## BULGARIAN NATIONAL BANK



### ECONOMIC REVIEW



# ECONOMIC REVIEW 4/2017



The BNB quarterly Economic Review presents information and analysis of balance of payments dynamics, monetary and credit aggregates, their link with the development of the real economy, and their bearing on price stability. Processes and trends in the external environment are also analysed since the Bulgarian economy is directly influenced by them. This publication contains also quantitative assessments of the development in major macroeconomic indicators in the short run: inflation, economic growth, exports, imports, trade balance and BoP current account, foreign direct investment, monetary and credit aggregate dynamics.

The Economic Review, issue 4/2017 was presented to the BNB Governing Council at its 7 February 2018 meeting. It employs statistical data published up to 24 January 2018.

The estimates and projections published in this issue should not be regarded as advice or recommendation. Exclusively the information user is liable for any consequences thereof.

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1, Knyaz Alexander I Square 1000 Sofia, Bulgaria

Tel.: (+359 2) 9145 1351, 9145 1209, 9145 1231

Website: www.bnb.bg

This issue includes materials and data received up to 9 February 2018.

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ISSN 1312 - 420X (print) ISSN 2367 - 4962 (online)

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#### **ABBREVIATIONS**

ABSPP Asset-Backed Securities Purchase Programme

APP Asset Purchase Programme
APRC Annual percentage rate of charge

BIR Base interest rate
BOP Balance of Payments

BTC Bulgarian Telecommunications Company

b.p. basis points

CBPP3 Covered Bond Purchase Programme
CEECs Central and East European countries
CEFTA Central European Free Trade Association
CFP Consolidated Fiscal Programme

CIF Cost, insurance, freight CNY Chinese Yuan CPI Consumer Price Index

DXY an index measuring the exchange rate of the US dollar against the

basket of six major currencies

EA Employment Agency
EC European Commission
ECB European Central Bank
EIB European Investment Bank
EMBI Emerging Markets Bond Index
EONIA Euro OverNight Index Average

EU European Union

EURIBOR Euro Interbank Offered Rate

EWRC Energy and Water Regulatory Commission

FAO

FDI Foreign Direct Investment

FOB Free on Board

FRS Federal Reserve System
GDP Gross Domestic Product
GFMS Gold Fields Mineral Services

HICP Harmonized Index of Consumer Prices

HRW Hard Red Wheat HUF Hungarian forint

IEA International Energy Agency
IMF International Monetary Fund
ISM Institute for Supply Management
LEONIA LEV OverNight Index Average
LIBOR London Interbank Offered Rate

M1 narrow money
M2 M1 and quasi-money
M3 broad money
MF Ministry of Finance

MFIs Monetary Financial Institutions

mt metric tons

NPISHs Non-profit institutions serving households

NSI National Statistical Institute

OECD Organization for Economic Cooperation and Development

OPEC Organization of Petroleum Exporting Countries

OTC over-the-couter
PBoC People's Bank of China
PMI Purchasing Managers' Index
p.p. percentage points
PPP Purchasing Power Parity

PSPP Public Sector Purchase Programme

RON Romanian new leu

SITC Standard International Trade Classification

WTI West Texas Intermediate

## Summary

Global PMI dynamics suggests that global economic activity continued to increase in the fourth quarter of 2017. Between January and October 2017 the average annual growth of world trade accelerated significantly, with the strongest growth observed again in foreign trade flows of Eastern European countries and Asian emerging markets.

High manufacturing PMIs coupled with increased global industrial output contributed to the year-on-year increase in petroleum product and metal prices on international markets. Commodity price increases were the major factor for global inflation acceleration at the end of the year. In December 2017 global inflation was 2.6 per cent on an annual basis, with developing countries recording more pronounced consumer price rises.

In line with the global economic activity improvement, external demand for Bulgarian goods and services is expected to continue growing at high rates in the first half of 2018. Over the same period international prices of energy and non-energy goods in US dollars are anticipated to rise on the first half of 2017, while international prices in euro are expected to fall, with significantly lower declines recorded in energy than in non-energy products. Given the larger share of petroleum products in goods imports of Bulgaria compared to that in goods exports, developments of international commodity group prices are expected to worsen the terms of trade in Bulgaria over the first and second quarters of 2018.

Between January and November 2017 the balance of payments current and capital account surplus in Bulgaria shrank from the same period of 2016, reflecting mainly a trading deficit increase and lower transfers under EU programmes. In the first half of 2018 the balance of payments current account surplus is expected to continue decreasing as a share of GDP on an annual basis, driven mainly by the projected growth in net primary income deficit. The expected improved absorption of funds under the EU-funded operational programmes for the 2014–2020 programming period will result in an increased capital account surplus on an annual basis as a share of GDP on the end of 2017.

In 2017 deposits of households and non-financial corporations in the banking system continued growing at a comparatively high annual rate, with a gradual moderating trend in households and acceleration in corporations. Growth of loans to the non-government sector followed an upward trend, with the annual growth rate of loans to households exceeding that to non-financial corporations at the end of 2017.

In the first half of 2018 deposits of the non-government sector are expected to increase further, their growth tending to slightly accelerate due to the retention of a comparatively high savings rate in the economy. Improving macroeconomic environment along with comparatively low lending rates will further contribute to growth of loans to households and non-financial corporations.

In the third quarter of 2017 real GDP rose by 0.9 per cent on a quarterly basis. This growth was largely due to net exports and, to a lesser extent, to private and government consumption. Gross fixed capital formation had a low negative contribution to overall growth.

Positive developments in short-term economic indicators continued in the fourth quarter of 2017, suggesting an improvement in the economic environment. At the same time, labour market conditions continued to improve along with increasing domestic and external demand for goods and services and still relatively low oil prices and interest rates which are expected to affect positively growth in private consumption and investment activity of corporations. These factors are projected to influence the further increase in real GDP over the first half of 2018, with domestic demand contributing most

Summary

to this effect. Risks to the GDP growth outlook are assessed as balanced with regard to both external environment and domestic demand.

At the end of 2017 annual inflation was 1.8 per cent. This mainly reflected continuing rises in international oil, food and commodity prices in euro, which were passed onto final consumer prices of energy products and food. Food price rises were also affected by higher domestic production costs in the context of a slight decline in domestic agricultural production. Tobacco products and goods and services with administratively controlled prices had positive contributions to inflation due mainly to raised tobacco excise duties and higher regulated prices of natural gas, heating and electricity. The internal factors related to the sustained long-term trend toward cheaper telecommunication services, air transport and durable goods helped curb consumer price growth.

Reflecting the positive contributions of food and energy product prices, and administratively controlled prices, inflation is expected to rise in the first two quarters of 2018 compared to the current levels. Core inflation is projected to accelerate gradually.

This issue of Economic Review includes the BNB forecast of key macroeconomic indicators for the 2017–2019 period. It is based on information published as of 19 December 2017 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 13 December 2017.

Global economic growth is expected to accelerate in 2017 and 2018 and subsequently stabilise in 2019. Faster economic growth will be observed in developing economies, while growth in developed countries will accelerate in 2017 against 2016, thereafter slightly slowing in 2018–2019.

Taking into account global economic growth forecasts, external demand for Bulgarian goods and services is expected to accelerate in 2017 compared to 2016. In 2018 and 2019 it is anticipated to moderate from its 2017 levels. Given the favourable economic and political developments in Bulgaria's main trading partners, the uncertainty about global economic prospects declined *vis-à-vis* the previous forecast. Risks of deviations in external environment developments (from the assumptions used in the forecast) are assessed as balanced.

Following a more significant rise in energy and non-energy commodities in 2017 compared to 2016 due to the exhaustion of excess supply in international markets, prices in US dollars are projected to increase further in the 2018–2019 period, though at lower rates. Non-energy product prices in euro will decline slightly in 2018 compared to 2017.

Real GDP growth in Bulgaria is expected to reach 4.0 per cent in 2017, from 3.9 per cent in 2016. In 2018 it is anticipated to accelerate slightly to 4.2 per cent, thereafter reaching again 4.0 per cent in 2019. Domestic demand is projected to have the major positive contribution to real growth in the 2018–2019 period, leading to goods and services import growth. Faster increases of imports than exports of goods and services will result in a negative contribution of net exports to overall growth. Risks to the economic activity forecast in the baseline scenario are assessed as oriented towards higher growth in 2017 and balanced for the 2018–2019 period.

In 2018 and 2019 inflation is expected to increase gradually in line with the assumptions of upward international price dynamics and core inflation acceleration due to the exhausted effect of country-specific factors in 2017. Goods and services with administratively controlled prices are expected to make a positive contribution to the overall inflation, reflecting the projected increase in both excise duty on tobacco products and water supply prices in the 2018–2019 period. There are risks of higher than projected inflation in case of unexpected rises in administratively controlled prices and higher than expected international oil and commodity prices, which would impact the other inflation components.

## 1. External environment

Global PMI dynamics suggests that global economic activity continued to increase in the fourth quarter of 2017. Between January and October 2017 the average annual growth of world trade accelerated significantly, with the strongest growth observed again in foreign trade flows of Eastern European countries and Asian emerging markets.

High manufacturing PMIs coupled with increased global industrial output contributed to the year-on-year increase in petroleum products and metal prices on international markets. Commodity price increases were the major factor for global inflation acceleration at the end of the year. In December 2017 global inflation was 2.6 per cent on an annual basis, with developing countries recording more pronounced consumer price rises.

In line with the global economic activity improvement, external demand for Bulgarian goods and services is expected to continue growing at high rates in the first half of 2018. Over the same period international prices of energy and non-energy goods in US dollars are anticipated to rise on the first half of 2017, while international prices in euro are expected to fall, with significantly lower declines recorded in energy than in non-energy products. Given the larger share of petroleum products in goods imports of Bulgaria compared to that in goods exports, developments of international commodity group prices are expected to worsen the terms of trade in Bulgaria over the first and second quarters of 2018.

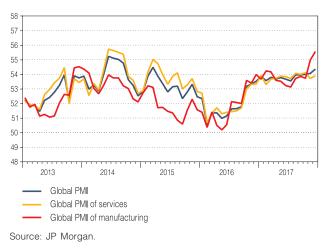
### **Current Business Situation**

In 2017 the average global PMI was higher than in 2016. At the end of 2017 the global PMI continued to show an increase in global economic activity driven by the manufacturing sector over the fourth quarter, while the index of services production remained at a level close to the third quarter. Across regions, a more pronounced improvement in economic activity expectations was recorded in developing countries. PMI increased also in developed countries, except the USA, while the composite PMI declined in December, still remaining significantly above the neutral 50-point mark.

Between January and October 2017 the world trade volume increased strongly<sup>1</sup> from the same period of 2016. It was mainly driven by developing economies where the largest annual increase was observed in Eastern European countries and Asian emerging markets.<sup>2</sup> At the same time, Japan reported the strongest annual growth in its foreign trade flows among developed economies.

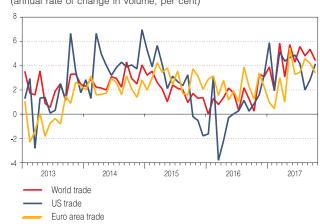
### <sup>1</sup> CPB Netherlands Bureau for Economic Policy Analysis data as of 22 December 2017.

#### Global PMIs



#### World Trade and Trade in Selected Regions

(annual rate of change in volume, per cent)



Source: CPB Netherlands Bureau for Economic Policy Analysis.

<sup>&</sup>lt;sup>2</sup> CPB Netherlands Bureau for Economic Policy Analysis Classification by country groups.

From the beginning of 2017 global inflation rose from the end of 2016, reaching 2.6 per cent on an annual basis in December.<sup>3</sup> A more pronounced increase in inflation was observed in developing countries, reflecting mainly a year-on-year increase in international petroleum product and metal prices.

In line with global economic activity improvements, external demand for Bulgarian goods and services is expected to continue growing at high rates in the first half of 2018.

US dollar international prices of energy and non-energy goods are anticipated to rise from the first half of 2017, while international commodity group prices in euro will decrease on an annual basis, with energy prices registering a much smaller decrease compared to non-energy prices. Given the larger share of petroleum products in goods imports of Bulgaria compared to that in goods exports, developments of international commodity group prices are expected to worsen the terms of trade in Bulgaria over the projection horizon.

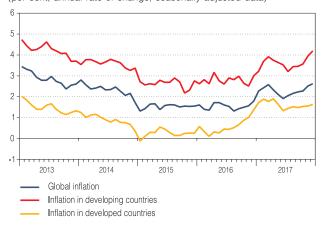
### Euro Area

In the third guarter of 2017 euro area real GDP increased by 0.7 per cent on a quarterly basis, recording the same pace as in the second quarter. Economic activity acceleration was observed in all euro area countries, with real GDP growth in Germany, France, Italy and Spain reaching 0.8, 0.6, 0.4 and 0.8 per cent, respectively. All expenditure components contributed positively to the economic activity increase, except investment whose contribution was -0.1 percentage points. Developments in leading economic indicators, including PMIs and EC indices, showed that euro area economic growth in the fourth quarter of 2017 would be close to that in the previous period, covering most member countries.

Labour market indicators continued to improve slowly, unemployment declining to 8.7 per cent in November 2017. The expected change in unemployment over the next 12 months included in the EC consumer confidence index showed an improvement in consumer expectations of labour market developments.

### Inflation Measured through CPI

(per cent, annual rate of change, seasonally adjusted data)

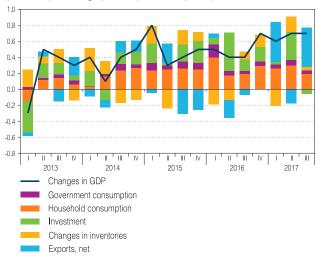


Note: The World Bank measures the change of CPI in individual groups as a weighted average of CPI changes in the countries of the group. For calculating the weights of the countries, real GDP based on purchasing power parity is used. Groups include only World Bank Member States classified by the World Bank as developing and developed countries.

Source: the World Bank.

### Contribution to the Change in Euro Area Real GDP by Component

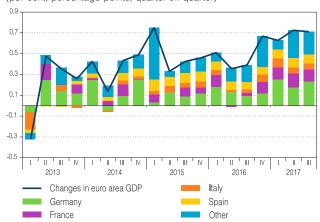
(per cent; percentage points; quarter-on-quarter)



Source: Eurostat.

### Contribution to the Change in Euro Area Real GDP by Country

(per cent; percentage points; quarter-on-quarter)



Sources: Eurostat and BNB calculations.

<sup>&</sup>lt;sup>3</sup> Based on World Bank data as of 15 January 2018.

Despite economic growth sustainability and labour market improvements, euro area inflation remained at relatively low levels. In December the annual change in HICP was 1.4 per cent, from 1.5 per cent in November.

In December the ECB revised upwards its euro area real GDP growth outlook from 2.2 to 2.4 per cent for 2017 (+0.2 percentage points), from 1.8 to 2.3 per cent for 2018 (+0.5 percentage points) and from 1.7 to 1.9 per cent for 2019 (+0.2 percentage points). Risks to euro area economic growth are assessed as balanced by the ECB.

ECB euro area inflation forecasts for 2017 and 2019 remained unchanged at 1.5 and 1.4 per cent, with that for 2018 being revised upwards from 1.2 to 1.4 per cent (+0.2 percentage points). The latter reflects primarily higher energy and food prices. Inflation is expected to reach 1.7 per cent in 2020, below the ECB target of 2 per cent.

At its monetary policy meeting of 26 October 2017, the ECB left unchanged key interest rates, extending, as expected, the Asset Purchase Programme (APP) duration. The ECB decision provided for halving from January to September 2018 of APP purchases (to EUR 30 billion *per* month), leaving the possibility for increasing their size and/or duration depending on deviations of inflation from its target level. The Eurosystem would continue to reinvest the principal payments from maturing securities purchased under the APP for an extended period of time

### Projections of the Annual Rate of Change of Euro Area Real GDP

(per cent)

Institution	Date of	20	)18	20	019	2020		
montunion	release	release latest pr		latest	previous	latest	previous	
ECB	December 2017	2.3	1.8	1.9 1.7		1.7	-	
EC	November 2017	2.1	1.8	1.9	-	-	-	

Sources: the ECB, the EC,

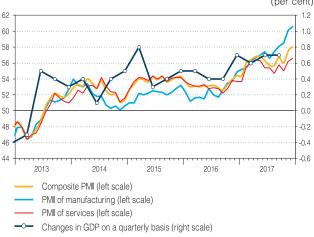
### Projections of Euro Area Annual Inflation Rate

(per cent)

Institution	Date of	20	)18	20	019	2020		
montation	release	release latest p		latest	previous	latest	previous	
ECB	December 2017	1.4 1.5		1.5 1.5		1.7	-	
EC	November 2017	1.4	1.3	1.6	-	-	-	

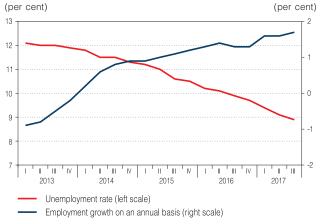
Sources: the ECB, the EC.

### GDP Change and Manufacturing and Services PMIs



Sources: Eurostat, Markit.

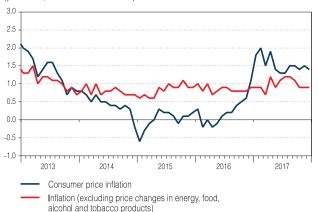
### Euro Area Unemployment Rate and Employment Growth



Source: Eurostat.

#### Euro Area Inflation Rate

(per cent, on an annual basis)



Source: Eurostat.

after the end of its net asset purchases, and in any case for as long as necessary. The ECB would continue conducting main refinancing operations and three-month longer-term refinancing operations as fixed rate tender procedures with full allotment for as long as necessary, and at least until the end of the last reserve maintenance period of 2019.

At its monetary policy meeting of 14 December 2017, the ECB made no adjustments to its monetary policy.

On 12 January 2018 the cumulative amount of purchases under the APP totalled EUR 2299.1 billion, with assets purchased under the four PSPP, CBPP3, ABSPP and CSPP programmes reaching EUR 1898.4 billion, EUR 242.4 billion, EUR 25.0 billion and EUR 133.3 billion.

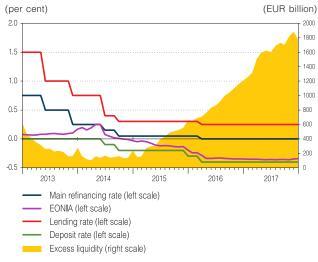
As a result of continuing APP purchases, on 12 January 2018 excess liquidity in the euro area banking system increased to EUR 1871.1 billion from EUR 1701.8 billion by end-September 2017, the Eurosystem balance sheet figure reaching EUR 4.473 trillion. Between 2 October 2017 and 12 January 2018 EONIA was -0.35 per cent, from -0.36 per cent in the third quarter. Overnight interbank deposit trading in the euro area decreased, with its daily average coming to EUR 5.5 billion from 2 October 2017 to 12 January 2018 (EUR 7.3 billion for the third quarter of 2017). EURIBOR rates remained unchanged in most maturity sectors. On 12 January 2018 one-month (-0.37 per cent) and six-month interest rates (-0.27 per cent) remained at their end-September levels, while twelve-month rates fell to -0.19 per cent (-1 basis points from end of September 2017).

### The United States

In the third quarter of 2017 the annual US GDP growth rate accelerated to 2.3 per cent, from 2.2 per cent in the previous quarter. Quarterly GDP growth was almost equal to that in the second quarter (0.78 per cent against 0.76 per cent). In the third quarter household consumption and business investment growth slowed down, compensated by accelerated growth in inventories and declining goods and services imports.

US leading economic indicators showed diverse developments over the fourth quarter of 2017,

### ECB Interest Rates, EONIA and Excess Liquidity in the Euro Area Banking System

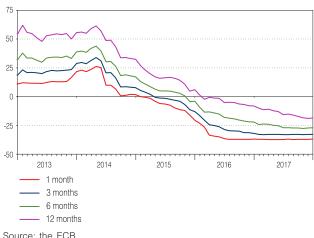


Note: Average EONIA data for the month.

Source: the ECB.

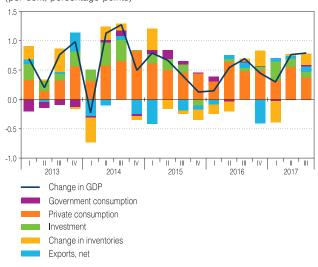
### **EURIBOR Dynamics**





### Contribution to US GDP Growth by Component (Quarterly)

(per cent; percentage points)



Source: Bureau of Economic Analysis.

signalling still high economic activity. The ISM Manufacturing PMI in the USA edged up over the last three months, while the ISM Services PMI went down, both indices remaining significantly above the 50 percentage point limit. Monthly rates of change in individual consumer expenditure and retail sales were positive, with consumer confidence indicators remaining at relatively high levels despite prevailing negative changes in the fourth quarter. Construction indicators started to increase hesitantly after recording sector's economic activity slowdown in the second and third quarters.

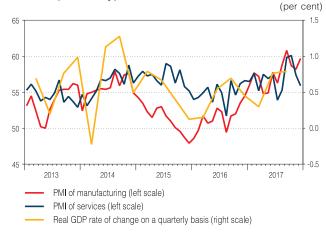
In November the annual rate of change of the price index of personal consumption expenditure (PCE) rose to 1.8 per cent from 1.6 per cent in October and 1.7 per cent in September. The annual growth rate of core index (excluding food and fuel prices) increased to 1.5 per cent in November from 1.4 per cent in October and September.

December CPI data pointed to a drop in annual inflation to 2.1 per cent from 2.2 per cent in November, with core inflation increasing to 1.8 per cent, from 1.7 per cent in November. December data on expectations of consumer price changes one to five years ahead, which are part of the consumer confidence index of the University of Michigan, showed stabilisation in long-term and increases in short-term inflation expectations.

US labour market conditions improved in the fourth quarter of 2017. The average quarterly number of new employees in the non-farm sector rose from the third quarter as the negative effect of hurricanes Harvey, Irma and Maria on job creation faded away. In October US unemployment rate declined to 4.1 from 4.2 per cent in September, stabilising at this level until the end of 2017. Leading economic activity indicators show that US labour market conditions will remain favourable.

