ECONOMIC REVIEW
4/2019

BULGARIAN NATIONAL BANK

Content

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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
ESA 2010	European System of National and Regional Accounts
EU	European Union
EURIBOR	Euro Interbank Offered Rate
EWRC	Energy and Water Regulatory Commission
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
OPEC	Organization of Petroleum Exporting Countries
OTC	over-the-counter
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
€STR	Euro Short-Term Rate

SUMMARY

The downward trend in global economic activity which prevailed for most of 2019 was reversed in the last two months of the year. Global sentiment indicators in industry stabilised at close to neutral levels in the August–December period, while those in services improved somewhat over the last two months of the year. The increase in economic indicators at the end of 2019 was mainly due to the agreement reached between the USA and China to sign a preliminary trade agreement aimed at reducing protectionist measures. Despite the improvement in economic indicators, negative trends in global trade and industrial production continued in the beginning of the fourth quarter of 2019. In November global inflation declined to 1.8 per cent on an annual basis, reflecting its slowdown in developed economies. In the fourth quarter of 2019 the European Central Bank made no changes to its monetary policy, while the US FOMC cut in October the federal funds rate corridor by 25 basis points to 1.50–1.75 per cent.

Given the expected retention of low levels in global industrial output (in line with economic indicators dynamics) and continuous year-on-year declines in international trade, external demand for Bulgarian goods and services is expected to retain its weak growth over the first half of 2020.

Despite the limiting effect of the international environment on external demand for Bulgarian goods and services, in the first eleven months of 2019 real goods exports rose from the same period of 2018. This increase along with subdued imports dynamics and favourable terms of trade contributed largely to the growth in the surplus on the combined current and capital account of Bulgaria's balance of payments. In the context of a continuous increase in economic activity and rising profits of corporations we project a gradual increase in the primary income deficit as a share of GDP for the first half of 2020. This is going to be the main driver of the expected decrease in the overall surplus on the current and capital account on an annual basis as a share of GDP.

Retained favourable developments in the labour market and continued growth in labour income in the absence of sufficiently safe alternatives to bank savings contributed to the retention of comparatively high growth rates in non-government sector's deposits over the first eleven months of the year. Since the end of the third quarter, the accelerating upward trend in credit growth to non-financial corporations has been reinstated mainly driven by the increasing amount of regular corporate loans. The growth rate of household credit continued to accelerate gradually, with housing loans contributing most significantly.

In line with expectations of a continued rise in labour income and a decrease in the unemployment rate amid a preserved household propensity to save, non-government sector's deposits are projected to maintain their comparatively high growth rates in the first half of 2020. In the background of continued high inflow of attracted funds in the banking system, favourable domestic macroeconomic environment and low lending interest rates, growth in credit to corporations and households is also anticipated to remain relatively high over the projection horizon.

In the third quarter of 2019 real GDP growth decelerated slightly on a quarterly basis, amounting to 0.8 per cent. Both domestic demand components and net exports contributed positively to the growth.

In the third quarter of 2019 the seasonally adjusted number of employed decreased by 0.1 per cent quarter on quarter in the total economy due to agriculture, while employment in the industry and services sectors increased. Amid enhanced demand for labour by corporations and limited supply, the unemployment rate declined further, reaching 3.9 per cent, while compensation *per* employee rose by 0.6 per cent on a quarterly basis.

The consumer confidence indicator improved in the third quarter of 2019, while the business climate indicator worsened, which was mainly attributable to more pessimistic expectations of managers in industry. Positive consumer sentiments, favourable financing conditions, wage growth and concurrent rises in household purchasing power are expected to continue favouring private consumption growth in the first half of 2020. Government investments are projected to be an additional factor stimulating economic activity, whereas the external environment will remain a source of uncertainty constraining the

exports of goods and services and investment activity of corporations. Given these factors, quarter-on-quarter real GDP growth is anticipated to vary between 0.5 and 0.6 per cent in the first and second quarters of 2020.

At the end of 2019 annual inflation rose to 3.1 per cent on end-2018. Higher inflation in December was due to a large extent to the substantial positive contribution of the food group influenced by higher international food prices in euro and internal factors related to the spread of the African swine fever. Higher international oil prices at the end of 2019 also contributed to higher inflation in the energy products group compared with December 2018. The prices of the core HICP components continued to increase though at slower rates than at the end of 2018, reflecting to a large degree the exhausted base effects in the services group. Goods and services with administratively controlled prices and tobacco products contributed further to overall inflation throughout the year. The forecast for a gradual deceleration of overall inflation in the first half of 2020 reflects primarily market expectations of international oil price developments. Food and core inflation are expected to have the main positive contribution to overall inflation in the first two quarters. Goods and services with administratively controlled prices and industrial goods are expected to have a low positive contribution to overall inflation in early 2020.

This issue of Economic Review includes the BNB forecast of key macroeconomic indicators for the 2019–2021 period. It is based on the information published as of 20 December 2019 and employs European Central Bank, European Commission and International Monetary Fund assumptions of global economic developments and international commodity price dynamics as of 12 December 2019.

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

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

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

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

1. Eχternal environment

The downward trend in global economic activity which prevailed for most of 2019 was reversed in the last two months of the year. Global sentiment indicators in industry declined in June and July 2019 before stabilising at neutral levels in the last five months of the year. At the same time, services economic indicators improved somewhat over the last two months of the year. The improvement in economic indicators at the end of 2019 was mainly due to the agreement reached between the USA and China to sign a preliminary trade agreement aimed at reducing protectionist measures. Despite the stabilisation and increase in economic indicators, negative trends in industrial production and global trade continued in the beginning of the fourth quarter of 2019. In November global inflation declined to 1.8 per cent on an annual basis, reflecting its slowdown in developed economies.

In the fourth quarter of 2019 the European Central Bank made no changes to its monetary policy, keeping the forward guidance on reference rates unchanged. At the same time the US FOMC cut in October the federal funds rate corridor by 25 basis points to 1.50–1.75 per cent. Following the December meeting of the Committee, the median of FOMC members' individual forecasts about the expected level of the federal funds rate pointed to expectations of maintaining the target rate at its current level in 2020 and increasing the reference rate by 25 basis points in 2021 and 2022.

Given the expected retention of low levels in global industrial output (in line with economic indicators dynamics) and continuous year-on-year declines in international trade, external demand for Bulgarian goods and services is expected to maintain its weak growth over the first half of 2020.

Current Business Situation

The downward trend in the composite global economic indicator (global PMI) which prevailed for most of 2019 was reversed in the last two months of the year. The improvement in economic indicators at the end of 2019 was mainly due to the agreement reached between the USA and China to sign a preliminary trade agreement aimed at reducing protectionist measures. The increase in the PMI indices gave positive signs about the global economic growth over the fourth quarter of 2019. The reported improvement of global PMI in November and December was mainly driven by the services sector. Concurrently, manufacturing PMI remained close to the neutral limit of 50 points at the end of the year, signalling a retention of global output at the levels reached in October. There was divergent dynamics across countries by end-2019: PMIs improved in the USA and China, while in the euro area the indices stabilised.

After a gradual moderation in the industrial production growth since the year start, in October the index's first year-on-year drop since February 2013 was recorded. The euro area, followed

Global PMIs

Global PMI
Global PMI of services
Global PMI of manufacturing
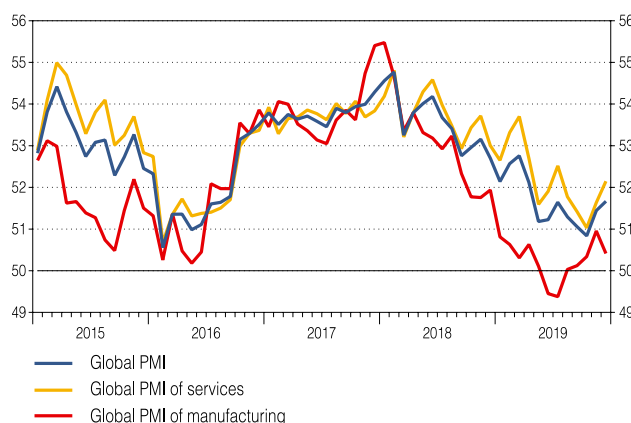
Source: JP Morgan.

Global Industrial Production

(annual rate of change in volumes, per cent, contribution of individual economies, percentage points)

- World industrial output
- USA
- Euro area
- Other developed economies
- China
- Emerging markets in Asia (China excluded)
- Other emerging markets

Source: CPB Netherlands Bureau for Economic Policy Analysis.

World Trade

(annual rate of change in volumes, per cent, contribution of individual economies, percentage points)

- World trade
- USA
- Euro area
- Other developed economies
- China
- Emerging markets in Asia (China excluded)
- Other emerging markets

Source: CPB Netherlands Bureau for Economic Policy Analysis.

Inflation Measured through CPI

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

- Global inflation
- Inflation in developing countries
- Inflation in developed countries

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

Source: the World Bank.

by Japan and the USA, contributed most to it. World trade[1] continued to accelerate its decline on an annual basis in October 2019 due to the continuous uncertainty ensuing from growing international trade conflicts in the first nine months of the year. Trade in almost all regions and mainly in emerging market economies and the USA declined. Among emerging market economies Asian countries contributed most strongly to this decline, which may be explained by the slower growth in China's domestic demand and the country's role in the regional value chains.

In November 2019 global annual inflation[2] decreased by 0.2 percentage points in comparison to the level at the end of 2018, and reached 1.8 per cent. The decline was entirely driven by the lower inflation in developed economies, while in emerging market economies the growth rate of consumer prices accelerated.

Given the expected retention of low levels in global industrial output (in line with economic indicator dynamics) and continuous year-on-year declines in international trade, the external demand for Bulgarian goods and services is expected to maintain its weak growth over the first half of 2020.

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[1] CPB Netherlands Bureau for Economic Policy Analysis data as of 21 December 2019.

[2] Based on the World Bank data as of 10 January 2020.

Euro Area

In the third quarter of 2019 quarterly growth of euro area real GDP came to 0.2 per cent, the same as in the second quarter of the year. Private consumption had the main positive contribution (by 0.3 percentage points) to GDP growth, followed by government consumption and gross fixed capital formation (by 0.1 percentage point each). Net exports and inventories changes contributed negatively to GDP change on a quarterly basis (by -0.1 percentage point each). On a quarterly basis Spain, France and Italy matched the previous quarter's growth rate (0.4, 0.3 and 0.1 per cent, respectively), while that in Germany accelerated to 0.1 per cent (against a fall of 0.2 per cent in the second quarter).

In the fourth quarter of 2019 the average values of euro area leading economic indicators, including PMI and European Commission (EC) indices were lower than in the previous quarter. In general indices signalled a weak economic activity in the euro area and a continuous fall in manufacturing.

Labour market indicators stabilised over the second half of 2019, with the unemployment rate in the euro area reaching 7.5 per cent in October and November. The downward trend in employment growth, which started in 2019, continued in the third quarter of the year. Concurrently, consumer expectations of unemployment rate over the next twelve months measured by the EC consumer confidence index deteriorated in the last quarter of 2019.

In December 2019 the euro area inflation measured by HICP accelerated to 1.3 per cent on an annual basis against 1.0 per cent in November and 0.9 per cent on average over the third quarter of 2019. This dynamics reflected largely price increases in energy products, HICP energy component rising by 0.2 per cent on an annual basis in December compared to the fall of 3.2 per cent in November and 0.6 per cent on average in the third quarter. In December core inflation, excluding food and energy products, amounted to 1.3 per cent on an annual basis (against 1.3 per cent in November and 0.9 per cent in the third quarter).

In December 2019 the ECB revised upwards its euro area real GDP growth projection for 2019 by 0.1 percentage point to 1.2 per cent, and downwards its projection for 2020 by 0.1 per-

Contribution to the Change in Real GDP in the Euro Area by Component
(per cent; percentage points; quarter-on-quarter)
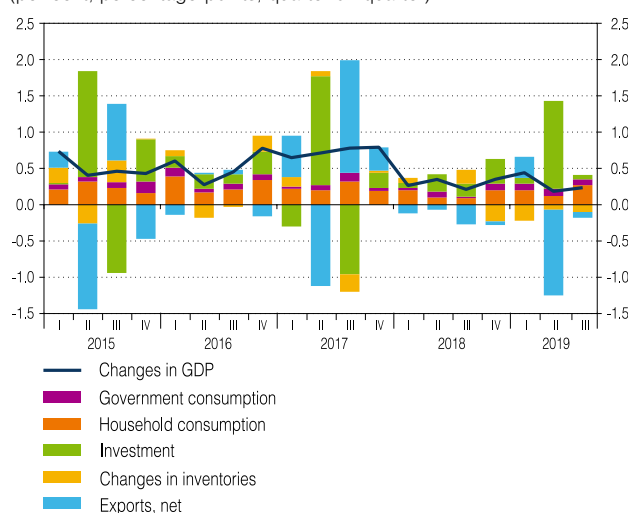
Source: Eurostat.

Contribution to the Change in Real GDP in the Euro Area by Country
(per cent; percentage points; quarter-on-quarter)
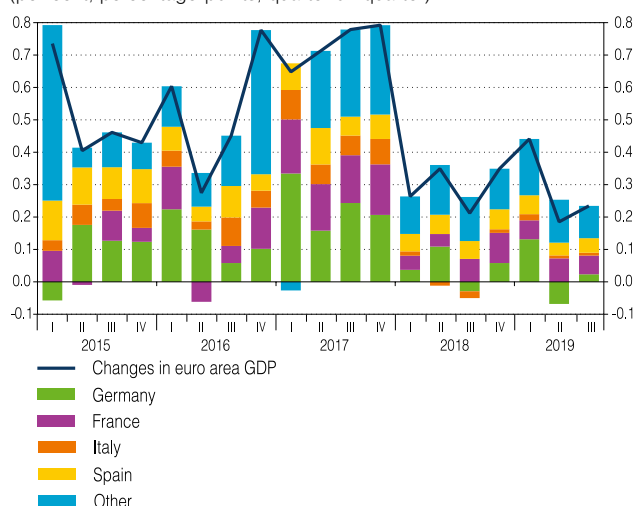
Sources: Eurostat and BNB calculations.

GDP Change and Manufacturing and Services PMIs in the Euro Area
(per cent)
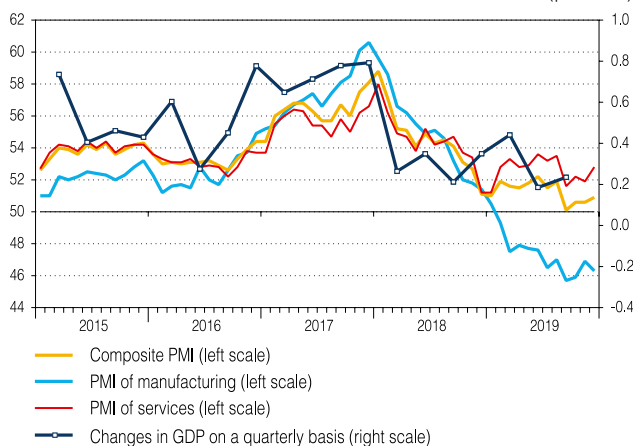
Sources: Eurostat, Markit.

External Environment

Euro Area Unemployment Rate and Employment Growth
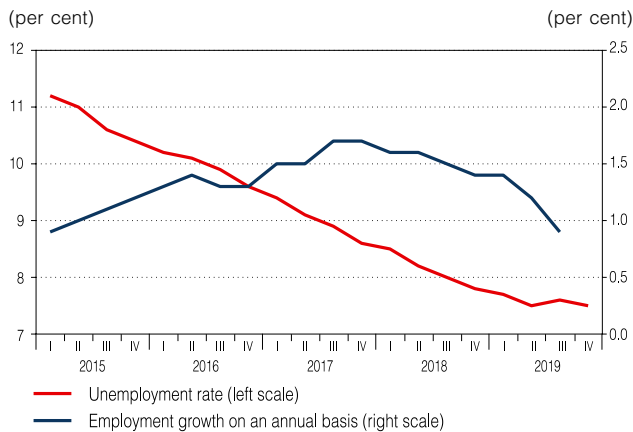
(per cent)   (per cent)

Note: The chart on unemployment in the fourth quarter of 2019 does not include data for December.

Source: Eurostat.

centage point to 1.1 per cent. Growth expectations for 2021 remained unchanged at 1.4 per cent, matching its forecast for 2022. According to the ECB, risks to the projection still point to a slower than expected growth, being less pronounced than September 2019 estimates. Risks are associated to geopolitical factors, growing protectionism in international trade and the vulnerability of some emerging market economies.

The ECB euro area harmonized inflation forecasts for 2020 and 2021 was also revised to 1.1 and 1.4 per cent (against the previous projection of 1.0 and 1.5 per cent), reflecting mainly the change in expected price developments of energy products. In 2022 inflation is expected to grow to 1.6 per cent. In the 2020–2022 period core inflation is projected to accelerate, with monetary policy measures, economic growth sustainability and sustainable wage growth in the euro area.

In the fourth quarter the ECB Governing Council made no changes to the reference interest rates and the forward guidance for changing these rates in the future. Over the review period the ECB Governing Council expected interest rates to remain at their present or lower levels until the inflation outlook robustly converge to a level sufficiently close to but below 2 per cent, and the resulting impact of this process on core inflation dynamics.

In the Minutes of the 24 October monetary policy meeting, the importance of reaching consensus on monetary policy vision of the ECB Governing Council was stressed and euro area

Euro Area Inflation Rate

(per cent, on an annual basis)
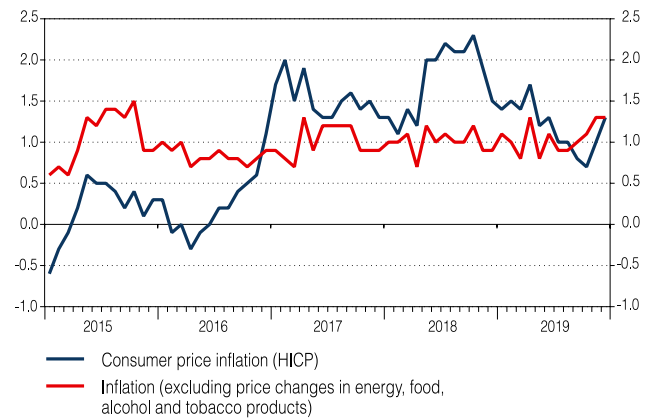
Source: Eurostat.

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

(per cent)

Institu-tion	Date of release	2019		2020		2021	
		latest	previous	latest	previous	latest	previous
ECB	XII.2019	1.2	1.1	1.1	1.2	1.4	1.4
EC	X.2019	1.1	1.2	1.2	1.4	1.2	-

Sources: the ECB, the EC.

Projections of Euro Area Annual Inflation Rate

(per cent)

Institu-tion	Date of release	2019		2020		2021	
		latest	previous	latest	previous	latest	previous
ECB	XII.2019	1.2	1.1	1.1	1.0	1.4	1.5
EC	X.2019	1.2	1.3	1.2	1.3	1.3	-

Sources: the ECB, the EC.

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

(per cent)   (EUR billion)
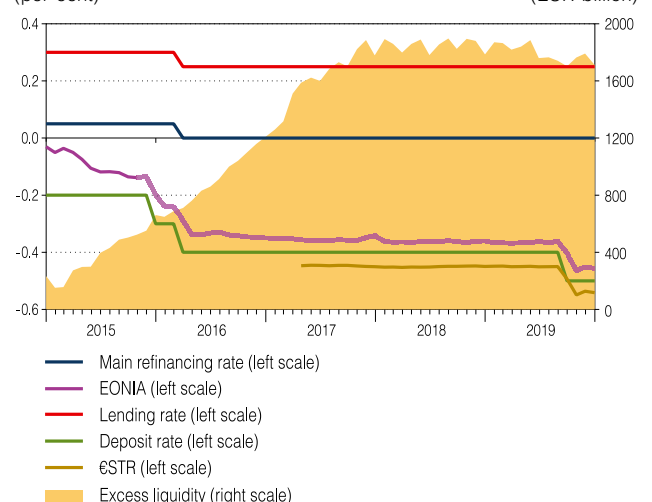
Notes: Between 15 March 2017 and 30 September 2019 €STR data are on the pre-€STR interest rate (preliminary €STR).
Average EONIA and €STR values for the month.

