 2018. This will reflect mainly the new agreement reached in December between OPEC and other leading oil-producing countries on production cuts in the first six months of 2019. With the expiry of the agreement limiting oil production the forecasts are for a decrease in international oil prices over 2020.

International non-energy product prices exhibited a divergent dynamics both in euro and US dollars in 2018 reflecting the depreciation of the US dollar against the euro. Higher non-energy product prices in US dollars were attributable to agricultural commodities and metals (due mainly to temporary constraints on the supply side), while food prices posted a decrease. US dollar international prices of non-energy products are expected to decrease slightly from 2018 and to increase again in 2020. Due to technical assumptions for retaining the exchange rate unchanged over the forecast horizon<sup>2</sup> the forecast for euro prices of non-energy products points to growth in the 2019–2020 period which will be most strongly pronounced in food prices.

In 2018 economic growth in Bulgaria will slow down from 2017 owing to the strong negative contribution of net exports. Exports of goods are expected to decrease for 2018 due to a temporary decline in production of oil products as a result of a scheduled refurbishment of production facilities in a key undertaking for the energy sector.<sup>3</sup> An additional factor which will limit exports of goods and services at the close of the year will be the projected slowdown in annual growth of external demand. Imports of goods and services will slow down its rate of real growth in 2018 due mainly to slower growth in imports of services and lower imports of mineral products. Concurrently, the contribution of domestic demand to real GDP growth in 2018 is expected to increase, reflecting stronger growth both in private consumption and gross fixed capital formation. Private consumption growth will be supported by the persistent long-term upward trend in nominal and real household labour income and low interest rates, which stimulate credit growth. Improvements in investment activity will be driven mainly by the significant increase projected in public investments.

Between 2019 and 2020 real GDP growth is expected to gradually accelerate compared with 2018, reaching 3.8 per cent in the last year of the forecast horizon. This will depend on the decrease in the negative contribution of net exports, while the positive contribution of domestic demand to real GDP growth will slow down, particularly in terms of private consumption. The projected slower increase in household real disposable income as compared with 2018 will be the main factor behind the slowdown in private consumption. Gross fixed capital formation will keep a relatively high growth rate driven by the expected increase in public investment due to both the planned national investment expenditure and the spending under EU programmes associated with the advanced stage of implementing projects of

<sup>1</sup> In the third quarter of 2018 annual GDP growth in Germany slowed down, reflecting the effect of temporary factors in the car industry. For more details see: <https://www.ecb.europa.eu/pub/pdf/ecbu/eb201808.en.pdf?432086776247c2ae18646606b5c441d1>

<sup>2</sup> The euro price forecast is based on the technical assumption about the EUR/USD exchange rate. It is fixed at the average value for the last ten days on 14 December 2018, the date when the assumptions on the external environment were made. In line with the technical assumption, the EUR/USD exchange rate will decrease over the forecast horizon.

<sup>3</sup> NSI data on production and supplies of oil and oil products as of 27 June 2018.

the 2014–2020 programming period. At the same time, the uncertain international environment will be a factor limiting corporate investment. Expected growth in expenditure on staff remuneration, intermediate consumption and healthcare will have the main contribution to higher government consumption in the 2019–2020 period. In line with the stronger public sector wage increases in 2019 projected in the budgetary framework, government consumption growth is expected to accelerate in 2019 compared with the end of the forecast horizon. The negative contribution of net exports to the change in real GDP will decrease driven by the recovery in exports of oil products in 2019 and demand for Bulgarian goods and services by Turkey in 2020. Exports of goods and services are projected to increase faster than external demand in the 2019–2020 period due to competitive advantages of Bulgarian exporters, which will help increase further Bulgaria's market share in world trade. In 2019 imports are expected to accelerate their growth from 2018 in line with the projected slight acceleration of growth in investments in Bulgaria, but in 2020 it will slow down due to a weaker increase in domestic demand.

