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

The BNB forecast of key macroeconomic indicators is based on data published as of 24 June 2019. Assumptions on the global economic developments and dynamics of major commodity group prices in international markets as of 7 June 2019 were used.

In line with these assumptions growth of external demand for Bulgarian goods and services is expected to moderate in 2019 due to further weakening of global trade growth, increased uncertainty surrounding international trade conflicts and Brexit, unfavourable economic situation in Turkey and expectations of slower economic growth in Romania and some euro area countries. With the weakening of the negative contribution of Turkey, external demand for Bulgarian goods and services is anticipated to increase in the 2020–2021 period. Petroleum product prices in US dollars over 2019–2021 are expected to decline from 2018, while prices of non-energy products in US dollars will initially fall in 2019 before rising in 2020 and 2021.

In 2019 Bulgaria's real GDP growth rate is projected to accelerate from 2018 and to come to 3.7 per cent. This will reflect the decrease in the negative contribution of net exports, while the positive contribution of domestic demand to real GDP growth will weaken compared to 2018 due to lower growth of private consumption. Between 2020 and 2021 real GDP growth is expected to gradually slow down compared with 2019, reaching 3.4 per cent in the last year of the projection horizon. This will depend on the decrease in the positive contribution of all main components of domestic demand to real GDP growth and weaker export growth compared to 2019. Real GDP growth is expected to be higher in 2019 and lower over the remaining projection horizon than the forecast published in the Economic Review, issue 4 of 2018.

Annual inflation, the dynamics of which is largely driven by international euro oil and food prices, is expected to accelerate slightly to 2.6 per cent at the end of 2019 before decelerating and staying at levels close to 2 per cent until the end of the projection horizon. The expected overall inflation in 2019 remains unchanged compared with the forecast published in the Economic Review, issue 4 of 2018, while the inflation forecast for 2020 has been revised downwards and that for 2021 upwards. Revisions take into account mainly changes in the assumptions about the dynamics of international prices of major commodity groups and some internal factors.

Risks to the macroeconomic outlook are assessed as oriented towards lower real GDP growth, mainly stemming from the external environment where there are risks of weaker than projected growth of demand for Bulgarian goods and services. An internal factor creating uncertainty to the outlook is the dynamics of public investment co-financed by the EU and the national budget. Risks to the inflation outlook are assessed broadly to be on the upside, mostly arising from the possibility of higher inflation in energy products and core HICP components.

Forecast

The BNB forecast of key macroeconomic indicators is based on data published as of 24 June 2019. ECB, EC and IMF assumptions on global economic developments and the dynamics of international prices of major commodity groups as of 7 June 2019 are used. Based on these assumptions global economic growth in 2019 is expected to slow down from 2018 which will depend to a greater extent on the advanced economies. Economic activity developments in advanced economies will reflect the weaker effect of cyclical factors, which had a temporary positive effect on the output gap in 2018. Negative effects of the global foreign trade protectionist measures and the impact of some country-specific factors will contribute to slower growth. The rate of economic growth in the euro area in the following quarters is expected to slow down from the first quarter of 2019, reflecting the higher global uncertainty and slower growth of international trade. Economic activity growth in emerging markets is also expected to slow in 2019, reflecting mainly the expectations for lower growth in China and worsened economic situation in Turkey and Iran. Between 2020 and 2021 global growth is expected to accelerate driven by emerging economies, while growth in developed economies will slightly moderate.

Expectations about external demand for Bulgarian goods and services in 2019 point to slower growth than in 2018. This will reflect the continuous weakening of world trade growth, higher uncertainty over international trade conflicts and Brexit, unfavourable economic situation in Turkey, an expected economic activity slowdown in Romania and in some euro area countries. With the weakening of the negative contribution of Turkey, growth of external demand for Bulgarian goods and services is anticipated to accelerate in 2020 and 2021. The baseline scenario of external demand takes into account the impact of the foreign trade tariffs launched by the USA but it does not include a further escalation of international trade conflicts during the forecast period. As regards the UK leaving the EU, the forecast includes an assumption of a withdrawal agreement and negotiations on future trade relationships.