Source: the ECB.

governments were urged to contribute more by fiscal stimulus to support the economic growth. At its monetary policy meeting of 12 December it was announced that a comprehensive review of all aspects of monetary policy strategy would be launched in January 2020, continuing throughout the year.

As of 31 December 2019 the cumulative amount of purchases under the Eurosystem's extended asset purchase programme totalled EUR 2579.5 billion, up EUR 9.7 billion on the end of 2018. As of 31 December 2019 the excess liquidity in the euro area banking system rose to EUR 1711.6 billion against EUR 1702.5 billion at the end of September and the Eurosystem balance sheet figure reached EUR 4692 billion.

Over the fourth quarter of 2019 the average value of the €STR, the short-term euro area's money market rate, was -0.54 per cent. By comparison, over the third quarter the average €STR (preliminary) was -0.48 per cent. In the fourth quarter the average EONIA, computed since 2 October by applying a fixed spread of 8.5 basis points to the €STR[3], was -0.46 per cent compared to -0.38 per cent in the third quarter. The trade volume of overnight deposits in the unsecured money market decreased, with its daily average over the same period coming to EUR 30.8 billion (against EUR 37.5 billion in the third quarter). EURIBOR unsecured deposit rates increased. On 31 December 2019 one-month deposit rates were -0.44 per cent (against -0.46 per cent by end-September), while six-month and twelve-month deposit rates were -0.32 per cent and -0.25 per cent respectively (against -0.39 per cent and -0.33 per cent by end-September).

United States

Over the third quarter of 2019 US real GDP grew by 0.5 per cent on a quarterly basis, as in the previous quarter. Private consumption growth moderated, but continued to make the main positive contribution (0.5 percentage points) to real GDP growth on a quarterly basis. Public sector consumption and investment contributed less, while net exports, changes in inventories

[3] For further detail, see the box entitled Key Characteristics of the €STR, the New Euro Unsecured Overnight Rate, Economic Review, 3/2019.

EURIBOR Dynamics
(per cent)
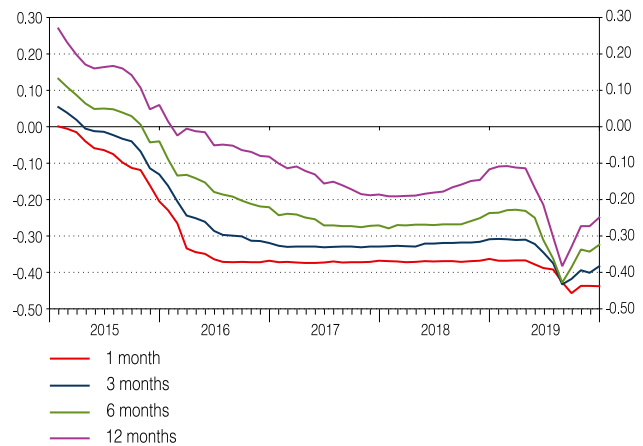
Source: the ECB.

Contribution to US Real GDP Growth by Component (Quarterly)
(per cent; percentage points)
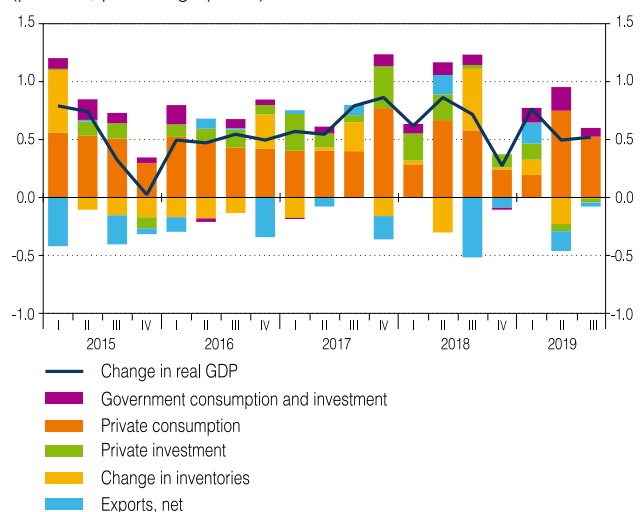
Source: Bureau of Economic Analysis.

and private investment had a neutral contribution to real GDP growth over the review period.

In the fourth quarter of 2019 the US leading economic indicators showed volatile and diverse developments. Over the period ISM-PMI manufacturing index remained slightly below the 50-point threshold in December reaching its lowest level since June 2009. This change of the indicator signalled a significant slowdown of activity in the manufacturing industry over the quarter. In the same period ISM-PMI of services remained over 50 points, its average value being higher than the average value for the third quarter. Consumer confidence indicator saw divergent changes over the fourth quarter. The Conference Board Consumer Confidence Index matched its third quarter's level, while the equivalent University of Michigan Consumer Sentiment Index indicated an increase. Average values of both indicators for 2019 were lower than in 2018. US household consumption and retail sales in the fourth quarter grew at rates close to those reported in the prior quarter. Data on the construction sector showed an accelerating economic activity as compared with the third quarter. Overall, mid-January 2020 data signal GDP growth over the fourth quarter similar to that of the third quarter.

Over the fourth quarter of 2019 the annual inflation measured by the personal consumption expenditure index (PCE) accelerated, but remained slightly under the 2 per cent target level of the US Federal Reserve System. In November 2019 the annual inflation according to this price index was 1.5 per cent, from 1.4 per cent in October and 1.4 per cent in the third quarter. Concurrently, core inflation (excluding food and fuels) slightly decelerated on an annual basis to 1.6 per cent against 1.7 per cent in October and 1.7 per cent on average over the third quarter. CPI data – the other key US inflation indicator – pointed to an acceleration in annual inflation to 2.3 per cent in December from 2.1 per cent in November and 1.8 per cent on average in the third quarter, resulting from price increases in fuels, housing expenditure and medical care. The annual growth rate of the core PCE price index, excluding food and energy products, stabilised at 2.3 per cent in December for a third consecutive month, matching the average in the third quarter. Preliminary data for January 2020 reflecting expectations

US Manufacturing and Services ISM-PMIs and Real GDP Growth (Quarterly)

(per cent)

- PMI of manufacturing (left scale)
- PMI of services (left scale)
- Real GDP rate of change on a quarterly basis (right scale)
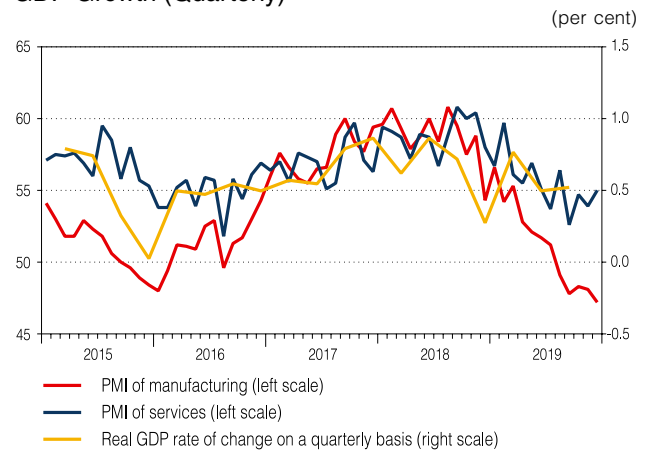
Sources: Institute for Supply Management, Bureau of Economic Analysis.

US Consumer Confidence Indices

(2000 = 100)

- Consumer confidence
- Assessment of economic situation in the following six months
- Assessment of economic situation in the last six months
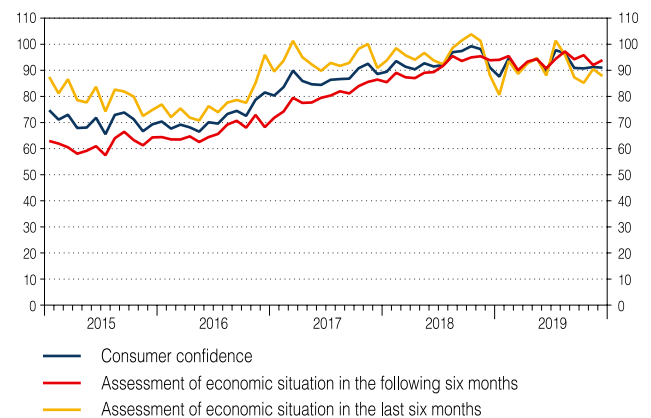
Source: The Conference Board.

US Inflation Rate

(per cent, on an annual basis)

- Inflation
- Inflation measured by PCE, excluding energy and food expenditure
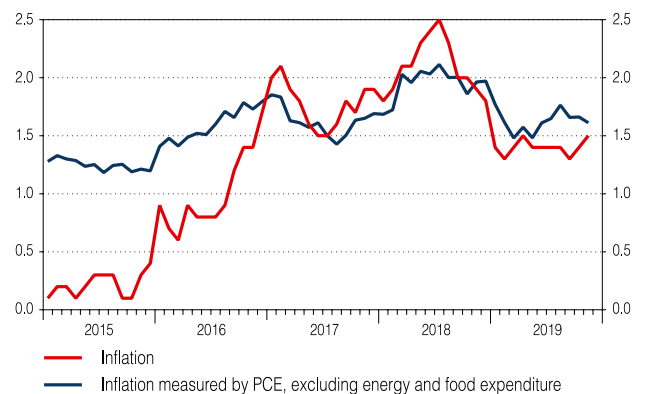
Note: Inflation is measured by the personal consumption expenditure deflator.

Source: Bureau of Economic Analysis.

about the change in consumer prices in one to five year horizon, which are part of the consumer confidence index of the University of Michigan, showed an increase both in short-term and long-term inflation expectations.

The US labour market conditions improved slightly in the fourth quarter of 2019 from the previous period, but throughout the year employment growth slowed down significantly compared with 2018. The average quarterly number of new employees in the US non-agricultural sector in the fourth quarter of 2019 increased on the third quarter and was 191,000, which was considerably lower than the average for 2018 (223,000). The average US unemployment rate went down over the fourth quarter to 3.5 per cent from 3.6 per cent in the third quarter. The US participation rate rose to 63.2 per cent on average in the fourth quarter from 63.1 per cent in the third quarter of 2019. Current employment data suggest that over the fourth quarter of 2019 US labour market conditions in the services sector remain favourable, while in the manufacturing they continue to worsen.

Taking into account labour market developments and increasing risks to US economic growth and inflation, in October the US Federal Open Market Committee (FOMC) decided to cut for the third time the federal funds rate corridor by 25 basis points to 1.50–1.75 per cent. The Committee announced that it will make no changes to its monetary policy unless the economic environment changes significantly. At its last meeting for 2019, held in December, the FOMC decided unanimously to maintain the rate target range. Decisions in October and December were expected by market participants and they were almost entirely reflected in financial asset prices by the time of their announcement.

Following the December meeting of the Committee the median of FOMC members' individual forecasts about the expected level of the federal funds rate showed a decrease by 25 basis points for each year until the end of 2022 compared with their September 2019 forecast. The median reflected the expectations of maintaining the target rate at its current level of 1.50–1.75 per cent in 2020 and increasing the reference rate by 25 basis points in 2021 and 2022. The estimate of the long-run equilibrium level of federal funds rate remained unchanged

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

(per cent)　　　　　　　　　　　　(new employees, thousand)

Unemployment rate (left scale)

Average number of new employees in the non-farm sector for the last three months, on a monthly basis (right scale)

New employees in the non-farm sector, total (on the prior month, right scale)
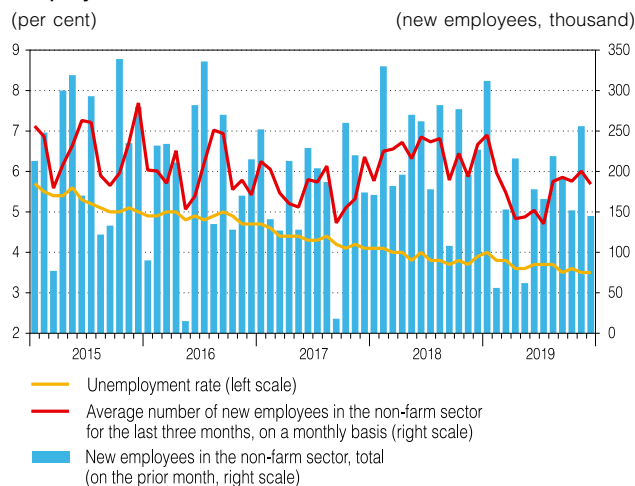
Source: Bureau of Labor Statistics.

at 2.50 per cent or by 75 basis points above the top of the target range for the reference rate.

China

Over the fourth quarter of 2019 China's real GDP grew by 6.0 per cent on an annual basis and by 1.5 per cent on a quarterly basis against 6.0 per cent and 1.4 per cent respectively in the third quarter. Dynamics by economic sector pointed to a recovery of real growth rate of industrial output to 6.9 per cent on an annual basis in December against 6.2 per cent in November and 4.7 per cent in October. Concurrently, economic activity growth moderated to 6.6 per cent on an annual basis, from 7.1 per cent in the third quarter. Throughout 2019 China's real GDP grew by 6.1 per cent against 6.6 per cent in 2018.

In November and December 2019 the average values of services and manufacturing PMI in China increased, signalling economic growth stabilisation in the first quarter of 2020. In November and December the values of manufacturing PMI came to 50.2 points following six consecutive months below the 50-point threshold. Sub-components of manufacturing PMI for new export orders, new orders and current output rose in December 2019 mainly due to the positive signals for trade negotiations between China and the USA and the USA repealed introduction of new duties planned for 15 December 2019. Services PMI in the fourth quarter fluctuated between 52.8 and 54.4 points, its average value almost matching that of the third quarter.

In the fourth quarter of 2019 Chinese CPI rose to 4.5 per cent on an annual basis, its dynamics reflecting mainly the accelerated growth in food prices. In November the annual inflation rate of food component increased to 19.1 per cent, while in December it decelerated minimally to 17.4 per cent. High growth rates in food prices over the fourth quarter of 2019 were driven largely by the continuous price increase in pigmeat – by nearly 100 per cent on an annual basis. The growth rate of non-food prices accelerated to 1.3 per cent on an annual basis in December against 1.0 per cent in November and 0.9 per cent in October.

Manufacturing and Services PMIs and GDP Growth (Quarterly) in China
(per cent)

GDP changes on a quarterly basis (left scale)
PMI of services (average for the quarter)
PMI of manufacturing (average for the quarter)
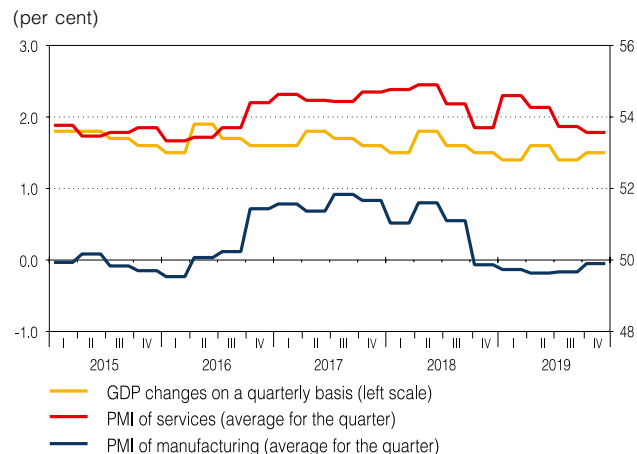
Sources: National Bureau of Statistics of China and China Federation of Logistics and Purchasing.

Manufacturing PMI in China and Major Components

Production
Employment
New export orders
Manufacturing PMI
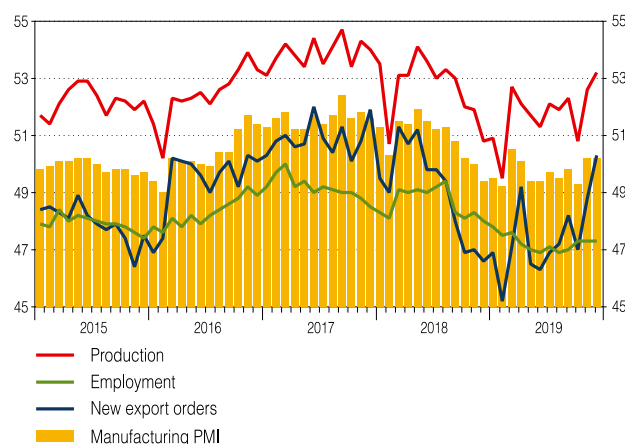
Source: China Federation of Logistics and Purchasing.

China's Inflation Rate
(per cent, on an annual basis)

Consumer price inflation
Core inflation (excluding price changes in energy and food)
Food inflation
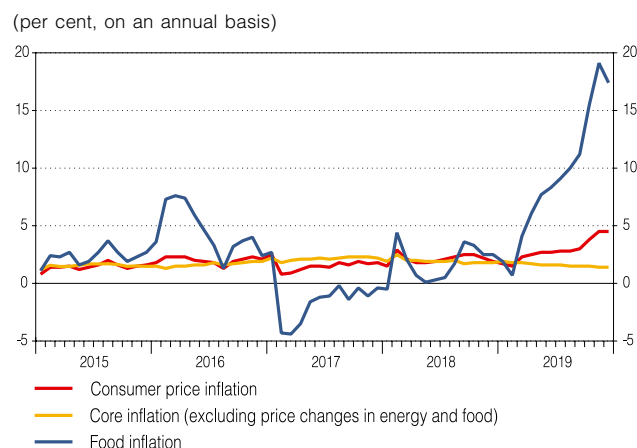
Source: National Bureau of Statistics of China.

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

(per cent, on an annual basis)

- Real estate investment
- Construction investment (infrastructure)
- Manufacturing investment
- Investment (total)

Source: National Bureau of Statistics of China.

House Prices in China

(per cent, on an annual basis)

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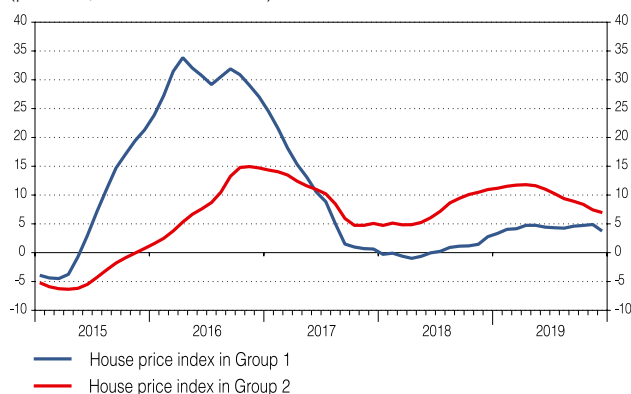
Note: Group 1 includes the four largest cities: Beijing, Shenzhen, Guangzhou, and Shanghai. Group 2 includes the capitals of the rest provinces.

Source: National Bureau of Statistics of China.

Over the fourth quarter annual growth rate of total investment in China's economy slowed down, reflecting investment growth moderation in real estate.

In October and November annual growth of house prices in China continued to slow down due to weaker price rises in provincial centres, while house prices in the largest four cities accelerated slightly on an annual basis. The major factor behind the slower house price rise in provincial centres was prudential measures undertaken in certain regions of China for limiting the demand by the tightening of credit conditions in mortgage lending.