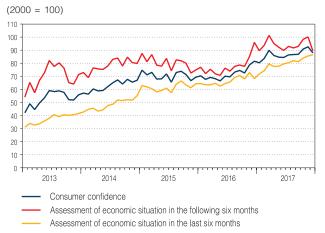
Based on reported and expected US labour market and inflation indicators, at its 12 and 13 December meeting, the Federal Open Market Committee (FOMC) took a decision to raise by 25 basis points the federal funds rate corridor to 1.25–1.50 per cent. Despite positive revisions of FOMC members' forecasts of US economy and labour market, prospects of ongoing

### US ISM Manufacturing and Services PMIs and GDP Growth (Quarterly)



Source: Institute for Supply Management, Bureau of Economic Analysis.

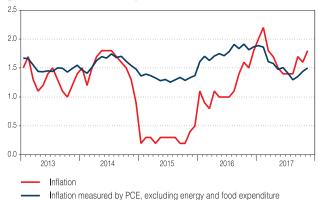
### **US Consumer Confidence Indices**



Source: the Conference Board.

### **US Inflation Rate**

(per cent, on an annual basis)



Note: Inflation is measured by the personal consumption expenditure deflator.

Source: Bureau of Economic Analysis.

monetary policy normalisation in the next year did not change. According to the projection medians of individual FOMC members, in 2018 three further increases of the federal funds rate are expected, with the long-run equilibrium level reaching 2.75 per cent.

#### China

Over the fourth quarter of 2017 China's economic growth was 6.8 per cent on an annual basis and 1.6 per cent on a quarterly basis. For 2017 it was 6.9 per cent, up 0.2 percentage points on 2016 and 0.4 percentage points above the government's target of 6.5 per cent announced in early 2017.

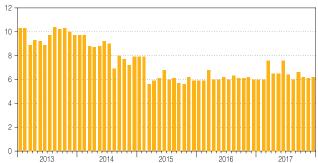
Economic indicator data show that the increased contribution of net exports to economic growth in the fourth quarter offset the moderate decrease in private consumption and investments' contributions.

The annual growth rate of China's industrial output and total investment tended to slightly slow down in the fourth quarter. This continued to be driven by the government measures to reduce air pollution in 28 cities of Northern China by shutting down production facilities in particular regions. Investment growth moderation was more pronounced in construction and real estate unlike the industrial sector whose annual growth accelerated slightly.

Annual CPI growth in China stabilised at levels below 2 per cent. In December inflation reached 1.9 per cent, as the disinflationary effect of past food price falls faded out. Downward trends in annual producer price growth resumed over the period, driven largely by a base effect from the strong price increase at the end of 2016.

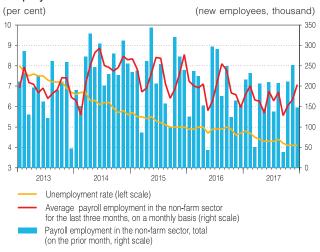
#### Industrial Output in China

(per cent, on an annual basis)



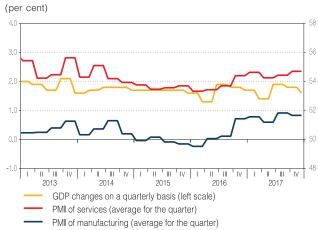
Source: National Bureau of Statistics of China.

### US Unemployment Rate and Number of New Employees in the US Non-farm Sector



Source: Bureau of Labor Statistics.

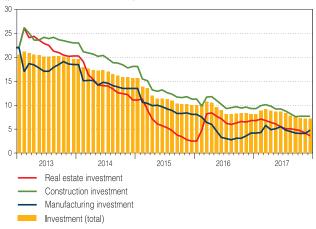
### Manufacturing and Services PMIs and GDP Growth (Quarterly) in China



Sources: National Bureau of Statistics of China and China Federation of Logistics and Purchasing.

### Fixed Capital Investment (Total) in Selected Sectors in China

(per cent, on an annual basis)



Source: National Bureau of Statistics of China.

#### China's Inflation Rate

(per cent, on an annual basis)



Source: National Bureau of Statistics of China.

Slowdown in China's house price increases was sustained in the fourth quarter, mostly in large cities, reflecting regional authorities' measures to limit speculation on the residential property market.

In the fourth quarter the People's Bank of China raised interest rates on some of its instruments used to control banking system liquidity. Seven and 28-day repo rates were raised by 5 basis points each to 2.5 and 2.8 per cent and one-year credit facility rate by 5 basis points to 3.25 per cent. Some market analysts suggest that these rate increases were intended to limit movements in the Chinese yuan to US dollar exchange rate following the December increase in US Federal Reserve's target rates.

China's foreign exchange reserves increased by USD 31.4 billion to USD 3.14 trillion. This was driven by the increased positive net exports of China to main trading partners, such as the USA and the EU, in the context of strong growth in world trade volumes.

### **International Commodity Prices**

#### Crude Oil

In 2017 international crude oil prices increased strongly on an annual basis, averaging around USD 54.4 per barrel (Brent). This reflected both lower supply and higher demand for crude oil. The agreement to extend oil output cuts between OPEC and other major oil producers until the end of 2018 was the main factor affecting supply. Reaffirming the commitment of these countries to comply with agreed production

#### House prices in China

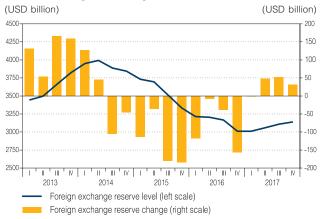
(annual rate of change, per cent)



Note: Group 1 includes the four largest cities: Beijing, Shenzhen, Guangzhou, and Shanghai. Group 2 includes the capitals of the rest provinces.

Source: National Bureau of Statistics of China.

### China's Foreign Exchenge Reserves



Source: People's Bank of China.

cuts pushed up prices to USD 61.5 *per* barrel on average in the fourth quarter of 2017, with price increases driven also by commitments on the part of Libya and Nigeria not to raise oil production over the current level. US production disruptions as a result of hurricanes and pipeline accidents in the North Sea and Libya were another factors of a temporary nature exerting upward pressures.

International Energy Agency (IEA) data showed a year-on-year increase in global oil demand over 2017. Reflecting projections of sustainable global economic growth in 2017 and 2018, high manufacturing PMIs and global industrial output growth, the IEA revised upwards its crude oil demand forecasts.

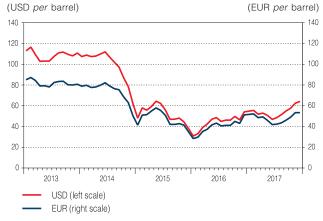
In December market oil price expectations for the first half of 2018, embedded in futures prices, increased *vis-à-vis* September expectations, with market players taking intio account data on lower global oil inventories and record demand highs. At the same time, given still high oil supply and a possible termination before the end of 2018 of the deal to cut oil output between OPEC and other global producers, market crude oil price expectations for the first and second quarters of 2018 point to a range of USD 60–65 *per* barrel.

### Commodity and Food Prices

In the fourth quarter of 2017 metal prices continued to increase on an annual basis in both US dollars and euro, their average increase for 2017 reaching 20.7 per cent (in dollars) and 18.1 per cent (in euro). This reflected both expanded demand as a result of strong global industrial production growth and supply-side problems stemming from closure of old and inefficient capacities in China in an effort to reduce air pollution. These factors had the strongest upward effect on aluminum prices. Weaker metal ore production in Australia and Brazil and closure of zinc mines in Ireland, Australia and the USA exerted an additional pressure on metal prices in 2017.

The price of copper, which is of key importance to Bulgarian goods exports, posted the largest annual growth in metals during 2017, driven by temporary disruptions of production processes in important copper ore mines in Chile and

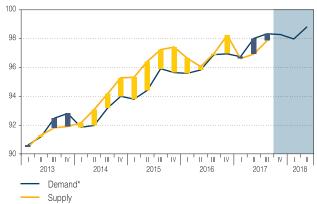
### Brent Crude Oil Price



Source: the World Bank.

### World Crude Oil Supply and Demand (Quarterly)

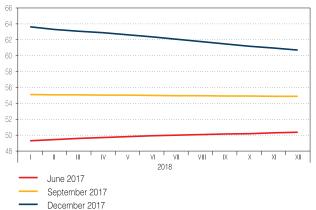
(million barrels per day)



\* Including IAE latest crude oil demand data of December 2017. Source: IAE.

#### Brent Crude Oil Futures Prices

(average monthly price of contract, USD per barrel)



Source: JP Morgan.

Peru. At the same time, certain measures of the Indonesian government led to a decline of copper exports by the world's second largest copper mine.

In the first half of 2018 metal prices in US dollars are expected to continue rising on an annual basis, coupled with year-on-year declines of prices in euro due to projected dollar depreciation against the euro.

In 2017 the global food price index fell by 1.6 per cent on an annual basis in US dollars (down 3.4 per cent in euro). In the fourth quarter, however, the annual rate of decline slowed down significantly. Divergent dynamics was recorded across sub-components in 2017. On the one hand, prices of some sub-components, such as maize, went down on an annual basis due mainly to better than expected harvests. On the other hand, wheat, which is essential for the Bulgarian goods exports, recorded year-on-year price rises in both dollars and euro (21.1 per cent in dollars and 10.5 per cent in euro in the fourth guarter). This was driven by lower global inventories and unfavourable weather conditions in Australia. In addition, market expectations of wheat yields in Brazil and Southern Africa were lowered.

Food price projections in US dollar terms point to a slight increase on an annual basis for the first half of 2018 on average, unlike expected declines in euro terms due to assumptions of dollar depreciation against the euro.

If market expectations of international fuel, commodity and food price dynamics materialise, the terms of trade in Bulgaria are anticipated to deteriorate in the first half of 2018.

### Price Indices of Major Raw Materials and Commodity Groups

(2013 = 100)

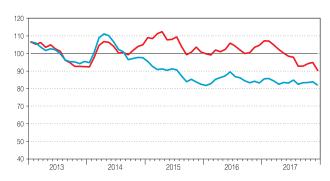
#### Metals



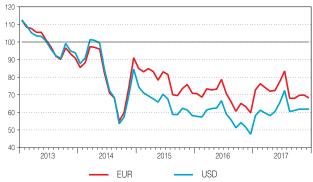
### Copper



#### Food



### Wheat



Sources: ECB and BNB calculations.

# 2. Financial flows, money and credit

Between January and November 2017 the balance of payments current and capital account surplus in Bulgaria shrank from the same period of 2016, reflecting mainly a trading deficit increase and lower transfers under EU programmes. In the first half of 2018 the balance of payments current account surplus is expected to continue decreasing as a share of GDP on an annual basis, driven mainly by the projected growth in net primary income deficit. The expected improved absorption of funds under the EU-funded operational programmes for the 2014–2020 programming period will result in an increased capital account surplus on an annual basis as a share of GDP on the end of 2017.

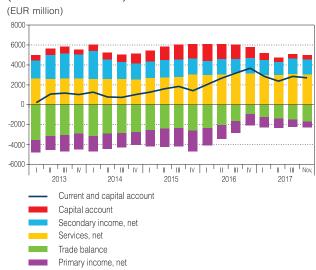
In 2017 deposits of households and non-financial corporations in the banking system continued growing at a comparatively high annual rate, with a gradual moderating trend in households and acceleration in corporations. Growth of loans to the non-government sector followed an upward trend, with the annual growth rate of loans to households exceeding that to non-financial corporations at the end of 2017.

In the first half of 2018 deposits of the non-government sector are expected to increase further, their growth tending to slightly accelerate due to the retention of a comparatively high savings rate in the economy. Macroeconomic environment improvements along with comparatively low lending rates will further contribute to growth of loans to households and non-financial corporations

### **External Financial Flows**

In the January-November 2017 period the balance on the current and capital account was positive at EUR 2949.7 million compared with a surplus of EUR 3879.8 million in the corresponding period of 2016.4 Lower surplus was reported on both the current and capital account compared with the same period of the previous year. The capital account surplus decreased as a result of smaller transfers under EU programmes. Lower current account surplus was mainly driven by the significant increase in the trade deficit due to higher real growth in imports as compared with exports of goods and worsened terms of trade.<sup>5</sup> Lower surplus on the net secondary income and net trade in services items also contributed to the lower surplus on current account. The positive balance on net trade in services decreased due to stronger growth in services imports on an annual basis compared with that in exports despite the sizeable increase in tourist services exports. In the first eleven months of 2017 the deficit on the net primary income item decreased on the January-November 2016 period following

## Current and Capital Account Dynamics and Contributions of Individual Components (on an Annual Basis)



Note: For each quarter, the chart shows item balances accumulated in the last four quarters. Chart data as of November 2017 are accumulated for the last 12 months.

 $<sup>^{\</sup>rm 4}$  The analysis of balance of payments flows employs information from its analytical reporting. Preliminary data.

<sup>&</sup>lt;sup>5</sup> For a more detailed analysis of exports and imports of goods and services, see Chapter 3.

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lower outflows under the reinvested profit item<sup>6</sup>, partly limiting the decline in the current account surplus.

In the first and second quarters of 2018 the current account surplus<sup>7</sup>, as a share of GDP, is expected to shrink further on an annual basis. The major factor behind this will be the anticipated rise in the deficit on the net primary income item, promoted by the gross operating surplus in the economy which increased in recent quarters, and a possible rise in the reinvested profit. Concurrently, trade balance deficit in the first half of 2018 is expected to contract as a share of GDP on end-2017 driven by higher nominal growth on an annual basis in goods exports compared to that in imports.8 The expected improved absorption of funds under the EU-funded operational programmes for the 2014-2020 programming period will result in an annual increase in the capital account surplus as a share of GDP on the end of 2017.

In the January-November 2017 period the financial account balance was positive driven by the stronger increase in Bulgarian residents' foreign assets compared with the increase in foreign liabilities. Total foreign asset dynamics reflected mainly transactions of banks which boosted their foreign assets by EUR 2421.4 million.9 An increase in foreign liabilities on financial account over the reviewed period was reported only in other sectors 10, in particular in foreign direct investment attracted by them and, to a lesser extent, in new external obligations assumed by these sectors on portfolio and other investment. General government sector foreign liabilities posted a decline following a repayment of Eurobonds maturing in July and due to residents' purchases of Bulgarian government securities issued in international capital markets.

Between January and November 2017 direct investment liabilities (reporting FDI inflows into Bulgaria) decreased from the corresponding

### Flows on Major Balance of Payments Accounts

(EUR million)

	2015	2016	On an annual basis as of November 2017
Current account	-16.9	2 561.4	2 523.1
Trade balance	-2 622.4	-984.4	-1 563.2
Services, net	3 003.6	3 092.3	2 959.1
Primary income, net	-2 038.5	-1 131.0	-348.2
Secondary income, net	1 640.4	1 584.6	1 475.5
Capital account	1 422.4	1 069.9	426.5
Financial account	-738.3	840.2	3 386.4
Change in reserves	3 729.7	3 467.3	-1 571.7

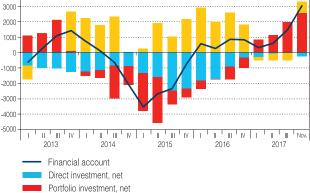
(per cent of GDP)

	2015	2016	On an annual basis as of November 2017
Current account	0.0	5.3	4.6
Trade balance	-5.8	-2.0	-3.5
Services, net	6.6	6.4	6.1
Primary income, net	-4.5	-2.4	-1.2
Secondary income, net	3.6	3.3	3.1
Capital account	3.1	2.2	0.9
Financial account	-1.6	1.7	6.3
Change in reserves	8.2	7.2	-2.3

Source: the BNB

### Financial Account Dynamics and Contribution by Component (on an Annual Basis)





Other

Notes: The Other item includes Other Investments, Net, and Financial Derivatives (Other than Reserves) and Employee Stock Options, Net. For each quarter, the chart shows item balances accumulated in the last four quarters. Chart data as of November 2017 are accumulated for the last 12 months.

<sup>&</sup>lt;sup>6</sup> Preliminary data subject to revision.

<sup>&</sup>lt;sup>7</sup> It should read the balance of the account for the last four quarters.

<sup>&</sup>lt;sup>8</sup> For a more detailed analysis of foreign trade flows, see Chapter 3, The Exports and Imports of Goods and Services Section.

<sup>&</sup>lt;sup>9</sup> For a more detailed analysis of banks' activities, see Chapter 2, Monetary and Credit Aggregates Section.

<sup>&</sup>lt;sup>10</sup> Sectors other than central banks, other monetary financial institutions and general government.

### Banks' Flows on Balance of Payments Financial Account

(EUR million)

	2015	2016	January – November 2017
Direct investment			
Assets	1.6	9.9	15.4
Liabilities	271.6	124.5	35.5
Portfolio investment			
Assets	-785.9	317.5	50.7
Liabilities	1.5	0.8	-12.0
Other investment			
Assets	-1 931.3	528.7	2 355.3
Liabilities	-1 638.6	-112.2	-142.6
Total assets	-2 715.7	856.0	2 421.4
Total liabilities	-1 365.5	13.1	-119.2
Assets, net	-1 350.2	843.0	2 540.6

Source: the BNB.

period of 2016 to EUR 976.7 million (against EUR 1211.7 million in the same period of 2016). The strongest foreign direct investment inflow was from the Netherlands and Switzerland.

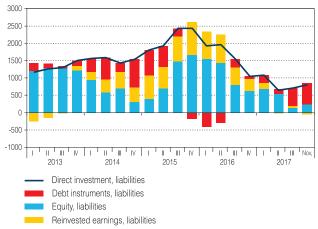
As a result of net flows on the balance of payments current, capital and financial account gross international reserves<sup>12</sup> decreased by EUR 1571.6 million. As of November 2017 the international reserve coverage of the average nominal imports of goods and non-factor services remained high (8.3 months) for the last 12 months, posting a slight decrease from December 2016 (10.0 months).

In October 2017 Bulgaria's gross external debt declined from the end of 2016 for all sectors of the economy. Government external debt fell significantly mainly as a result of repayment of Eurobonds maturing in July. <sup>13</sup> Residents' purchases of Bulgarian government securities issued in international markets from non-residents contributed to a lesser extent. The share of long-term debt in Bulgaria's total gross external debt was 77.7 per cent in October 2017, posting a slight decrease against end-2016.

While maintaining low interest rates in the euro area, conditions for servicing foreign debt of Bulgarian residents remained favourable. Over

### Direct Investment Liabilities by Type of Investment (on an Annual Basis)

(EUR million)



Notes: For each quarter, the chart shows item balances accumulated in the last four quarters. Chart data as of November 2017 are accumulated for the last 12 months.

Source: the BNB.

#### Gross External Debt in October 2017

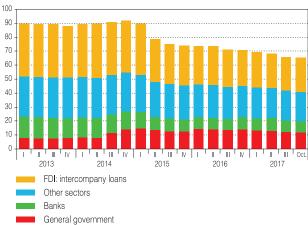
(EUR million)

		Change					
	Amount	Since December 2016	For the last 12 months				
General government	5 887.0	-895.6	-587.0				
Central bank	0.0	0.0	0.0				
Banks	4 019.8	-143.1	160.2				
Other sectors	10 500.6	-229.2	-380.6				
FDI – intercompany loans	12 114.9	-256.2	-283.9				
Total	32 522.2	-1 524.1	-1 091.3				

Source: the BNB.

#### Gross External Debt as a Share of GDP

(per cent of GDP)



<sup>&</sup>lt;sup>11</sup> Preliminary data subject to revision.

<sup>&</sup>lt;sup>12</sup> Valuation adjustments and price revaluation excluded.

<sup>&</sup>lt;sup>13</sup> The effect of Eurobonds redemption was partly limited as only 39.5 per cent of them were held by non-residents.

the January to October 2017 period interest payments on foreign debt posted a decline on the respective period of 2016. As a result of repayment by the government of Eurobonds maturing in July, the bulk of external debt service costs related to repayment of long-term external obligations. The new external debt taken up by Bulgarian residents in the January-October 2017 period dropped in all sectors except banks compared with the corresponding period of 2016 despite the favourable conditions for assuming external debt and its service.

### Monetary and Credit Aggregates

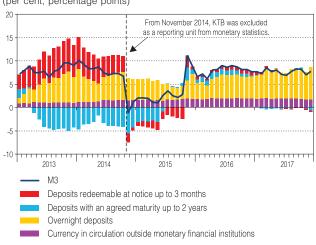
In 2017 non-government sector's deposits in the banking system continued growing at comparatively high rates. At the end of 2017 the broad monetary aggregate M3 rose by 7.7 per cent on an annual basis (7.6 per cent at the end of 2016). Overnight deposits continued to be the main positive contributor to the broad money dynamics with a lesser contribution by money outside monetary financial institutions (MFI) compared to end-2016 levels and a negative contribution by quasi-money. Growth of deposits in the banking system reflected the retention of a comparatively high savings rate in the economy. In the context of interest rates on time deposits close to zero broad money structure was driven by economic agents' preferences for faster and easier access to their funds in banks, provided by overnight deposits.

Non-government sector deposit growth 14 in the banking system accounted for 6.1 per cent on an annual basis in December 2017 (7.0 per cent at the end of 2016), with non-financial corporation deposits contributing mostly to this growth and those of households to a lesser degree. Households and corporations preferred to keep their savings mainly in overnight deposits. As regards the currency structure, deposits in levs prevailed. 15 At the end of December

<sup>14</sup> Non-government sector deposits include deposits of households, non-financial corporations and financial corporations. Deposits of households and non-financial corporations comprise the largest share of all non-government sector deposits (95.2 per cent on average for the last 12 months as of December 2017), and therefore the analysis is focused on these two sectors.

### Annual Rate of Change in M3 and Contribution by Component

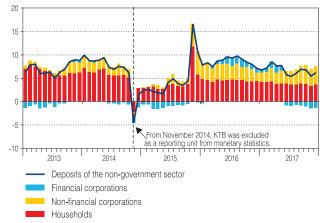
(per cent, percentage points)



Source: the BNB

### Annual Growth of Non-government Sector Deposits and Contribution by Sector

(per cent, percentage points)



<sup>&</sup>lt;sup>15</sup> As of December 2017 the share of lev-denominated deposits in total non-government sector deposits accounted for 62.1 per cent.