In 2018 the negative trade balance is anticipated to increase as a percentage of GDP due to projected worsening in the terms of trade for Bulgaria (measuring the change in prices of exported goods against prices of imported goods) in combination with the expected decline in exports and an increase in imports of goods in real terms. Trade deficit will further grow in 2019 driven by stronger growth in imports than exports of goods. This trend will be reversed at the end of the forecast horizon in line with the expected improvement in the terms of trade. The services trade balance in 2018 is projected to record a higher surplus as a percentage of GDP against 2017 amid stronger growth projected in exports than imports of services. Between 2019 and 2020 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 current account over the forecast horizon. In 2018 net transfers on the balance of payments secondary income account are projected to decrease as a percentage of GDP compared with 2017 and to remain close to those in the 2019–2020 period. As a result of the component dynamics, the surplus on the balance of payments current account will significantly decrease as a percentage of GDP in 2018 and 2019 compared with 2017, and in 2020 it will turn from surplus to low deficit.

The growth rate of employment in the total economy is expected to slow down significantly in 2018 as a result of a lower number of the self-employed in agriculture which is supposed to be a one-off factor. In 2019 employment is expected to slightly accelerate its growth and to increase at a subsiding rate until the end of the forecast horizon, reflecting the negative demographic trends. The unemployment rate will decline further over the whole forecast horizon but at slower rates than those observed in the 2015–2017 period. Labour productivity growth will accelerate as a result of the expected slight rise in employment and relatively constant dynamics of real GDP. The compensation *per* employee will continue to increase due to higher public sector remuneration in 2018 and 2019 and constraints in labour supply. By the end of the forecast horizon the growth rate of compensation *per* employee will moderate due to a lower public sector wage rise projected in the budgetary framework in 2020 as compared with 2019. Unit labour costs will match the pattern of compensation *per* employ. The indicator is expected to exhibit stronger growth in 2019 followed by a slower increase in 2020.

Annual inflation is expected to increase slightly to 2.6 per cent at the end of 2019 before moderating to 2.1 per cent at the end of 2020 in line with the projected dynamics in international oil and food prices in euro. Core inflation is anticipated to have a positive contribution to overall inflation over the forecast horizon mainly driven by developments in services prices. The inflation of services prices will be affected by the projected rise in labour costs, household consumer demand and also indirect effects of international commodity prices on firms' production costs. Administratively controlled prices are expected to have a low positive contribution to overall inflation over the forecast horizon, which will reflect the increase in prices

of gas in the beginning of 2019 and water supply services in the 2019–2020 period as announced by the Energy and Water Regulatory Commission (EWRC).<sup>4</sup>

Over the forecast horizon deposits in the banking system are expected to grow at a rate of around 7.0 per cent. Corporations and households are expected to keep the savings rate high amid increased uncertainty ensuing from the external environment and continuously increasing labour income. Although deposit rates are anticipated to remain at low levels, the lack of sufficiently safe alternatives to bank savings will also contribute to comparatively high growth rates of attracted funds in the banking system. The cost of funds attracted by banks and the euro area interest rate cycle will be the main factors behind lending rate developments. Market expectations for a three-month EURIBOR are for retaining its level close to its current levels until mid-2019 and a slight increase in the second half of 2019 and in 2020. In line with the expected deposit rate dynamics in Bulgaria and in the euro area, lending rates are anticipated to start gradually increasing from the second half of 2019. Following the significantly accelerated growth of credit to the non-government sector in 2018, partly due to the inclusion of a new reporting unit in the monetary statistics<sup>5</sup>, credit to the private sector between 2019 and 2020 is expected to increase at a rate of about 6.0–7.0 per cent with a positive contribution of loans to both corporations and households. These developments will be driven by continuously increasing private consumption and investments, and relatively low lending rates. Concurrently, a factor which is expected to have a dampening effect on credit growth is the continuing payment by the government of loans extended under the National Program for Energy Efficiency of Multi-family Residential Buildings (the National Energy Efficiency Programme), and a significant decrease in the volume of new loans under this programme. The comprehensive assessment of six Bulgarian banks in the first half of 2019<sup>6</sup> and the activation of the countercyclical capital buffer from October 2019 announced by the BNB may also have a limiting effect on credit dynamics.<sup>7</sup>

## Forecast Revisions

Real GDP growth is expected to be lower over the forecast horizon compared to the projection published in the *Economic Review*, issue 2 of 2018.