In the fourth quarter of 2019 the People's Bank of China made no changes to its monetary policy, but on 1 January 2020 it decided to cut minimum required reserve rates of commercial banks by 50 basis points to 12.5 per cent as of 6 January. According to the assessment of the Central Bank, this will increase banks' lending capacity by some CNY 800 billion (USD 115 billion[4]).

People's Bank of China Minimal Required Reserve Rate

(per cent, on an annual basis)

- Minimum required reserve rate – large banks
- Minimum required reserve rate – small banks
- Minimum required reserve rate – municipal and regional banks

Source: People's Bank of China.

International Commodity Prices

Crude Oil

In 2019 the Brent crude oil price declined year-on-year. Over the fourth quarter of 2019 the Brent crude oil was traded at an average price of USD 62.7 *per* barrel, down 7.0 per

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[4] Referred to as the US dollar below.
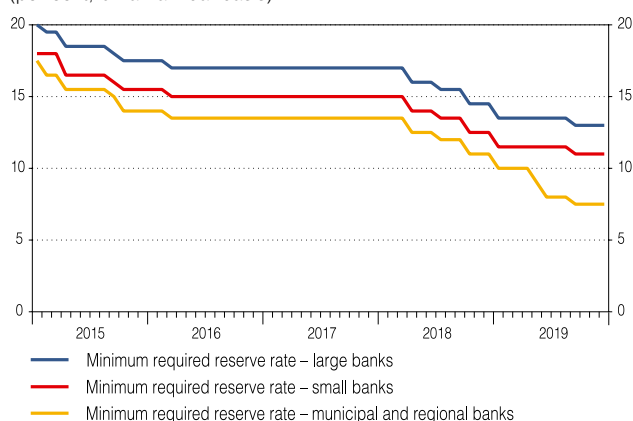
cent (-4.1 per cent in euro) on the correspond-
ing period of 2018. Lower oil prices reflected
subdued global oil demand owing to the global
trade and industrial output downturn. The annual
decline in oil price over the fourth quarter was
curbed by factors such as the Saudi Arabia oil
refinery attacks, OPEC+ agreement reached at
the end of the year to deepen oil output cuts in
the first quarter of 2020[5] and market participants'
expectations of reaching a preliminary trade
agreement between the USA and China.

As of December 2019 market expectations of
oil prices for the first half of 2020 were lower
than the average price on international markets
in 2019 and accounted for USD 62.6 *per* bar-
rel. This is in line with the International Energy
Agency expectations of oil supply exceeding
global demand in early 2020 despite OPEC+
additional restrictions and weaker oil production
outlook for the USA, Brazil and Ghana.

Commodity and Food Prices

In 2019 international metal price index fell from
2018 level, showing divergent quarter-on-quarter
dynamics. In the fourth quarter of 2019 the
US dollar price index reported a 1.4 per cent
decline on an annual basis. This was driven by
the lower demand for metals due to weak global
industrial production and deepening trade con-
flict between the USA and China in the first nine
months of 2019. In the October–December 2019
period metal prices exhibited a slight increase
in euro compared with the corresponding period
of 2018, reflecting the euro appreciation *vis-à-vis*
the US dollar.

There was divergent dynamics across the
sub-components of the combined metal price
index on an annual basis over the last quarter
of 2019. Aluminium price dropped significantly
both in US dollars and euro due to the weak
worldwide demand for motor vehicles and
increased aluminium production in China thanks
to a lighter than expected local environmental
regulations. The price of copper, which is of key
importance to Bulgarian exports, also decreased
on an annual basis in US dollars and euro. Cop-

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[5] On 6 December 2019 OPEC and Russia along with other
major non-OPEC producers agreed to cut oil output by
2.1 million barrels per day (instead of 1.2 million barrels), with
the deal coming into force on 1 January 2020 until end-March
2020.

Brent Crude Oil Price

USD *per* barrel
EUR *per* barrel
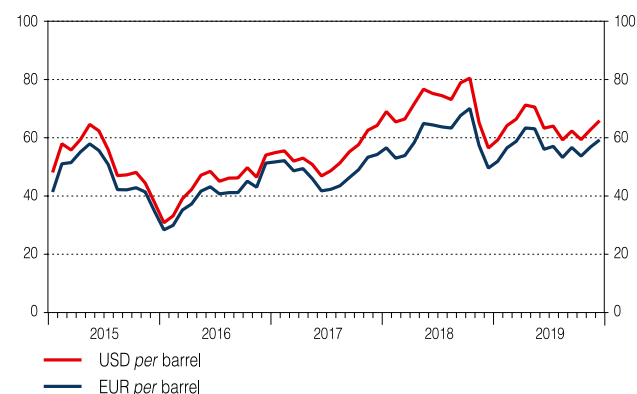
Source: the World Bank.

Brent Crude Oil Futures Prices
(average monthly price of contract, USD *per* barrel)

June 2019
September 2019
December 2019
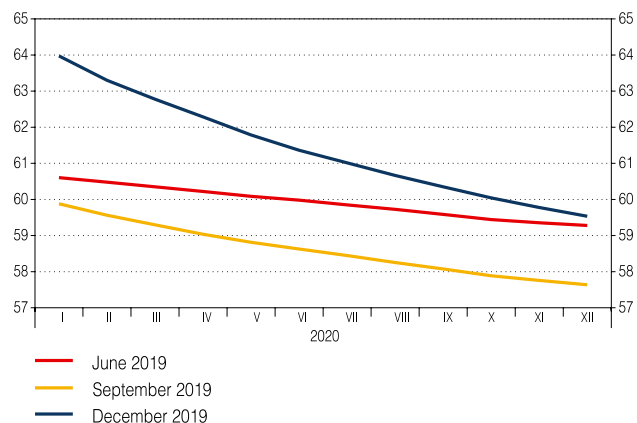
Source: JP Morgan.

per depreciation reflected the slower industrial production in China consuming about half of the world copper production. On the other hand, nickel prices rose significantly both in US dollars and euro on an annual basis in the last quarter of 2019. This dynamics was affected by market participants' concerns of lower supply after the ban on nickel exports announced by Indonesia came into effect earlier.

In the first half of 2020 market expectations of metal prices are for annual decreases in both dollars and euro.

Over the fourth quarter of 2019 food prices in US dollars posted an annual growth of 5.8 per cent (9.0 per cent in euro). The average food price index in US dollars for 2019 decreased compared to 2018. The meat showed sustainable rise in the last three months of 2019, reflecting the continued spread of African swine fever worldwide[6]. Concurrently, the price of wheat, which is essential for the Bulgarian exports of goods, reported a slight fall in US dollars on an annual basis over the last quarter of 2019. Potential factor behind this decline are the expected high levels of the harvest in the 2019/2020 season.[7]

Market participants' expectations of food prices over the projection horizon point to a rise both in US dollars and euro on an annual basis.

Based on the international commodity price dynamics, developments in the terms of trade in Bulgaria were positive in the first nine months of 2019. Our assessment suggests that they will remain positive until the end of 2019 and will worsen in the first quarter of 2020. In the second quarter of 2020 the terms of trade are expected to turn positive again.

Price Indices of Major Raw Materials and Commodity Groups

Metals
(per cent, percentage points)

Legend: Global metal index (per cent); Aluminium; Copper; Lead; Nickel; Tin; Zink; Other metals

Food
(per cent, percentage points)

Legend: Global food index (per cent); Cocoa; Maize; Coffee; Soybeans; Sugar; Wheat; Veal; Porc; Other food
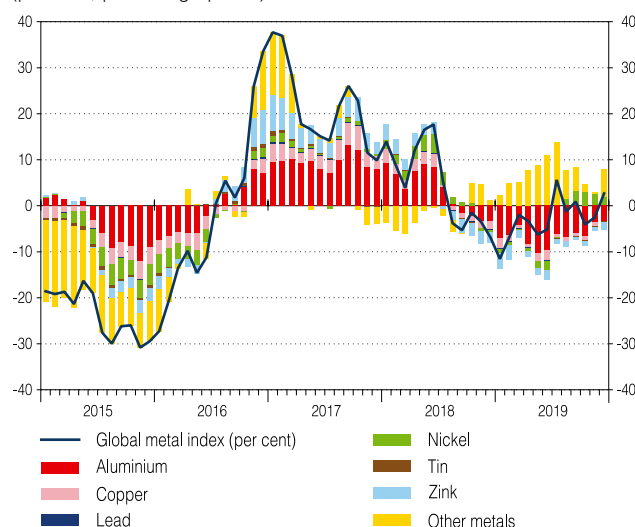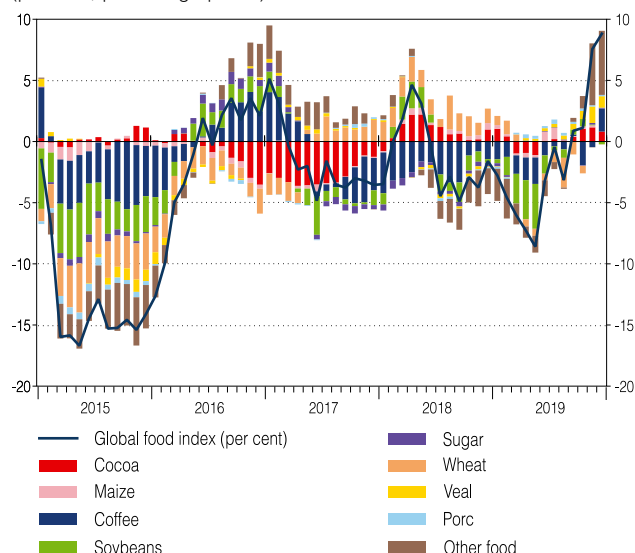
Note: Annual rate of change (per cent) and contribution (percentage points) by sub-components to respective price indices measured in US dollars.

Sources: the ECB and BNB calculations.

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[6] The disease was registered in China in August 2018.

[7] For more details: *Wheat Outlook, WHS-19L, December 12, 2019, USDA, Economic Research Service*.

2. Financial flows, money and credit

Despite the limiting effect of the international environment on external demand for Bulgarian goods and services, in the first eleven months of 2019 real goods exports rose from the same period of 2018. This increase along with subdued imports dynamics and favourable terms of trade contributed largely to the growth in the surplus on the current and capital account of Bulgaria's balance of payments. In the context of a continuous increase in economic activity and rising profits of corporations we project a gradual increase in the primary income deficit as a share of GDP for the first half of 2020. This is going to be the main driver of the expected decrease in the overall surplus on the current and capital account on an annual basis as a share of GDP.

Retained favourable developments in the labour market and continued growth in labour income in the absence of sufficiently safe alternatives to bank savings contributed to the retention of comparatively high growth rates in non-government sector's deposits over the first eleven months of the year. Since the end of the third quarter, the accelerating upward trend in credit growth to non-financial corporations has been reinstated mainly driven by the increasing amount of regular corporate loans. The growth rate of household credit continued to accelerate gradually, with housing loans contributing most significantly.

In line with expectations of a continued rise in labour income and a decrease in the unemployment rate amid a preserved household propensity to save, non-government sector's deposits are projected to maintain their comparatively high growth rates in the first half of 2020. In the background of continued high inflow of attracted funds in the banking system, a favourable domestic macroeconomic environment and low lending interest rates, growth in credit to corporations and households is also anticipated to remain relatively high over the projection horizon.

External Financial Flows

From January to November 2019 positive current account balance[8] rose significantly compared to the respective period of 2018, reaching 9.9 per cent of the GDP. Surplus increase was mainly driven by the trade balance shift from a deficit to a surplus, the other sub-items contributing to a lesser extent. Higher growth of real exports of goods compared to that of real imports along with favourable terms of trade for the Bulgarian economy were the major factors behind the trade balance surplus. Change in trade flows in real terms reflected primarily country-specific one-off factors. In the first eleven months of the year the surplus in services trade rose on the corresponding period of 2018 reflecting both the favourable developments in prices and smaller decline in real exports of services compared with that in imports.[9] The deficit on the net

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[8] The analysis of balance of payments flows employs information from its analytical reporting. Preliminary data.

[9] For a more detailed analysis of foreign trade flows and services trade, see Chapter 3, Exports and Imports of Goods and Services Section.

Flows on Main Balance of Payments Accounts
(EUR million)

	2017	2018	On an annual basis as of November 2019
Current account	1 825.0	3 002.2	5 893.4
Trade balance	-765.8	-1 858.0	-52.0
Services, net	3 052.8	3 560.6	4 019.6
Primary income, net	-2 316.2	-652.5	-48.3
Secondary income, net	1 854.2	1 952.1	1 974.1
Capital account	530.4	601.5	850.5
Financial account	2 423.2	1 883.2	2 826.0
Change in reserves	-98.9	1 361.6	413.5

(per cent of GDP)

	2017	2018	On an annual basis as of November 2019
Current account	3.5	5.4	9.9
Trade balance	-1.5	-3.3	-0.1
Services, net	5.8	6.3	6.7
Primary income, net	-4.4	-1.2	-0.1
Secondary income, net	3.5	3.5	3.3
Capital account	1.0	1.1	1.4
Financial account	4.6	3.4	4.7
Change in reserves	-0.2	2.4	0.7

Note: Data in tables as of November 2019 are accumulated for the last 12 months.

Source: the BNB.

primary income item decreased in the January–November period mainly due to the lower dividends paid and distributed profits to non-residents. Net secondary income surplus slightly increased in the period under review compared to the first eleven months of 2018 owing to higher remittances by Bulgarians working abroad.

Positive balance on capital account rose in the January–November 2019 period mainly as a result of higher capital transfers received under EU operational programmes.

Reflecting the above developments in current and capital account flows, in November 2019 the total surplus accumulated for the last 12 months rose from December 2018, with trade deficit decline contributing most substantially.

Over the first half of 2020 the current account surplus is expected to shrink as a share of GDP on an annual basis[10] compared to November 2019, mainly due to the projected gradual growth in the net primary income deficit. This dynamics is expected to reflect the reported accelerated gross operating surplus in the total economy in 2019 compared to 2018. With the progress of EU operational programmes implementation of the programming period ending in 2020 the surplus on the capital account is expected to increase further on an annual basis as a percentage of GDP over the projection horizon.

The financial account balance remained positive in the January–November 2019 period, with foreign assets increasing much stronger than foreign liabilities. All sectors contributed positively to the foreign assets developments. Other sectors[11] posted the highest increase in foreign assets, acquiring long-term debt securities issued by non-residents. General government foreign assets also rose mainly as a result of the transaction carried out by the government in August in the context of an investment project for the acquisition of a new type of fighter aircraft for the amount of USD 1.2 billion. Banks boosted their foreign assets mostly in the form

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[10] It should read the current and capital account balance for the last four quarters.

[11] It should read sectors other than general government, banks and the central bank.

Current and Capital Account Dynamics and Contribution by Component (on an Annual Basis)
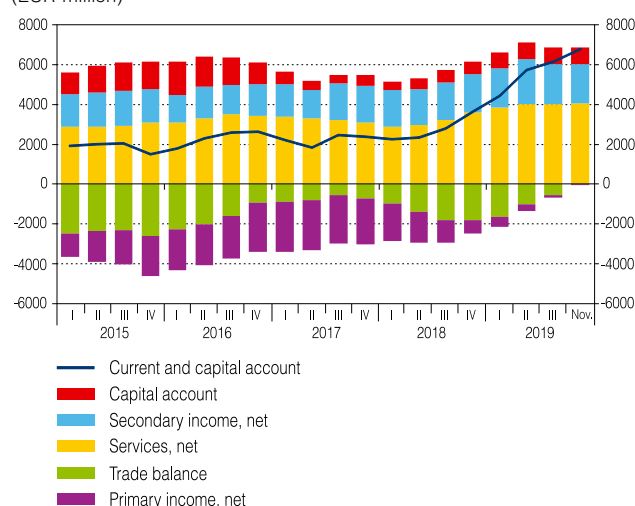
(EUR million)

- Current and capital account
- Capital account
- Secondary income, net
- Services, net
- Trade balance
- Primary income, net

Notes: As of each quarter, the chart shows accumulated balances on items for the last four quarters. Chart data as of November 2019 are accumulated for the last 12 months.

Source: the BNB.

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

(EUR million)

- Financial account
- Direct investment, net
- Portfolio investment, net
- Other
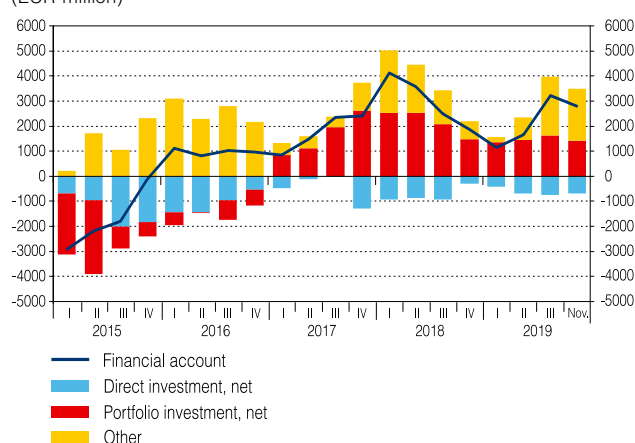
Notes: The Other item includes Other Investments, net, and Financial Derivatives (Other than Reserves) and Employee Stock Options, net. As of each quarter, the chart shows accumulated balances on items for the last four quarters. Chart data as of November 2019 are accumulated for the last 12 months.

Source: the BNB.

Financial Flows, Money and Credit

of foreign currency and deposits[12]. Over the review period financial account foreign liabilities increased only in other sectors reflecting mainly the attracted direct investment. In November financial account balance accumulated in the last 12 months also remained positive.

Between January and November 2019 foreign direct investment liabilities (reporting FDI inflows into Bulgaria) slightly declined to EUR 1023.7 million on the corresponding period of 2018.[13] In November inflows on direct investment liabilities accumulated for the last 12 months in Bulgaria amounted to EUR 1.0 billion, remaining largely unchanged from December 2018.

Reflecting balance of payments net current, capital and financial account flows, Bulgaria's gross international reserves[14] accumulated in the last 12 months increased by EUR 413.5 million in November 2019. The international reserve coverage of the average nominal imports of goods and non-factor services over the last 12 months came to 8.8 months in November, posting an increase on 2018 (8.6 months).

In October 2019 Bulgaria's gross external debt rose by EUR 1313.7 million from the end of 2018 to EUR 34,469.5 million (57.9 per cent of GDP). All sectors posted a debt increase except for the general government sector, where external debt repayments contributed most to external debt fall. The share of long-term debt in Bulgaria's total gross external debt was 75.7 per cent in October, a slight increase on the end of 2018.

Between January and October 2019 the external debt held by Bulgarian residents increased from the first ten months of 2018 amid maintained low interest rates in international financial markets. New external debt increased over the period reflecting both higher new external debt of banks and increased intercompany lending. The first ten months of the year saw a decline in foreign debt interest payments compared with the corresponding period of 2018, indicating that terms for servicing external obligations of Bulgarian residents remained favourable.

[12] For a more detailed analysis of bank operations, see Chapter 2, Monetary and Credit Aggregates Section.

[13] Preliminary data subject to revisions which usually show an increase in foreign direct investment liabilities.

[14] Valuation adjustments and price revaluation excluded.