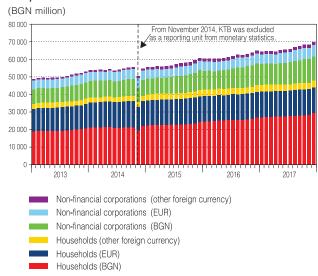
2017 household deposits reached BGN 47.8 billion, with the downward trend in their annual growth (5.4 per cent at the end of the year from 6.6 per cent in December 2016) reflecting a gradual decline in household savings rate. Deposits of non-financial corporations amounted to BGN 22.0 billion in December 2017 retaining the upward trend of their growth (13.8 per cent by December 2017 as compared to 6.3 per cent by the end of the previous year). Deposits of financial corporations fell by 26.9 per cent (an 18.1 per cent increase in December 2016) and had a substantial negative contribution to overall growth of non-government sector deposits at the end of 2017.

The structure of attracted funds with respect to the share of residents and non-residents in the banking system remained broadly unchanged helping to maintain the effective implicit rate of minimum required reserves<sup>16</sup> at its level of end-2016. In December 2017 this rate was 9.43 per cent (9.43 per cent at the end of 2016) with commercial bank deposits with the BNB comprising 8.32 percentage points in minimum required reserves performance, and the remaining 1.11 percentage points forming recognised cash balances.

The annual growth rate of reserve money slowed down, accounting for 3.5 per cent at the end of December (4.0 per cent in December 2016). The lower annual growth rate of the monetary base was mainly due to the decline in bank excess reserves with the BNB.

Resolution of the BNB Governing Council to change the methodology for setting the interest rates on accounts with the BNB added to the decline in bank excess reserves. The change became effective on 4 October 2017 and as a result the BNB applies on bank excess reserves whichever is lower between 0 per cent and the ECB deposit facility rate less 20 basis points. This change resulted in cutting the interest

### Currency Structure of Deposits of Non-financial Corporations and Households



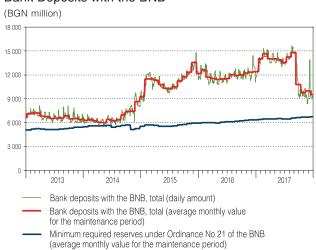
Source: the BNB.

### Reserve Money



Source: the BNB

### Bank Deposits with the BNB



<sup>&</sup>lt;sup>16</sup> According to Article 3 of BNB Ordinance No 21 on the Minimum Required Reserves Maintained with the Bulgarian National Bank by Banks, the rate of minimum required reserves on funds attracted from residents is 10 per cent of the deposit base, from non-residents 5 per cent and from the state and local government budgets 0 per cent.

rate on bank excess reserves with the BNB to -0.60 per cent.<sup>17</sup>

On average, bank excess reserves decreased by BGN 4.6 billion in the fourth quarter compared to end–September. By end-2017 banks' reserves decreased by 3.8 per cent on an annual basis (a fall of 2.2 per cent in December 2016). As of December the excess funds on banks' minimum reserve accounts with the BNB over the required minimum under Ordinance No 21 declined to 44.9 per cent of the minimum required reserves on an average daily basis (89.8 per cent in December 2016).

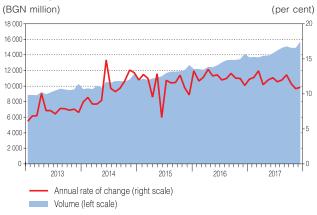
Banknotes and coins in circulation retained a relatively high annual growth rate in the fourth quarter reaching 11.0 per cent by the end of the year (11.2 per cent at the end of 2016). This trend was mainly underpinned by the low interest rates on deposits, savers' preferences to have cash and a significant increase in private consumption.

Banks' liquidity remained high in 2017. In November the liquid assets ratio calculated under BNB Ordinance No 11 accounted for 37.1 per cent (38.2 per cent in December 2016). Bank transactions with the BNB in reserve currency (euro) are the main instrument of banks for managing their lev liquidity under currency board arrangements in Bulgaria. Throughout the year BNB purchased EUR 0.8 billion (net) from commercial banks (EUR 1.1 billion in 2016).

In 2017 claims on the non-government sector and foreign assets contributed most to annual growth of banks' assets. A stronger increase in banks' foreign assets was reported in the fourth quarter of 2017 due to a lower interest rate on banks' excess reserves with the BNB. As a result of increased foreign assets and insignificant decline in foreign liabilities in 2017, banks' net foreign assets rose by BGN 2.2 billion to reach BGN 7.0 billion.

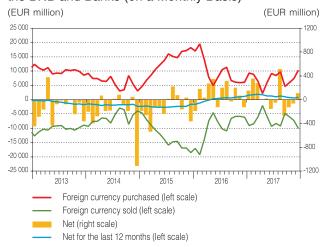
The upward trend in loans to the non-government sector in 2017 reflected the favourable economic environment, the gradual decline in lending rates and the use of loans extended under the National Programme for Energy

### Currency in Circulation



Source: the BNB.

### Foreign Currency Purchases and Sales between the BNB and Banks (on a Monthly Basis)



Notes: Net means currency purchased minus currency sold by the BNB. Data refer to all bank transactions in foreign currency including liquidity management operations related to the transfer of own funds from lev accounts with the BNB to own accounts with the BNB in euro and *vice versa*.

 $<sup>^{17}\,\</sup>mbox{From 16}$  March 2016 the ECB deposit facility rate is -0.40 per cent.

Efficiency of Multi-family Residential Buildings (National Programme for Energy Efficiency). In December total growth of loans to non-financial corporations and households<sup>18</sup> accelerated to 3.3 per cent (1.0 per cent by end-December 2016), household lending contributing most.

After a period of gradual acceleration in the first three quarters, the fourth quarter of 2017 saw some slowdown in loans to non-financial corporations, their annual growth rate reaching 1.7 per cent in December (0.3 per cent at the end of 2016) largely due to writing-off of non-performing loans and to a lesser extent to sales of loans.

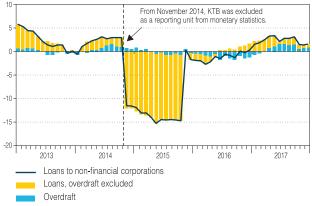
Breakdown by economic activity shows that manufacturing and agriculture continued to make the largest positive contribution to credit growth in the first three quarters of 2017 compared to December 2016. 19 The reviewed period saw a credit increase in trade 20 and real estate activities, unlike 2016 when a fall in credit was reported for these two sectors. Concurrently, in 2017 credit growth slowed down in the energy 21 and construction sectors, which made a strong positive contribution to credit growth in 2016.

In 2017 the volume of new loans<sup>22</sup> to non-financial corporations tended to decline compared with the end of 2016.<sup>23</sup> As regards the currency structure, new lev-denominated loans posted a gradual increase and their share rose by 4.1 percentage points on end-2016 to 53.4 per cent in November 2017 at the expense of the decreasing shares of new corporate loans

<sup>18</sup> Loans represent the bulk of bank claims on the non-government sector with a share of 98 per cent on average for the last 12 months as of December 2017, and the analysis was therefore focused on them. In addition to loans, claims include also repurchase agreements, securities other than shares, and shares and other equity instruments. Non-government sector deposits, in turn, include loans to households, loans to non-financial corporations and loans to financial corporations. The share of loans to households and non-financial corporations in total loans to the non-government sector accounted for 97 per cent on average in the last 12 months as of December 2017 and therefore developments in these two sectors are addressed.

### Annual Growth of Credit to Non-financial Corporations and Contributions of Individual Types of Loans

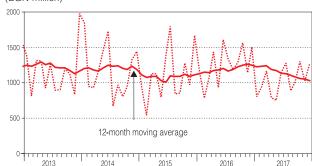
(per cent, percentage points)



Source: the BNB.

### New Loans to Non-financial Corporations (Monthly Volumes)

(BGN million)



Note: For data characterised by significant volatility, additionally moving averages computed for suitably selected periods are provided, in order to smooth the fluctuations in corresponding time series and present the trends in their development.

<sup>&</sup>lt;sup>19</sup> Agriculture, forestry and fishing.

<sup>&</sup>lt;sup>20</sup> Trade, cars and motorcycles repair.

<sup>&</sup>lt;sup>21</sup> Production and distribution of electricity, heating, gaseous fuels.

<sup>&</sup>lt;sup>22</sup> The terms 'new' and 'newly extended' hereinafter referred to as the statistical category 'new business'.

<sup>&</sup>lt;sup>23</sup> Based on 12-month moving average.

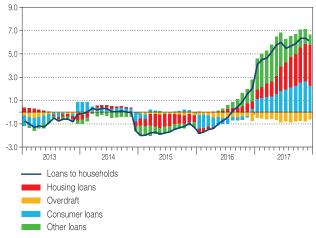
in euro and US dollars to 44.8 per cent and 1.8 per cent respectively.<sup>24</sup>

Unlike non-financial corporations, the upward trend in household credit was sustained throughout 2017. As of December 2017 annual growth of loans to households accounted for 6.0 per cent (2.0 per cent at the end of December 2016). Housing and consumer loans contributed most strongly to these developments, and other loans to a lesser extent. Loans extended under the National Programme for Energy Efficiency continued to contribute to the increase in other loans to households. At the same time, repayment by the government of loans extended under this programme, started in July, had a strong impact on reducing the contribution of the other loans item to overall household loan growth. Volumes of new loans to households showed an upward trend in 2017, which was more strongly pronounced in consumer and housing loans.<sup>25</sup>

Summarised results of the bank lending survey<sup>26</sup> in the third quarter of 2017 suggest that credit standards<sup>27</sup> for approving credit applications of large corporations and households are broadly sustained while the standards for lending to small and medium-sized enterprises eased. Strong competition in the banking sector continues to be the main reason for easier lending.<sup>28</sup> The ample liquidity of the banking system, increasing volumes and decreasing cost of attracted funds along with limited alternatives for high-yield investment contributed significantly to the easing of standards and conditions<sup>29</sup> for lending to corporations. In the fourth quarter of 2017 banks expect loan standards for corpora-

### Annual Growth of Household Credit and Contributions of Individual Types of Loans

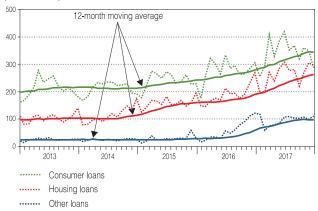
(per cent, percentage points)



Source: the BNB.

### New Loans to Households (Monthly Volumes)

(BGN million)



<sup>&</sup>lt;sup>24</sup> Based on 12-month moving average.

<sup>&</sup>lt;sup>25</sup> Based on 12-month moving average.

<sup>&</sup>lt;sup>26</sup> Summarised results of the bank lending survey are presented through weighting bank responses by their market share in the relevant credit segment.

<sup>&</sup>lt;sup>27</sup> Credit standards are understood as internal bank guidelines and criteria for loan approvals established prior to negotiating the terms of extended loans. Credit standards determine the type of the loan and collateral considered admissible by banks, taking into account specific priorities by sector, *etc*. Credit standards specify also all relevant conditions to be met by a borrower.

<sup>&</sup>lt;sup>28</sup> Credit policy refers to credit standards and credit conditions (see footnote 29), applied by banks in extending loans.

<sup>&</sup>lt;sup>29</sup> Credit conditions typically involve the reference interest rate surcharge, the loan amount, conditions for its utilisation and other conditions, fees and commissions, collateral or guarantees to be provided by a borrower.

tions to remain broadly unchanged, while those for households, in particular for consumer loans, to ease.

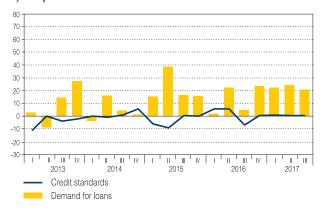
In the July to September 2017 period, banks registered increased demand for loans by both corporations and households, with the strongest growth recorded in housing loans. Loan demand for investment purposes was the main contributor to higher demand for corporate loans over the guarter. The low level of interest rates, working capital and inventories loan needs, and funds required to refinance, restructure, or renegotiate debt had also a significant impact on increased demand for corporate loans. The main factors encouraging household loan demand included low interest rates and a good housing market outlook. Bank expectations for the October-December 2017 period show that demand for funds by corporations and households will further increase, with more significant growth anticipated in corporate lending.

In the first half of 2018 the deposit growth rate is expected to accelerate slightly from the end of 2017 due to the retention of comparatively high savings rate in the economy. The growth rate of loans to the non-government sector is expected to remain close to that at the end of 2017 with an acceleration of annual growth of total loans to non-financial corporations and a gradual slowdown in loans to households. Improvements in the macroeconomic environment along with comparatively low lending rates will further contribute to growth of loans. Over the projection horizon further decline in the other loans item contribution to overall growth of loans to households is expected due to the repayment by the government of loans extended under the National Program for Energy Efficiency. Banks' policy to continue writing off non-performing loans is a factor which is likely to cap the growth of loans in the first half of 2018.

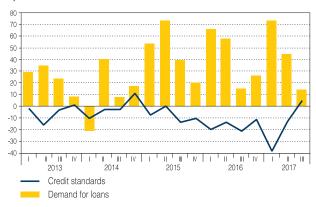
#### Changes in Demand and Credit Standards

(balance of opinions; percentage points)

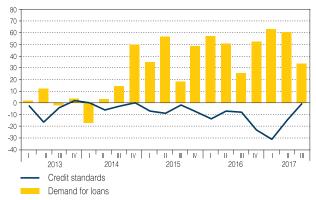
#### a) corporate loans



#### b) consumer loans



### c) housing loans



Notes: As regards credit standards, charts present banks' balance of opinions defined as a difference in percentage points between the percentage of banks responding 'tightened' ('considerably' and 'somewhat'), and the percentage of banks responding 'eased' ('considerably' and 'somewhat'). As regards credit demand, the balance of opinions is defined in percentage points as a difference between the percentage of banks responding 'increased' ('considerably' and 'somewhat') and the percentage of banks responding 'reduced' ('considerably' and 'somewhat'). All opinions are weighted by the bank's market share in the relevant credit segment.

### Interest Rates

In the fourth quarter of 2017 LEONIA Plus index reporting real transactions in the lev interbank money market declined somewhat compared to the first nine months of the year. Its level reached -0.48 per cent in December, down 14 basis points against EONIA level in the same month. LEONIA Plus index decline reflected the interest rate cuts on bank excess reserves by 20 basis points to -0.60 per cent with effect from 4 October 2017.30 LEONIA Plus went down by 37 basis points on December 2016 and the spread with EONIA dropped by 38 basis points respectively. Interest rate cuts on bank excess reserves had also an impact on the trade on the lev interbank money market consisting mainly of overnight transactions. In November 2017 the volume of overnight deposits increased by BGN 3.2 billion from September to BGN 3.3 billion thus reaching its highest level since end-2013. In the the same period of 2016 the increase was BGN 0.5 billion.

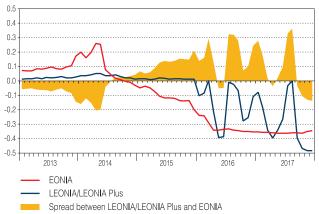
In 2017 interbank money market rates with an indicative value, without concluded transactions, posted a decrease in all maturities, as reflected in the yield curve. In December 2017 as compared to the same month of 2016 unsecured three-month lev deposit rates declined by 7 basis points to reach 0.05 per cent, sixmonth rates fell by 17 basis points to 0.16 per cent and unsecured 12-month lev deposit rates dropped by 12 basis points to 0.64 per cent. The decrease in rates was sharper in the fourth quarter of 2017.

As a result of the stronger decline in the interbank money market quotations in Bulgaria compared to that in the euro area, the spreads between money market quotations in Bulgaria *vis-à-vis* the euro area fell in the last quarter of 2017. As compared to December 2016 spreads on three-month and 12-month unsecured deposit rates were lower by 6 basis points and 1 basis point reaching 38 and 83 basis points respectively.

Following a slight decline in the first quarter of 2017 interest rates on time deposits stabilised at attained low levels throughout the rest of the year. This dynamics was favoured by the strong

### Interbank Money Market Rates (Average Monthly Value)

(per cent, percentage points)

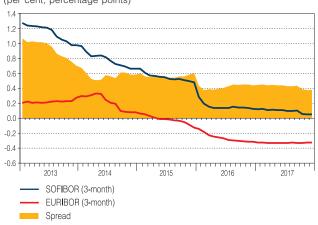


Note: With effect from 1 July 2017, LEONIA Plus index replaces LEONIA. LEONIA Plus monthly values are calculated as an arithmetic average for those days when overnight unsecured lending transactions are concluded in the interbank market in levs.

Source: the BNB, the ECB.

### Three-Month Deposit Interest Rates

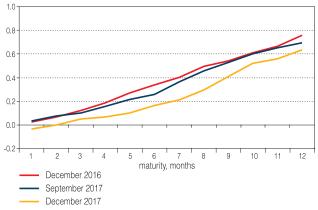
(per cent, percentage points)



Note: Average monthly SOFIBOR for three-month deposits. Sources: the BNB, the ECB.

### Yield Curve of Interbank Money Market Instruments

(per cent)



Note: Average monthly SOFIBOR for the relevant maturity. Source: the BNB.

 $<sup>^{\</sup>rm 30}\,{\rm See}$  the Monetary and Credit Aggregates Section in Chapter 2.

inflow of deposits and high liquidity in the banking system. In November 2017 the average weighted interest rate on new time deposits of non-financial corporations and households declined by 26 basis points from the end of 2016 to 0.2 per cent with a stronger decrease in the household sector. Unlike interest rates on new time deposits in levs and euro which posted a decline, those on deposits in US dollars remained at their level of December 2016.

In November 2017 the breakdown by bank of average weighted interest rates on new time lev deposits of households showed an increase on September in the number of banks with average interest rates ranging up to 0.25 per cent and from 0.50 to 0.75 per cent at the expense of banks with interest rates ranging between 0.25 and 0.50 per cent and 0.75 and 1.00 per cent. The standard deviation remained low, close to the level of the end of the third quarter of 2017, reflecting a low variation of banks' interest rates on new time lev deposits of households.

In 2017 the downward trend in interest rates on new loans was also retained. Results from the Bank Lending Survey show that major factors behind these developments were the enhanced competition and high liquidity in the banking sector, increasing volumes and decreasing cost of attracted resources and banks' lowered assessment of borrower's risk.

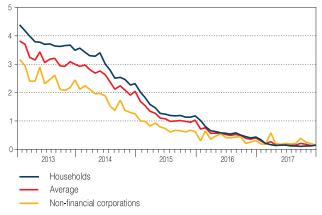
Interest rates on new loans to non-financial corporations decreased by 69 basis points in lev-denominated loans in November 2017 compared to December 2016, by 155 basis points in euro-denominated loans and by 84 basis points in US dollar-denominated loans. As of November 2017 interest rates on new loans to non-financial corporations in the three major currencies were 3.7 per cent in levs, 3.8 per cent in euro and 4.8 per cent in US dollars.<sup>31</sup>

The downward trend in the annual percentage rate of charge (APRC) on household loans was also sustained. In November 2017 compared to end-2016 the APRC on consumer loans posted a fall of 80 basis points to 10.1 per cent, while the APRC on housing loans went down by

#### Interest Rates on New Time Deposits

(per cent)

#### a) by sector



Notes: The average interest rate is calculated for all sectors, maturities and currencies weighted by the relevant volumes of new deposits. Average deposit rates for non-financial corporations and households are based on interest rates for all maturities and currencies weighted by relevant volumes of new deposits.

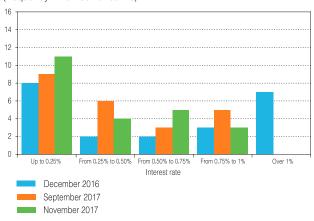
### b) by currency



Note: The average interest rate by currency is based on rates for all sectors and maturities weighted by relevant volumes of new deposits. Source: the BNB.

### Distribution of Interest Rates on New Household Time Lev Deposits

(frequency - number of banks)



 $<sup>^{31}</sup>$  The above values are the weighted averages of the interest rates on loans to non-financial corporations on a 12-month basis.

93 basis points to 4.5 per cent.<sup>32</sup> The decrease in the APRC in both housing and consumer loans was mainly driven by the downward dynamics of the interest rate component of costs.

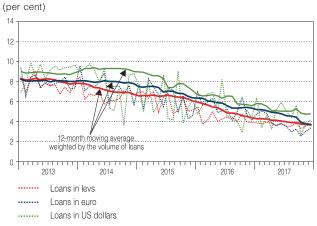
In November 2017 the breakdown by bank of average weighted interest rates on new housing loans in euro showed that the average interest rate of most banks ranged up to 4.0 per cent and from 4.0 to 5.0 per cent, with no banks offering an average interest rates on housing loans ranging from 5.0 to 6.0 per cent. In November the standard deviation increased by 11 basis points to 1.16 per cent compared with September 2017. Over the same period the average interest rate on new housing loans in euro decreased by 8 basis points to 4.11 per cent.

In the first half of 2018 interest rates on new time deposits and loans are expected to remain close to the current comparatively low levels. This dynamics will be driven by the sustained high inflow of deposits and enhanced competition in the banking sector. An additional factor for keeping interest rates in Bulgaria at the attained levels reflects the market expectations for retaining ECB interest rates unchanged over this period.

In the fourth quarter of 2017 the yield of primary market government securities decreased further. After a reported decline (by 27 basis points from September) in the yield of government securities with a maturity of seven years and six months in opening the issue in October the average annual yield declined further by six basis points in the subsequent offering in December to reach 0.36 per cent. For the first time the average annual yield attained at the November government securities auction with a maturity of four years was negative (-0.19 per cent), down 24 basis points compared with the previous auction in June.

A combination of internal and external factors contributed to the continuous and increasingly stronger decrease in Bulgarian government securities yield. In the context of a limited supply of government securities in the primary market and high liquidity in the banking system,

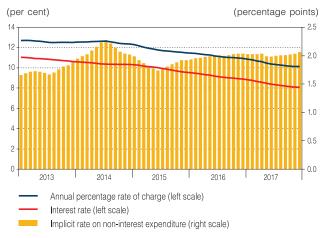
### Interest Rates on New Loans to Non-financial Corporations by Currency



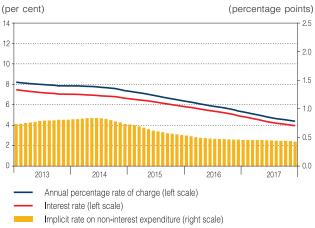
Source: the BNB.