The most significant growth revision was made in 2018 due mainly to a decline in exports over the first nine months, driven by short-term factors and NSI national account data revisions.<sup>8</sup> Current external assumptions indicate weaker external demand *vis-à-vis* the previous projection, which is reflected in lower export growth rates in the 2019 and 2020 projection. The weaker external demand, increased uncertainty surrounding the external environment and worsened business climate in the second half of 2018 are prerequisites for downside revisions in the growth of private investment over the forecast horizon. Data revisions and higher than expected growth in private consumption over the second and third quarters led to an upward revision of the forecast for this component in 2018. At the same time, worsening consumer sentiment in the last months of 2018 and projected slower growth in disposable income related to a lower

<sup>4</sup> For more details see:

<http://www.dker.bg/news/289/65/otkrito-zasedanie-po-zayavlenieto-na-bulgargaz-ead-za-tsenata-na-prirodniya-gaz-za-to-trimesechie-na-2019-g.html>

<http://www.dker.bg/news/294/65/kevr-prie-reshenie-za-izmenenie-na-odobrenite-s-biznesplanovete-tseni-na-uslugi-na-vik-druzhestvata-za-2019-g.html>

<sup>5</sup> From April 2018 other monetary financial institutions include also BNP Paribas Personal Finance S.A. – Bulgaria branch, with balances reclassified from the sector of other financial intermediaries. The reclassification results from the transformation through the merger of BNP Paribas Personal Finance EAD specialised in lending and reported until now for the purposes of monetary statistics in the sector of other financial intermediaries.

<sup>6</sup> Bulgaria's request of 18 July 2018 for accession to the Single Supervisory Mechanism (SSM) by establishing close cooperation with the ECB provides for a thorough assessment of six banks to be carried out by the ECB (an asset quality review and stress tests). The assessment began in November 2018, and its results are expected to be published in July 2019.

<sup>7</sup> In its resolution of 26 September 2018, the BNB Governing Council set in compliance with Article 5, paragraphs 3 and 4 of Ordinance No 8 on Banks' Capital Buffers a countercyclical buffer rate applicable to credit risk exposures in the Republic of Bulgaria at 0.5 per cent, effective from 1 October 2019. The resolution is published no later than 12 months before its entry into force, according to Article 5, paragraph 5 of BNB Ordinance No 8. For details, see <http://www.bnb.bg/PressOffice/POPressReleases>.

<sup>8</sup> Revisions were published on the NSI website on 3 October 2018 according to the NSI schedule on statistical survey releases and refer to the period from the first quarter of 2013 to the second quarter of 2018.

expected increase in the number of employed are the main drivers for the downward revision in private consumption growth for 2019 and 2020.

Changed assumptions about international oil and food prices in euro over the projection horizon are the main reason for our upward revision of expected overall inflation in 2019 and a downward revision in 2020. In 2019 core inflation is revised insignificantly upwards, reflecting an indirect effect of higher global prices of commodities and some services, including catering and transport services. This effect will be significantly weaker in 2020, which in combination with lower private consumption and labour costs growth in the 2019–2020 period give grounds to expect lower core inflation at the end of the forecast horizon compared to the projection published in the *Economic Review*, issue 2.

## GDP and Inflation Forecast Revisions (21 December 2018 vis-à-vis 21 June 2018)

Annual rate of change, per cent	Forecast as of 21 December 2018				Forecast as of 21 June 2018				Revision (percentage points)			
	2017	2018	2019	2020	2017	2018	2019	2020	2017*	2018	2019	2020
GDP at constant prices	3.8	3.2	3.6	3.8	3.6	3.9	4.0	4.0	0.2	-0.7	-0.4	-0.2
Private consumption	4.5	7.6	4.0	3.9	4.8	4.5	4.4	4.2	-0.3	3.1	-0.4	-0.3
Government consumption	3.7	3.8	3.6	3.0	3.2	3.5	2.6	2.6	0.5	0.3	1.0	0.4
Gross fixed capital formation	3.2	6.7	6.9	5.0	3.8	13.1	8.5	8.5	-0.6	-6.4	-1.6	-3.5
Exports (goods and services)	5.8	-1.6	3.8	4.1	4.0	5.5	5.4	5.3	1.8	-7.1	-1.6	-1.2
Imports (goods and services)	7.5	4.6	5.1	4.3	7.2	8.2	6.7	6.5	0.3	-3.6	-1.6	-2.2
HICP at end of period**	1.8	2.3	2.6	2.1	1.8	2.6	2.2	2.4	0.0	-0.3	0.4	-0.3
Core inflation	0.3	2.5	2.9	2.6	0.3	1.9	2.8	3.0	0.0	0.6	0.1	-0.4
Energy	6.9	1.0	1.0	0.7	6.9	11.1	-0.7	0.3	0.0	-10.1	1.7	0.4
Food	2.7	2.4	4.9	3.2	2.7	2.5	3.5	3.5	0.0	-0.1	1.4	-0.3
Goods and services with administratively controlled prices and tobacco products	2.6	2.3	-0.2	0.1	2.6	1.0	0.1	0.1	0.0	1.3	-0.3	0.0