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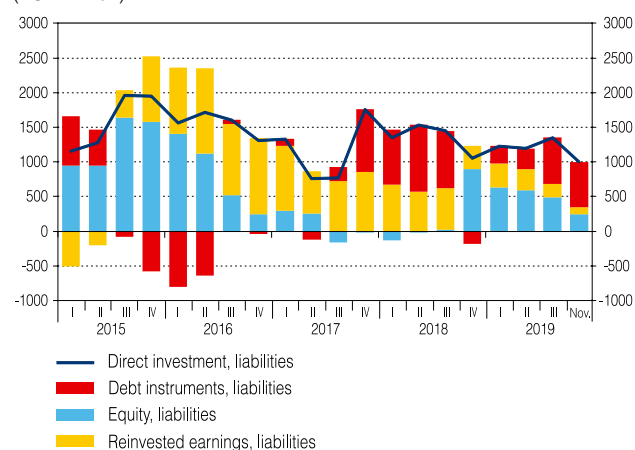
(EUR million)

Notes: As of each quarter, the chart shows accumulated balances on items for the last four quarters. Chart data as of November 2019 are accumulated for the last 12 months.
Source: the BNB.

Gross External Debt in October 2019

(EUR million)

	Amount	Change	
		Since December 2018	for the last 12 months
General government	5 400.6	-140.3	-200.3
Central bank	0.0	0.0	0.0
Banks	4 842.7	239.8	174.7
Other sectors	10 764.3	302.1	-222.9
FDI – intercompany loans	13 462.0	912.0	335.0
Total	34 469.5	1 313.7	86.5

Note: For further information on individual institutional sectors, see the Statistics section, External Sector/Gross External Debt sub-section of the BNB website.
Source: the BNB.

Gross External Debt As a Share of GDP

(per cent of GDP)
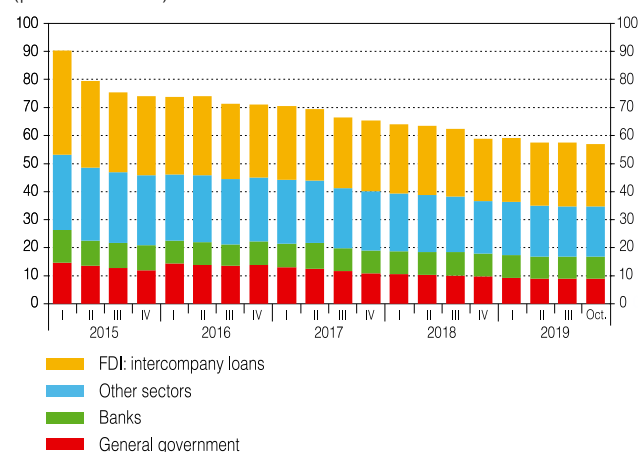
Notes: For further information on individual institutional sectors, see the Statistics section, External Sector/Gross External Debt sub-section of the BNB website. Data as of October 2019 are based on accumulated GDP data for the last four quarters as of September 2019.
Source: the BNB.

Monetary and Credit Aggregates

Continuous strong inflows of funds attracted from residents in the banking system contributed to the maintaining of a relatively high growth rate of broad money in the first eleven months of 2019 accounting for 9.3 per cent in November (8.8 per cent at the end of 2018). Broad money growth was fostered by the continued favourable labour market developments and further increase in labour income including the accelerated growth rate of gross operating surplus in the total economy. Despite historically low interest rates on deposits, the lack of sufficiently safe alternatives to bank savings underpinned the observed dynamics of monetary aggregate M3. Low interest rates were a determining factor for firms and households to continue to save mostly in the form of overnight deposits. Quasi-money continued to contribute to M3 growth though to a lesser extent. The contribution of money outside MFI to the total growth of broad money remained stable throughout the year.

Non-government sector's deposits[15] continued to occupy the bulk of the total amount of funds attracted by banks, their share reaching 87.3 per cent on average for the first eleven months of 2019. In November their annual growth rate accelerated to 8.8 per cent (7.3 per cent in December 2018). This dynamics was mainly driven by non-financial corporation deposits posting a rise of 11.4 per cent on an annual basis as of November. The contribution of household deposits remained relatively stable throughout the year, their annual growth rate reaching 8.3 per cent as of November. In the first eleven months of the year both corporations and households again preferred to save mostly in national currency.

The effective implicit rate of minimum required reserves[16] remained at levels similar to the

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[15] Non-government sector's deposits include deposits of households, non-financial corporations and financial corporations. Deposits of households and non-financial corporations (95.9 per cent on average for the last 12 months as of November 2019) comprise the major share of all non-government sector's deposits, and the analysis therefore is focused on these two sectors.

[16] 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 reserve base, from non-residents 5 per cent and from the state and local government budgets 0 per cent.

Annual Rate of Change in M3 and Contribution by Component
(per cent, percentage points)

- M3
- Deposits redeemable at notice up to 3 months
- Deposits with an agreed maturity up to 2 years
- Overnight deposits
- Currency in circulation outside monetary financial institutions
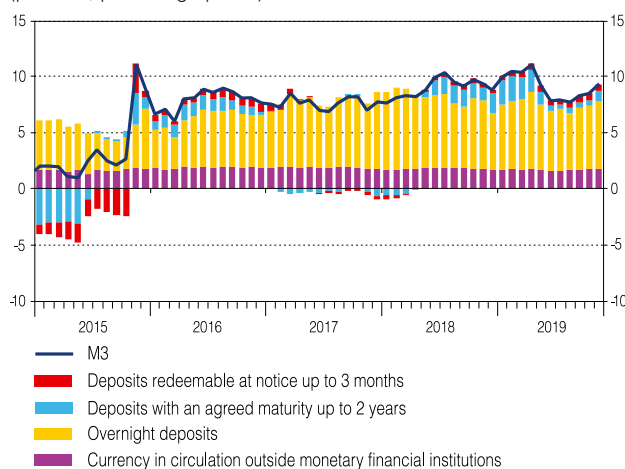
Notes: The marketable instruments component is not shown on the chart due to its insignificant contribution to broad money change. The annual growth rate of M3 in November 2015 reflects the exhausted base effect of KTB removal as a reporting unit from the monetary statistics in November 2014.

Source: the BNB.

Annual Growth of Non-government Sector's Deposits and Contribution by Sector
(per cent, percentage points)

- Deposits of the non-government sector
- Financial corporations
- Non-financial corporations
- Households
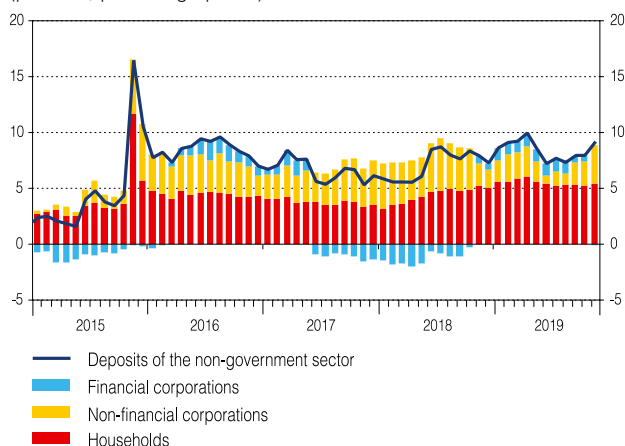
Note: The annual growth rate of non-government sector's deposits in November 2015 reflects the exhausted base effect of KTB exclusion as a reporting unit from monetary statistics since November 2014.

Source: the BNB.

previous year's levels, reflecting the continued high inflow of attracted funds from residents in the banking system in the January to November 2019 period. In November it was 9.42 per cent (9.40 per cent in December 2018) with bank deposits with the BNB accounting for 8.44 percentage points in the fulfilment of minimum required reserves, and the remaining 0.98 percentage points forming recognised cash balances.

The annual growth of reserve money slowed down to 5.4 per cent in November (10.1 per cent at the end of 2018). This dynamics largely reflected the year-on-year decline in banks' reserves due to reduction of banks' excess reserves. Banks' excess funds over the required minimum of reserve assets under Ordinance No 21 continued to follow a gradual downward trend in the first eleven months of the year and in November this excess accounted for 23.6 per cent of the minimum required reserves on an average daily basis (33.1 per cent in December 2018). The ECB Governing Council's decision of September 2019 to cut the interest rate on the deposit facility by 10 basis points to -0.50 per cent leading to a decline in the interest rate on banks' excess reserves with the BNB to -0.70 per cent, had no material effect on the volume of excess reserves.[17] Lower bank funds in TARGET2 influenced to a much lesser extent the decrease in bank reserves on an annual basis as of November. Concurrently, minimum required reserves' amount continued to grow due to a rise in deposit base.

In the first eleven months of the year the annual growth rate of banknotes and coins in circulation remained similar to that observed at the end of the prior year, reaching 10.5 per cent in November (10.3 per cent at the end of 2018). Increasing household labour income and maintained high levels of demand for goods and services in the economy favoured these developments.

Reserve currency (euro) transactions with the BNB are banks' main lev liquidity management instrument under currency board arrangements.

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[17] The methodology for calculating interest rates on accounts with the BNB was changed upon a resolution of the BNB Governing Council effective from 4 October 2017. According to this change the BNB applies on bank excess reserves whichever is lower between 0 per cent and ECB deposit facility rate reduced by 20 basis points.

Reserve Money

(BGN million)   (per cent)

Annual rate of change (right scale)
Volume (left scale)
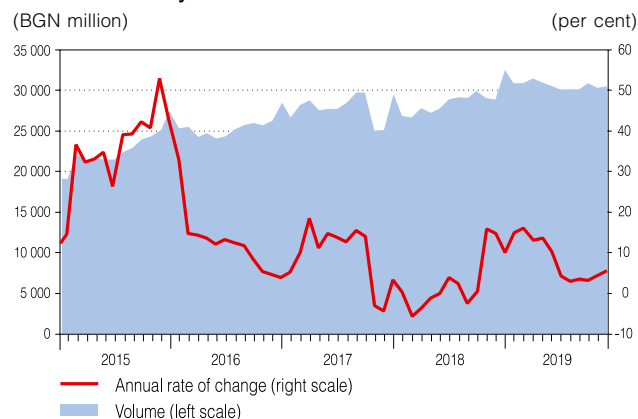
Source: the BNB.

Bank Deposits with the BNB

(BGN million)

Bank deposits with the BNB, total (daily value)
Bank deposits with the BNB, total (average monthly value for the maintenance period)
Minimum required reserves under Ordinance No 21 of the BNB (average value for the maintenance period)
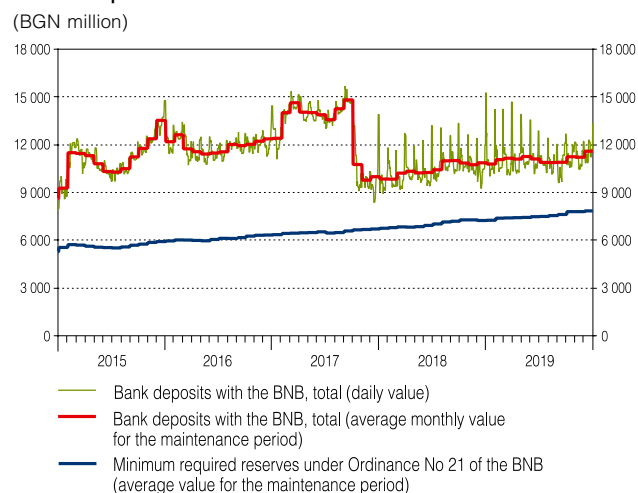
Source: the BNB.

Currency in Circulation

(BGN million)   (per cent)

Annual rate of change (right scale)
Volume (left scale)
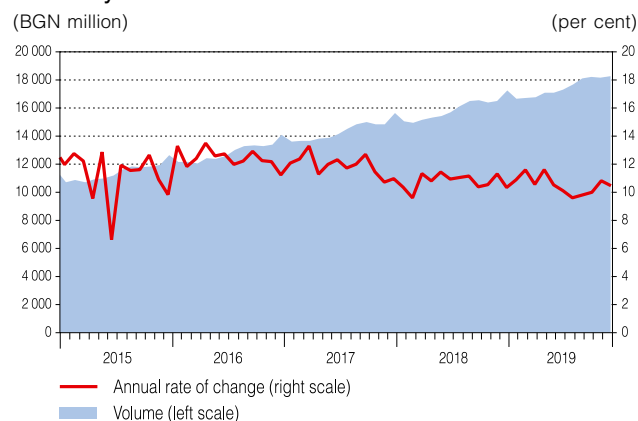
Source: the BNB.

In November 2019 the BNB net purchases of euro from banks amounted to EUR 2.5 billion on an annual basis.

Bank assets grew 8.0 per cent on an annual basis in November 2019[18]. The substantial contribution of higher claims on non-government sector and the significant support of increased foreign assets underpinned the growth of bank assets.

Favourable macroeconomic environment, low lending rates and significant volume of borrowed funds in the banking system contributed to the maintaining of a relatively high growth rate of credit to non-financial corporations and households[19], accounting for 7.0 per cent year on year at the end of November (7.7 per cent at the end of 2018).

Following the slowdown in annual growth rate of credit to non-financial corporations in the March–August 2019 period due to lower amount of bad and restructured loans and slower rise in overdraft, the upward growth trend has been resumed since the end of the third quarter, reaching 5.4 per cent in November (5.4 per cent at the end of 2018). Stronger growth over the last months was largely driven by the rising volume of standard corporate loans. Loans, excluding overdraft, continued to contribute most significantly to the growth of loans to non-financial corporations. New[20] corporate loans followed an upward trend in volumes[21] since the beginning of the year, with a further increase in the share of loans in euro at the expense of loans in national currency. In November 2019 the share of euro loans was 55.6 per cent of total new loans extended to non-financial corporations.

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[18] Data from the sectoral monthly reporting of other monetary financial institutions were used.

[19] Loans represent the bulk of bank claims on the non-government sector with a share of 97.5 per cent on average for the last 12 months in November 2019, and the analysis is 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's 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 94.8 per cent on average in the last 12 months as of November 2019 and therefore developments in these two sectors are addressed.

[20] The terms 'new' and 'newly extended' hereinafter referred to as the statistical category 'new business'.

[21] Based on 12-month moving average.

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

(EUR million)   (EUR million)

- Foreign currency purchased (left scale)
- Foreign currency sold (left scale)
- Net (right scale)
- Net for the last 12 months (left scale)
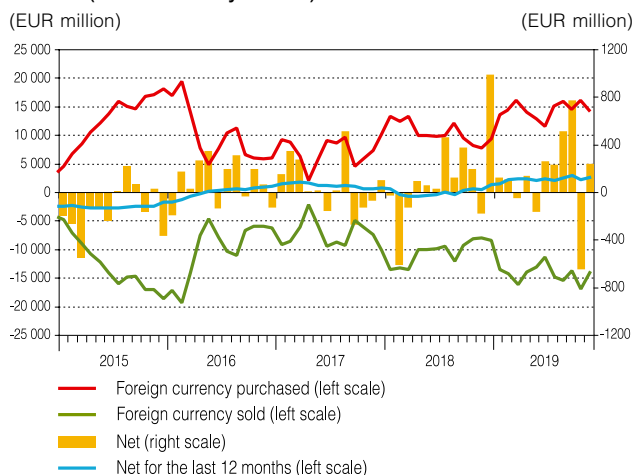
Notes: Net means currency purchased by the BNB minus currency sold by the BNB. Data refer to all bank transactions in foreign currency including liquidity management operations related to the transfer of own funds from lev accounts with the BNB to own accounts with the BNB in euro and *vice versa*.

Source: the BNB.

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

(per cent, percentage points)

- Loans to non-financial corporations
- Loans, overdraft excluded
- Overdraft
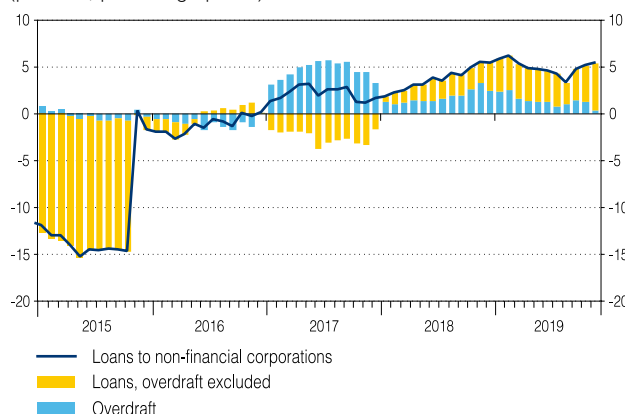
Note: The annual growth rate of non-financial corporations' credit in November 2015 reflects the exhausted base effect of KTB exclusion as a reporting unit from monetary statistics since November 2014.

Source: the BNB.

Since the beginning of the second quarter of 2019 the annual growth rate of loans to households gradually accelerated accounting for 9.5 per cent in November (11.2 per cent at the end of 2018).[22] Housing loans had the major contribution with annual growth accelerating further to 14.4 per cent in November (11.8 per cent at the end of 2018). Concurrently, the contribution of consumer loans remained relatively stable from April to November. Other loans contributed negatively to overall growth of household loans largely as a result of government repayment of loans extended under the National Programme for Energy Efficiency of Multi-family Residential Buildings which exceeded the volume of new loans under this programme. New consumer and housing loan volumes continued to rise in the first eleven months of the year.[23]

Summarised weighted results of the bank lending survey[24] in the third quarter of 2019 suggest that bank standards[25] remained almost unchanged in approving credit applications of corporations. Household credit standards were eased somewhat for consumer loans and slightly tightened for housing loans. Banks reported further easing of credit conditions[26] for corporations and households in terms of interest rates and interest rate spread. At the same time, both consumer loans and loans for house purchase reported an increase in the amount of the required fees and commissions compared to the previous quarter. Major factors behind the

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[22] The inclusion of a new reporting unit in monetary statistics contributed significantly to higher growth rates of household loans in the April to March 2019 period. As from April 2018, the other monetary financial institutions sector includes BNP Paribas Personal Finance S.A. – Bulgaria branch, with balances reclassified from the sector of other financial intermediaries. The reclassification results from BNP Paribas Personal Finance EAD specialised in lending being transformed through merger into the new credit institution. Until March 2018, it was included in the sector of other financial intermediaries for the purposes of monetary statistics.

[23] Based on 12-month moving average.

[24] Bank Lending Survey in Bulgaria is carried out by the BNB on a quarterly basis. Summarised results of the survey are presented through weighting bank responses by their market share in the relevant credit segment.

[25] Credit standards are understood as internal bank guidelines or 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.

[26] 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.

New Loans to Non-financial Corporations (Monthly Volumes)

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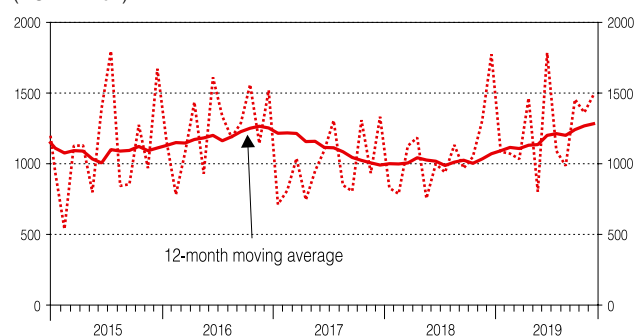
Note: For data characterised by a significant volatility, additionally moving averages computed for suitably selected periods are provided, in order to smooth the fluctuations in corresponding time series and present the trends in their development.

Source: the BNB.

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

(per cent, percentage points)

- Loans to households
- Housing loans
- Overdraft
- Consumer loans
- Other loans
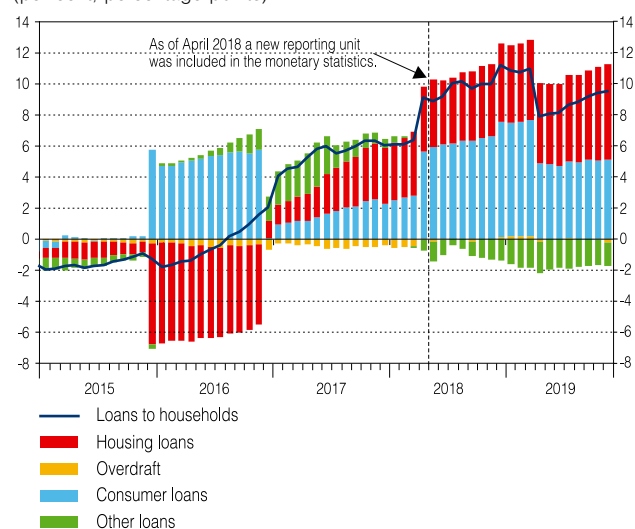
Source: the BNB.