Over the first six months of the year average annual USD prices of energy products decreased irrespective of the agreement concluded in January 2019 between OPEC and other leading oil-producing countries on production cuts and some unplanned disruptions in oil supplies. This was attributable to weaker oil demand due to lower global economic activity, uncertainty over trade conflicts and enhanced supply by non-OPEC countries. As a result of US dollar appreciation *vis-à-vis* the euro international oil prices in US dollars and in euro showed divergent developments. Average petroleum product prices in US dollars over 2019 are expected to decline from 2018. Due to technical assumptions for retaining the exchange rate unchanged over the projection horizon[1] the euro prices of energy products are anticipated to increase in 2019. Between 2020 and 2021 oil demand will remain subdued, which coupled with limited supply growth will result in a slight fall in international market oil prices in US dollars and in euro.

Non-energy product prices exhibited a divergent dynamics both in euro and in US dollars in the first six months of 2019 reflecting the appreciated US dollar against the euro. USD metal and food prices posted a fall. The decline in metal prices reflected the increased supply by China, the recovered production in key sector undertakings after temporary disruptions and lower global demand for metals. Weaker world demand and high yields in the USA had also a negative effect on USD food prices in the first half of the year. Non-energy product prices are expected to start rising over the forecast horizon both in US dollars and in euro amid gradually recovering global demand.

In 2019 the rate of real GDP growth in Bulgaria will accelerate on 2018 owing to the contraction of the negative contribution of net exports. Growth in exports of goods is anticipated to recover over 2019 following the 2018's fall caused by the temporary decline in production of metals and petroleum products due to refurbishment of production facilities. A factor which will limit exports of goods and services over the year will be subdued growth of external demand. Real imports of goods and services will slightly accelerate its growth rate in 2019 in line with the described export dynamics and the expected domestic demand growth. The contribution of domestic demand to real GDP growth in 2019 is expected to decrease, which will reflect slower growth of private consumption due to lower consumer confidence and higher uncertainty reported at the end of 2018 and in early 2019. Over 2019 private consumption growth will be supported by the persistent long-term upward trend in nominal and real household labour income and also by low interest rates stimulating credit demand. The projected improvement of investment activity and increased government consumption will continue to support domestic demand growth, partly offsetting the lower contribution of private consumption. Fixed capital investment growth will be mainly driven by the projected strong rise in public investment due both to the accelerated implementation of projects co-financed by EU funds and higher national-financed government investment. Concurrently, the uncertain international environment will be a limiting factor for corporate investments. In line with stronger public sector wage increases in 2019 projected in the budgetary framework, government consumption growth is expected to remain buoyant.

[1] The euro price forecast is based on the technical assumption about the EUR/USD exchange rate, which is fixed at its average value for the last ten days as of 7 June 2019, the date of external environment assumptions. In line with the technical assumption, the US dollar is appreciating *vis-à-vis* the euro in 2019 compared to 2018.

Between 2020 and 2021 real GDP growth is expected to gradually slow down compared with 2019, reaching 3.4 per cent in the last year of the projection horizon. This will depend on the contraction of the positive contribution of all major domestic demand components to real GDP growth and lower growth of exports on 2019. The projected slower increase in household real disposable income as compared with 2019 and the high savings rate will be the main factors behind the slowdown in private consumption. The expected completion of infrastructure projects financed by the national budget is projected to result in a weaker investment activity at the end of the projection horizon. At the same time, this effect will be partly offset by the greater absorption of EU funds at the final phase of the current EU funding cycle and also by the expected gradual rise in private investment given the long-term decrease in labour force and higher labour costs. The expected slower rise in costs on staff remunerations and healthcare will add to the projected slowdown in government consumption growth between 2020–2021. The negative contribution of net exports to the real GDP change will continue to decrease driven by the strengthening demand for Bulgarian goods and services over this period. Exports of goods and services is projected to increase faster than external demand in the 2020–2021 period due to competitive advantages of Bulgarian exporters, which will help increase Bulgaria's market share in the world trade. In 2020 and 2021 growth in imports is anticipated to moderate on 2019 in line with the domestic demand dynamics.