### Interest Rates and Annual Percentage Rate of Charges on New Household Loans

### a) consumer loans



### b) housing loans



Notes: Interest rates in all maturities and currencies are weighted by the relevant volumes of new loans for a 12-month period. Implicit per cent is the difference between the APRC and the relevant interest rates and reflects the approximate per cent of all non-interest service charges on loans (including fees and commissions). Source: the BNB.

<sup>&</sup>lt;sup>32</sup> Values indicating the APRC and interest rates are weighted averages of the interest rates on household consumer and housing loans on a 12-month basis.

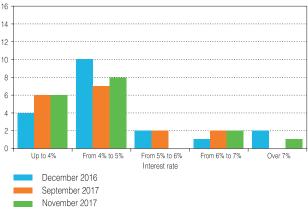
the interest rate cuts on bank excess reserves with the BNB, effective as of early October, are likely to have impacted the increased demand for government securities by the banks. An additional factor that could be contributing to the government debt yield decline is the reduction in the risk premium of Bulgaria as a result of its long-term credit rating upgrade in December 2017 by the international rating agencies Standard&Poor's and Fitch. The external environment also remained favourable.

Yield dynamics on the secondary government securities market was similar to that on the primary market. In December the long-term interest rate used for assessing the degree of convergence fell by 0.65 percentage points on the end of the third quarter to reach 1.02 per cent. Yields of Bulgarian Eurobonds issued in international capital markets continued to follow the downward trend in the last quarter of 2017. The sharpest decline was observed in the long end of the maturity curve while Bulgarian Eurobonds maturing in March 2022 have maintained negative yields since end-November. The downward trend in the spread between yields of Bulgarian and German government securities across all maturity sectors was also sustained. As a result of Bulgaria's credit rating upgrade this trend intensified in December 2017.

Two groups of factors, internal and external, will influence the Bulgarian government securities yield in the first half of 2018. Given the volume reduction under the Asset Purchase Programme (APP), as announced by the ECB, external factors will contribute to yield increases.<sup>33</sup> Concurrently, declines in Bulgarian government securities yields could be entirely due to internal factors involving the released liquidity as a result of significant principal and interest payments on government securities maturing in January 2018 (BGN 1144 million) and the limited supply of government securities as planned throughout the year in line with the MF issuing policy for 2018.

### Distribution of Interest Rates on New Housing Loans in Euro

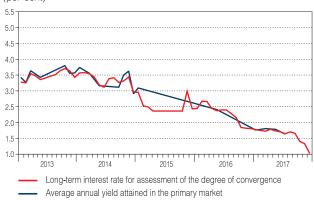
(frequency - number of banks)



Source: the BNB.

### Ten-year-and-six-month Government Bond Rates on the Primary and Secondary Markets

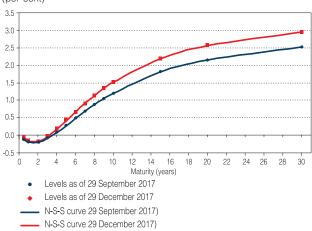
(per cent)



Source: the BNB

### Reference Government Securities Yield Curve in Bulgaria

(per cent)



Notes: The reference yield curve of Bulgarian government securities is based on own calculations under the extended version of Nelson-Siegel-Svensson model (1994). The yield change refers to the previ-

The chart employs daily yield data on Bulgarian government securities issued and traded in international capital markets, published in the MF Central Government Debt and Guarantees Monthly Bulletin.

Sources: the MF, BNB calculations.

<sup>33</sup> For more information, see Chapter 1.

### Financial Flows between the General Government and Other Sectors of the Economy

Government revenue and expenditure policy, and budget financing operations affect the allocation of liquidity across economic sectors.

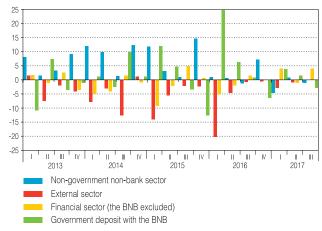
Maturing Bulgarian Eurobonds in international capital markets amounting to EUR 950 million was the major factor behind the allocation of liquidity from the budget to other sectors in the third guarter of 2017. Given the significant share of residents in the structure of holders (60.5 per cent)<sup>34</sup> repayments and interest paid on the maturing issue to the financial sector (excluding the BNB) largely exceeded budget funds due to the positive net financing with government securities on the domestic market (BGN 174.5 million) over the period. As a result, the financial sector (excluding the BNB) was a net beneficiary of liquidity from the budget accounting for 4.0 per cent of GDP for the quarter. Concurrently, the external sector had a neutral effect on government's liquidity for the period July-September as the total amount of payments on maturing Eurobonds made to non-residents, negative net other external financing and EU budget contribution costs was entirely offset by reimbursed funds from the EC under the EU Common Agricultural Policy (BGN 676.2 million) and grants received under EU programmes (BGN 366.7 million).

As a result of the primary surplus reported in the third quarter of 2017, non-government non-bank sector was a net source of funds for the budget amounting to 1.1 per cent of GDP for the quarter. Liquidity flows from the non-government non-bank sector to the budget were considerably lower than net payments made to the financial sector, resulting in a decrease in the government deposit with the BNB by BGN 795.8 million in the third quarter.

Based on monthly preliminary data of January 2018, it may be concluded that in the fourth quarter of 2017 the non-government non-bank sector was the main beneficiary of liquid funds from the budget. Funds rechannelled to this sector as a result of the excess of budget

### Consolidated Budget Effect on Other Sectors' Liquidity (Quarterly)

(as a percentage of GDP, per cent)



Sources: the MF, the BNB.

<sup>&</sup>lt;sup>34</sup> Based on the MF Central Government Debt and Guarantees Monthly Bulletin as of 30 June 2017.

Financial Flows, Money and Credit

non-interest expenditure and payment of farm subsidies by the EU over tax and non-tax revenue for the period explain the bulk of the decline in the government deposit with the BNB (BGN 1587.6 million on the end of the third quarter).

Developments in financial flows generated in the process of external and internal economic factor interaction contributed to the decrease in gross international foreign exchange reserves. By the end of 2017 the market value of international foreign exchange reserves (assets on the Issue Department balance sheet) was EUR 23.7 billion (BGN 46.3 billion), posting a decline of EUR 236 million from the end of the previous year. According to the currency board principles, the decrease in international reserves corresponds to a decrease in the Issue Department balance sheet liabilities. Lower liabilities to the government and budget organisations and decreased excess reserves of banks at the BNB to a lesser extent, had the main negative contributions to liabilities dynamics in 2017.

In the first half of 2018 bank reserves at the BNB are expected to remain at levels close to those of mid-January 2018. Developments in the government deposit at the BNB will be mainly driven by the budget balance in the first half of 2018 and domestic bond issuance policy. Government deposit will be positively affected by the the pending EU reimbursement of farm subsidies paid in December 2017. Growth rates of currency in circulation are expected to remain close to those of end-2017, reflecting largely private consumption growth, higher prices and low deposit interest rates.

## 3. Economic activity

In the third quarter of 2017 real GDP rose by 0.9 per cent on a quarterly basis. This growth was largely due to net exports and, to a lesser extent, to private and government consumption. Gross fixed capital formation had a low negative contribution to overall growth.

Positive developments in short-term economic indicators continued in the fourth quarter of 2017, suggesting an improvement in the economic environment. At the same time, labour market conditions continued to improve along with increasing domestic and external demand for goods and services and still relatively low oil prices and interest rates which are expected to affect positively growth in private consumption and investment activity of corporations. These factors are projected to influence the further increase in real GDP over the first half of 2018, with domestic demand contributing most to this effect. Risks to the GDP growth outlook are assessed as balanced with regard to both external environment and domestic demand.

### Current Economic Environment

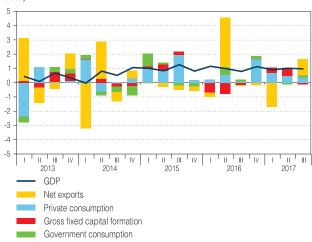
In the third guarter of 2017 real GDP growth refained its early year level, reaching 0.9 per cent on a quarterly basis. Net exports contributed most to growth driven by stronger growth of exported goods and services than that of imports. Private consumption continued to increase, thereby retaining its positive contribution to overall growth. Government consumption also contributed to real GDP growth. Gross fixed capital formation slightly decreased from the previous quarter. As a result the positive contribution of domestic demand to GDP growth contracted. BNB calculations<sup>35</sup> indicate that the quarter-onquarter decline in investment in fixed capital was due to government investment, whereas private investment increased in real terms.

Indicators tracking firms and households' sentiment (NSI business climate and consumer confidence surveys) remained at high levels, close to those of previous quarters. Optimistic expectations for the future economic activity also give positive signals for the development of the economy, with the trade and services sectors posting more significant improvement.

In the last quarter of 2017 the number of companies determining the uncertain economic environment as a major factor limiting their activity continued to decrease, while the share of companies pointing to sector competition and

### Contribution to GDP Growth by Final Use Component

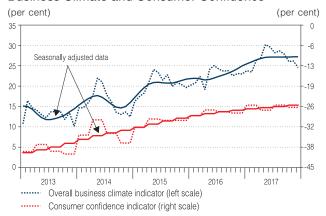
(per cent, percentage points; quarter-on-quarter; seasonally adjusted data)



Note: Non-additive data due to direct chain-linked and seasonal adjustment of GDP and its components; the contribution of the change in inventories has not been included.

Sources: the NSI, BNB calculations.

#### **Business Climate and Consumer Confidence**



Sources: the NSI, BNB calculations.

**Economic Activity** 

<sup>&</sup>lt;sup>35</sup> Calculations are based on quarterly non-financial acconts of the general government sector and reports on the implementation of the Consolidated Fiscal Programme, published by the NSI and the MF respectively.

#### **Expectations about Future Economic Activity**

(balance of opinions, per cent; seasonally adjusted data)



Sources: the NSI, BNB calculations.

insufficient labour force increased. The optimistic sentiment of corporations about the expected economic activity and continuously increasing production capacity utilisation are expected to encourage firms to enhance their investment activity and to hire more staff. The improving labour market conditions, growing household labour income and high consumer confidence are indicative of a further increase in private consumption, which is expected to contribute positively to GDP growth in the first half of 2018.

Based on the revenue and expenditure policy parameters envisaged in the budgetary framework for 2018 and taking into account the effects of increased pensions and wages in the second half of 2017, it may be expected that the fiscal policy in the first half of 2018 will have a net positive effect on economic growth due both to higher transfers to households and to stronger government consumption and investment.

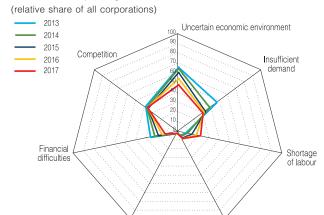
### Industrial Production Index and Production Capacity Utilisation in Industry



Note: Data on the industrial production index for the fourth quarter of 2017 are average for the October-November period.

Sources: the NSI, BNB calculations.

### Factors Hampering Business Activities



Note: Average data for the respective period calculated as sectorweighted (industry, construction, trade and services).

No difficulties

Sources: the NSI, BNB calculations.

Shortage of materials and/or adequate equipment and/or space

### Real GDP Growth by Final Use Component

(per cent, quarter-on-quarter; real rate, seasonally adjusted data)

		2014		2015			2016					2017			
	1	Ш	III	IV	- 1	Ш	Ш	IV	- 1	Ш	III	IV	- 1	II	Ш
Consumption	0.7	-0.6	-0.2	0.2	1.5	1.2	2.0	0.4	0.3	1.4	0.4	1.8	1.0	0.5	0.9
incl.															
Household consumption	2.6	-0.9	-0.1	0.4	1.4	1.3	2.9	0.3	0.3	8.0	0.1	2.5	1.1	0.7	0.5
Government final consumption expenditure	2.5	-2.3	1.5	-5.5	2.3	2.5	-0.9	-0.8	-0.6	3.2	0.0	1.9	1.5	-2.3	0.2
Collective consumption	-0.7	-0.1	-3.6	-1.7	4.9	-1.2	0.7	-0.1	-0.4	2.4	1.6	1.4	-0.4	0.1	0.8
Gross fixed capital formation	0.3	1.4	-1.0	-1.0	0.8	2.1	1.3	0.1	-3.2	-3.8	-0.8	0.0	2.1	2.6	-0.4
Exports of goods and non-factor services	-2.4	4.6	1.3	4.0	2.2	-1.3	-2.2	3.3	2.9	3.1	2.5	1.0	-1.2	1.3	3.0
Imports of goods and non-factor services	2.8	0.2	2.3	3.0	2.2	-0.8	-1.7	3.7	3.3	-2.2	2.7	1.3	1.3	1.1	1.3
GDP	-0.1	8.0	0.5	1.0	1.0	0.8	1.2	0.8	1.1	0.9	0.8	1.1	0.9	1.0	0.9

Source: the NSI.

Exports of goods and services are anticipated to increase further in the first two quarters of 2018 driven by strengthening external demand, though at slower rates than imports. Consequently, net exports are foreseen to have a negative contribution to overall growth.

As a result of accelerating domestic demand real GDP is expected to continue increasing both on a quarterly and annual basis in the first and second quarters of 2018. Risks to the growth outlook are assessed as balanced with regard to both external environment and domestic demand in the first half of 2018.

### Exports and Imports of Goods and Services

Between January and October 2017 nominal exports of goods increased by 12.6 per cent on an annual basis, and nominal imports of goods by 15.4 per cent.<sup>36</sup> According to non-seasonally adjusted GDP data, between January and September 2017 real growth in exports of goods came to 7.0 per cent on an annual basis, while real imports of goods increased by 9.2 per cent. Cross-checking the changes in exports and imports of goods in nominal and real terms suggests that the dynamics of global prices over the January-September 2017 period contributed positively to nominal growth of international trade. Balance of payments data indicate a retained upward trend in nominal exports and imports of goods in November 2017.

In the first half of 2018 real exports and imports of goods are expected to continue to increase on an annual basis, with growth in exports outpacing that in imports. Real exports of goods will reflect the expected strong increase in external demand. Concurrently, real imports dynamics will be determined by the projected acceleration in annual investment and private consumption growth in Bulgaria.

According to balance of payments data for the January–November 2017 period exports and imports of services increased on an annual basis from the corresponding period of 2016, with growth of imported services outpacing that of exported services.<sup>37</sup> According to national accounts data in the first nine months of 2017

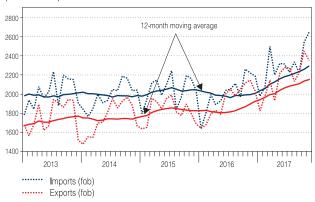
Net Exports of Commodity Groups by Use, January–October 2017

	Balance (EUR million)	Change* (EUR million)	GDP growth** (per cent)	Growth of imports** (per cent)
Consumer goods	240.5	-227.1	4.7	9.9
Raw materials	-399.5	-357.5	13.9	18.4
Investment goods	-521.7	574.1	22.9	8.7
Energy resources	-1 666.7	-800.6	3.7	31.0
Other exports	-82.0	-6.5	15.5	11.0
Total	-2 429.3	-817.6	12.6	15.4

<sup>\*</sup> Balance change on the same period of previous year.

### Exports and Imports of Goods Dynamics

(EUR million)



Source: the BNB.

**Economic Activity** 

<sup>\*\*</sup> Exports and imports growth for the period on an annual basis. Source: the BNB.

<sup>&</sup>lt;sup>36</sup> Foreign trade data.

<sup>&</sup>lt;sup>37</sup> Preliminary data subject to revision.

the increase in overall exports and imports of services was due to a rise in the price component of both items. Despite the annual decline in real volumes of exported and imported services reported in the first half of 2017 this trend was reversed in the third quarter of the year as a result of both increasing external demand and higher domestic demand on an annual basis. Annual growth of real exports of services is expected to continue recovering in the first half of 2018 reflecting the increasing external demand, while imports of services will remain at a level close to that in the first half of 2017.

Between January and October 2017 exports of goods to EU Member States increased by 10.9 per cent on an annual basis reflecting the improvement of EU economic activity. Exports to Germany and Belgium contributed most to this growth. Exports of metals<sup>38</sup> and machines<sup>39</sup> continued to contribute most significantly to the dynamics of exports to EU Member States by commodity group. Between January and October 2017 year-on-year growth in imports to non-EU countries outstripped that to non-EU countries accounting for 15.9 per cent. A major factor behind this growth was stronger exports of metals. By country, Russia contributed most to growth in exports to non-EU countries. Between January and October 2017 the share of exported goods to EU Member States decreased slightly on an annual basis at the expense of that to non-EU countries and reached 66.1 per cent.

Between January and October 2017 exports of metals and machinery had the most sizeable positive contribution to year-on-year nominal growth of goods under the Combined Nomenclature. The group of textile products was the only group posting a decline in exports from the corresponding period in 2016.

The upward trend in nominal exports of goods observed over the recent years continued. In addition to increasing external demand for Bulgarian goods this trend reflects also the strenghtening competitiveness of the Bulgarian economy. An indicator for this is the increasing

 $^{\rm 38}\,{\rm In}$  this chapter it should read the base metals and their products group under the Combined Nomenclature.

### Exports and Imports of Services Dynamics

(EUR million) 1400 12-month moving average 1200 1000 800 600 200 2013 2017 2014 2015 2016 ····· Exports

Source: the BNB

····· Imports

### Dynamics of Exports to EU and non-EU Countries

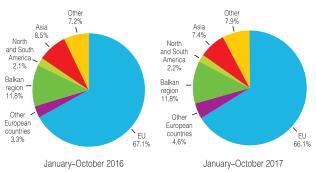
(EUR million) 1800 12-month moving average 1600 1400 1200 800 600 400 2014 2015 2016 2017

Source: the BNB

..... Exports (fob) to the EU

..... Exports (fob) to non-EU countries

#### Exports of Goods Geographical Breakdown



Source: the BNB

<sup>&</sup>lt;sup>39</sup> In this chapter, it should read the machines, vehicles, appliances, instruments and weapons group under the Combined Nomenclature.

market share of Bulgaria in both global and EU trade. Against the backdrop of rising unit labour costs over the recent years, it can be concluded that the improving competitiveness was largely attributable to non-price factors.

Between January and October 2017 exports of machines increased sizeably on an annual basis, a trend observed also in 2016. A stronger increase was reported in exports to non-EU countries and significant year-on-year growth was also observed in exports to EU Member States. Exports of machines dynamics in the first nine months of 2017 was driven by higher exported volumes, while prices exhibited a decrease. Exports of machines are expected to continue to increase in the first half of 2018 due to growing external demand.

Between January and October 2017 a trend towards a slight increase in nominal exports of energy products occurred<sup>41</sup>, driven entirely by the annual rise of petroleum product prices.<sup>42</sup> Exports to EU Member States posted an increase on an annual basis, while exports to non-EU countries declined. Slower annual growth of international petroleum product prices in US dollars (corresponding to a slight decrease of the price in euro) in the first half of 2018 is expected to limit growth in exported mineral products in nominal terms.

Exports of base metals reported the most sizeable annual growth in total exports of goods in the January-October 2017 period. This was partly due to the lower base from the previous year when copper production declined due to renovation and extension of the production capacity in a key enterprise for this sector. <sup>43</sup> Metal prices, which increased <sup>44</sup> sizeably on an

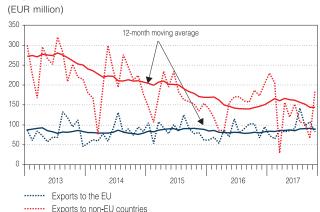
<sup>40</sup> The quarterly export deflators for the machines, equipment and vehicles group under the Standard International Trade Classification (SITC) were used to estimate the price effect in the first, second and third quarters of 2017.

### Exports of Machines, Vehicles, Appliances, Instruments and Weapons

(EUR million) 500 12-month moving average 450 400 350 300 250 200 150 100 50 2017 2015 2016 2013 2014 · Exports to the EU ----- Exports to non-EU countries

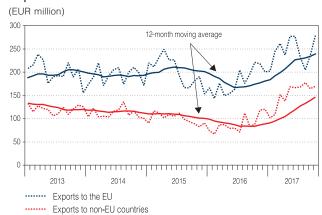
Source: the BNB.

### Exports of Mineral Products and Fuels



Source: the BNB.

#### Exports of Base Metals and Related Products



Source: the BNB.

**Economic Activity** 

<sup>&</sup>lt;sup>41</sup> In this chapter, it should read mineral products and fuels group under the Combined Nomenclature.

<sup>&</sup>lt;sup>42</sup> The quarterly export deflators for the mineral fuels, oils and related products group under the SITC were used to estimate the price effect in the first, second and third quarters of 2017.

<sup>&</sup>lt;sup>43</sup> According to the press release published on 10 May 2016 on the Aurubis web site: http://bulgaria.aurubis. com/bg/novini-i-publikacii/sobshchenija-za-mediite/ aurubis-otchita-dobri-rezultati-za-shestmesechieto/

<sup>&</sup>lt;sup>44</sup>The quarterly export deflators for the precious and other non-ferrous metals under SITC were used to estimate the price effect in the first, second and third quarters of 2017.

annual basis over the first nine months of 2017, had an additional positive effect. By geographical breakdown exports of metals contributed most substantially to overall growth in exports to both EU and non-EU countries. In the first and second quarters of 2018 growth in nominal exports of metals is expected to slow down due to the projected decline in international metal prices in euro on an annual basis.

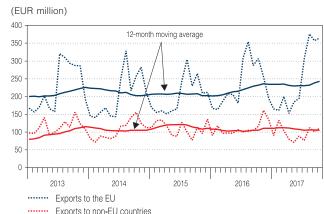
Between January and October 2017 nominal exports of animal and plant products slightly increased on an annual basis due to higher export prices. 45 Growth in exports of animal and plant products was ascribable to higher exports to EU Member States, while exports to non-EU countries declined on an annual basis. In the first and second quarters of 2018 nominal exports of the group are expected to accelerate their nominal growth driven by higher external demand and expected good harvest in Bulgaria. 46

Exports of chemical products<sup>47</sup> for the January–October 2017 period increased substantially on an annual basis, with the rate of annual growth accelerating throughout the year. Pharmaceutical products contributed most sizeably to the increased exports of chemical products. An increase was reported in exports to both EU and non-EU countries. Nominal growth of exports in this group was the result of exported larger physical volumes, whereas export prices fell on an annual basis.<sup>48</sup> In the first and second quarters of 2018 the upward trend in exported physical volumes is expected to continue and to have a positive effect on nominal exports of chemical products.