New Loans to Households (Monthly Volumes)

(BGN million)

- Consumer loans
- Housing loans
- Other loans
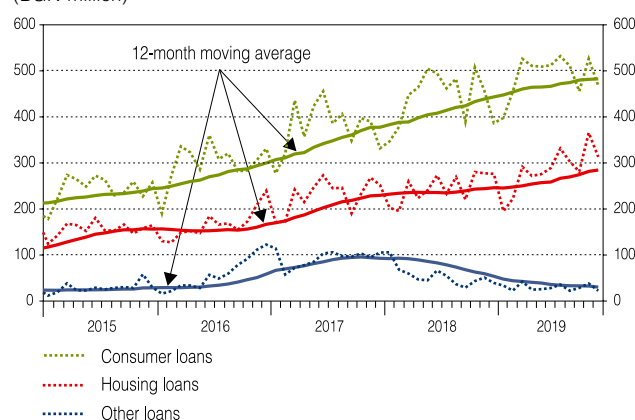
Source: the BNB.

eased banks' lending policy (lending standards and conditions) over the quarter included high liquidity and competition in the banking sector, increasing volume and falling cost of attracted funds, and lowered risk assessment. In particular, risk assessments reflected the overall macroeconomic environment and business climate improvement in the sectors with a large share in the credit portfolio, increased borrowers' solvency and favourable prospects in the housing market. Banks' lower risk appetite was a factor for tighter lending policies regarding small- and medium-sized enterprises and households in the quarter. Banks' expectations for the October–December 2019 period are for slight easing of lending standards for corporate and consumer loans and a slight tightening of standards for house purchase loans.

Demand for loans increased further in the third quarter of 2019. According to the weighted balance of opinions, the needs of funds for investment, working capital and inventories needs were the main reason behind the enhanced demand for corporate loans. According to banks, low interest rates coupled with the need of funds for refinancing, restructuring or renegotiating debts also made a significant contribution to the higher demand for corporate loans. Major factors behind rising demand for consumer loans involved demand for financial resources by households for purchasing current consumption and durable goods, the low interest rates and favourable macroeconomic environment. The surge in demand for housing loans over the quarter was mainly driven by households' need of funds for purchasing first or additional home, favourable housing market prospects and the overall macroeconomic environment. Bank expectations for the October–December 2019 period are for a continuously increasing demand for corporate and household loans.

In the first half of 2020 non-government sector's deposits are expected to accelerate further at comparatively high rates. Projected maintenance of positive trends in the labour market, coupled with continued growth of labour income and lower unemployment rate amid the lack of sufficient safe alternatives to bank savings will contribute to the expected developments in household deposits. Concurrently, sustained historic low interest rates will be a factor limit-

Changes in Demand and Credit Standards
(balance of opinions, percentage points)

a) in corporate loans

Credit standards
Credit demand

b) in consumer loans

Credit standards
Credit demand
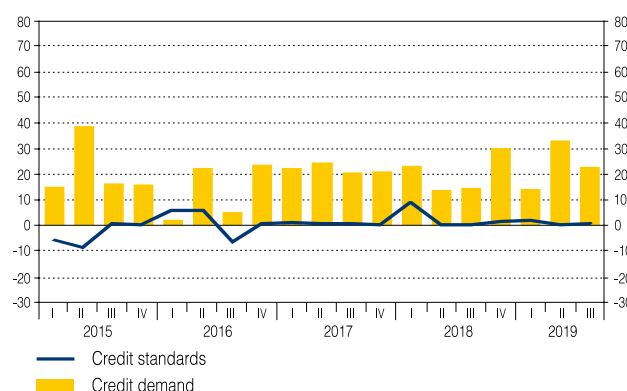
c) in housing loans
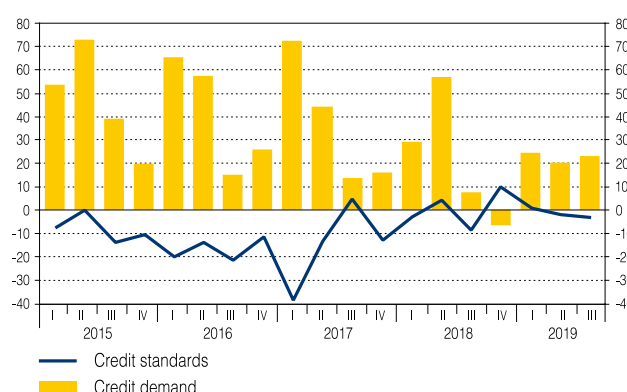
Credit standards
Credit demand
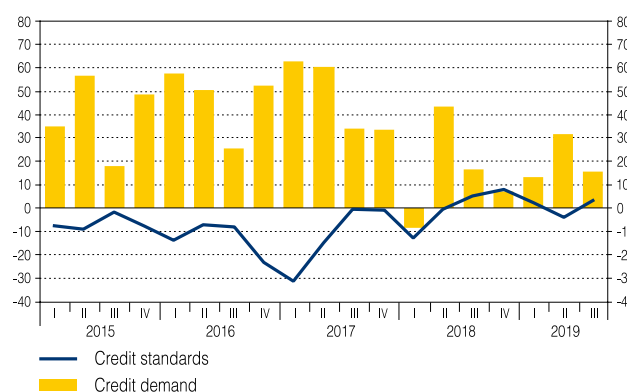
Notes: Regarding credit standards, charts present balance of opinions of banks as a difference in percentage points between the share of banks responding 'tightened' ('significantly' and 'to a certain extent') and that of banks responding 'eased' ('significantly' and 'to a certain extent'). Regarding credit demand, balance of opinions is defined in percentage points as a difference between the share of banks responding 'increased' ('significantly' and 'moderately') and that of banks responding 'decreased' ('significantly' and 'moderately'). All bank responses are weighted by their market share in the relevant credit segment.

Source: the BNB.

ing somewhat non-government sector deposit growth. In the light of continued high inflows of attracted funds in the banking sector, a favourable macroeconomic environment and low lending interest rates, the growth of credit to corporations and households is anticipated to remain relatively high over the projection horizon. Factors with a potentially limiting effect on credit growth include maintained bank policies to sell credit portfolios and to write-off non-performing loans, and further increase in the countercyclical capital buffer rate to 1.0 per cent from the beginning of April 2020.

Interest Rates

The cut in the ECB deposit facility rate in September impacted interbank money market trends by the end of the third quarter of 2019. This resulted in a decrease in the interest rate on banks' excess reserves with the BNB to -0.70 per cent affecting interbank money market trade. As of December LEONIA Plus index[27] accounted for -0.59 per cent, declining by 15 basis points from August. Traded volumes in the lev interbank market rose in the second half-year, mostly in the overnight transactions segment.

Since 2 October 2019 the ECB started publishing a new euro unsecured overnight rate, €STR, which replaced EONIA. The ECB published preliminary data on the index (pre-€STR) for the period from 15 March 2017 to September 2019.[28] Values of LEONIA Plus index are much closer to those of the new €STR, than to EONIA. In December the spread between LEONIA Plus and €STR was negative, coming to -5 basis points.

In the first eleven months of 2019 interest rates on deposits denominated in levs and euro remained at historically low levels. Concurrently, interest rates on USD-denominated deposits were characterised by significant volatility. In November 2019 the average weighted interest rate on new time deposits of non-financial corporations and households was 0.2 per cent,

Interbank Money Market Interest Rates (Monthly Average Amount) on Overnight Deposits
(per cent, percentage points)

€STR
EONIA
LEONIA/LEONIA Plus
Spread between LEONIA/LEONIA Plus and €STR
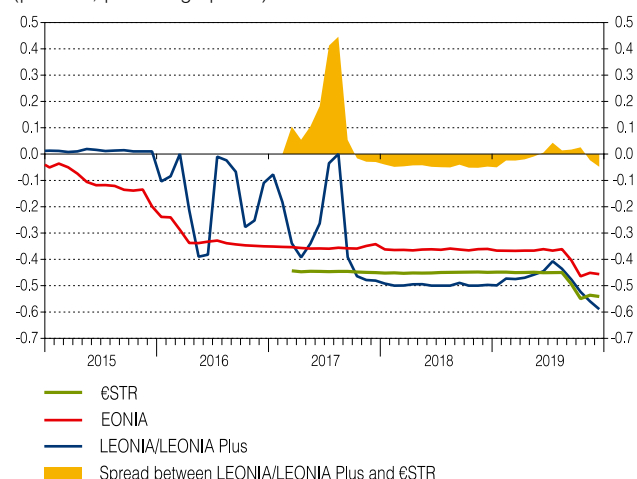
Notes: €STR replaced EONIA on 2 October 2019. EONIA (euro overnight index average) will continue to be computed by applying a fixed spread to the €STR and published until the end of 2021.

LEONIA Plus replaced LEONIA on 1 July 2017. LEONIA Plus monthly values are calculated as an arithmetic average for days when overnight unsecured lending transactions are concluded in the interbank market in levs.

Sources: the BNB and the ECB.

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[27] LEONIA Plus (LEv OverNight Interest Average Plus) is a reference rate of unsecured overnight deposit transactions in Bulgarian levs on the interbank market.

[28] For further details, see the box entitled Key Characteristics of the €STR, the New Euro Unsecured Overnight Rate, Economic Review, 3/2019.

declining by 9 basis points from the end of the previous year. The decrease was driven almost entirely by the interest rates on non-financial corporations' deposits in US dollars, while the interest rates on household deposits remained relatively stable in the period under review.

In November 2019 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 rate within ranges from 0.25 to 0.50 per cent and from 0.75 to 1.00 per cent and a decline in the number of banks with interest rates ranging from 0.50 to 0.75 per cent and above 1.00 per cent. The standard deviation measuring the variation of interest rates offered by banks remained relatively stable, reaching 0.29 per cent in November 2019.

Interest rates on new loans continued to decrease slightly in the first eleven months, as was the case for lev- and euro-denominated loans to non-financial corporations and housing loans to households. At the same time, consumer loan interest rates stabilised at levels close to those by end-2018. Results from the Bank Lending Survey for the third quarter of the year show that major factors behind lending rate developments were high liquidity and competition in the banking sector, increasing volume and falling cost of attracted resources, and lowered risk assessment by banks.

In November 2019 the interest rate on new loans to non-financial corporations came to 3.4 per cent for lev-denominated, and to 2.8 per cent for euro-denominated, declining by 37 and 28 basis points, respectively, on end-2018. On the other hand, interest rates on new corporate loans in US dollar rose to 4.4 per cent.[29]

From January to November 2019 the annual percentage rate of charge (APRC) on housing loans to households continued to follow a slight downward trend, reaching 3.5 per cent in November.[30] This dynamics was driven to a large degree by the interest rate component of charges, and, to a lesser degree, by the implicit rate of non-interest service charges. The annual percentage

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[29] The above values of lending rates for non-financial corporations are weighted averages on a 12-month basis.

[30] 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.

Interest Rates on New Time Deposits
a) by sector
(per cent)
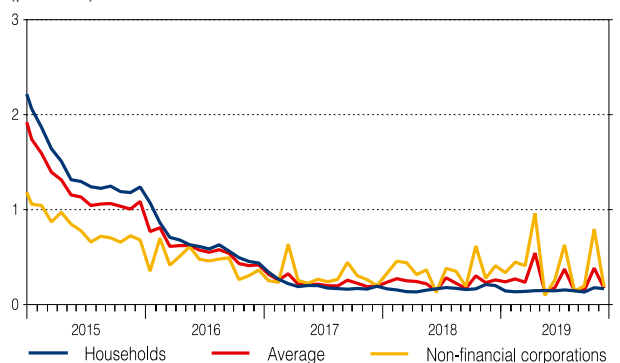
Notes: The average interest rate is calculated using the interest rates in all sectors, maturities and currencies weighted by relevant new deposit volumes. Average interest rates for non-financial corporations and households are calculated using the interest rates in all maturities and currencies weighted by relevant new deposit volumes.

b) by currency
(per cent)
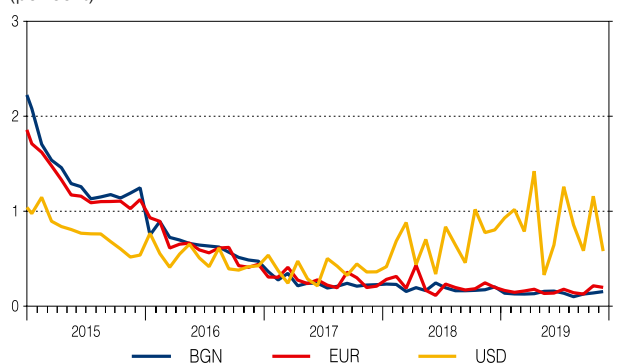
Note: The average interest rate by currency is calculated using the interest rates in all sectors and maturities weighted by relevant new deposit volumes.
Source: the BNB.

Distribution of Interest Rates on New Household Time Lev Deposits
(frequency – number of banks)
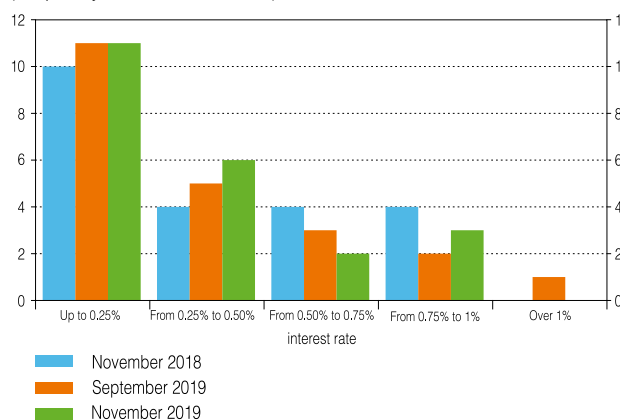
Source: the BNB.

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

(per cent)

12-month moving average, weighted by the volume of loans

Loans in levs
Loans in euro
Loans in US dollars
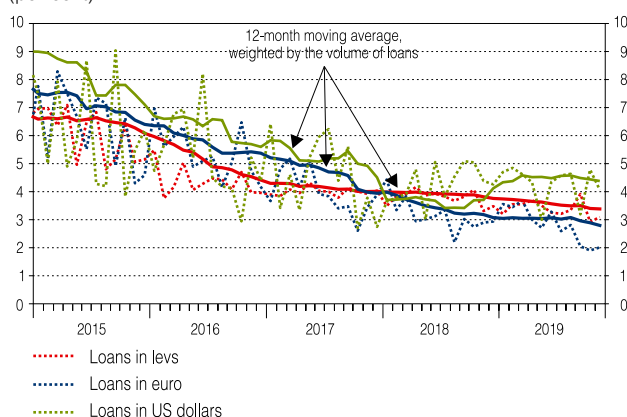
Source: the BNB.

rate of charge in consumer loans fell slightly on end-2018 to 9.9 per cent in November, entirely driven by the implicit rate of non-interest service charges.

In November the breakdown by bank of average weighted interest rates on new housing loans in euro showed an increase on September in the number of banks with average interest rates within the range from 3.0 to 4.0 per cent and a decline in the number of banks with interest rates ranging up to 3.00 per cent and from 5.00 to 6.00 per cent. The standard deviation reflecting variation of interest rates offered by banks went down by 33 basis points in November compared to September, accounting for 0.85 per cent.

Spreads between lending rates on new corporate and housing loans in Bulgaria and the corresponding euro area rates continued to contract to reach in November historical lows of 164 and 150 basis points, respectively.[31]

In the first half of 2020 new time deposit and lending rates are expected to remain at the attained low levels with a possible slight decline. The main factors behind the outlook for interest rates include the high liquidity and continuous inflow of borrowed funds in the banking system and ECB's expectations of keeping interest rates at their present or lower levels to achieve a sustainable inflation target in the euro area.

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[31] Spreads are calculated as a difference between average interest rates in Bulgaria and in the euro area in all maturities for the relevant type of loan, overall in national currency and euro, weighted by the relevant volumes of new loans for a 12-month period.

Interest Rates and APRC on Newly Extended Household Loans

a) consumer loans

(per cent)   (percentage points)

Annual percentage rate of charge (left scale)
Interest rate (left scale)
Implicit rate on non-interest expenditure (right scale)

b) housing loans

(per cent)   (percentage points)

Annual percentage rate of charge (left scale)
Interest rate (left scale)
Implicit rate on non-interest expenditure (right scale)
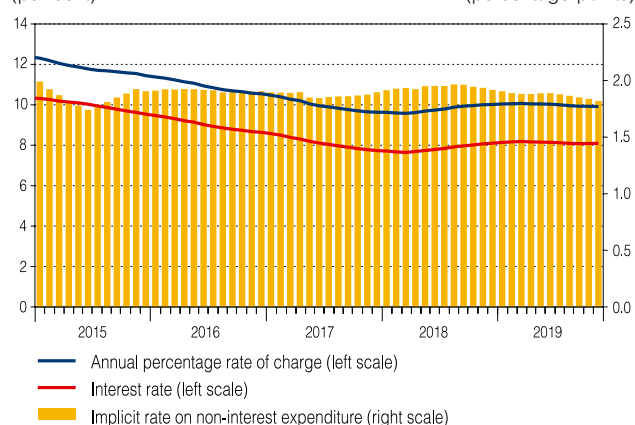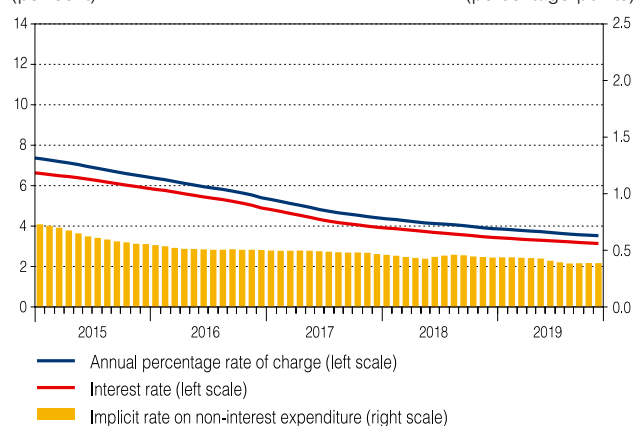
Notes: Interest rates are weighted across maturities and currencies by the relevant volumes of new loans for a 12-month period. The implicit rate is the difference between the APRC and relevant interest rates and reflects the approximate share of all non-interest service charges on loans (including fees and commissions).

Source: the BNB.

Distribution of Interest Rates on New Housing Loans in Euro

(frequency – number of banks)

November 2018
September 2019
November 2019
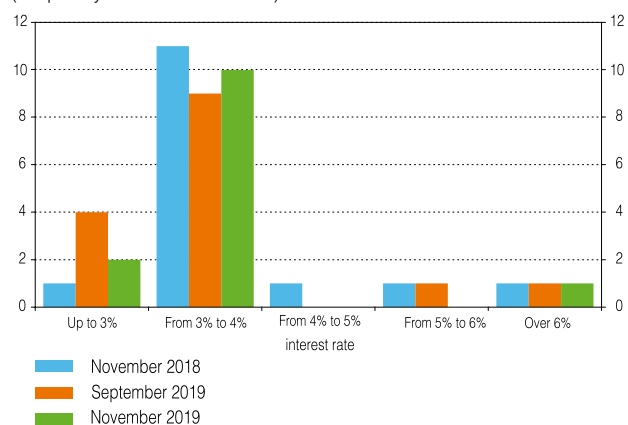
Source: the BNB.