Between 2019 and 2021 the trade deficit balance is expected to expand as a percentage of GDP from 2018 despite the projected positive terms of trade for Bulgaria (measuring the change between prices in exported and imported goods) due to a faster increase in real imports of goods than exports of goods. Concurrently, imports of services will grow faster than exports in 2019 resulting in a slight fall in services trade surplus as a percentage of GDP compared with 2018. Over the remaining forecast horizon the services positive balance is expected to stabilise as a percentage of GDP. Enhanced economic activity in Bulgaria will boost corporate profits and payment of dividends to non-residents, which will result in a higher deficit of the balance of payments net primary income account over the forecast horizon. Net transfers on the balance of payments secondary income account are projected to remain comparatively stable as a percentage of GDP in the 2019–2021 period. As a result of the described component dynamics the surplus on the balance of payments current account will gradually decrease as a percentage of GDP over the projection horizon.

In 2019 employment growth will increase from 2018 reflecting mainly the contribution of services and industry sectors, while the number of self-employed in agriculture is expected to further decrease. Over the forecast horizon employment growth is expected to remain weak and to gradually subside curbed by unfavourable demographic developments in Bulgaria. This trend will be partly offset by the projected rise in the rate of economically active population amid comparatively high wage growth and increasing average effective retirement age[2]. The unemployment rate will continue to fall, though at slower rates, as a result of changes in employment, which is expected to reach 4.1 per cent in 2021. Labour productivity will largely follow the real GDP dynamics pattern due to projected slight increase in the number of employed. In 2019 the compensation *per* employee will grow at an accelerated pace due to limited labour supply and projected wage rises in the public sector, including also further wage increases in the sector of education. The expected slower staff expenditure rise in the public sector and slower labour productivity growth will result in gradual weakening of labour remuneration growth in the total economy. Reflecting such sub-component dynamics, growth in nominal unit labour costs is expected to accelerate over 2019, though gradually slowing in the following two years.

Projected slight acceleration in annual inflation to 2.6 per cent by end-2019 and its subsequent moderation to 1.9 per cent by end-2020 reflect largely the expectations for international oil and food prices in euro over the projection horizon. The anticipated positive contribution of core inflation components throughout the whole period will be mainly driven by services price developments, with industrial goods inflation expected to remain low. Goods and services with administratively controlled prices are projected to make a low positive contribution to the overall inflation over the forecast horizon, reflecting

[2] Source: the NSI.

natural gas price rises since the beginning of 2019 and water supply price increases in 2019–2020[3] as announced by the Energy and Water Regulatory Commission (EWRC)[4].

Over the forecast period non-government sector's deposits are expected to grow at an annual rate of around 7.0–8.0 per cent. This dynamics will depend on retention of a high savings rate in the economy in the context of increased uncertainties stemming from the external environment, favourable labour market conditions and continued income growth, as well as lack of a sufficiently safe alternative to bank savings. The increasing inflow of attracted funds and high banking liquidity will contribute to the maintenance of achieved low deposit rates. In line with expectations of a continuous high inflow of attracted funds and market expectations of holding euro area rates at the achieved low levels, domestic lending rates are anticipated to remain low over the projection period, slightly rising from the second half of 2020. Low interest rates will continue to stimulate demand for loans by corporations and households. Lending to the non-government sector is projected to increase at rates close to 7.0 per cent, favoured by continued growth in domestic demand, in addition to low lending rates. Concurrently, a factor that is expected to have a dampening effect on credit growth in 2019 and 2020 is the continuing government payment of loans under the National Programme for Energy Efficiency of Multi-family Residential Buildings (the National Energy Efficiency Programme) and significant cuts in the volume of new loans under this programme.

Forecast Revisions

Real GDP growth is expected to be slightly higher in 2019 and lower over the remaining projection horizon compared to Economic Review, issue 4/2018 projections.