According to balance of payments data, in the January-November 2017 period exports of services increased by 1.7 per cent year on year, reporting significant annual growth in the travel and transport subitems. Between January and November 2017 year-on-year earnings from

## <sup>45</sup> The quarterly export deflators for the food and live animals group under SITC were used to estimate the price effect in the first, second and third quarters of 2017.

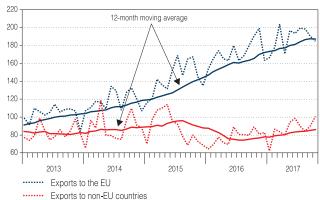
### Exports of Animal and Plant Products, Food, Drinks and Tobacco



Source: the BNB.

### Exports of Chemical Products, Plastics and Rubber

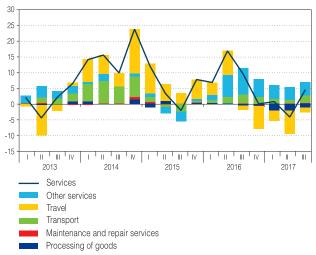
(EUR million)



Source: the BNB.

### Annual Change of Exports of Services and Contribution by Subcomponent

(per cent, percentage points)



Source: the BNB.

 $<sup>^{\</sup>rm 46}$  For further details see Wheat Outlook of USDA, December 2017, p 7.

<sup>&</sup>lt;sup>47</sup> The chemical products, plastics and rubber group under the Combined Nomenclature.

<sup>&</sup>lt;sup>49</sup> The quarterly export deflators for the chemicals and chemical products group under the SITC were used to estimate the price effect in the first, second and third quarters of 2017.

visits of foreign nationals to Bulgaria increased by 9.1 per cent. According to NSI data visits of foreign tourists to Bulgaria in the January– November 2017 period increased by 7.3 per cent on the corresponding period of 2016 mainly due to the larger number of visits from Turkey, the UK and Germany.

In the January to October 2017 period nominal imports of goods increased on an annual basis due to both higher imported physical volumes and higher import prices. By use, nominal growth was reported in all subgroups, with raw materials followed by energy resources contributing most significantly.

In the January-October 2017 period imports of goods from EU Member States rose by 8.1 per cent on the corresponding period of 2016, with imports from Romania and Italy having the most significant positive contribution to growth. Imports from non-EU countries also reported a sizeable increase on an annual basis and came to 24.5 per cent. Imports from Russia, consisting mainly of petroleum products, had the largest positive contribution to these developments and remained influenced by raw material price rises. In the January to October 2017 the share of imports from EU countries declined from the corresponding period of 2016 to 51.5 per cent on the account of imports from non-EU countries which increased to 48.5 per cent.

In the January to October 2017 period nominal imports of energy resources increased significantly on the corresponding period of 2016. This was attributable to increased international prices of petroleum products. At the same time the physical volumes imported in Bulgaria decreased from the January-October 2016 level. 49 Imports of petroleum products from Russia contributed most significantly to nominal growth. As a result of the expected slower increase in oil prices in US dollars (corresponding to a slight decrease of the price in euro) in the first half of 2018, nominal imports of energy products are expected to continue to increase on an annual basis albeit at considerably lower rates compared with current ones.

The sizeable annual increase in imports of the raw materials group in the first ten months of

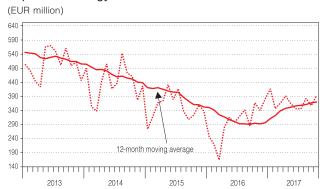
### Imports of Commodity Groups by Use, January–October 2017

	EUR million	Change* (EUR million)	Growth** (per cent)	Contribution** (percentage points)
Consumer goods	5 343.4	480.0	9.9	2.2
Raw materials	9 209.6	1 432.5	18.4	6.7
Investment goods	6 317.0	504.1	8.7	2.4
Energy resources	3 689.8	873.3	31.0	4.1
Other imports	126.8	12.5	11.0	0.1
Total imports (cif)	24 686.7	3 302.4	15.4	

<sup>\*</sup> Change on the corresponding period of previous year.

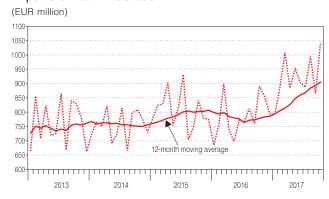
Source: the BNB.

#### Imports of Energy Resources



Source: the BNB

#### Imports of Raw Materials



Source: the BNB

<sup>&</sup>lt;sup>49</sup> Monthly NSI data are used on production and supplies of oil and oil products in thousand tones for 2017.

<sup>\*\*</sup> Growth/contribution to total import growth over the period on an annual basis.

2017 reflected higher imported physical volumes and the increase in import prices. Increased imports of the raw materials group was supported by the accelerated economic activity in the industrial sector. Imports of metal ores had the largest positive nominal contribution due to the recovery of production in a key undertaking for the sector and the annual increase in the imported metal ore prices. In the first and second quarters of 2018 imports of raw materials are expected to continue to increase, but the growth rate is expected to moderate due to the anticipated fall in the prices of raw materials in euro.

Between January and October 2017 the nominal increase in imports of consumer goods continued on an annual basis. This growth is in line with the growing private consumption both in nominal and real terms according to nonseasonally adjusted GDP data. The food, drink and tobacco products, and pharmaceuticals and cosmetics subgroups had the largest contribution to growth. Given the forecast of keeping the rates of private consumption real growth comparatively high in the first half of 2018, imports in the group are expected to increase further in real terms, and the projected falls in food prices in euro may have an adverse effect on the nominal change in imports of the group.

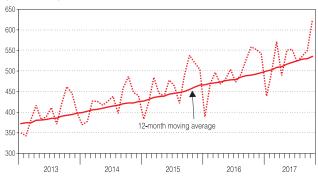
Nominal imports of investment goods also exhibited a year-on-year increase between January and October 2017, with their dynamics corresponding to nominal and real growth of investment on an annual basis in the first nine months of 2017 according to non-seasonally adjusted GDP data. The estimates of price changes show that the increase in the group's imports was due to rising import prices and growing physical volumes.<sup>54</sup> Our forecasts for

<sup>50</sup> The quarterly import deflators of the groups of food and live animals, inedible (crude) materials (excluding fuels); chemicals and chemical products and manufactured goods classified chiefly by materials under the SITC were used to estimate the price effect in the first, second and third quarters of 2017.

<sup>53</sup> The quarterly import deflators for the metal ores and metal scrap group under the SITC were used to estimate the price effect in the first, second and third quarters of 2017.

#### Imports of Consumer Goods

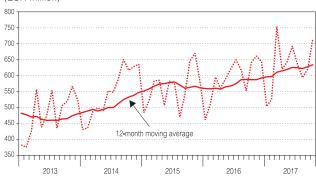
(EUR million)



Source: the BNB.

### Imports of Investment Goods

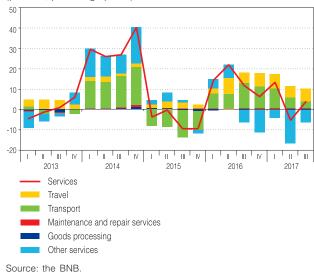
(EUR million)



Source: the BNB.

### Annual Change of Imports of Services and Contribution by Subcomponent

(per cent, percentage points)



<sup>&</sup>lt;sup>51</sup> For further details, see the Behaviour of Firms and Competitiveness section in Chapter 3.

<sup>&</sup>lt;sup>52</sup> See footnote 42.

<sup>&</sup>lt;sup>54</sup>The quarterly import deflators for the machines, equipment and vehicles group under the SITC were used to estimate the price effect in the first, second and third quarters of 2017.

the first and second quarters of 2018 point to a continuous upward trend in nominal exports of investment goods with a view to the expected annual rise in investment in Bulgaria compared with the current levels.

According to balance of payments data, imports of services increased by 4.7 per cent on an annual basis in the January–November 2017 period. Expenditure of Bulgarian residents for travels abroad rose significantly from the January–November 2016 period, which coupled with higher expenditure of Bulgarian residents for transport services were the major factors behind increased imports of services. According to NSI data, Bulgarians' visits abroad between January and November increased by 15.5 per cent on an annual basis, with the visits to Greece and Turkey having the most significant contribution to this growth.

### Behaviour of Firms and Competitiveness

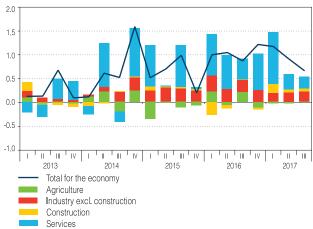
Over the third quarter of 2017 gross value added continued to increase in real terms, rising 0.7 per cent on the previous quarter. The industrial sector, posting value added growth of 1.0 per cent in real terms, contributed most substantially to this growth, with both manufacturing and construction having positive contributions. Value added in the agricultural sector retained its neutral contribution to total value added growth. The trends recorded in the national accounts data were accompanied by a favourable dynamics from the NSI short-term business statistics, where the industrial turnover and construction production indices improved on the previous quarter. Gross value added in the services sector rose by 0.4 per cent, with the trade subsector alone having a slightly negative contribution<sup>55</sup> to quarterly growth. Despite slower quarterly growth, data on retail trade measured by trade volumes of the sector continued to show growth. The third quarter saw a strong demand in transport, hotels and restaurants, as well as in information and communication turnovers.

NSI data on short-term business statistics (turnover in manufacturing, trade and construc-

<sup>55</sup> Wholesale and retail trade; repair of motor vehicles and motorcycles; transportation and storage; accommodation and food service activities sector by A10 breakdown of economic activities.

### Value Added Growth and Contribution by Sector

(per cent, percentage points, quarter-on-quarter; seasonally adjusted data)

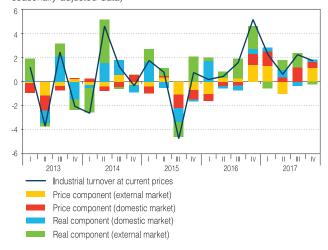


Note: Non-additive data on contributions due to direct seasonal adjustment of value added and its components.

Sources: the NSI, BNB calculations.

### Industrial Turnover Dynamics

(per cent, percentage points, quarter-on-quarter; seasonally adjusted data)



Note: Data for the fourth quarter of 2017 are average for the October-November period.

Sources: the NSI, BNB calculations.

**Economic Activity** 

41

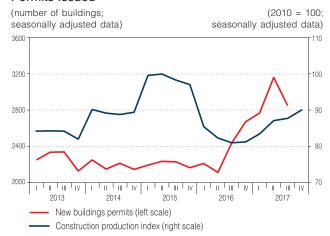
tion) for October and November indicate a further increase in gross value added in the respective sectors in the fourth guarter of 2017. On average, over the October-November period the nominal industrial turnover increased on the third guarter of 2017 in both the external and domestic market driven mainly by the price component. The real component on domestic market also contributed positively, while the external market volume decreased. Over the same period the retail trade volume both at current and constant prices continued to increase on a quarterly basis. The construction production index also improved from the previous quarter with a positive contribution both in the building and civil construction.

In the third quarter of 2017 employment accelerated its growth on a quarterly basis posting an increase of 1.0 per cent. The agricultural sector had the main contribution to growth driven by developments in self-employed persons. Historically, the number of self-employed in the agricultural sector fluctuated dramatically. Fluctuations increased in recent years with no regularity observed in changes. This suggests that the strong increase in the number of self-employed in the agricultural sector in the third quarter of 2017 is a one-off effect specific for the quarter.

The industrial sector also had a positive contribution to the change in the number of employed in the economy, exhibiting an increase in both subsectors: manufacturing and construction. Employment in the services sector decreased by 0.4 per cent, showing divergent developments across subsectors. The public services and trade subsectors had the largest negative contribution over the quarter. In the third quarter developments in the number of hours worked were similar to those in employment both across sectors and in overall economy. In line with the improving firm expectations about the business climate in the future and gradually increasing number of job vacancies, higher labour demand

<sup>56</sup> Using a procedure of additive seasonal adjustment the increase in the number of self-employed persons in the agricultural sector explains more than 90 per cent of the change in total employment in the third quarter of 2017 compared with the previous quarter.

### Construction Production Dynamics and New Buildings Permits Issued

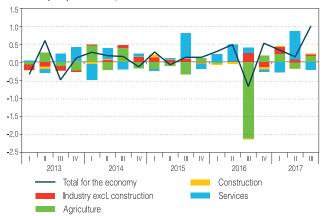


Note: Data for the fourth quarter of 2017 are average for the October-November period.

Sources: the NSI, BNB calculations.

### Contribution to Changes in the Number of Employed by Economic Sector

(per cent, percentage points, quarter-on-quarter; seasonally adjusted data)

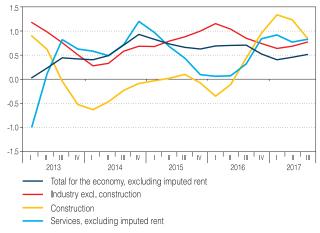


Note: Non-additive data on contributions due to direct seasonal adjustment of the total amount and its components.

Sources: the NSI, BNB calculations.

### Labour Productivity Developments (Value Added *per* Employee)

(per cent, quarter-on-quarter; seasonally adjusted data)



Sources: the NSI, BNB calculations.

<sup>&</sup>lt;sup>57</sup> Public administration and defence; compulsory social security; education; human health and social work activities sector by A10 breakdown of economic activities.

by corporations is expected to continue favouring the increase in employment in the first half of 2018.

Labour productivity in the total economy increased further in the third quarter of 2017, posting 0.5 per cent growth on a quarterly basis. Labour productivity increased in all sectors, with growth rates in construction only posting a slight decrease from the beginning of the year.

The nominal compensation *per* employee continued to increase in the third quarter of 2017, with all economic sectors contributing positively. Growth rates in construction and services accelerated, while growth in compensation *per* employee in manufacturing slowed down from the previous quarter. In the first half of 2018 compensation *per* employee is expected to increase further but at slower rates than in the previous year, reflecting mainly the expected lower wage rises in the public sector in 2018 as compared with 2017.

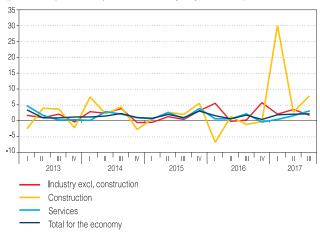
As a result of the dynamics of labour productivity and compensation *per* employee and the faster growth rates of compensation *per* employee in the third quarter of 2017, nominal unit labour costs in the total economy increased both in nominal and real terms.

In the third quarter of 2017 gross operating surplus rose on a quarterly basis in most services subsectors and in industry, while the agricultural sector experienced no essential changes. Financing of firms from sources other than the gross operating surplus again suggested a concentration of attracted financing in the industrial and services (excluding public services and financial intermediation) sectors. In the third quarter of the year firms were financed mostly by foreign direct investment and lending, with foreign obligations other than intercompany loans continued to be repaid.

The breakdown of GDP growth by production factor shows that all subcomponents had a positive contribution to GDP growth in the third quarter of 2017. The capital continued to contribute substantially to growth but due to a strong increase in the hours worked in the total economy labour became the main driver of economic growth over the quarter.

#### Compensation per Employee at Current Prices

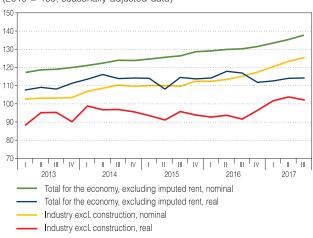
(per cent, quarter-on-quarter; seasonally adjusted data)



Sources: the NSI, BNB calculations.

#### **Unit Labour Costs**

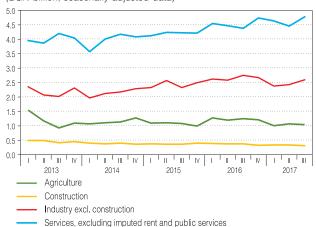
(2010 = 100; seasonally adjusted data)



Sources: the NSI, BNB calculations.

### Gross Operating Surplus at Current Prices

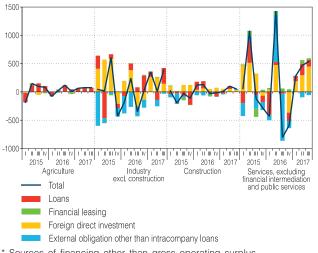
(BGN billion; seasonally adjusted data)



Sources: the NSI, BNB calculations.

#### Sources of Financing\*

(BGN million, quarter-on-quarter volume change)

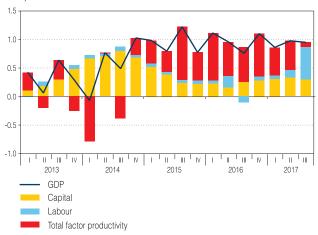


<sup>\*</sup> Sources of financing other than gross operating surplus.

Source: the BNB.

#### Contribution of Changes in Production Factors to GDP Growth

(per cent, percentage points, quarter-on-quarter; seasonally adjusted data)



Sources: the NSI, BNB calculations.

#### Gross Value Added Growth

(per cent, quarter-on-quarter; real rate, seasonally adjusted data)

		20	14			20	15			20	16			2017	
	- 1	Ш	Ш	IV	-1	Ш	Ш	IV	- [	Ш	Ш	IV	-1	Ш	Ш
Agriculture, forestry and fishing	2.5	4.6	-4.1	5.2	-7.6	-0.2	-2.6	-1.8	5.3	-1.4	4.9	-2.6	-0.7	-0.6	0.2
Mining and quarrying; manufacturing; electricity, gas, steam and air conditioning supply; water supply; sewerage, waste management and remediation activities	0.2	0.5	1.0	1.3	11	1.4	1.3	11	1.5	12	11	11	0.8	0.9	0.9
Construction	-1.5	-0.5	0.2	0.2	1.4	0.4	0.7	0.5	-4.4	-1.4	0.3	-0.8.	3.4	1.2	1.3
Wholesale and retail trade; repair of motor vehicles and motorcycles; transportation and storage; accommodation and food service activities	-1.5	2.1	-0.4	1.9	2.8	0.3	1.5	-0.6	-0.5	2.4	0.6	1.6	1.9	0.1	-0.2
Information and communication	0.1	0.4	0.6	0.9	0.3	0.0	0.3	0.2	20.8	-4.0	-2.4	-1.1	-0.8.	0.2	0.6
Financial and insurance activities	-1.1	2.9	-3.4	0.2	0.1	-3.9	5.1	-0.8.	3.7	2.5	-0.1	2.3	0.1	1.5	2.1
Real estate activities	0.1	0.2	0.9	1.3	1.0	1.3	1.3	0.9	1.4	1.4	1.5	1.9	1.8	1.8	0.4
Professional, scientific and technical activities; administrative and support service activities	0.2	0.1	1.6	0.5	3.6	0.9	1.4	2.2	-1.6	1.4	0.5	0.4	1.8	0.8	0.0
Public administration, education, human health and social work activities	2.5	1.0	-1.4	2.7	-0.5	-0.2	0.0	-0.5	-3.2	0.2	1.8	0.3	3.4	-0.7	0.3
Culture, sport and entertainment; other activity; activities of households as employers; non-identified activities of households producing goods and services for own use; activities of extraterritorial organisations and bodies	-5.3	3.6	2.8	1.1	-0.2	2.0	-2.4	1.4	-2.4	0.6	1.6	0.7	-0.4	-0.4	0.6
Gross value added, total for the economy	0.1	0.6	0.5	1.6	0.5	0.7	1.0	0.2	1.0	1.0	0.9	1.2	1.2	0.9	0.7

Source: the NSI.

### Household Behaviour

Seasonally adjusted national account data show that in the third quarter of 2017 the household consumption rose by 0.5 per cent on the previous quarter (4.9 per cent on an annual basis). The major factor behind the higher private consumption was the improving labour market resulting in an increase in employment and real wage.

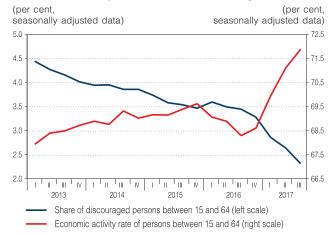
The NSI Labour Force Survey shows that in the third quarter of 2017 labour supply, as measured by the labour force<sup>58</sup>, increased significantly as new persons joined the labour force. As a result the labour force participation rate<sup>59</sup> rose on the previous quarter to reach its highest level since 2003. Concurrently, the number of discouraged persons decreased over the review period.

The NSI Labour Force Survey shows that in the third quarter of 2017 the unemployment rate<sup>60</sup> continued to decrease, reaching 6.0 per cent (according to non-seasonally adjusted data the unemployment rate accounted for 5.8 per cent). This decline was largely due to long-term unemployed (unemployed for more than a year). The seasonally adjusted unemployment rate<sup>61</sup> calculated using the Employment Agency data also continued to decrease, with the average monthly unemployment rate reaching 7.2 per cent in 2017 (8.7 per cent in 2016).

Driven by the improved economic situation in Bulgaria in the third quarter of 2017, wages continued to increase (both annually according to non-seasonally adjusted data on the wage bill and average wage per employee and quarterly according to seasonally adjusted national accounts data). Enhanced demand for labour by corporations amid high economic activity, increased minimum wage from the beginning of the year and wage increases in the public sector approved by the government are expected to support private sector wage rises and to motivate working-age population to join labour force in the following quarters. According to the assessment of corporations an additional factor supporting wage growth is the lack of skilled staff. 62

<sup>58</sup> The labour force (currently economically active population) comprises persons aged 15 and older who provide the supply of labour for the production of goods or services. Labour force includes both employed and unemployed persons.

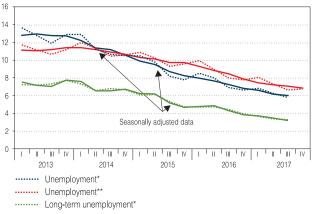
### Economic Activity and Share of Discouraged Persons



Sources: NSI Labour Force Survey, BNB calculations.