In the last quarter of 2019 an auction for BGN-denominated government securities with an original maturity of 20 years was carried out, with bids approved amounting to BGN 69.2 million. In August the average weighted yield decreased by 4 basis points to 1.38 per cent compared with the previous opening of the issue. In December the long-term interest rate used for assessing the degree of convergence reached 0.18 per cent posting a decline of 17 basis points on the end of the previous quarter.

Between September and December the yield of Bulgarian long-term Eurobonds, issued in international capital markets remained largely unchanged. The spread between yields of Bulgarian and German government securities declined most substantially in the long end of the maturity curve, reflecting the relatively stronger increase in German government bond yield. Spread narrowing between Bulgarian and German long-term government securities could be explained by favourable factors, specific for Bulgaria such as country's credit upgrade by a leading international rating agency and continuous demand for government securities exceeding supply.

In the first half of 2020 Bulgarian government bond yield is expected to remain at the historic lows given the continuous beneficial effect of internal factors. Possible deterioration of growth outlook for global economy coupled with increased uncertainty in a global context could be an additional factor for a decline in Bulgarian government securities yield.

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

Government revenue and expenditure policies and budget financing operations affect the allocation of liquidity among economic sectors.[32]

In the third quarter of 2019 a significant amount of liquidity was redirected from the budget to the external sector as a result of the expenditure incurred in August under the Ministry of Defence budget related to the investment project for the

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[32] The division of economic sectors in this section of the Economic Review is based on the information in the monthly reports under the Consolidated Fiscal Programme and therefore does not match the sector classification used in the National System of Accounts.

Interest Rates on Ten-Year-and-Six-Month Government Securities on the Primary and Secondary Market
(per cent)

Long-term interest rate for assessment of the degree of convergence

Average annual yield attained in the primary market
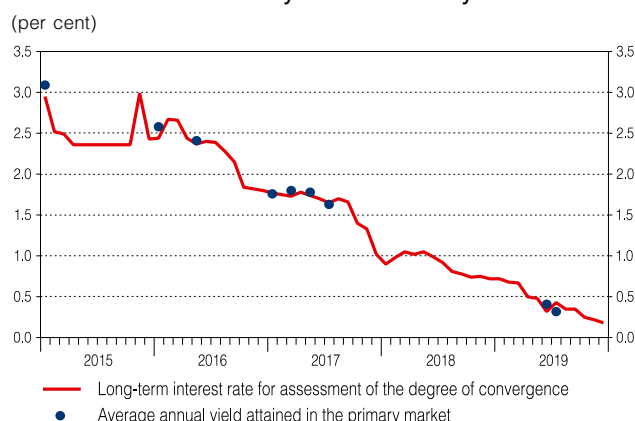
Note: The chart shows primary and secondary market yields of government securities with an original maturity of ten years and six months. The frequency of auctions organised for issues with such a maturity corresponds to the number of observations depicted in blue, with the last primary market offering in July 2019 (issue BG2040119211 maturing in December 2029).

Source: the BNB.

Benchmark Government Securities Yield Curve in Bulgaria
(per cent)

Yield curve as of 30 September 2019

Yield curve as of 31 December 2019
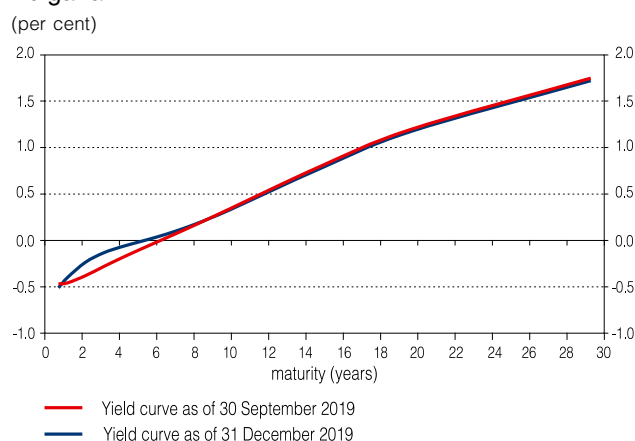
Notes: The benchmark yield curve for Bulgaria is based on BNB own calculations according to the *Nelson–Siegel–Svensson* (1994) methodology. The chart shows a yield change for a quarter backwards.
The chart employs daily data on Bulgarian government securities yields in capital markets.

Sources: the MF, BNB calculations.

acquisition of a new type of fighter aircraft in the amount of USD 1.2 billion. The amount of this payment exceeded significantly the regularly received grants under EU programmes (BGN 585 million) and reimbursed funds under the EU Common Agricultural Policy (BGN 429 million). As a result liquidity of 4.5 per cent of GDP was directed to the external sector in the third quarter. EU budget contribution costs and principal and interest payments to non-residents had a comparatively weaker effect on the shift of liquidity from the budget to the external sector between July and September.

The budget had also a positive but very limited effect on the non-government non-bank sector liquidity (amounting to 0.6 per cent of GDP in the third quarter) as a result of the minimum excess of government non-interest expenditure (excluding expenses for purchasing new military equipment) over tax and non-tax revenue for the period. In the third quarter of 2019 only the financial sector (excluding the BNB) was a net source of liquidity to the budget (1.6 per cent of GDP for the quarter) mainly as a result of government securities issued in the domestic market totalling BGN 600 million. The amount of the new debt financing was significantly lower than the liquidity redirected from the budget to the external sector. Consequently, the government deposit with the BNB decreased by BGN 1102 million at the end of September (3.5 per cent of GDP for the quarter) compared to end-June.

Based on monthly preliminary data of January 2020, it may be concluded that the decline reported in the government deposit with the BNB in the fourth quarter of 2019 (by BGN 1610 million from September to BGN 8.1 billion at the end of December) reflected the typical of year-end redirection of liquidity from the budget to the non-government non-bank sector due to higher non-interest spending and payments from the budget under the EU Common Agricultural Policy.

Developments in financial flows generated in the process of external and internal economic factor interaction contributed to the decrease in gross international reserves. By end-December 2019 the market value of international reserves (including currency exchange rate and revaluation adjustments), an asset on the BNB Issue Department balance sheet, fell by EUR 0.2 billion from

The Effect of Consolidated Budget on Other Sectors' Liquidity (Quarterly)

(share of GDP, per cent)

■ Non-government non-bank sector
■ External sector
■ Financial sector (the BNB excluded)
■ Government deposit with the BNB
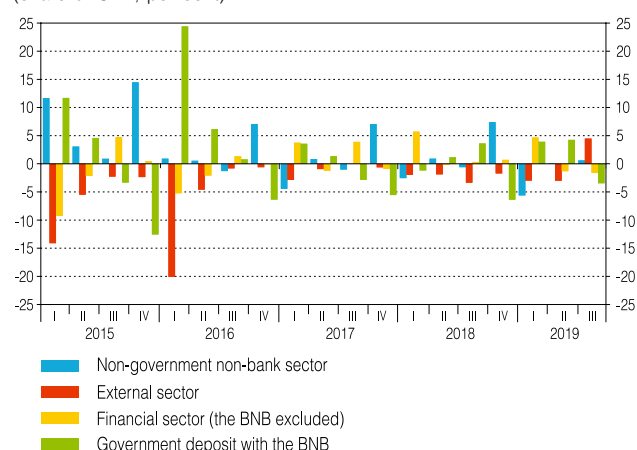
Sources: the MF, the BNB.

the end of the previous year to EUR 24.8 billion (BGN 48.6 billion). According to the currency board principles, the decrease in international reserves corresponds to a decrease in the BNB Issue Department balance sheet liabilities. The lower Issue Department liabilities reflected mainly the decline in bank reserves, and in particular, the reduction of banks' excess reserves and, to a much lesser degree, the lower government deposit with the BNB. These effects were only partly offset by the increase in the currency in circulation and the Banking Department deposit.

In the first half of 2020 banks' reserves at the BNB are expected to continue following the pattern of a slight decrease, which will be determined by the dynamics of excess reserves. The shift of free resources by banks for crediting the non-government sector and the cut in the ECB deposit facility rate in September 2019 to -0.5 per cent, which led to a decrease in the interest rate on banks' excess reserves with the BNB to -0.7 per cent, may also add to this effect. The dynamics of the government deposit with the BNB will be mainly driven by the expected positive budget balance in the first half of 2020. The comparatively strong demand for goods and services in the economy will help maintain relatively high rates of growth in the currency in circulation.

Financial Flows, Money and Credit

3. Economic activity

In the third quarter of 2019 growth of real GDP decelerated slightly on a quarterly basis on the previous quarter, amounting to 0.8 per cent. Both domestic demand components and net exports contributed positively to the growth.

In the third quarter of 2019 the seasonally adjusted number of employed decreased by 0.1 per cent quarter on quarter in the total economy due to agriculture, while employment in the industry and services sectors increased. Amid enhanced demand for labour by corporations and limited supply, the unemployment rate declined further, reaching 3.9 per cent, while compensation *per* employee rose by 0.6 per cent on a quarterly basis.

The consumer confidence indicator improved in the third quarter of 2019, while the business climate indicator worsened, which was mainly attributable to more pessimistic expectations of managers in industry. Positive consumer sentiments, favourable financing conditions, wage growth and concurrent rises in household purchasing power are expected to continue favouring private consumption growth in the first half of 2020. Government investments are projected to be an additional factor stimulating economic activity, whereas the external environment will remain a source of uncertainty constraining the exports of goods and services and investment activity of corporations. Given these factors, quarter-on-quarter real GDP growth is anticipated to vary between 0.5 and 0.6 per cents in the first and second quarters of 2020.

Current Economic Environment

In the third quarter of 2019 real GDP growth slowed down from the previous quarter to 0.8 per cent (seasonally adjusted NSI national account data). Stronger economic activity was driven by the increase both in domestic demand components and net exports.

Among domestic demand components government consumption contributed most to quarterly growth of real GDP in the third quarter of 2019. These developments corresponded to accelerated growth of government current wage, healthcare and operating expenditure.

Private consumption growth was underpinned by the improved customer sentiment[33] and increased labour income of households, as well as by the enhanced demand for loans amid low interest rates and active supply of lending resources by banks. A factor limiting household consumption was the persistently high savings rate. This possibly reflected the significantly improved financial situation of high-income households[34], which were

Contribution to GDP Growth by Final Use Component
(per cent; percentage points; quarter-on-quarter)
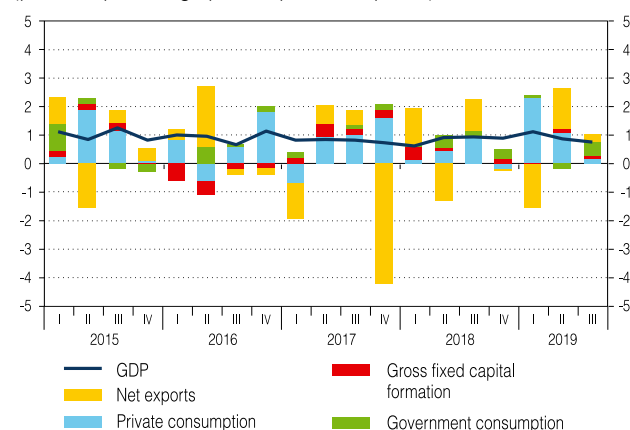
Note: Non-additive data due to direct chain-linking and seasonal adjustment of GDP and its components; the contribution of the change in inventories has not been included.

Sources: the NSI, BNB calculations.

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[33] BNB seasonally adjusted data on the consumer confidence indicator are used.

[34] European Commission seasonally adjusted data are used. For details, see the Household Behaviour Section in Chapter 3.

less inclined to consume and more inclined to save than low-income households[35].

Over the quarter investment in fixed capital continued rising on a quarterly basis, though at slower rates compared with the second quarter. BNB estimates[36] indicate that this reflects mainly the subdued dynamics of private investment, while public investment recorded a substantial increase. Potential factors limiting private investment growth over the quarter involved the economic uncertainty in important trading partners of Bulgaria, slower growth of external demand for Bulgarian goods and services and the related worsening of expectations of manufacturing firms about future production activity.

Over the quarter net exports contributed positively to real GDP growth, reflecting the stronger increase in goods and services exports than that in imports.[37]

In the third quarter of 2019 the overall business climate indicator remained above its long-term average but the decline in the index over the period signalled that the economy passed from a phase of economic expansion to a phase of downward dynamics. Concurrently, the business climate dynamics showed divergent trends across economic sectors. According to the indicator constructed by the BNB retail trade is still in the expansion phase, while manufacturing, construction and services are in the phase of downward dynamics.

The BNB's estimates of the cyclical position of the economy show that in the third quarter of 2019 the economic activity in Bulgaria continued to exceed its potential level of production but tending to narrow the gap.[38] This signals that in terms of supply, part of the resources in the economy are still employed above their potential level, which is in line with the long-term trend toward an unemployment decline, an increase in

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[35] According to Eurostat's estimate the propensity to consume in 20 per cent of households with the highest and lowest income accounts for 128.8 per cent and 57.7 per cent of their disposable income.

[36] The analysis employs data from quarterly non-financial accounts of the general government sector and reports on the implementation of the Consolidated Fiscal Programme, published by the NSI and the MF respectively.

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

[38] To estimate the potential output level and the cyclical position of the economy a multivariate production function model, Phillips Curve and Okun's Law are used, presented in the Economic Review, issue 1/2019.

Business Climate Indicator Dynamics
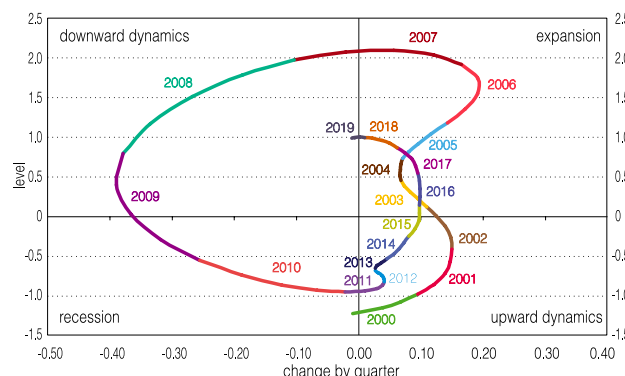
Notes: The chart compares the business climate level (the vertical axis) and its quarterly change (the horizontal axis). The business climate series has been transformed using the HP filter (with a parameter λ = 100) in order to eliminate short-term fluctuations, after which it has been standardised. The four chart quadrants enable to distinguish the four phases of the business cycle.

Sources: the NSI, BNB calculations.

Potential GDP Growth and Output Gap

(per cent, growth) (per cent, output gap)

- Potential GDP growth (left scate)
- Real GDP growth (left scale)
- Output gap (right scale)
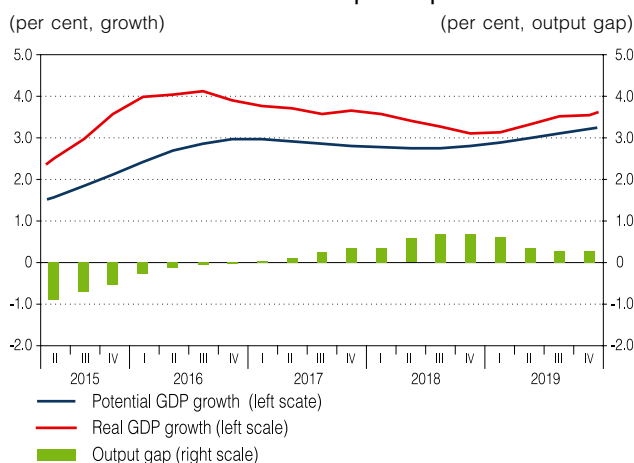
Notes: Results are obtained through the application of a multivariate model with unobserved components presented in the research topic on Methods for Estimating the Cyclical Position of the Economy, Economic Review, 1/2019. The output gap is the deviation of the current level of economic activity from potential output measured as a percentage of potential output.

Sources: the NSI, BNB calculations.

Business Climate and Consumer Confidence

(per cent) (per cent)

- Overall business climate indicator (left scale)
- Consumer confidence indicator (right scale)
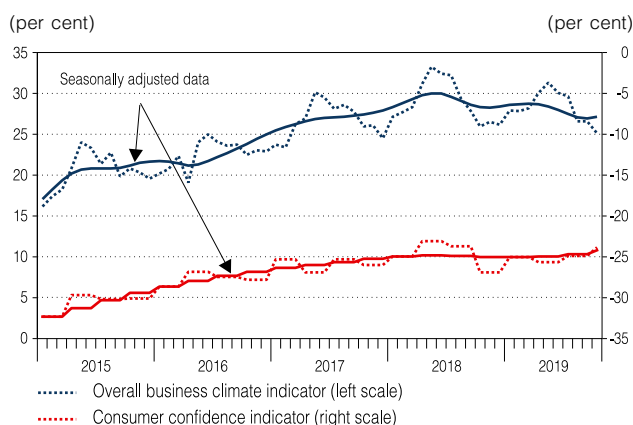
Sources: the NSI, BNB calculations.

compensation *per* employee and high production capacity utilisation.

In the fourth quarter of 2019 short-term economic indicators dynamics give mixed signals about developments in export oriented sectors and mostly positive signals about domestic market oriented sectors. Between October and November 2019 the nominal industrial turnover increased both on a quarterly and annual basis reflecting the simultaneous increase in prices and trading volumes.[39] External market volumes recorded a substantial quarter-on-quarter rise, which is indicative of a positive dynamics in exports of goods in the fourth quarter of the year. Notwithstanding, between October and December 2019 the business climate indicator deteriorated from the third quarter as a result of more unfavourable assessments of managers in manufacturing, while the remaining sectors (trade, construction and services) reported an improvement in the business climate[40]. The pessimistic sentiment of managers in manufacturing reflected worsened expectations about future production activity, the lower amount of external orders and the high level of finished output inventories. The third quarter of 2019 saw a quarter-on-quarter decline in the turnover in services on transport, storage and mail services at current prices, while the turnover in services on information and communication[41] posted an increase. These developments make firms more cautious in fixed capital investment in the following quarters.

The NSI Consumer Survey of October 2019 showed an improvement in the composite consumer confidence indicator from July 2019.[42] Concurrently, in October and November 2019 the retail trade turnover at constant prices continued to increase both on a quarterly and annual basis, which is a precondition to retain the positive contribution of private consumption to real GDP growth in the following quarters[43].

In the first half of 2020 real GDP growth is expected to slow down quarter on quarter and to vary between 0.5 and 0.6 per cent. As to

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[39] For details on industrial turnover developments, see the Behaviour of Firms Section in Chapter 3.

[40] BNB seasonally adjusted data.

[41] In this chapter, information and communication, total.

[42] BNB seasonally adjusted data.

[43] For more details on developments in nominal retail trade turnover and household propensity to save, see the Household Behaviour Section in Chapter 3.

Expectations about Future Economic Activity

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

- Total
- Trade
- Manufacturing
- Construction
- Services
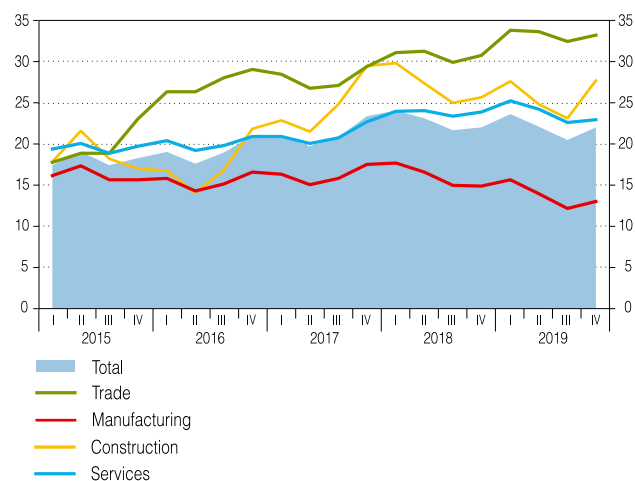
Sources: the NSI, BNB calculations.