The upward revision of 2019 GDP growth projection reflects mainly a stronger than expected recovery in goods exports over the first quarter as a result of the exhausted short-term factors. Stronger than projected GDP growth *vis-à-vis* the previous forecast is also driven by an upward government consumption revision which in turn reflects primarily the reported higher growth rate in government consumption in early 2019. Compared with the previous projection, fixed capital investment growth is slightly revised upwards, while the expected growth in private consumption remains unchanged. In line with domestic demand component and export dynamics, imports of goods and services are expected to grow at higher rates than estimates in the previous forecast.

Our expectations of real GDP growth in 2020 and 2021 are revised downwards *vis-à-vis* the previous projection, which is due mainly to changed assumptions about external environment developments. Current external assumptions indicate weaker external demand in 2020–2021, which is reflected in lower export growth rates over the same period. The weaker external demand and increased uncertainty surrounding the external environment are a prerequisite for a slight downside revision in private investment growth over 2020–2021. Nevertheless, total investment in 2020 enjoys a minimal upward revision as a result of more optimistic expectations about an increase in EU co-financed public investment. Compared to the prior projection, 2021 public investment is expected to have a larger negative contribution to the change in total investment. Private consumption is anticipated to grow in 2020–2021 at rates similar to the previous forecast since such factors, as an increase in household disposable income and sustainable financing conditions, will continue to act. Projected lower growth in goods exports over 2020 is the driver for a downward revision in goods and services imports.

Overall inflation expectations at the end of 2019 remain unchanged from the previous projection. Our forecast for 2020, however, has been revised downwards and for 2021 upwards, reflecting primarily a change in assumptions about international oil and food prices in euro. Core inflation at the close of 2019 is revised downwards which is largely due to a lower increase in core HICP components' prices

[3] 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 and http://www.dker.bg/news/318/65/komisiyata-za-energijno-i-vodno-regulirane-utvrdi-tsenata-na-prirodniya-gaz-za-vtoroto-trimesechie-na-2019-g.html

[4] For more details, see: 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

over the first quarter *vis-à-vis* the previous forecast. The EWRC' decision to raise regulated natural gas prices since the second quarter of 2019 is the main factor for the upward revision in administratively controlled inflation. Expected higher food inflation (due to the weaker domestic harvests) and energy products inflation is another factor for keeping the overall inflation forecast unchanged. Downward inflation revisions for the end of 2020 are mainly driven by assumed lower oil prices the effect of which will be limited, to a certain extent, by the upward inflation revision in the food group. Lower oil prices in 2020 are expected to have an indirect effect on services inflation, giving grounds to expect lower core inflation compared to that in issue 4 of 2018 Economic Review. The main driver for the upward 2021 inflation forecast revision is the higher core inflation, whereas lower oil prices will have a dampening effect on it.

GDP and Inflation Forecast Revisions (24 June 2019 *vis-à-vis* 21 December 2018)

Annual rate of change, per cent	Forecast as of 24 June 2019				Forecast as of 21 December 2018				Revision (percentage points)			
	2018	2019	2020	2021	2018	2019	2020	2021	2018	2019	2020	2021
GDP at constant prices	3.1	3.7	3.6	3.4	3.1	3.6	3.8	3.6	0.0	0.1	-0.2	-0.2
Private consumption	6.4	4.0	3.9	3.7	6.4	4.0	3.9	3.7	0.0	0.0	0.0	0.0
Government consumption	4.7	4.8	3.5	3.5	4.7	3.6	3.0	3.0	0.0	1.2	0.5	0.5
Gross fixed capital formation	6.5	7.2	5.3	3.6	6.5	6.9	5.0	3.9	0.0	0.3	0.3	-0.3
Exports of goods and services	-0.8	4.6	3.4	3.6	-0.8	3.8	4.1	3.8	0.0	0.8	-0.7	-0.2
Imports of goods and services	3.7	5.8	4.0	3.8	3.7	5.1	4.3	3.8	0.0	0.7	-0.3	0.0
HICP at end of period*	2.3	2.6	1.9	2.1	2.3	2.6	2.1	2.0	0.0	0.0	-0.2	0.1
Core Inflation	2.5	2.5	2.1	2.8	2.5	2.9	2.6	2.6	0.0	-0.4	-0.5	0.2
Energy products	1.0	2.5	-2.7	0.0	1.0	1.0	0.7	0.5	0.0	1.5	-3.4	-0.5
Food	2.4	5.0	4.5	3.4	2.4	4.9	3.2	2.9	0.0	0.1	1.3	0.5
Goods and services with administratively controlled prices and tobacco products	2.3	0.2	0.1	0.1	2.3	-0.2	0.1	0.1	0.0	0.4	0.0	0.0