\* Changes in historical GDP series for 2017 reflect the NSI data revision published on 3 October 2018.

\*\* Reporting data on inflation for 2018.

Source: the BNB.

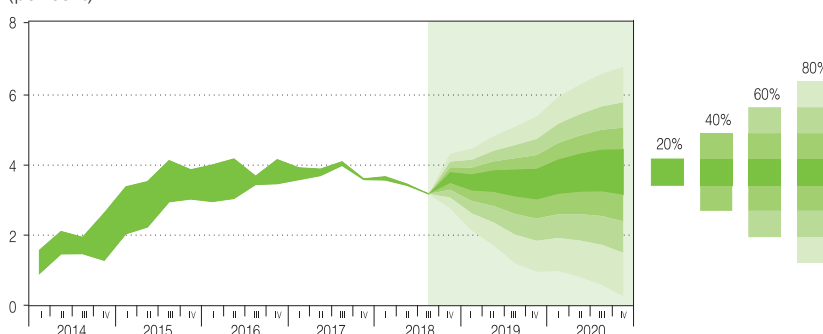
## Risks to the Forecast

Major risks to the forecast of economic growth stem from the uncertainty surrounding external demand and investments. The balance of risks is tilted to lower than expected real GDP growth in Bulgaria.

A lower than projected external demand for Bulgarian goods and services is likely to materialise if the economic growth in important trading partners of Bulgaria, such as Germany, Italy, France and Turkey, is lower than the baseline scenario. Additional downside risks to external demand stem from the UK possibly leaving the EU without agreeing to a deal and the potential impact of additional 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.



by the USA. The baseline scenario of projected external demand for Bulgarian goods and services involves no escalation of already existing trade conflicts and introduction of new protectionist measures, as well as longer-term economic growth weakening in Germany, the main trading partner of Bulgaria.

Where any delay is observed in government investment projects co-financed by EU and national funds in 2019, the projected growth in public investment would be lower, which could exert a dampening effect on real GDP growth. It can reasonably be expected that such delay in project implementation would result in higher growth in public investment over 2020. Worsened external environment could have a negative effect on firms seeking to invest, posing a risk to the growth projection of private investment.

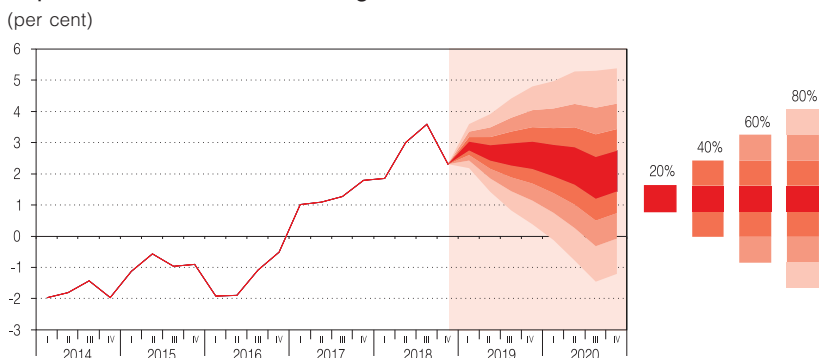
The uncertainty over the outlook for a particular indicator may be graphically illustrated by means of a fan chart. Chart bands marked with a specific colour set an interval in which a projected value is most likely to fall (for further details, see the GDP growth note to the chart). Each interval widens with the increase in the forecast horizon, reflecting the increasing uncertainty further into the future. The fan chart on the annual GDP growth shows, for example, that there is a 60 per cent probability for the annual GDP growth to range from 1.8 to 4.7 per cent for the last quarter of 2019.