Production Assured with Orders from Other Countries and Inventories of Finished Goods

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

······ Production assured with orders from other countries (left scale)
······ Inventories of finished output (right scale)
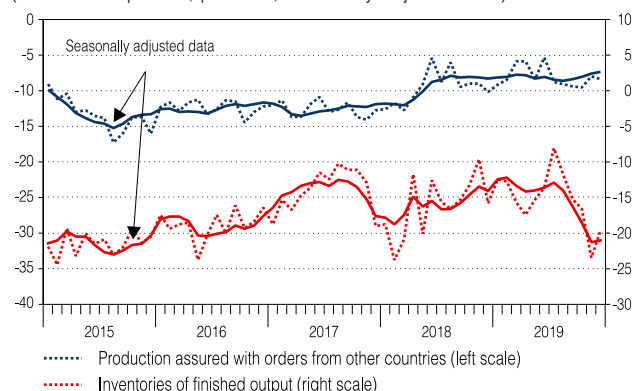
Sources: the NSI, BNB calculations.

Factors Limiting Economic Activities of Corporations

(relative share of all corporations)

- 2015
- 2016
- 2017
- 2018
- 2019
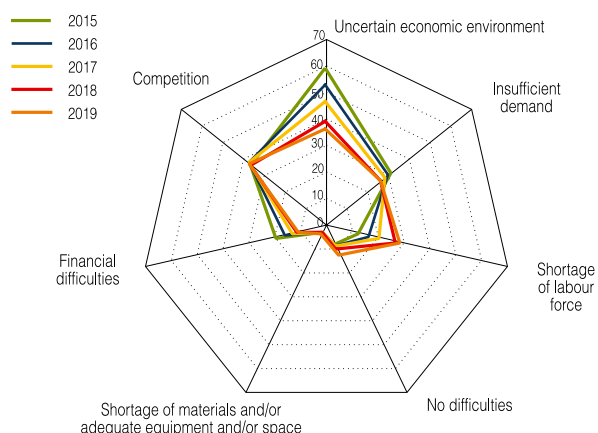
Note: Average data for the period calculated as sector-weighted (manufacturing, construction, trade and services).

Sources: the NSI, BNB calculations.

the structure of growth domestic demand is expected to contribute strongly to economic activity growth, while the contribution of net exports will be negative as a result of projected higher growth of imports of goods and services than that of exports.[44] The positive consumer sentiment, favourable financing conditions, wage growth and concurrent rises in household purchasing power are expected to continue favouring private consumption growth in the first half of 2020. Government investments are projected to be an additional factor stimulating economic activity, whereas the external environment will remain a source of uncertainty curbing investment activity of corporations.

Exports and Imports of Goods and Services

Between January and October 2019 nominal exports of goods increased by 4.2 per cent on an annual basis and nominal imports of goods decreased by 2.2 per cent.[45]

According to non-seasonally adjusted national account GDP data, real exports of goods rose by 2.4 per cent on an annual basis between January and September 2019 showing strong fluctuations across quarters. The fluctuations may be explained primarily by internal one-off factors rather than by the worsened economic environment accompanied by a decline in growth of external demand for Bulgarian goods and services. At the same time, real imports of goods rose year on year by 1.0 per cent in the January–September 2019 period, with growth concentrated mainly in the first quarter.

The comparison of exports and imports of goods in nominal and real terms suggests that global price developments in the first nine months of 2019 contributed positively to growth of nominal exports of goods and negatively to the change in growth of nominal imports of goods.

Between January and October 2019 exports of all commodity groups (excluding base metals) grew nominally on an annual basis irrespective of the worsened economic environment throughout the year. The mineral products and fuels group contributed most strongly to overall growth of exported goods both in nominal and real

Net Exports of Commodity Groups by Use, January – October 2019

	Balance (EUR million)	Change* (EUR million)	Growth of exports** (per cent)	Growth of imports** (per cent)
Consumer goods	-24.6	-173.3	5.9	9.1
Raw materials	195.3	580.7	1.6	-4.2
Investment goods	-1291.0	-247.2	1.4	4.7
Energy resources	-38.1	1448.3	17.6	-27.2
Other exports	-95.9	-6.4	16.0	10.3
Total	-1254.3	1602.0	4.2	-2.2

* Balance change on the same period of previous year.
** Exports and imports growth for the period on an annual basis.

Source: the BNB.

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[44] For details, see the Exports and Imports of Goods and Services Section in Chapter 3.
[45] Foreign trade data.

Real GDP Growth by Final Use Component
(%, quarter-on-quarter; seasonally adjusted data)

	2015				2016				2017				2018				2019		
	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III
Consumption	0.7	2.3	1.3	0.1	1.3	-0.1	0.7	2.1	-0.1	1.5	1.2	1.9	0.6	1.2	1.5	0.5	2.4	1.1	0.9
incl.																			
Household consumption	0.3	3.1	1.8	0.2	1.3	-1.1	0.9	3.0	-1.1	1.6	1.6	2.6	0.2	0.7	1.5	-0.3	3.7	1.7	0.3
Government final consumption expenditure	1.7	2.3	-0.8	-0.4	-0.8	3.1	0.1	2.3	0.8	-1.0	0.6	1.0	2.9	2.1	0.6	0.7	0.6	-0.6	2.1
Collective consumption	5.4	-1.0	0.8	0.0	-0.8	2.7	1.5	1.1	1.9	0.5	1.3	1.3	-0.4	2.9	1.4	1.7	1.3	-0.4	2.3
Gross fixed capital formation	0.9	1.1	1.2	-0.1	-3.0	-2.3	-1.1	-0.8	1.1	2.3	1.1	1.5	2.2	0.5	0.1	0.9	-0.1	0.6	0.4
Exports of goods and non-factor services	3.1	-2.0	-2.3	4.2	3.0	4.6	0.4	0.7	1.9	2.1	2.2	-3.0	0.6	1.2	0.3	2.9	-2.3	-3.4	4.3
Imports of goods and non-factor services	1.6	0.4	-3.1	3.6	2.5	1.4	0.7	1.1	4.0	1.2	1.5	3.2	-1.3	3.2	-1.3	3.0	0.0	-5.4	3.9
GDP	**1.1**	**0.9**	**1.3**	**0.8**	**1.0**	**1.0**	**0.7**	**1.1**	**0.8**	**0.8**	**0.8**	**0.7**	**0.6**	**0.9**	**0.9**	**0.9**	**1.1**	**0.9**	**0.8**

Source: the NSI.

terms[46]. This growth is rather of one-off nature and may be explained by the low base in the previous year, when a key sector company cut significantly the production due to a scheduled repair of production capacities.[47] In the January to October 2019 period the group machines[48] continued to play a significant role in growth of exports both in real and nominal terms. By quarter, growth of exports in the group slowed down only in the second quarter of the year. By geographical breakdown, nominal exports data indicate that lower rates reflected exports to non-EU countries (mostly to Turkey), while exports to the EU rose at double-digit rates. Over the January to October 2019 period only exports of base metals posted a year-on-year decline both in nominal and real terms. The decline was mainly ascribable to lower exports of copper and copper products[49]. This dynamics reflected primarily the effect of one-off factors related to temporary stoppages of production in a key sector company[50]. Developments in exports of machines and metals indicate that the slowdown of euro

Exports of Commodity Groups by Use
(EUR million)

Source: the BNB.

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[46] Real volumes of exports have been constructed under the commodity groups of Standard International Trade Classification (SITC) by using NSI data on export prices and nominal values of exports under the SITC.

[47] NSI data on production and supplies of oil and oil products.

[48] In this chapter, it should read the machines, vehicles, appliances, instruments and weapons group under the Combined Nomenclature.

[49] According to BNB calculations real volumes of imports under the commodity groups of SITC based on NSI data on import prices and nominal values of imports under SITC.

[50] For further details see p. 86–87 of the Aurubis Group's Annual Report 2018/2019.
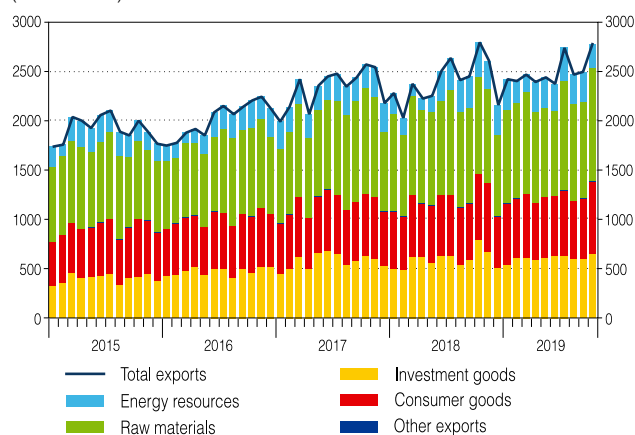
Exports by Commodity Group, January–October 2019

	Value (EUR million)	Change* (EUR million)	Growth** (per cent)	Contribution**, percentage points
Wood products, paper, ceramics and glass	1 171.0	48.9	4.4	0.2
Machines, vehicles, appliances, instruments and weapons	6 830.1	476.0	7.5	2.0
Mineral products and fuels	3 124.3	483.0	18.3	2.0
Base metals and related products	3 582.7	-686.5	-16.1	-2.9
Animal and vegetable products, food, drinks and tobacco	3 964.1	359.5	10.0	1.5
Textiles, leather, clothing, footwear and other consumer goods	2 917.8	4.5	0.2	0.0
Chemical products, plastics and rubber	3 314.1	320.5	10.7	1.3
Total exports	24 904.0	1 005.8	4.2	-

* Change on the corresponding period of previous year.
** Growth/contribution to growth of total exports over the period on an annual basis.
Source: the BNB.

area industrial production[51] had no strong negative effect on Bulgarian exports.

Between January and October 2019 exports of goods to EU Member States rose by 3.4 per cent on an annual basis, with exports to Romania and Germany making the major contribution, whereas exports to Italy declined significantly. Exports to non-EU countries also increased by 5.8 per cent from January–October 2018 despite the dramatic fall in exports to Turkey (attributable almost entirely to exports of base metals). Between January and October 2019 the share of exported goods to EU Member States in total exports of goods remained almost unchanged from the corresponding period of 2018 at 67.1 per cent.

Between January and October 2019 nominal imports of goods posted a decline on an annual basis. The decline reflected primarily lower imports of energy resources and, to a much lesser extent, imports of raw materials. The dynamics of nominal imports of energy resources was mainly driven by lower real volumes.[52] Metal ores and non-ferrous metals, which according to BNB calculations[53] posted a decline both in nominal and real terms due to one-off factors[54], had the main negative contribution to lower imports of raw materials.

Dynamics of Goods Exports to the EU and non-EU Countries
(EUR million)

.... Exports (fob) to the EU
.... Exports (fob) to non-EU countries
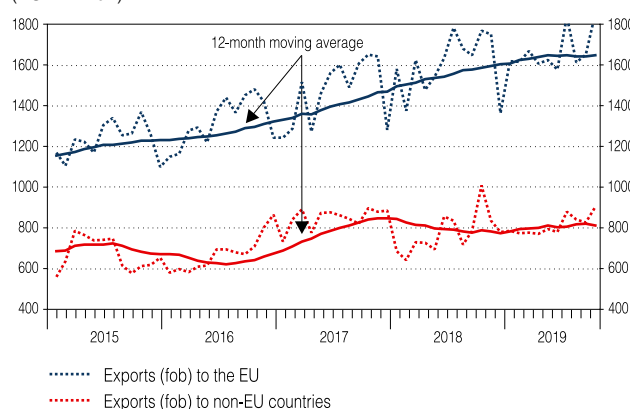
Source: the BNB.

Geographical Breakdown of Goods Exports

January–October 2018   January–October 2019

Source: the BNB.

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[51] According to Eurostat seasonally adjusted data in January–November 2019 the euro area industrial production decreased by 1 per cent year on year against an increase of 1.1 per cent on average in 2018.

[52] According to BNB calculations on real volumes of imports under the commodity groups of SITC based on NSI data on import prices and nominal values of imports under SITC.

[53] Real volumes of imports have been constructed under the commodity groups of SITC by using NSI data on import prices and nominal values of imports under SITC.

[54] See footnote 49.

Imports of goods from EU Member States rose year on year by 4.7 per cent in the January–October 2019 period. Imports from the Netherlands and Greece contributed most strongly to growth. Concurrently, imports from non-EU countries decreased by 9.5 per cent on an annual basis, with imports of mineral products and fuels from Russia and Iraq making the largest negative contribution to this dynamics. The share of imports from the EU increased by 3.6 percentage points on the January–October 2018 period and reached 54.6 per cent.

Balance of payments data for November 2019 indicate a persistent upward trend in year-on-year exports of goods and a decline in imported goods in the fourth quarter of 2019.

In the first half of 2020 real exports of goods are expected to further increase on an annual basis, with growth accelerating mostly in the second quarter of 2020 due to exhausted effect of the negative one-off factors in exports of metals. An additional factor accelerating export growth compared to January–September 2019 will be the expected higher external demand rise. Growth in real imports of goods in the first half of 2020 is projected to accelerate compared to the first nine months of 2019. This dynamics will be driven by the discontinued decline in imports of mineral products and fuels and accelerated annual growth of investments. Taking into account market sentiment on international prices of goods[55], the year-on-year export and import prices are expected to rise in the first half of 2020, which will contribute positively to the nominal change in foreign trade flows.

According to balance of payments data, in the January–November 2019 period exports of services increased on an annual basis, while imports of services decreased from the January–November 2018 period. According to national account data between January and September growth in exported services was attributable only to the price component, while real volumes posted a decline. The decline in imports of services reflected both lower import prices and lower real volumes.

Between January and November 2019 services exports increased by 0.8 per cent year on

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Imports of Commodity Groups by Use, January–October 2019

	Value (EUR million)	Change* (EUR million)	Growth** (per cent)	Contribution** (percentage points)
Consumer goods	6 262.2	521.3	9.1	1.9
Raw materials	9 579.3	-423.1	-4.2	-1.6
Investment goods	7 388.2	330.2	4.7	1.2
Energy resources	2 775.2	-1 039.0	-27.2	-3.9
Other imports	153.3	14.3	10.3	0.1
Total	26 158.3	-596.2	-2.2	-

* Change on the corresponding period of previous year.
** Growth/contribution to total import growth over the period on an annual basis.

Source: the BNB.

Imports of Commodity Groups by Use
(EUR million)
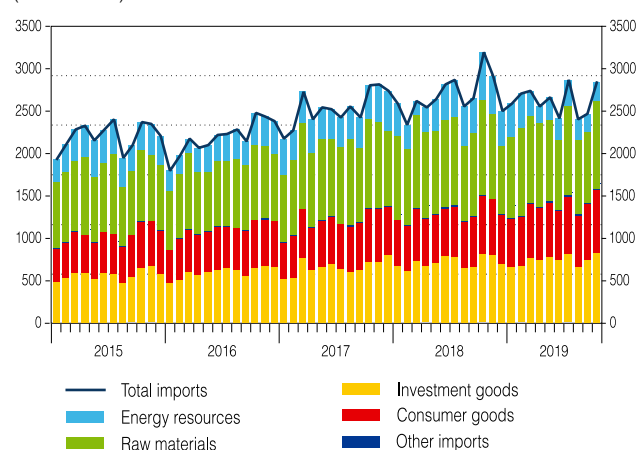
Source: the BNB.

Dynamics of Services Exports and Imports
(EUR million)

Source: the BNB.

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[55] For a more detailed analysis of market expectations of international commodity group prices, see the International Commodity Prices Section in Chapter 1.

Annual Change of Services Exports and Contribution by Sub-component

(per cent, percentage points)

Legend:
- Services
- Other services
- Travel
- Transport
- Maintenance and repair services
- Processing of goods

Source: the BNB.

Annual Change of Services Imports and Contribution by Sub-component

(per cent, percentage points)

Legend:
- Services
- Travel
- Transport
- Maintenance and repair services
- Processing of goods
- Other services
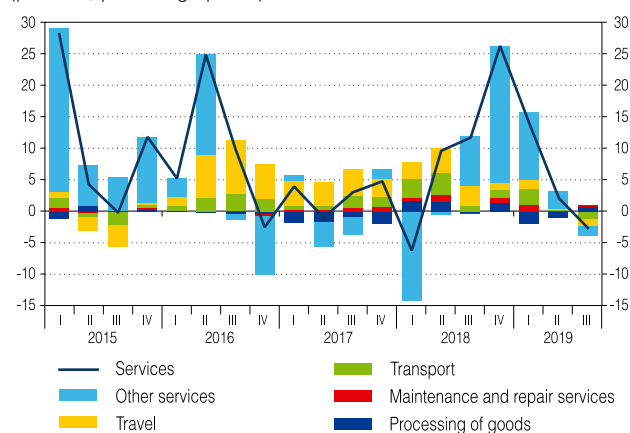
Source: the BNB.

year in nominal terms due mainly to growth in information[56] and technical services[57]. Earnings from visits of foreign nationals to Bulgaria rose 0.2 per cent on an annual basis. According to NSI data the number of visits of foreign nationals to Bulgaria in the January–November 2019 period increased by 1.1 per cent on the corresponding period of 2018, with visits from Romania and Ukraine contributing most to growth.

Imports of services between January and November 2019 declined by 7.7 per cent on an annual basis, which was ascribable mainly to lower imports of insurance and pension services (due to temporary factors) and, to a lesser extent, to lower imports of transport services.

In the first half of 2020 nominal exports of services is expected to continue growing year on year, and growth of imported services to recover after the reported annual decline. This will be driven by both price components and the projected rise in real trading volumes amid growing external and domestic demand.

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[56] It should read telecommunications, computer and information services subgroup.

[57] It should read technical, trade-related, and other business services subgroup.

Behaviour of Firms and Competitiveness

In the third quarter of 2019 real value added growth in the total economy moderated to 0.6 per cent from the previous quarter, reflecting mainly the slowdown in the services sector.

Real value added in industry went up by 0.7 per cent on a quarterly basis (against 0.6 per cent in the previous quarter) driven by both industry and construction. These developments were in line with short-term business statistics data, where the industrial turnover and construction production indices improved on the previous quarter. As regards the geographical breakdown, growth of the industrial turnover (at constant prices) reflected the turnover both on international and domestic markets. The construction output index rise in July–September 2019 was a result of the simultaneous increase in building and engineering construction.

Services value added moderated its quarterly growth rate to 0.4 per cent in the third quarter of 2019 against 1.2 per cent in the previous quarter. This reflected mainly the reported value added fall in the professional, scientific and technical activities sub-sector[58] and lower economic activity growth in real estate activities, financial and insurance activities and public services sectors compared with the previous quarter. Over the same period the positive contribution of the trade, transport, accommodation and food service activities sub-sector to the change in the real value added increased in line with the short-term business statistics data, reporting a quarterly increase in the turnover of services (at current prices) on accommodation and food service activities and wholesale and retail trade[59]. Between October and November NSI data on short-term business statistics on output and turnover in industry, trade and construction production gave mostly positive signals of the change in the gross value added in the corresponding sectors over the fourth quarter of 2019.

In the third quarter of 2019 employment in the total economy slightly fell quarter on quarter

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[58] This refers to the sub-sector of professional, scientific and research activities; administrative and support service activities.