* Reporting inflation data for 2018 and projections as of 21 December 2018.

Source: the BNB.

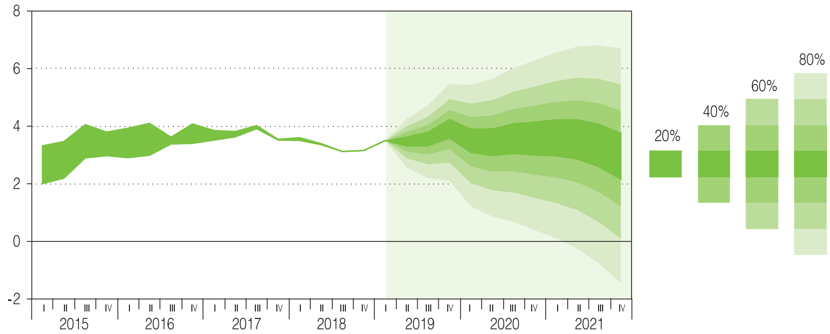
Risks to the Forecast

Risk balance to the baseline scenario of the macroeconomic projection is assessed as oriented towards lower GDP growth, with main downside risks stemming from external demand and public investment.

Lower than projected demand for Bulgarian goods and services could be reported in case of: lower than projected economic growth in Bulgaria's important trade partners, further deteriorating economic situation in Turkey, the UK leaving the EU without a deal and potential additional protectionist trade measures by the USA. At the same time, if euro area economic activity growth rates of the first quarter of 2019 are retained for an extended period of time, external

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.

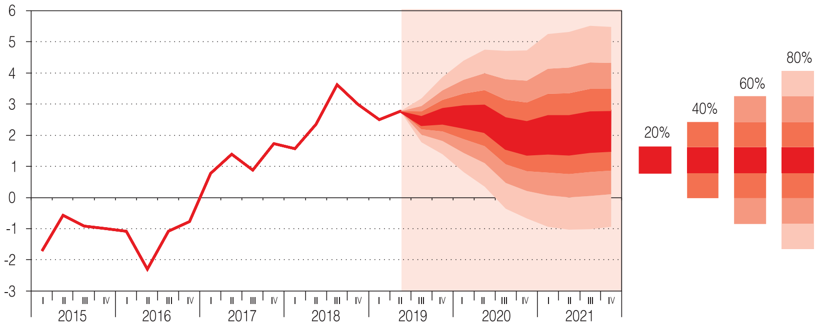
Source: the BNB.

demand for Bulgarian goods and services would be higher than projected. Currently, materialisation of such a scenario is estimated as less likely to occur against the above described risks to the external environment, as reflected in our views on prevailing downward risks to external demand.

Possible delays in government investment projects co-financed by EU and national funds in 2019 pose the major risk to lower than projected domestic demand. In such a scenario, a lower increase in public investment may be expected in 2019, likely to be offset by its stronger growth in the coming two years of the projection period. Such a move forward in time of the project implementation would have a dampening effect on real GDP growth for 2019, likely to result in higher economic growth in 2020–2021. The baseline scenario of the public investment projection involves no potential positive effects on domestic demand from the implementation of a Bulgarian army modernisation project due to the uncertain schedule for delivering military technology and equipment.

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.

The chart employs reporting data for the second quarter of 2019.

Source: the BNB.

Domestic demand higher than projected in the baseline macroeconomic projection would materialise in case of a potential stronger rise in labour income in the total economy. If such a scenario occurs, we could also expect higher growth rates in private consumption. Currently, these upside risks to the economic growth forecast are assessed as relatively less likely than the downside risks to real GDP growth arising from potential weaker external demand and public investment.