#### **Unemployment Rate**

(per cent, share of the labour force)



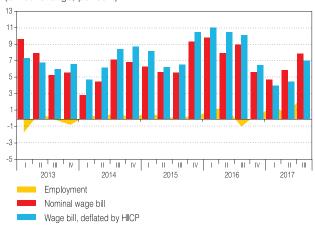
\* NSI data.

\*\* Employment Agency data.

Sources: NSI Labour Force Survey, Employment Agency, BNB calculations

#### **Employment and Nominal Wage Bill**

(annual change, per cent)



Sources: the NSI - SNA, BNB calculations.

**Economic Activity** 

<sup>&</sup>lt;sup>59</sup> The labour force participation rate is the proportion between economically active persons (labour force) and the population of the same age.

<sup>&</sup>lt;sup>60</sup> The unemployment rate is the proportion between the number of unemployed and the labour force based on Labour Force Survey data.

<sup>&</sup>lt;sup>61</sup> The definition of the unemployment rate according to the Employment Agency corresponds to that referred to in footnote 60, but using a constant rate of labour force comprising the number of persons in the respective age group since the last census of the population.

<sup>&</sup>lt;sup>62</sup> According to corporations' assessments from the NSI Business Survey in industry, construction, trade and service sectors on the lack of labour force as a factor limiting their activity.

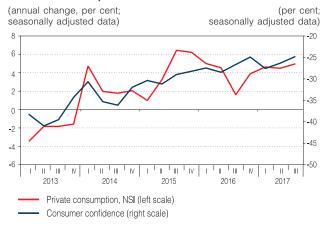
The consumer confidence indicator from the NSI Consumer Survey<sup>63</sup> shows that decreased in October 2017 due to worsened expectations of households for both their financial position and overall economic situation but remained at relatively high levels. The estimates were influenced to a large extent by a seasonal factor (the beginning of the winter) and the expectations for larger expenditure related to household spending.

Retail trade turnover, an conjuctural indicator of consumption developments, increased at the close of 2017, with a more sizeable contribution reported by food, drinks and tobacco, and household appliances, furniture and other household good in the October–November 2017 period. Developments in consumer lending remained positive, with the amount of new consumer loans growing further in December 2017.

The growing demand for labour and the continued increase in household labour income are expected to have a positive effect on household sentiment, to increase household participation in the labour market and to boost private consumption in the first and second quarters of 2018.

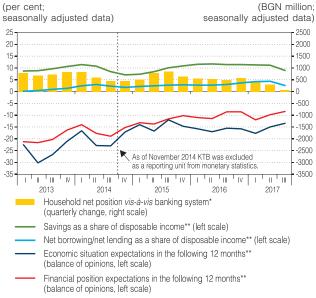
The NSI Household Budget Survey data show that the share of savings in household disposable income declined slightly in the third quarter of 2017 reflecting higher household consumer expenditure. In the third guarter of 2017 household net assets measured through their net position vis-à-vis the banking system (based on BNB monetary statistics data) also decreased as a result of incurred new debt. Due to the influence of loans extended under the National Programme for Energy Efficiency of Multi-family Residential Buildings on the dynamics of total household loans, the fall in household net assets partly reflects a temporary factor, the effect of which is expected to gradually subside in the course of repayment by the government of funds extended for the programme implementation.

### Private Consumption and Consumer Confidence



Sources: the NSL BNB calculations.

#### Household Propensity to Save and Expectations



\* BNB data.

\* NSI data.

Sources: NSI Household Budget Survey, NSI Consumer Survey, the BNB.

<sup>&</sup>lt;sup>63</sup> Final results of the Consumer Survey represent balances of opinions calculated as a difference between the relative shares of positive and negative opinions on raised issues. The composite consumer confidence indicator is calculated as the arithmetic mean of expectation balances in the following 12 months for the development of: the financial position and savings of households, the overall economic situation in the country and unemployment (the latter with the sign reversed).

### Employment and Income Dynamics

		20	13			20	14			20	15			20	16			2017	
	1	Ш	Ш	IV	1	Ш	Ш	IV	1	Ш	Ш	IV	-1	Ш	Ш	IV	1	Ш	Ш
(per cent, quarter-on-quarter; seasonally ad	justed d	ata)																	
Employed persons	-0.3	0.6	-0.5	0.1	0.3	0.2	0.2	-0.1	0.3	-0.1	0.1	0.1	0.3	0.5	-0.7	0.5	0.3	0.1	1.0
Nominal wage per employee*	2.9	0.9	0.7	1.5	1.1	1.6	2.2	0.9	0.9	2.0	1.2	3.0	2.0	0.5	1.6	0.3	1.3	1.9	1.9
Real wage per employee**	3.1	1.1	1.2	1.8	1.5	2.2	2.5	1.2	1.3	1.8	1.8	3.5	2.5	1.0	1.0	0.4	1.1	1.9	1.9
Wage bill, nominal terms	2.8	0.9	0.4	1.5	1.0	1.9	2.0	0.9	1.6	2.0	1.7	3.2	2.1	1.2	1.8	0.9	1.3	1.6	2.1
Wage bill, real terms**	3.0	1.0	1.0	1.8	1.4	2.5	2.3	1.2	1.9	1.8	2.2	3.7	2.6	1.7	1.2	1.0	1.1	1.7	2.2
(per cent, on corresponding quarter of previ	ous yea	r, non-	seaso	nally a	djusted	data)													
Employed persons	-1.7	0.7	-0.1	-0.7	0.3	0.3	0.7	0.1	0.8	0.2	0.2	0.3	0.9	1.5	-1.0	0.6	1.2	0.9	2.7
Nominal wage per employee*	12.3	8.6	6.2	6.6	3.5	4.3	7.3	7.3	5.5	5.1	4.2	8.1	8.2	5.9	7.4	3.6	3.8	6.1	7.8
Real wage per employee**	9.9	7.4	6.9	7.7	5.4	6.1	8.5	9.2	7.4	5.8	5.2	9.2	9.4	8.4	8.6	4.4	3.0	4.6	6.9
Wage bill, nominal terms	9.7	8.0	5.3	5.6	2.9	4.5	7.2	6.9	6.4	5.7	5.6	9.5	9.9	8.0	9.1	5.7	4.8	6.0	8.0
Wage bill, real terms**	7.4	6.9	6.0	6.7	4.8	6.3	8.5	8.8	8.3	6.3	6.6	10.6	11.1	10.6	10.3	6.5	4.0	4.5	7.1

<sup>\*</sup> The wage is calculated according to NSI data (SNA), with social security contributions paid by the employer deducted from the compensation per employee. The difference is divided by the number of employees.

Sources: NSI - SNA, BNB calculations, Eurostat.

### Retail Trade Turnover

(per cent, quarter-on-quarter; seasonally adjusted data at constant prices)

		20	13			20	)14			20	15			20	16			20	17	
	1	Ш	Ш	IV	1	П	Ш	IV	1	Ш	Ш	IV	I	Ш	Ш	IV	-1	Ш	Ш	Oct- Nov
Retail trade, excluding motor vehicles and motorcycles	1.2	1.9	1.7	2.2	6.7	-0.8.	1.8	1.8	11.0	-2.6	0.6	1.7	1.4	1.2	0.9	0.8	1.0	0.8	0.4	1.1
incl.																				
Food, drinks and tobacco products	-6.4	5.4	4.7	0.0	14.0	2.9	2.2	0.9	1.7	1.8	2.1	2.6	3.9	2.0	1.2	1.5	1.5	1.0	1.0	3.3
Textile, clothing, footwear and leather	-11.2	14.9	8.7	0.5	-10.0	9.7	7.6	-1.0	-5.5	3.4	2.7	5.5	0.2	3.8	-0.3	3.1	4.5	0.6	-4.0	3.3
Household appliances, furniture and other household goods	1.6	2.4	2.2	2.0	-0.7	0.6	0.1	1.9	1.4	-0.4	0.9	-1.0	0.1	-0.2	-0.9	-0.3	3.2	4.4	1.4	2.5
Computer and communication equipment	10.6	3.4	-0.3	3.5	-3.1	-3.1	-0.8.	-1.7	16.6	-3.5	-0.2	-3.8	-8.7	8.1	2.0	5.9	0.0	5.3	1.3	0.7
Pharmaceutical and medical goods, cosmetics and toiletries	6.9	5.7	4.5	1.9	3.7	1.9	1.9	3.3	2.4	2.0	1.7	2.0	-2.4	4.3	3.4	0.0	3.2	2.8	0.5	0.2
Unspecialised shops with different kinds of goods	-4.9	12.7	-2.5	0.8	1.7	1.9	0.6	-1.0	2.5	1.0	1.9	2.2	-10.5	2.1	1.6	0.8	5.0	5.4	2.8	3.8
Automobile fuels and lubricants	-1.6	3.4	-5.8	-2.7	12.0	-3.6	7.3	-4.4	46.2	-8.9	-1.5	4.5	2.1	-1.2	-2.5	-3.0	-3.6	-5.0	-2.1	-2.2

Source: the NSI. Short-term statistics.

47 Economic Activity

<sup>\*\*</sup> Data deflated by HICP.

### Impact of Fiscal Policy on the Economy

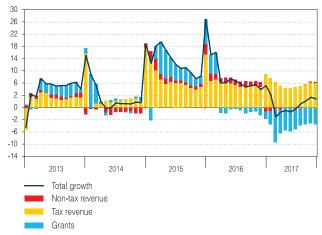
At the end of November 2017 the Consolidated Fiscal Programme surplus came to BGN 2385.8 million (2.4 per cent of projected GDP)<sup>64</sup>, reporting a minimum decline on the previous month. The budget balance on the Consolidated Fiscal Programme was lower by BGN 1079 million than in the January–November 2016 period, reflecting mainly the base effect of higher revenue under EU programmes in 2016.<sup>65</sup>

Total budget revenue rose by 2.6 per cent between January and November, with the increase in tax revenue of 9.6 per cent offsetting entirely the lower revenue from grants. Sustainable growth of tax revenue throughout 2017 reflected both the favourable macroeconomic environment and positive effects of the amendments to the tax and social security legislation. in force since the beginning of the year, and of the measures to increase tax collection. Higher labour income and employment coupled with the pension contribution changes since early 2017 were the major factors behind the increased revenue from social security and health insurance contributions (by 14.4 per cent), which again had the largest contribution to higher tax revenue in the review period. Annual growth of revenue from indirect taxes accounted for 6.8 per cent, with faster VAT revenue growth than private consumption growth being sustained. Concurrently, growth of revenue from excise duties was relatively weaker. In November growth of revenue from personal income tax accelerated (12.6 per cent) due mainly to the strong efforts of tax administration to increase tax collection. 66 Reported corporate tax growth (c 8.4 per cent) also markedly outpaced the annual gross operating surplus increase for the first nine months of the year.

<sup>64</sup> GDP forecasts of the Ministry of Finance for 2017 based on the autumn macroeconomic forecast for the 2017–2020 period, published in October 2017.

### Contribution of Major Groups of Revenue to Growth in Total Revenue and Grants, Cumulatively

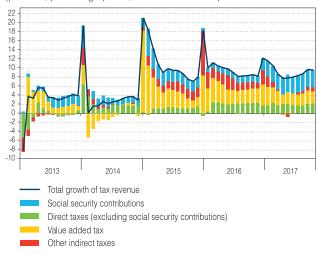
(per cent; percentage points; on an annual basis)



Sources: the MF, BNB calculations.

### Contribution of Major Tax Groups to Tax Revenue Growth, Cumulatively

(per cent; percentage points; on an annual basis)



Sources: the MF, BNB calculations.

<sup>&</sup>lt;sup>65</sup> In 2016 the EC reimbursed the funds for the spending under the 2007–2013 programming period concentrated at the end of 2015. As there were no such receipts during 2017, revenue from grants was 55.8 per cent lower compared to the same period in the previous year.

<sup>&</sup>lt;sup>66</sup> October and November 2017 saw a significant increase in final tax revenue from resident and non-resident individuals, which based on the Ministry of Finance Monthly Bulletin data was mainly due to the National Revenue Agency campaign for control over business entities and non-profit institutions with sizeable cash balances reported in their 2016 financial statements. Where it is identified that there are no such balances, the companies resubmit the annual tax declaration to correct the omitted hidden profit distribution which is treated as a dividend and a five per cent withholding tax is levied thereon.

Total expenditure on the Consolidated Fiscal Programme increased by 6.9 per cent as of November against the backdrop of growing current expenditure and gradually subsiding capital expenditure. The upward trend in current expenditure was very much driven by the effects of the measures envisaged in the 2017 budgetary framework<sup>67</sup>, as well as by the subsequently approved twofold increase in the amount of the minimum pension in July and October 2017 and the increase in the remunerations in the education sector in September 2017. Current staff and operating expenditure (3.4 percentage points), social expenditure (2.0 percentage points) and subsidies (1.3 percentage points) contributed most to budget expenditure growth. The 4.4 per cent increase in social payments reported for the first eleven months of the year suggests that the positive effect of fiscal policy on household disposable income will continue also in the second half year.

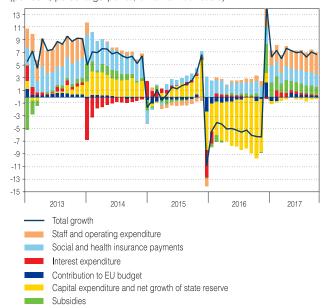
At the same time, the upward dynamics of staff costs, operating expenditure and health insurance contributions was a key driver behind the positive contribution of government consumption to the quarter-on-quarter real GDP growth in the third quarter of 2017 (0.1 percentage point) and gives grounds to expect a quarter-on-quarter increase in government consumption in the fourth quarter of the year.

The trend toward a decelerating annual rate of decline in capital expenditure (down to -2.7 per cent) remained sustained as of late November as the rise in investment under EU programmes offset most of the decline in national investment expenditure. Despite the unusual concentration of higher capital expenditure over the last month of the year, the decline points to a negative contribution of government investment to total investment growth in 2017.

In the first half of 2018 the trend toward sustainable growth in tax income is likely to remain sustained reflecting the favourable macroeconomic bases dynamics, the higher pension contributions and excise duty on cigarettes, in effect as of the beginning of the year, and the continued measures to boost tax collection. Based on the revenue and expenditure policy parameters envisaged in the budgetary framework for 2018<sup>68</sup>

### Contribution of Major Groups of Expenditure to Total Expenditure Growth, Cumulatively

(per cent; percentage points; on an annual basis)

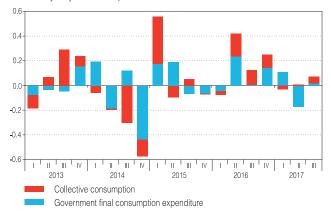


Note: In the January 2016 to August 2017 reports under the Consolidated Fiscal Programme, staff expenditure include wages, social security contributions and other remunerations, while in the reports for previous periods, the latter were included in operating expenditure. Aggregate data on staff expenditure and current expenditure are presented in the chart with a view to avoiding incomparability of data prior to and after 2016, resulting from the methodological change made. For a separate representation, see the Key Budget Indicators Perfomance for 2016–2017 table.

Sources: the MF, BNB calculations.

### Contribution of Government Consumption Components to Real GDP Growth

(percentage points, quarter-on-quarter, seasonally adjusted data)



Sources: the NSI, BNB calculations.

**Economic Activity** 

 <sup>&</sup>lt;sup>67</sup> For further information, see the Basic Parameters of the 2017–2019 Budgetary Framework box, Economic Review, 4/2016.
 <sup>68</sup> For further information, see the Basic Parameters of the 2018–2020 Budgetary Framework box.

### Key Budget Indicators Performance for 2016–2017

Consolidated Fiscal Programme	January-N	lovember 1	January-No	ovember <sup>1</sup>
C .	BGN million	per cent 2	BGN million	per cent 2
Total revenue and grants	31 084	6.9	31 903	2.6
Tax revenue	24 440	8.6	26 778	9.6
incl. social security and health insurance contributions	6 627	5.7	7 583	14.4
Non-tax revenue	3 824	11.7	3 880	1.5
Grants	2 820	-10.3	1 245	-55.8
Total expenditure (incl. the contribution to EU budget)	27 619	-6.3	29 518	6.9
Staff <sup>3</sup>	6 398		7 068	10.5
Operating expenditure <sup>3</sup>	3 032		3 294	8.6
Interest	696	6.0	759	9.1
Social expenditure, scholarships	13 201	4.5	13 765	4.3
Subsidies	1 448	12.3	1 801	24.4
Capital expenditure and government reserve growth	2 082	-56.7	2 014	-3.3
incl. capital expenditure	2 061		2 004	-2.7
Contribution to general budget of the European Union	763	-18.5	816	7.1
	BGN million	difference <sup>4</sup> (BGN million)	BGN million	difference <sup>4</sup> (BGN million)
Budget balance, on a cash basis	3 465	3 871	2 386	-1 079
Tax revenue under the state budget		116 lovember <sup>5</sup>	201 January–No	
· ·	BGN million	per cent 2	BGN million	per cent 2
Tax revenue	17 008	9.3	18 345	7.9
Corporate tax	1 618	11.6	1 753	8.4
Income tax for individuals	2 707	8.6	3 049	12.6

2016

Note: The difference between the sum of individual components and total sum is due to rounding.

7 934

4 433

161

30

125

10.2

7.5

12.2

13.5

37

8 591

4 610

174

33

135

8.3

4.0

7.7

10.8

18.2

Source: the MF.

Value added tax

Customs duties

Insurance premia tax

Excise duties

Other taxes

and taking into account the effects of increased pensions and wages in the second half of 2017, it may be expected that the fiscal policy in the first six months of 2018 will have a stronger positive effect on economic growth. The projected increase in current government expenditure is expected to support economic growth on account of both higher household disposable income resulting from the higher volumes of transfers from the budget and increased government consumption. If the expectations of a simultaneous accelaration in spending under EU programmes and recovery of national investment expenditure materialise, government investment would have a positive effect on economic growth in the first half of 2018.

<sup>&</sup>lt;sup>1</sup> Based on monthly reports on cash-based performance of the Consolidated Fiscal Programme.

<sup>&</sup>lt;sup>2</sup> Annual rate of change on the same period of previous year.

<sup>&</sup>lt;sup>3</sup> The annual rates of change for 2016 have not been calculated for these expenditure items due to inconsistencies in the 2015 and 2016 data or lack of data for the respective item for 2015.

<sup>&</sup>lt;sup>4</sup> The change of the budget balance on the same period of previous year.

<sup>&</sup>lt;sup>5</sup> Based on monthly reports on cash-based budget performance.

### Basic Parameters of the 2018–2020 Budgetary Framework

The updated medium-term budgetary forecast of the government for the 2018–2020 period, which correspouds to 2018 budget law parameters adopted by the National Assembly, sets the cash deficit on the consolidated fiscal programme (CFP) for 2018 at BGN 1100 million (-1.0 per cent of projected GDP). A fiscal consolidation process is foreseen for the next two years, whereby the CFP cash deficit will decline to BGN 610 million (-0.5 per cent of projected GDP) in 2019 followed by a balanced budgetary position in 2020. The ESA 2010 budget of the general government sector is planned to remain in a close-to-balance position over the whole forecast horizon (0.0 per cent of GDP for 2018, 0.3 per cent of GDP for 2019 and 0.1 per cent of GDP for 2020). Fiscal targets of the updated medium-term budgetary forecast on a cash and accrual basis are assessed as fully compliant with the EU framework for fiscal policies and national legislation.

The increase in CFP budget revenue for 2018 compared to its expected performance for 2017<sup>2</sup> is projected to be 9.6 per cent and is mainly on account of planned tax and social security revenue growth of 6.6 per cent. Upward tax and social security revenue dynamics reflects both the anticipated growth of domestic consumption, wages and employment and positive budget effects of increased pension contributions (by 1 percentage point), minimum wage and minimum social security income (from BGN 460 to BGN 510)<sup>3</sup> and excise duties on cigarettes. The planned growth of non-tax revenue by 11.8 per cent in 2018 is due to a large extent to the estimated one-off revenue (BGN 480 million) from Sofia airport concession. There is also a significant increase in revenue from grants by 63.9 per cent *vis-à-vis* expected performance for 2017, reflecting estimated acceleration in absorption of funds under EU 2014–2020 operational programmes.

Total expenditure for 2018 (including the contribution to EU budget) is planned to increase by 12.8 per cent against the expected performance for 2017. Capital expenditure will increase most significantly (by BGN 2122.5 million) reflecting estimated costs on major EU co-funded infrastructure projects and higher national investment expenditure including planned defence modernisation. Social and health insurance payments are expected to rise by BGN 857.4 million from the anticipated 2017 performance, including National Health Insurance reserve, mainly as a result of additional healthcare expenditure, the 3.8 per cent increase in the weight of one year of pensionable service in the pension calculation formula from July 2017<sup>4</sup> and carry-over effects of the two-step increase in minimum pension from 1 July and 1 October 2017 (up to BGN 180 and BGN 200). More significant increases in both operating expenditure by BGN 583.0 million and staff costs by BGN 551.9 million are also projected as compared to the expected performance for 2017. Higher staff costs reflect the continuation of wage increase policy in the budget sector with the main focus on remunerations in the education sector and effects of increased pension contributions and minimum wage on budget expenditure. A projected decrease in other staff payments by 15.3 per cent compared to the expected 2017 performance helps limit growth of employee compensation costs in the budget sector.

The projected improvement of budget balance in 2019 and 2020 reflects mainly reduced current non-interest expenditure, particularly through operating expenditure, social payments and subsidies. CFP revenue as a share of GDP is also expected to decline, which in 2019 will mainly reflect the base effect of projected one-off revenue from Sofia airport concession in 2018.

Budgetary consolidation planned for 2019 and 2020 contributes to the government debt reduction under the updated medium-term budget forecast from 22.3 per cent of projected GDP at the end of 2018

Economic Activity

<sup>&</sup>lt;sup>1</sup> The updated medium-term budget forecast for the 2018–2020 period from October 2017 constitutes the motives to the draft 2018 State Budget Law and was adopted by the Council of Ministers with Decision No 654 of 30 October 2017. To ensure consistency with both the parameters of 2018 final budget laws adopted by the National Assembly and tax laws, amendments to the updated medium-term budget forecast were made and adopted by the Council of Ministers with Decision No 808 of 22 December 2017. This box discusses government's medium-term budget forecast approved on 22 December 2017.