Risks to the inflation outlook are assessed as balanced, arising mainly from the uncertainty surrounding international oil price dynamics, which in turn affects directly energy products prices and indirectly prices of certain services, such as transportation. More significant changes in international oil prices would eventually cause changes in administratively controlled prices of natural gas, electricity and heating. Risks to the food price projection are broadly balanced and stem largely from international food price developments and crop conditions in Bulgaria. There is a risk of higher than projected inflation in case of stronger than anticipated increases in unit labour costs and possible spillover effects on consumer prices, especially of services. The balance of risks regarding inflation is graphically presented in the relevant fan chart. It suggests that there is a 60 per cent probability for annual HICP growth to range between 1.1 and 4.0 per cent at the end of 2019.

A key source of uncertainty to the balance of payments projection is the external environment, *i.e.* external demand and international commodity price dynamics could have a significant effect on the trade balance and current account, accordingly. If any of the above risks to the external environment materialise, a higher than projected trade balance deficit and relevant deterioration in current account balance may be expected.

The outlook for the non-government sector credit growth is marked by uncertainties regarding the policy of banks, subject to an overall assessment in the first half of 2019, potential sales of credit portfolios, writing-off NPLs and extending new loans. There is also an uncertainty about the future impact of the National Programme for Energy Efficiency on the growth rates of household loans and the countercyclical capital buffer's effect on overall domestic lending.

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



Note: 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 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.

## Forecast of Key Macroeconomic Indicators for 2018–2020

(per cent)

	2016	2017	2018	2019	2020
<i>Annual rate of change</i>					
GDP at constant prices	3.9	3.8	3.2	3.6	3.8
Private consumption	3.6	4.5	7.6	4.0	3.9
Government consumption	2.2	3.7	3.8	3.6	3.0
Gross fixed capital formation	-6.6	3.2	6.7	6.9	5.0
Exports (goods and services)	8.1	5.8	-1.6	3.8	4.1
Imports (goods and services)	4.5	7.5	4.6	5.1	4.3
HICP at end of period	-0.5	1.8	2.3	2.6	2.1
Core inflation	-2.1	0.3	2.5	2.9	2.6
Energy	-0.2	6.9	1.0	1.0	0.7
Food	0.9	2.7	2.4	4.9	3.2
Goods and services with administratively controlled prices and tobacco products	1.4	2.6	2.3	-0.2	0.1
Employment	0.5	1.8	0.1	0.3	0.2
Unit labour costs	2.3	8.4	2.3	3.0	2.3
Labour productivity	3.4	2.0	3.0	3.2	3.5
Unemployment rate (share of labour force, per cent)	7.6	6.2	5.2	4.8	4.3
Claims on non-government sector*	1.8	4.5	8.9	6.5	6.7
Claims on corporations**	0.4	1.5	6.4	5.7	6.0
Claims on households	2.0	6.1	11.2	5.8	6.9
Deposits of the non-government sector*	7.0	6.2	7.3	7.0	7.1
<i>Share of GDP</i>					
Balance of payments current account	2.6	6.5	2.6	0.6	-0.2
Trade balance	-2.0	-1.5	-5.1	-5.9	-5.6
Services, net	6.4	5.4	5.7	5.6	5.6
Primary income, net	-5.0	-1.0	-1.3	-2.3	-3.2
Secondary income, net	3.3	3.6	3.4	3.2	3.0
<i>Annual rate of change</i>					
External assumptions					
External demand	3.1	6.4	3.5	2.8	3.9
Average annual Brent oil price (in USD)*	-15.9	23.5	30.7	0.8	-6.2
Average annual price of non-energy products (in USD)*	-2.4	7.9	3.9	-0.6	3.4
Brent oil price at the end of period (in USD)*	15.3	22.7	9.6	4.4	-4.4
Price of non-energy products at the end of period (in USD)*	9.1	5.4	-1.2	4.9	2.7

\* Reporting data for 2018.

\*\* Data refer to non-financial corporations.

Source: the BNB.