The uncertainty over the outlook for a particular indicator may be graphically illustrated by means of a fan chart. Chart bands of 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 GDP growth). Each interval widens with the increase of the forecast horizon, reflecting the increasing uncertainty about more distant future. The fan chart on annual real GDP growth shows, for example, that there is a 60 per cent probability for the annual GDP growth to range from 2.7 to 5.0 per cent in the last quarter of 2019.

Risks to the inflation outlook are assessed as broadly on the upside. Higher than expected inflation could be seen in energy products and core components of inflation, while risks to the food inflation outlook are balanced. Materialisation of higher than expected international oil prices in euro would be a precondition for both higher inflation in energy products and higher services and administratively controlled prices. There is a risk of a larger than expected rise in unit labour costs and stronger growth in private consumption, along with their potential upward pressure on inflation, especially in services. The balance of risks regarding inflation is graphically shown in the fan chart. It suggests, for example, that there is a 60 per cent probability for annual HICP growth to range between 1.8 and 3.4 per cent at the end of 2019.

Risks to the projection of non-government sector's deposits tilt to the upside. Higher than expected growth in labour income amid a stronger uncertainty stemming from the external environment could lead to an increased savings rate in the economy. At the same time, risks to growth of non-government sector's credit appear more balanced. Uncertainties around the credit outlook involve potential sales of credit portfolios and writing-off NPLs by banks, as well as the effect of the countercyclical capital buffer increase on overall domestic lending.

BNB Forecast of Key Macroeconomic Indicators for 2019–2021

(per cent)

	2017	2018	2019	2020	2021
Annual rate of change					
GDP at constant prices	3.8	3.1	3.7	3.6	3.4
Private consumption	4.5	6.4	4.0	3.9	3.7
Government consumption	3.7	4.7	4.8	3.5	3.5
Gross fixed capital formation	3.2	6.5	7.2	5.3	3.6
Exports of goods and services	5.8	-0.8	4.6	3.4	3.6
Imports of goods and services	7.5	3.7	5.8	4.0	3.8
HICP at end of period	1.8	2.3	2.6	1.9	2.1
Core Inflation	0.3	2.5	2.5	2.1	2.8
Energy products	6.9	1.0	2.5	-2.7	0.0
Food	2.7	2.4	5.0	4.5	3.4
Goods and services with administratively controlled prices and tobacco products	2.6	2.3	0.2	0.1	0.1
Employment	1.8	-0.1	0.2	0.2	0.1
Unit labour costs	8.4	2.4	5.1	4.6	4.3
Labour productivity	2.0	3.2	3.7	3.4	3.3
Unemployment rate (share of labour force, per cent)	6.2	5.2	4.6	4.3	4.1
Claims on non-government sector	4.5	8.9	6.9	6.9	6.8
Claims on corporations*	1.5	6.4	5.6	6.0	6.2
Claims on households	6.1	11.2	6.9	7.1	7.2
Deposits of the non-government sector	6.2	7.3	8.1	7.5	7.6
Share of GDP					
Balance of payments current account	3.1	4.6	2.8	1.1	1.0
Trade balance	-1.5	-4.1	-4.4	-4.4	-4.3
Services, net	5.5	6.2	6.0	6.0	6.0
Primary income, net	-4.6	-1.0	-2.2	-3.7	-3.8
Secondary income, net	3.6	3.5	3.4	3.2	3.0
Annual rate of change					
External assumptions					
External demand	6.7	2.9	1.9	3.0	3.4
Average annual Brent oil price (in USD)	23.5	30.7	-3.7	-4.9	-2.8
Average annual price of non-energy products (in USD)	7.9	3.9	-2.7	3.4	2.8
Brent oil price at the end of period (in USD)	22.7	9.6	2.6	-7.1	-2.3
Price of non-energy products at the end of period (in USD)	5.4	-1.2	2.4	3.2	2.8

* Data refer to non-financial corporations.

Source: the BNB.