<sup>&</sup>lt;sup>2</sup> The October 2017 budget revenue estimate for 2017 remained unchanged in the updated medium-term budget forecast approved on 22 December 2017.

<sup>&</sup>lt;sup>3</sup> The minimum social security income of BGN 510 will also apply to self-employed persons, and the differentiated amount of minimum social security income for such persons determined on the basis of their annual taxable income is no longer applicable. The minimum social security income for farmers and tobacco producers is increased from BGN 300 to BGN 350.

<sup>&</sup>lt;sup>4</sup> From 1 January 2018 for new pensions, and from 1 July 2018 for all other pensions.

to 20.0 per cent of projected GDP at the end of 2020. Concurrently, the relatively high level of the fiscal reserve by the end of 2017 allows partial coverage of 2018 government's gross funding needs by the government deposit at the BNB, with net debt financing estimated to be negative.

Risks to the 2018 State Budget Law implementation could arise in case of lower than projected revenue from Sofia airport concession, provided expenditure are incurred equal to the expected concession revenue. An additional risk to 2018 budgetary targets is the projected decline in other staff payments, which could be difficult to implement given the expected higher than projected performance of this expenditure for 2017. Medium-term risks to the planned fiscal consolidation could arise if the international environment is less favourable than that in the Ministry of Finance macroeconomic forecast used in budget framework estimates. Lower than expected tax revenue would make more difficult to achieve budgetary targets given hard-to-reverse effects of increased budget wages and social payments under the updated medium-term budget forecast and risks of excessive expenditure on EU project implementation for the 2014–2020 period.

# 4. Inflation

At the end of 2017 annual inflation was 1.8 per cent. This reflected mainly the continuing rises in international oil, food and commodity prices in euro, which were passed onto final consumer prices of energy products and food. Food price rises were also affected by higher domestic production costs in the context of a slight decline in domestic agricultural production. Tobacco products and goods and services with administratively controlled prices had positive contributions to inflation due mainly to raised tobacco excise duties and higher regulated prices of natural gas, heating and electricity. The internal factors related to the sustained long-term trend toward cheaper telecommunication services, air transport and durable goods helped curb consumer price growth.

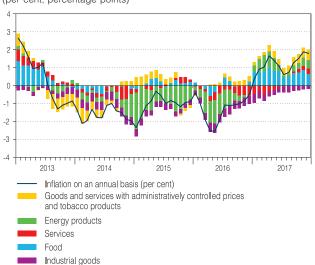
Reflecting the positive contributions of food and energy product prices, and administratively controlled prices, inflation is expected to rise in the first two quarters of 2018 compared to the current levels. Core inflation is projected to accelerate gradually.

At the end of 2017 annual inflation was 1.8 per cent (-0.5 per cent in December 2016). 69 This reflected the sizeable year-on-year increase in crude oil prices (in euro) since the year start in international markets and its pass-through to domestic prices of fuels, transport services and some goods and services with administratively controlled prices. Increased prices of imported food and agricultural products and higher production costs in agriculture<sup>70</sup> over the first three quarters of the year contributed to the rise in food prices since the year start, with this group making a comparatively high positive contribution to overall inflation. Specific factors, related to the price decreases in some services having relatively high weights in the consumer basket (mainly air transport and telecommunication services) and continuing declines in durable goods prices also acted in the opposite direction.

In the first nine months of 2017 the price deflator for imported goods was positive and came to 6.8 per cent (compared to -9.2 per cent on average for the corresponding period of the previous year)<sup>71</sup> thereby reversing the tendency toward cheaper imported goods since 2013. This reflects mainly the early 2017 rise in import

### Annual Inflation and Contribution of Major Commodity and Services Groups to It

(per cent; percentage points)



Notes: This structure corresponds to the Eurostat classification; tobacco products and goods and services with administratively controlled prices are presented separately. The index of goods and services with administratively controlled prices is calculated through the elementary aggregates level in the consumer basket.

Sources: the NSI, BNB calculations.

53 Inflation

 $<sup>^{\</sup>rm 69}$  The analysis in this Chapter employs NSI data on HICP.

<sup>&</sup>lt;sup>70</sup> NSI data on price indices of goods and services currently consumed in agriculture are used in the analysis.

<sup>&</sup>lt;sup>71</sup> Import data under the Standard International Trade Classification (SITC).

prices of fuels<sup>72</sup>, food<sup>73</sup> and various types of raw materials, 74 as well as some more expensive finished products. Higher import prices of these goods were rapidly transmitted through the supply chain on domestic producer prices and consequently on consumer goods prices.

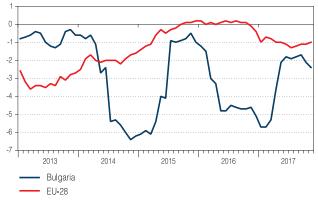
Since the year start the various domestic factors in Bulgaria had divergent effects on HICP dynamics. The increase in tobacco excise duty resulted in higher tobacco product prices and they contributed positively to inflation. At the same time, the effect of country-specific factors related to cheaper goods and services making up the core HICP components helped dampen the upward trend in consumer prices.

Since the year start the total producer price index (PPI) on domestic market largely followed the upward international oil, food and metal price developments.<sup>75</sup> From December 2016 PPI started to increase on an annual basis at an accelerating pace, reaching 5.8 per cent in November 2017 (compared with 0.6 per cent at the end of 2016). The subsectoral breakdown shows that the increase in producer prices was driven mainly by manufacturing and production and distribution of electricity and heating subsectors. 76 Higher industrial production prices related to the manufacture of refined petroleum products, metals, food and tobacco products contributed mostly to this.<sup>77</sup> Higher prices in the subsector related to the production of electricity. heating and gas<sup>78</sup> were underpinned mainly by the increase in oil prices in international markets and the related increase in natural gas prices.

 $^{72}\,\mathrm{This}$  refers to the oil and refined petroleum products

### Rate of Change of the Telecommunications Price Index in Bulgaria and the EU

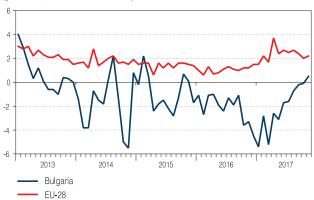
(per cent; on an annual basis)



Source: Eurostat.

### Rate of Change of the Transport Price Index in Bulgaria and the EU

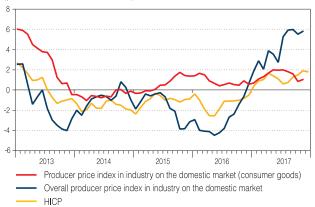
(per cent; on an annual basis)



Source: Eurostat.

#### Rate of Change in Manufacturing CPI and HICP

(per cent; on an annual basis)



Source: the NSI.

group.  $\,^{73}$  This refers to the food and live animals and animal and vegetable fats, oils and waxes groups.

<sup>&</sup>lt;sup>74</sup> This refers to the inedible (crude) materials (excluding fuels), manufactured goods classified chiefly by materials

<sup>&</sup>lt;sup>75</sup> For more details on price developments in major raw materials, see the International Commodity Prices section in Chapter 1.

<sup>&</sup>lt;sup>76</sup> This refers to the production and distribution of electricity, heating, and gaseous fuels group.

<sup>77</sup> This refers to the production of coke and refined petroleum products, the manufacture of basic metals and fabricated metal products, except machinery and equipment, and the manufacture of food products, beverages and tobacco groups.

<sup>&</sup>lt;sup>78</sup> This refers to the production and distribution of electricity, heating, and gaseous fuels group.

According to the end-use classification, the PPI increase in the January to November 2017 period was mainly due to the higher energy and intermediate consumption product prices which (together with labour costs) account for a substantial part of firms' production costs. Retention of the upward trend in these prices over the following months will be a prerequisite for an upward pressure on final consumer prices. In 2017 an increase in producer prices of consumer non-durables and durables continued to be observed in the manufacturing sector. Consumer non-durable price rises were largely due to the increased prices of some food and drinks, tobacco products, and clothing. Higher producer prices of food and drinks were swiftly passed on to final consumer prices of processed food which reported year-on-year growth of 2.5 per cent in August (0.5 per cent at the end of 2016).

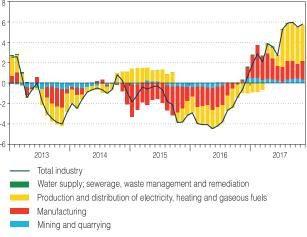
In 2017 unprocessed food inflation was characterised by comparatively high volatility, reaching 3.0 per cent in December (1.9 per cent at the end of 2016). Since early 2017 meat and meat product prices have followed a trend toward a gradual increase which corresponded to the upward dynamics in international meat prices. Higher prices of imported products and increased costs of domestic production were the reasons behind the acceleration of inflation in vegetables and fruit groups in the first half year. This trend discontinued in the second half of 2017 which resulted in a decline in unprocessed food inflation.

In 2017 producer prices of durable goods on the domestic market also reported low positive year-on-year growth which was reflected in final prices of non-food goods whose negative inflation rate contracted to -0.9 per cent in December (against -1.9 per cent at the end of 2016). The past 2017 saw a continued negative price dynamics in the durables group, still observing a comparatively large fall in the prices of automobiles.

In most of 2017 core inflation, including services and non-food goods prices, remained negative, though tending to decelerate. In December it reached 0.3 per cent (-1.9 per cent at the end

### Rate of Change in PPI on the Domestic Market and Contribution by Major Subsectors

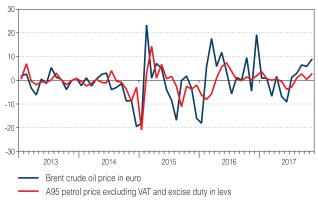
(percentage points; on an annual basis)



Source: the NSI.

### Rate of Change in the Prices of Brent Crude Oil and A95 Petrol

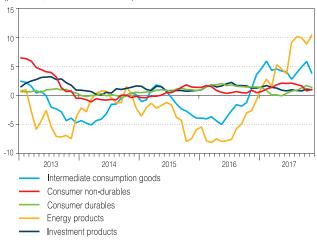
(per cent; on an monthly basis)



Sources: the ECB, the NSI, BNB calculations.

### Rate of Change in Producer Prices on the Domestic Market by Major Industrial Groupings

(per cent; on an annual basis)



Source: the NSI.

55

Inflation

<sup>&</sup>lt;sup>79</sup> The analysis employs FAO information on the meat price index in international markets.

of 2016). These developments reflected services prices which in September 2017 reversed their deflationary trend and inflation in this group reached 1.2 per cent in December (-2.1 per cent at the end of 2016), with catering and other services (excluding telecommunication and transport services) subsectors contributing most to this. The fall in prices of telecommunication and transport services continued, though tending to decelerate. Enhanced competition in these sectors and the introduction of low-cost airlines in Bulgaria which started business over the recent years continued to contribute to the decrease in annual prices of telecommunication and transport services. Positive inflation was recorded in catering prices, tending to gradually increase in the context of rising food prices.

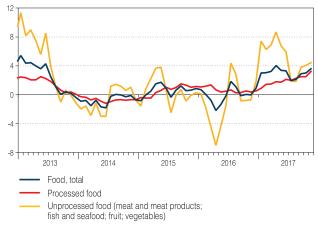
In 2017 administratively controlled prices continued to increase on an annual basis. As of December 2017 the positive contribution of tobacco prices to annual inflation was sustained, reflecting the increased excise duty on cigarettes since early 2017.80 EWRC rises in regulated prices of natural gas (from early January, April and July 2017)81, heating and electricity (from the beginning of April and July 2017)82 which are indirectly affected by international oil prices added further to the increase in administratively controlled prices. In the fourth guarter of 2017 EWRC decreased the administered price of natural gas in the context of stabilising international oil prices, but this had no material effect on final consumer prices.83

As of December 2017 the diffusion index, showing the share of groups of goods and services with declining prices on an annual basis, fell from 38.7 per cent to 22.6 per cent compared to 38.7 per cent at the end of 2016. This reflected mainly the lower number of food, services and energy products subgroups with

<sup>80</sup> From the beginning of 2017, the *ad-volarem* excise duty on tobacco products was raised from 25 to 27 per cent along with the minimum amount of the overall excise duty (specific and *ad-volarem*) from BGN 161 to BGN 168 *per* 1000 cigarettes.

#### Rate of Change of Food Price Index

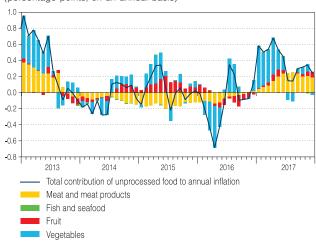
(per cent; on an annual basis)



Sources: the NSI, BNB calculations.

### Contribution of Major Subgroups of Unprocessed Food to Overall Inflation

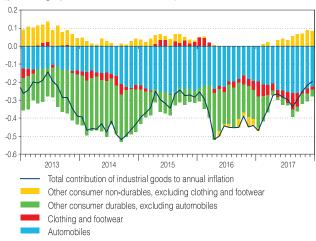
(percentage points; on an annual basis)



Sources: the NSI, BNB calculations.

### Contribution of Major Non-food Goods Subgroups (Excluding Energy Products) to Overall Inflation

(percentage points; on an annual basis)



Sources: the NSI, BNB calculations.

<sup>&</sup>lt;sup>81</sup> For more details see: http://old.dker.bg/newsbg.php?n=2846, http://old.dker.bg/newsbg.php?n=2869 u http://old.dker.bg/newsbg.php?n=2790

<sup>&</sup>lt;sup>82</sup> For more details see: Http://old.dker.bg/newsbg.php?n=2872 and http://old.dker.bg/newsbg.php?n=2896

<sup>&</sup>lt;sup>83</sup> For more details see: http://www.dker.bg/news/98/65/kevr-utvrdi-tsenata-na-prirodniya-gaz-za-V-to-trimesechie-na-2017-g.html

declining prices. This trend was supported by the reduced number of goods and services with administered prices declining on an annual basis. At the close of the year, the number of goods and services subgroups with inflation higher than 2 per cent increased which will help the upward HICP inflation dynamics remain sustained in the coming months.

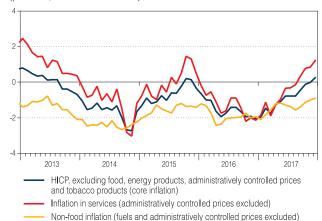
According to the NSI business surveys, in December 2017 most managers in industry (89.4 per cent), services (92.3 per cent) and retail trade (88.4 per cent) expect selling prices to remain stable over the coming three months. However, the balance of opinions in the three sectors was positive from the beginning of 2017, reflecting the larger share of managers expecting price rises as compared with those expecting price declines. As regards selling prices in the coming months, managers' sentiment in December 2017 were in line with the early 2017 price increases in intermediate consumption goods, energy products and some administratively controlled prices. In December 2017 the share of managers in industry and services, outlining insufficient demand as an obstacle to the business activity, decreased from the end of 2016. Concurrently, in the retail trade sector, which is the closest to end-users in the supply chain, a slight increase was reported in the share of managers pointing to insufficient demand as a factor limiting their activity.

Inflation is expected to follow a gradual upward trend in the coming months. All main HICP components will contribute to this. It is expected that administratively controlled prices will continue to make a positive contribution to the overall inflation, reflecting largely the increased excise duty on tobacco products since early 2018<sup>84</sup>, as well as the increases in the prices of water and sewerage services in 14 districts in Bulgaria for 2018 announced by the EWRC in 2017.<sup>85</sup> Over the first half year a base effect from the administrative increases in the prices of natural gas,

<sup>84</sup> Under the Law on Excise Duties and Tax Warehouses early 2018 saw an increase in the specific tobacco excise duty from BGN 101 to BGN 109 *per* 1000 cigarettes (7.9 per cent), a decrease of the *ad volarem* excise duty from 27 to 25 per cent and an increase in the minimum overall excise duty (specific and *ad volarem*) from BGN 168 to BGN 177 *per* 1000 cigarettes (5.4 per cent).

#### Core Inflation

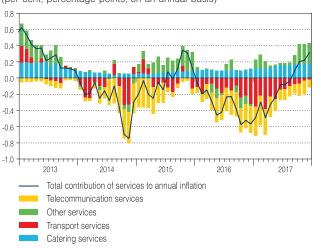
(per cent; on an annual basis)



Sources: the NSI, BNB calculations.

#### Contribution of Services and Major Services Subgroups to Overall Inflation

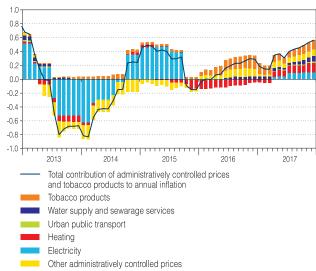
(per cent; percentage points; on an annual basis)



Sources: the NSI, BNB calculations.

#### Contribution of Major Subgroups of Goods with Administratively Controlled and Tobacco Prices to Overall Inflation

(per cent; percentage points; on an annual basis)



Sources: the NSI, BNB calculations.

57 Inflation

<sup>&</sup>lt;sup>85</sup> For more details see: http://www.dker.bg/news/139/65/kevr-prie-reshenie-za-izmenenie-na-odobrenite-tseni-na-vik-uslugi-za-2018-g.html

heating and electricity in the beginning of April and July 2017 will put a further upward pressure on inflation. Core inflation is expected to have a slight positive contribution to consumer prices and to start to accelerate gradually, which will reflect the unwinding of the effect of country-specific factors in 2017.

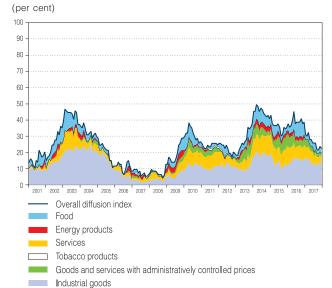
There are risks of higher than projected inflation in case of unforeseen rises in administratively controlled prices and international oil and commodity prices. Higher than expected oil prices are likely to result in a faster than projected rise in fuel prices along with price appreciation of the other components of the consumer basket as a result of the higher production costs. The end of 2017 saw a trend toward an increase in the prices of electricity traded by the Bulgarian independent energy exchange (IBEX) which has an effect on firms' production costs and is a prerequisite for an increase in selling prices.

In the first three quarters of 2017 the house price index continued to increase on an annual basis, reaching 8.8 per cent (against 6.6 per cent in the corresponding period of 2016). The rise was due to the higher prices of existing and, to a lower extent, of new dwellings. Across geographical regions a similar dynamics was observed, with higher house prices reported also in the six largest cities in Bulgaria (cities with a population of over 120,000 citizens). In the third quarter of 2017, however, house prices remained still some 24 per cent lower than the maximum values recorded in the third quarter of 2008.

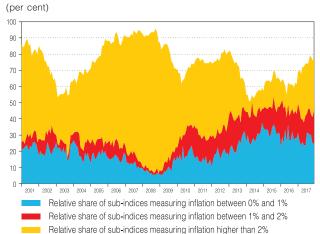
The upward dynamics of house prices was in line with improved consumer confidence and the increased disposable income of households, reflecting favourable labour market developments. High household savings rate and the continued downward trend in interest rates on new fixed-term deposits were the reasons behind enhanced household demand for housing. In 2017 the annual percentage rate of charge (APR) on new mortgage loans declined further, reaching 4.3 per cent in the third quarter (against 5.0 per cent at the end of 2016). 86 Banks' policy towards easing credit standards

#### Diffusion Index of Major Goods and Services Groups

a) relative shares of declining HICP subindices on an annual basis



### b) relative shares of declining HICP subindices on an annual basis



Sources: the NSI, BNB calculations.

### Expectations of Selling Prices in Industry, Retail Trade and Services in the Next Three Months

(balance of opinions, per cent, 6-month moving average)



Source: the NSI

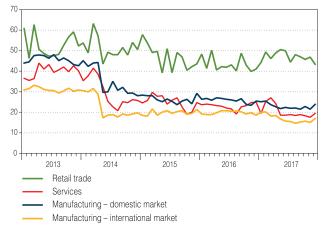
<sup>&</sup>lt;sup>86</sup> Values indicating APRC on housing loans to households are averages weighted by the relevant volumes of new loans for a 12-month period.

and conditions for households also acted in this direction.<sup>87</sup>

In addition, house price dynamics also influenced the behaviour of firms in the construction sector. In the first nine months of 2017 real value added in this sector reported year-on-year growth of 6.9 per cent (against a fall of 4.2 per cent for the corresponding period of 2016). The continued increase in house prices at rates higher than those of the firms' construction cost index is likely to result in a further increase of economic activity in the construction sector and higher supply of new dwellings, which will have a dampening effect on house price dynamics. An indication of that is the higher number of new residential building permits issued over the first three quarters of 2017.

### Share of Firms by Sectors Pointing to Insufficient Demand as a Factor Limiting Their Activity

(relative share of all corporations, per cent)



Sources: the NSI, BNB calculations.

### Rate of Change of the House Price Index

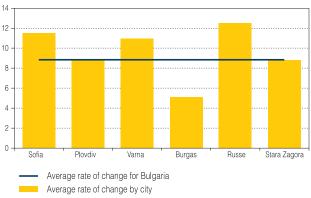
(per cent; on an annual basis)



Source: the NSI.

# Rate of Change of the House Price Index in Towns with More than 120,000 Citizens in the January–September 2017 Period

(per cent; on an annual basis)



Source: the NSI.

59 Inflation

 $<sup>^{\</sup>rm 87}\,\mbox{For}$  further details, see the Monetary and Credit Aggregates Section in Chapter 2.

### Key Indicators on the Housing Market Developments in Bulgaria

(per cent; year-on-year change)

Indicators	2013	2014	2015	2016	2016 IV	ı	2017 II	III
Prices					1 4			
House price index, total	-2.2	1.4	2.8	7.0	8.1	9.0	8.6	9.0
New dwellings	-2.7	2.8	3.5	6.4	7.0	9.4	7.3	5.5
Existing dwellings	-1.8	0.5	2.3	7.3	8.8	8.7	9.2	10.9
Inflation (HICP)	0.4	-1.6	-1.1	-1.3	-0.8	0.8	1.4	0.9
House rentals, paid by tenants (HICP)	0.5	0.2	0.7	0.6	0.8	1.0	1.0	1.0
Lending								
New housing loans	6.0	9.7	39.7	18.9	38.9	45.6	49.1	38.5
Annual percentage rate of charge on new housing loans (per cent, at the end of the period)	7.9	7.4	6.4	5.4	5.0	4.7	4.4	4.3
Housing loans balances	-0.2	-0.1	-1.8	0.5	1.4	2.4	4.4	5.8
Construction and investment								
Permits issued for the construction of new residential buildings (built area, square meters)	12.0	27.7	13.0	4.8	15.1	17.0	29.2	47.2
Value added in construction (at average annual prices for 2010)	1.3	-3.1	2.8	-6.8	-15.1	7.6	10.8	3.6
Constriction production index, building construction	-1.6	0.4	8.4	-16.5	-13.1	5.9	14.2	15.2
Fixed investment; residential buildings	-4.0	-3.3	-10.3	102.1	94.7	2.5	4.2	4.4
New buildings construction cost index	1.7	1.0	1.3	1.5	0.8	1.9	2.0	2.6

Note: Values indicating the APRC on housing loans to households are averages weighted by the relevant volumes of new loans for a 12-month period.

Sources: the NSI, the BNB, Eurostat.

### Growth Rates of Major Goods and Services Groups Prices and Contribution of These Groups to Inflation

	as of Dece	ecumulated ember 2016 2015 = 100)	Inflation Ac as of Dece (December	mber 2017	Decemb	f Inflation as of per 2017 2016 = 100)
Inflation (per cent)	-0	).5	1.	8	1	.8
	inflation rate by group (per cent)	contribution (percentage points)	inflation rate by group (per cent)	contribution (percentage points)	inflation rate by group (per cent)	contribution (percentage points)
Food	0.9	0.23	2.7	0.65	2.7	0.65
Processed food	0.5	0.09	2.5	0.40	2.5	0.40
Unprocessed food	1.9	0.14	3.0	0.24	3.0	0.24
Services	-2.1	-0.57	1.2	0.31	1.2	0.31
Catering	2.0	0.11	3.0	0.18	3.0	0.18
Transport services	-8.4	-0.32	-0.6	-0.02	-0.6	-0.02
Telecommunication services	-6.1	-0.33	-2.0	-0.10	-2.0	-0.10
Other services	-0.3	-0.03	2.2	0.25	2.2	0.25
Energy products	-0.2	-0.01	6.9	0.47	6.9	0.47
Transport fuels	-0.4	-0.02	6.7	0.41	6.7	0.41
Industrial goods	-1.9	-0.44	-0.9	-0.20	-0.9	-0.20
Goods and services with administratively controlled prices*	0.6	0.10	2.6	0.43	2.6	0.43
Tobacco products	3.8	0.19	2.7	0.13	2.7	0.13

<sup>\*</sup> The index of goods and services with administratively controlled prices is calculated through weighting the relevant elementary aggregates in the consumer basket.

Sources: the NSI, BNB calculations.

# 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 19 December 2017. ECB, EC and IMF assumptions on global economic developments and dynamics of major commodity group prices in international markets as of 13 December 2017 were used.

Global economic growth is expected to accelerate in 2017 and 2018 and subsequently to stabilise in 2019. Faster economic growth will be observed in developing economies, while in developed countries it will accelerate in 2017 compared to 2016 and slightly slow down in 2018 and 2019.

Taking into account global economic growth forecasts, external demand for Bulgarian goods and services is expected to accelerate in 2017 compared to 2016. In 2018 and 2019 external demand growth is anticipated to moderate on 2017. In view of the favourable economic and political dynamics in Bulgaria's major trading partners uncertainty about global economic developments subsided from the previous forecast. Risks of deviation in external environment developments from the assumptions used in forecast are assessed as balanced.

Following a significant rise in energy and non-energy commodity prices in 2017 on 2016 due to exhaustion of excess supply in international markets, prices in US dollar are expected to increase further though at lower rates in the 2018–2019 period. Non-energy product prices in euro will decline slightly in 2018 compared to 2017.

Real GDP growth in Bulgaria is expected to reach 4.0 per cent in 2017 compared with 3.9 per cent in 2016. It is anticipated to accelerate slightly to 4.2 per cent in 2018 and to decline again to 4.0 per cent in 2019. Domestic demand is projected to have the major positive contribution to real growth in the 2018–2019 period, leading to an increase in imports of goods and services. A faster increase in imports than in exports of goods and services will result in a negative contribution of net exports to overall growth. Risks to the outlook for economic activity in the baseline scenario are assessed as oriented towards higher growth in 2017 and balanced for the 2018–2019 period.

In 2018 and 2019 inflation is expected to increase gradually in line with the assumptions of upward dynamics of international prices and an anticipated rise in core inflation due to the exhausted effect of country-specific factors in 2017. Administratively controlled prices are expected to make a positive contribution to the overall inflation, reflecting the projected increase in excise duty on tobacco products and water supply prices in the 2018–2019 period. There are risks of higher than projected inflation in case of unexpected rise in administratively regulated prices and higher than expected international oil and commodity prices, which would impact the other inflation components.

### International Environment and Prices

The BNB forecast of Bulgaria's macroeconomic indicators is based on data published as of 19 December 2017. ECB, EC and IMF assumptions on the global economic developments and dynamics of major commodity group prices in international markets as of 13 December 2017 were used. On the basis of these assumptions global economic growth in 2017 is expected to accelerate compared to 2016. The expectations are further supported by the positive trends in global economic indicators, trade, industrial output and investment. Both higher economic activity in developing countries and cyclical growth improvement in developed countries will contribute to accelerated global growth in 2017. In 2018 global economic growth is expected to accelerate compared with 2017 and to remain at its 2018 level in 2019. In 2018 and 2019 growth in developing economies will accelerate from 2017, while in the euro area and in developed economies it will slightly slow down. The expected dynamics of global economic activity will contribute to rising external demand for Bulgarian goods and services, which following an accelerated increase in 2017 compared with 2016, will continue to grow steadily over the projection horizon albeit at a slower pace than in 2017.

BNB Forecast

Rebalancing of major commodity supply and demand was observed on the international markets in 2017 resulting in a rise in international energy prices and in most non-energy product prices. The extension of the agreement on oil production cuts between OPEK and other major oil producers until the end of 2018 coupled with strict adherence to agreement parameters were the main factors behind the decrease in excess supply of petroleum products and the significant rise in energy product prices accordingly. In 2018 and 2019 international prices of petroleum products are expected to increase further though at lower rates than in 2017.

As regards non-energy products, metal prices posted the strongest annual growth in 2017. A decline in supply due to closure of inefficient capacities in China, in an effort to reduce air pollution in 28 cities in the north of the country, contributed most to the increase in their prices. An important factor behind higher metal prices over the year was the increasing demand driven by higher growth of global industrial output in US dollar. International prices of non-energy products in US dollars are expected to rise further in the 2018–2019 period while those in euro will slightly fall in 2018 compared to 2017, with a new increase in 2019.

### **Forecast**

In 2017 real GDP growth is expected to accelerate from 2016 reaching 4.0 per cent on an annual basis. Growth will be largely due to domestic demand supported by its two components: consumption and gross fixed capital formation. As a result of growing demand for goods and services, imports are expected to accelerate their growth rate outpacing that of exports, with a negative contribution of net exports to overall growth.

By end-2019 real growth is projected to remain high, rising to 4.2 per cent in 2018, before slightly decelerating to 4.0 per cent in 2019. Domestic demand is expected to be the main engine of growth in 2018 and 2019. Private consumption will continue growing at a high rate driven by the increasing real disposable income of households and improving labour market conditions, thus retaining its significant positive contribution to overall growth until the end of the forecast horizon. The anticipated higher demand for goods and services, high capacity utilisation and optimistic business sentiment will contribute to the acceleration of private investment growth both in 2018 and 2019. Government consumption is also expected to increase in the 2018–2019 period mostly due to government's plans for wage increases, mainly in the education sector, according to the latest revision of the medium-term budget projections. Taking into account the relatively low levels of public investment in 2016–2017 and in line with the expectations for accelerated absorption of funds under EU programmes and reimbursement of national investment expenditure, the government investment dynamics would explain most of overall investment growth over the projection horizon. Therefore, government investment is expected to be the largest contributor to overall investment growth in 2018.

The rise in exports of goods and services in 2017 is expected to remain lower than in 2016 despite significantly higher external demand throughout the year. Slowdown in exports in 2017 is mainly due to services, where the high 2016 base played a key role because of the sizeable inflow of foreign tourists to Bulgaria. In 2018 real exports of goods and services are expected to accelerate its growth rate compared to 2017. This will be a result of recovered growth in exports of services driven by positive developments in global trade and economic activity of our major trade partners, and the exhausted base effect from the previous year. Concurrently, growth in exports of goods will moderate somewhat from 2017 in line with the anticipated slower growth of external demand. In 2019 real exports of goods and services are expected to decelerate on 2018 reflecting slower external demand. The rate of real growth in imported goods and services is anticipated to accelerate in 2017 and 2018 in line with growing domestic demand and, in particular, strengthening investment activity in Bulgaria. In 2019 growth in exported goods and services is projected to slow down following the external demand

dynamics. As a result, net exports are expected to have a negative contribution to GDP growth over the projection horizon, most notable in 2018.

If the forecast of higher growth rate in real imports of goods than that of exports of goods materialises and given the negative terms of trade for Bulgaria (measuring the change in prices of exported goods against the change in prices of imported goods) in 2017 and 2018, the balance of payments trade deficit is expected to increase as a share of GDP in the 2017–2019 period compared with 2016. The surplus in the services trade balance is expected to gradually contract as a share of GDP mainly as a result of higher growth in imports of services than that in exports of services. Enhanced economic activity in Bulgaria is expected to boost companies' profits which will result in a gradual increase in dividends paid to non-residents, and correspondingly, to a rise in the deficit of the balance of payments primary income account at the end of the forecast horizon. In the 2017–2019 period net transfers on the balance of payments secondary income account are projected to remain almost unchanged as a share of the GDP at a level lower than in 2016, reflecting the anticipated absorption of EU funds. As a result of the components dynamics the balance of payments current account will remain positive for the 2017–2019 period gradually contracting as a share of GDP.

In 2017 employment growth is expected to accelerate from 2016 reaching 1.5 per cent. The stronger increase in the number of self-employed in agriculture in the third quarter of 2017 will contribute to this effect. Due to continuous wage growth and favourable economic conditions in Bulgaria new persons are anticipated to continue joining labour force. By the end of the forecast horizon negative demographic trends are expected to have a downward effect on employment growth. The unemployment rate will decline further but at the end of the forecast period the decrease will slow down due to lower employment growth. Given the projected slow employment growth, labour productivity will largely follow the real GDP dynamics. The growth rate of real compensation *per* employee is expected to gradually approach labour productivity growth. As a result unit labour costs will grow at a rate between 2.5 per cent and 3.0 per cent over the forecast horizon.

Assuming that the 2017 upward trend in international oil prices in euro continues in the next two years, HIPC is expected to follow the upward dynamics over the forecast horizon. Annual inflation is projected to be 1.9 per cent at the end of 2018 and to come to 2.0 per cent at the end of 2019. Core inflation is expected to follow a trend toward a gradual increase and to contribute positively to the overall inflation, which will largely reflect the exhausted effect of country-specific factors in 2017 due to cheaper tele-communication services and air transport in the context of strong price competition and the introduction of low-cost airlines. Administratively controlled prices are also expected to make a positive contribution to the overall inflation driven by the projected increase in excise duty on tobacco products and water supply services over the 2018–2019 period as announced by the Energy and Water Regulatory Commission (EWRC).

Over the forecast period funds attracted from the non-government sector in the banking system are expected to grow at a rate of around 6–7 per cent. These developments will reflect employment and wage growth expectations contributing to an increase in private consumption and savings. Concurrently, retention of deposit rates at relatively low levels will have a dampening effect on deposit growth. Lending rates will continue to reflect mainly the current interest rate cycle in the euro area and expectations of continuously subsiding uncertainty in the economy and the corresponding lower borrowers' risk profile. The growth rate of loans to non-government sector is expected to follow the trend toward a gradual acceleration. Relatively low lending rates and the continuous improvement of economic activity will support the demand for loans by corporations and households. Repayment by the government of loans extended under the National Programme for Energy Efficiency of Multi-family Residential Buildings will limit growth of credit to households.

BNB Forecast

### **Forecast Revisions**

Real GDP growth is expected to be higher over the whole forecast horizon *vis-à-vis* the forecast published in the Economic Review, issue 2 of 2017. This is attributable to the changes in the assumptions about external environment developments and fiscal policy parameters, revisions of NSI national accounts data<sup>88</sup> and higher than expected growth of GDP domestic demand components by final use.

The upward revision of reported data on private consumption growth in the first quarter of 2017 and higher than expected rates of growth in the second and third quarters of the year determine to a large extent the upward revision for 2017. The positive consumer sentiment, growing real disposable income and continuous upward dynamics in consumption prompted also an upward revision in the expectations for the 2018–2019 period. Weaker growth of gross capital formation is projected as compared to the 2017 forecast, reflecting the expectations for lower government investment throughout the year. Gross capital formation growth is expected to rise in the 2018–2019 period due to the upward revision of government investment growth. In line with higher domestic demand, the forecast for an increase in imports of goods and services is revised upwards. The higher increase in exported goods and services for the 2017–2019 period as compared with the previous forecasts reflects the upward revision of external demand growth.

Inflation expectations for the 2018–2019 period are revised upwards. A faster than expected decline in core HICP components deflation at the end of 2017, due mainly to the services group, is the reason behind the upward revision of core inflation forecast for 2018 and 2019. Expectations of higher food price inflation in the next two years reflect the revised assumptions of international food prices over the forecast horizon. In addition the current forecast is impacted by the increase in some administratively controlled prices since the beginning of 2018, for which no data were available as of June 2017.

#### GDP and Inflation Forecast Revisions (28 December 2017 vis-à-vis 20 June 2017)

Annual rate of change, per cent	Forec	ast as of 28	B Decembe	er 2017	For	ecast as of	f 20 June 2	017	Rev	vision (perc	entage po	ints)
Armuarrate of change, per cent	2016 <sup>1</sup>	2017	2018	2019	2016 <sup>2</sup>	2017	2018	2019	2016	2017	2018	2019
GDP at constant prices	3.9	4.0	4.2	4.0	3.4	3.6	3.4	3.5	0.5	0.4	0.8	0.5
Private consumption	3.6	4.3	3.6	3.5	2.1	3.5	2.8	2.9	1.5	0.8	8.0	0.6
Government consumption	2.2	3.2	3.1	2.6	0.6	1.9	2.1	1.9	1.6	1.3	1.0	0.7
Gross fixed capital formation	-6.6	3.9	10.1	7.5	-4.0	6.2	6.3	6.7	-2.6	-2.3	3.8	0.8
Exports (goods and services)	8.1	5.2	5.6	5.4	5.7	5.1	5.3	5.3	2.4	0.1	0.3	0.1
Imports (goods and services)	4.5	6.2	6.3	5.7	2.8	5.4	5.3	5.4	1.7	0.8	1.0	0.3
HIPC at the end of period <sup>3</sup>	-0.5	1.8	1.9	2.0	-0.5	1.5	1.6	1.7	0.0	0.3	0.3	0.3
Core inflation <sup>3</sup>	-2.1	0.3	1.8	2.1	-2.1	0.1	1.5	2.0	0.0	0.2	0.3	0.1
Energy <sup>3</sup>	-0.2	6.9	0.7	3.5	-0.2	3.6	1.7	3.0	0.0	3.3	-1.0	0.5
Food <sup>3</sup>	0.9	2.7	2.9	3.0	0.9	3.3	2.3	2.1	0.0	-0.6	0.6	0.9
Goods and services with administratively controlled prices and tobacco												
products <sup>3</sup>	1.4	2.6	1.2	0.2	1.4	1.9	0.9	0.0	0.0	0.7	0.3	0.2

<sup>&</sup>lt;sup>1</sup> Reported data on GDP were published on 3 October 2017.

Sources: the NSI, the BNB.

<sup>88</sup> Revisions were published on the NSI website on 3 October 2017 according to the NSI schedule for statistical survey results and refer to the period from the first quarter of 2016 to the second quarter of 2017. The revisions relate to additional data inputs within the comprehensive annual statistical reporting.

<sup>&</sup>lt;sup>2</sup> Reported data on GDP were published on 7 March 2017.

<sup>&</sup>lt;sup>3</sup> Reporting data for 2017.

<sup>&</sup>lt;sup>89</sup> For further information on core inflation dynamics, see Chapter 4.

#### Risks to the Forecast

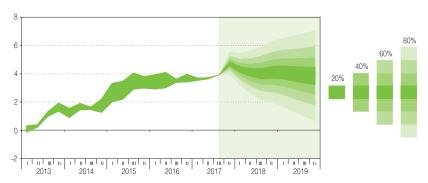
Risks to economic growth outlook are associated with higher than expected growth for 2017 and are assessed as balanced for the 2018–2019 period. In view of the favourable economic and political dynamics in Bulgaria's major trading partners uncertainty of global economic development outlook declined on the previous forecast. Risks related to external environment are assessed as balanced. Negotiations over Brexit remain the main source of uncertainty over the external environment after an agreement for forming a government in Germany was reached in the beginning of 2018. There is a risk of higher than expected growth of private consumption and correspondingly higher growth of domestic demand in 2017. As a result annual real growth of the economy could be higher than the projected one. For the remaining forecast horizon risks to the outlook of domestic demand compo-

nents are assessed as balanced.

The uncertainty over the outlook for a particular indicator may be graphically illustrated by means of the so-called fan chart. Chart bands with 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 in the forecast horizon, reflecting the increasing uncertainty further into the future. The fan chart on annual GDP growth shows that there is 60 per cent probability for annual GDP growth to range from 3.8 to 4.6 per cent for 2017.

There are risks of higher than projected inflation in case of unforeseen rises in administratively controlled prices and international oil and commodity prices. Higher than expected oil prices presuppose a faster than projected rise in fuel prices along with an appreciation of other components of the consumer basket as a result of higher production costs. Risk to the outlook arises from a potentially stronger-than-expected pass-through of higher labour costs to inflation driven by the ongoing labour market improvement. The balance of risks regarding inflation is shown in the fan chart below. The fan chart on inflation shows that there is 60 per cent probability for annual HIPC growth to range from 0.57 to 3.47 per cent at the end of 2018.

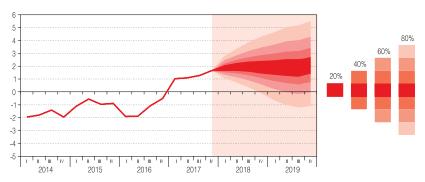
### Fan Chart of the Expected Annual Rate of Change of Real GDP



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.

Sources: the NSI, 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.

65 BNB Forecast

Risks to our balance of payments outlook are assessed as balanced. A key source of uncertainty is the external environment and, in particular, international commodity price dynamics which could have a significant effect on the trade balance and current account through the terms of trade.

Risks to the outlook of non-government sector deposit growth in the banking system are balanced. In terms of credit dynamics, uncertainty over the outlook stems from the pace at which the government will repay loans extended under the National Programme for Energy Efficiency of Multi-family Residential Buildings, taking into account the significant effect of these loans on the overall dynamics of loans to households. Additional risk to the outlook of credit growth relates to potential sales of loans and writing-off of non-performing loans from banks' balance sheets.

Forecast of Key Macroeconomic Indicators for 2017–2019

(per cent)

(50. 00.1.)					
	2015	2016	2017	2018	2019
Annual rate of change					
GDP at constant prices	3.6	3.9	4.0	4.2	4.0
Private consumption	4.5	3.6	4.3	3.6	3.5
Government consumption	1.4	2.2	3.2	3.1	2.6
Gross fixed capital formation	2.7	-6.6	3.9	10.1	7.5
Exports (goods and services)	5.7	8.1	5.2	5.6	5.4
Imports (goods and services)	5.4	4.5	6.2	6.3	5.7
HIPC at the end of period <sup>1</sup>	-0.9	-0.5	1.8	1.9	2.0
Core inflation <sup>1</sup>	-0.3	-2.1	0.3	1.8	2.1
Energy <sup>1</sup>	-10.5	-0.2	6.9	0.7	3.5
Food <sup>1</sup>	0.9	0.9	2.7	2.9	3.0
Goods and services with administratively controlled prices and tobacco products <sup>1</sup>	-0.7	1.4	2.6	1.2	0.2
Employment	0.4	0.5	1.5	0.6	0.4
Unit Labour Costs	2.3	2.3	5.2	2.9	2.6
Labour productivity	3.3	3.4	2.4	3.6	3.6
Unemployment rate (share of labour force)	9.1	7.6	6.4	5.8	5.4
Claims on non-government sector <sup>1</sup>	-1.6	1.8	4.6	4.9	5.6
Claims on corporations <sup>1, 2</sup>	-1.6	0.6	1.5	4.6	6.1
Claims on households <sup>1</sup>	-1.3	2.0	6.0	5.2	4.3
Deposits of the non-government sector <sup>1</sup>	10.6	7.0	6.1	6.8	7.2
Share of GDP					
Balance of payments current account	0.0	5.3	4.7	2.8	2.0
Trade balance	-5.8	-2.0	-2.7	-3.1	-3.1
Services, net	6.6	6.4	6.2	6.1	6.0
Primary income, net	-4.5	-2.4	-1.6	-3.1	-3.7
Secondary income, net	3.6	3.3	2.9	2.9	2.8
Annual rate of change					
External assumptions					
External demand	2.2	3.3	6.0	5.0	4.1
Average annual Brent oil price (in USD) <sup>1</sup>	-47.1	-15.9	23.5	4.4	1.7
Average annual price of non-energy products (in USD) <sup>1</sup>	-16.5	-3.9	7.9	2.3	2.6
Brent oil price at the end of period (in USD) <sup>1</sup>	-42.9	15.3	22.7	-5.2	1.9
Price of non-energy products at the end of period (in USD) <sup>1</sup>	-18.9	7.4	6.6	1.3	2.8

<sup>&</sup>lt;sup>1</sup> Reporting data for 2017.

Source: the BNB:

<sup>&</sup>lt;sup>2</sup> Data refer to non-financial corporations.

### ISSN 2367-4962

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