[59] This refers to the sectors of wholesale trade, excluding the trade of motor vehicles and motorcycles and retail trade, excluding the trade of motor vehicles and motorcycles.

Value Added Growth in Real Terms and Contribution by Sector

(per cent, percentage points, quarter-on-quarter; seasonally adjusted data)
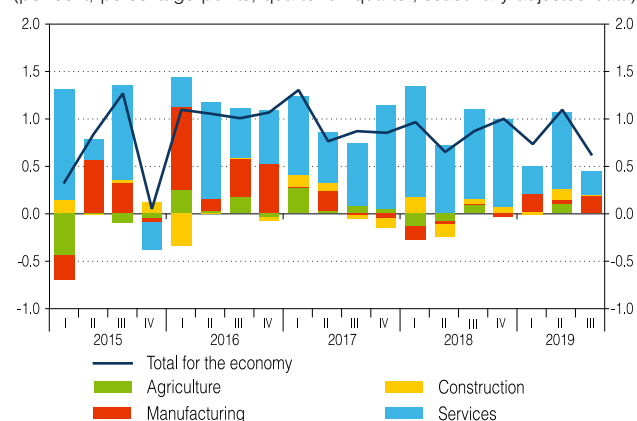
Note: Non-additive data on contributions due to direct seasonal adjustment of value added and its components.

Sources: the NSI, BNB calculations.

Industrial Turnover Dynamics

(per cent, percentage points, quarter-on-quarter; seasonally adjusted data)
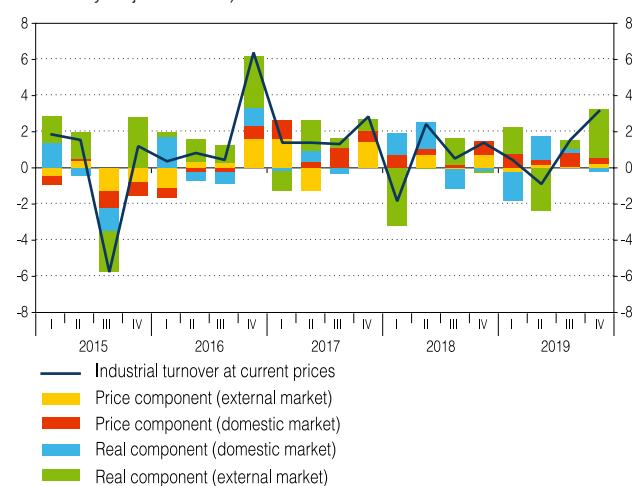
Note: Data for the fourth quarter of 2019 are for October and November.

Sources: the NSI, BNB calculations.

Construction Production Dynamics and New Buildings Permits Issued

(number of buildings; seasonally adjusted data)   (2015 = 100; seasonally adjusted data)
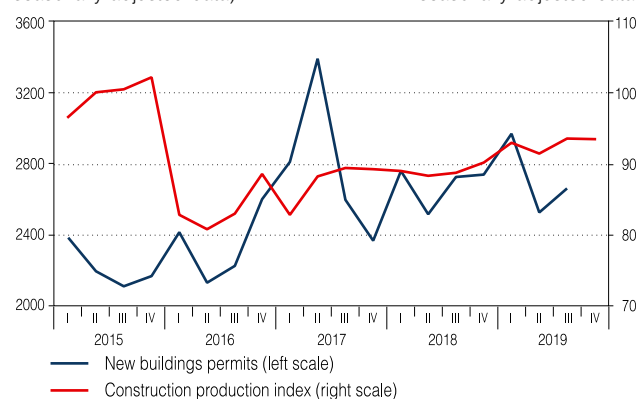
Note: Data for the fourth quarter of 2019 are for October and November.

Sources: the NSI, BNB calculations.

Dynamics of Nominal Retail Trade Volumes

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

Real component
Price component
Total
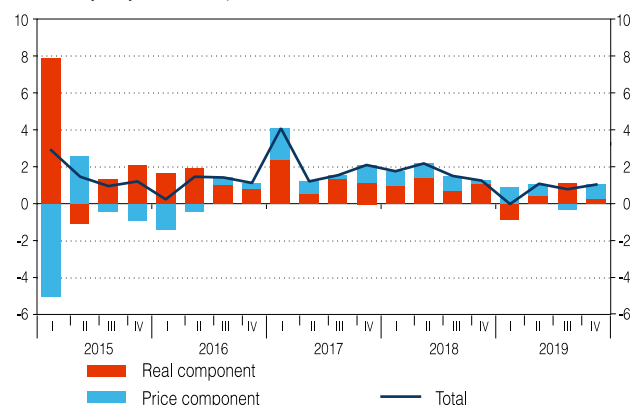
Sources: the NSI, BNB calculations.

according to seasonally adjusted NSI data. The services sector contributed most strongly to the change in employment over the quarter. In the context of a continuing improvement of economic activity in construction supported by housing price rises and the large infrastructure projects launched by the government, employees in this sector also increased quarter on quarter. Employees in agriculture went down, reflecting the lower number of self-employed in the sector. In the first half of 2020 employment is expected to slightly increase driven by sustainable labour demand and the expected wage rise.

In the third quarter of 2019 labour productivity growth slightly decelerated on the previous quarter, which was due to the services sectors and construction. The productivity dynamics was a result of slower growth in the value added over the period, whereas the faster increase in hours worked *per* person than that of employment had a positive effect on productivity over the quarter.

Compensation *per* employee in nominal terms decelerated on a quarterly basis in the third quarter of 2019 reflecting lower growth in services and the decline in compensations in agriculture. Nevertheless, the steady labour demand amid limited supply[60] was sustained, exerting upward pressure on wages. In the first half of 2020 the growth rate of compensation *per* employee is expected to accelerate as a result of the higher minimum wage and wage rises in some budget sectors.

[60] Labour demand is measured by companies' expectations about staff employment according to NSI survey of business developments, and labour supply is measured by the unemployment rate.

Contribution to Changes in the Number of Employed by Economic Sector

(per cent, percentage points, quarter-on-quarter;
seasonally adjusted data)
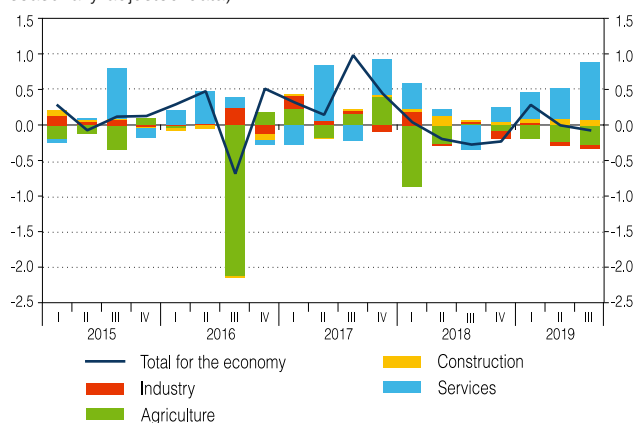
Total for the economy
Industry
Agriculture
Construction
Services

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)

Total for the economy, excluding imputed rent
Industry
Construction
Services, excluding imputed rent
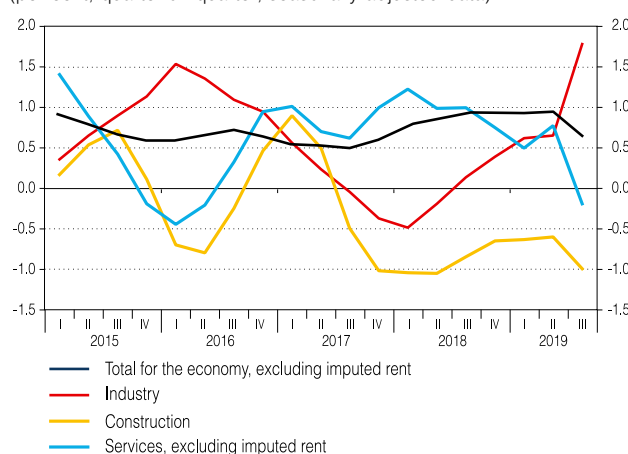
Sources: the NSI, BNB calculations.

Compensation *per* Employee at Current Prices

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

Industry
Construction
Services
Total for the economy
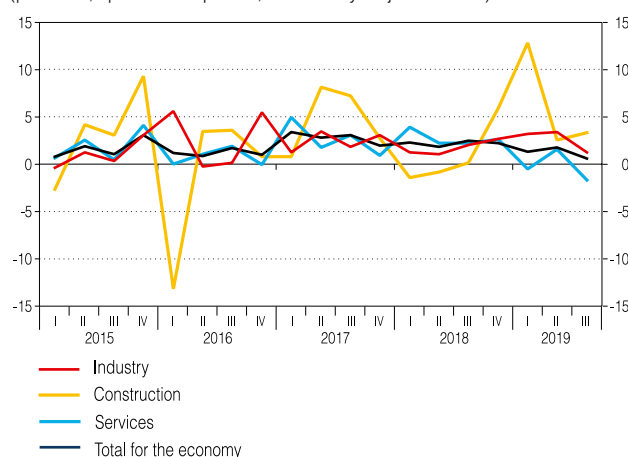
Sources: the NSI, BNB calculations.

Unit Labour Costs

(2010 = 100; seasonally adjusted data)

- Total for the economy, excl. imputed rent, nominal
- Total for the economy, excl. imputed rent, real
- Industry, nominal
- Industry, real

Sources: the NSI, BNB calculations.

Gross Operating Surplus at Current Prices

(billion BGN; seasonally adjusted data)

- Trade; hotels and restaurants, transport and communications
- Construction
- Industry
- Financial and business services

Sources: the NSI, BNB calculations.

The comparatively steady growth rate of labour productivity coupled with slower growth of compensation *per* employee resulted in lower unit labour costs in the third quarter of 2019. Developments across sectors were divergent: the indicator declined in the sectors of services and agriculture, while labour costs in industry rose.

In the third quarter of 2019 the gross operating surplus slightly fell from the previous quarter according to seasonally adjusted data. The sector of services and agriculture contributed negatively to growth in the operating surplus in line with the slower increase in the value added. The operating surplus in industry rose from the previous quarter consistent with accelerated turnover growth in industry.

In the third quarter of 2019 financing of firms from sources other than the gross operating surplus was diverse across sector, with foreign direct investment and loans accounting for the largest amount.

Fixed capital investment growth in the third quarter of the year, improved labour productivity and the high rate of production capacity utilisation were the major reason for the capital and total factor productivity to retain their significant positive contribution to growth of real GDP by production factor. Despite the fall in employment, labour also had a low positive contribution to real GDP growth, reflecting the increased number of worked man-hours *per* employee.

Financing Sources*

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

- Total
- Loans
- Financial leasing
- Foreign direct investment
- External obligations, other than intracompany loans
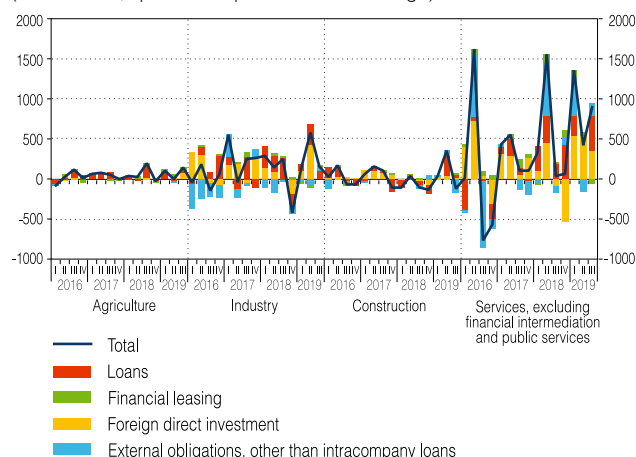
* Sources of financing other than gross operating surplus.

Source: the BNB.

Contribution of the Change in Production Factors to GDP Growth

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

- GDP
- Capital
- Labour
- Total factor productivity
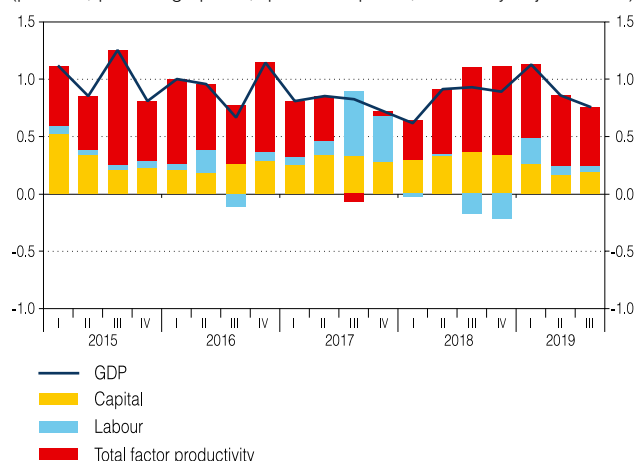
Sources: the NSI, BNB calculations.

Gross Value Added Growth

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

	2015				2016				2017				2018				2019		
	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III
Agriculture, forestry and fishing	-8.4	-0.3	-2.1	-1.3	5.6	0.4	3.6	-0.8	5.5	0.6	1.5	0.8	-2.8	-1.6	1.9	-0.1	0.0	2.1	0.1
Mining and quarrying; manufacturing; electricity, gas, steam and air conditioning supply; water supply; sewerage, waste management and remediation activities	-1.1	2.5	1.4	-0.2	3.7	0.6	1.7	2.2	0.1	0.9	-0.1	-0.2	-0.6	-0.1	0.1	-0.2	0.9	0.2	0.8
Construction	3.3	-0.2	0.7	2.7	-7.8	-0.1	0.5	-1.1	3.2	2.2	-0.9	-2.4	4.5	-3.5	1.4	1.8	-0.6	3.0	0.4
Wholesale and retail trade; repair of motor vehicles and motorcycles; transportation and storage; accommodation and food service activities	4.0	0.8	1.3	-1.6	-1.3	2.4	1.0	0.8	0.6	0.6	0.3	1.6	1.7	0.3	0.5	0.9	0.8	0.1	0.4
Information and communication	-1.1	1.0	2.6	2.7	7.6	2.1	0.4	1.3	-0.2	3.0	3.1	2.6	3.0	2.3	1.6	1.3	0.1	0.5	0.6
Financial and insurance activities	0.4	-3.9	5.1	-0.6	3.6	2.9	-1.7	2.2	-1.0	-0.3	1.9	-1.6	1.6	0.3	1.0	2.8	0.6	2.4	0.5
Real estate activities	-1.6	1.9	1.9	-1.0	3.2	0.8	1.9	1.1	2.1	2.5	-0.6	4.6	3.4	1.8	3.5	1.5	-0.2	2.3	0.5
Professional, scientific and technical activities; administrative and support service activities	5.6	0.0	1.1	2.3	-0.6	0.5	1.6	-1.9	2.6	-0.8	2.6	1.7	0.8	2.7	1.2	2.7	-0.4	2.7	-0.1
Public administration, education, human health and social work activities	0.7	0.0	-0.1	-0.8	-2.1	0.5	0.9	1.0	2.7	0.2	0.9	0.9	0.6	0.8	1.3	0.7	0.7	0.9	0.3
Culture, sport and entertainment; other activities; activities of households as employers; non-identified activities of households producing goods and services for own use; activities of extraterritorial organisations and bodies	2.5	2.7	-0.7	2.1	-1.6	0.3	-0.9	1.3	2.3	0.6	2.7	0.3	0.4	-0.1	1.7	0.6	0.2	1.4	-0.2
Gross value added, total for the economy	0.3	0.8	1.3	0.0	1.1	1.1	1.0	1.1	1.3	0.8	0.9	0.8	1.0	0.6	0.9	1.0	0.7	1.1	0.6

Source: NSI.

Household Behaviour

Positive labour market developments were sustained in the third quarter of 2019 in the context of improving consumer confidence and increased household savings rates.

According to the Labour Force Survey conducted by the NSI in the third quarter of 2019 labour supply measured by labour force[61] increased. Concurrently, the economic activity rate[62] reached the historically highest value, reflecting both the increase in labour force and the continuous downward trend in the working age population.

The Labour Force Survey shows that in the third quarter of 2019 the seasonally adjusted unem-

Economic Activity and Share of Discouraged Persons

(per cent, seasonally adjusted data) (per cent, seasonally adjusted data)

Share of discouraged persons between 15 and 64 (left scale)
Economic activity rate of persons between 15 and 64 (right scale)
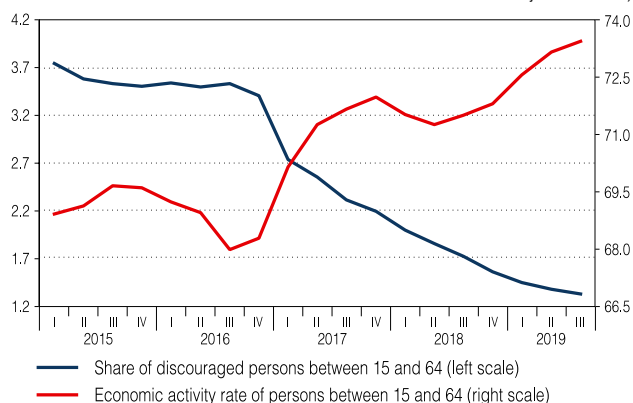
Sources: NSI Labour Force Survey, BNB calculations.

[61] 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.
[62] The labour force participation rate is the proportion between economically active persons (labour force) and population of the same age.

Economic Activity

Unemployment Rate

(per cent, share of labour force)

- Unemployment*
- Unemployment**
- Long-term unemployment*
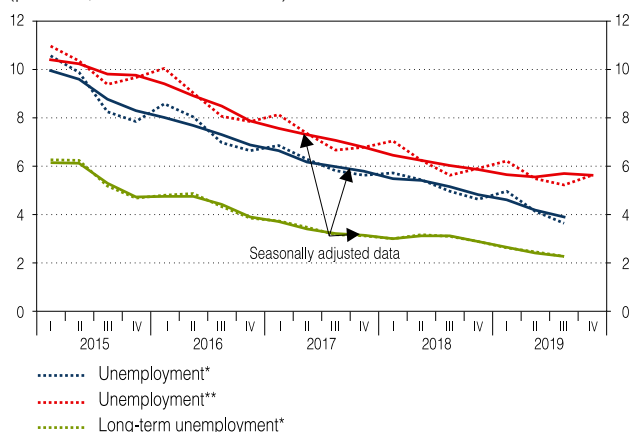
* NSI data.
** Employment Agency data.

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

Employment and Nominal Wage Bill

(per cent, annual change)   (per cent, annual change)

- Employment (right scale)
- Nominal wage bill
- Wage bill deflated by HICP

Sources: the NSI – SNA, BNB calculations.

Private Consumption and Consumer Confidence

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

- Private consumption, NSI (left scale)
- Consumer confidence (right scale)

Sources: the NSI, BNB calculations.

Retail Trade Turnover

(seasonally adjusted data at current prices; per cent, on the previous quarter)

- Retail trade turnover
- Price component (food)
- Price component (non-food)
- Real component (food)
- Real component (non-food)

Notes: Data for the fourth quarter of 2019 refer to October and November.

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

Sources: the NSI, BNB calculations.

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ployment rate[63] continued to decrease, reaching 3.9 per cent (according to non-seasonally adjusted data: 3.7 per cent). Long-term unemployed (unemployed for more than a year) and, to a lesser extent, persons unemployed for less than a year contributed most significantly to the decline in the unemployment rate. At the same time, average annual unemployment[64] for 2019 dropped to 5.6 per cent, according to Employment Agency data (from 6.2 per cent for 2018).

Labour income decreased its growth rate in the third quarter of 2019 (both annually according to non-seasonally adjusted data on the wage bill and quarterly according to seasonally adjusted national accounts data).[65]

The growth rate in private consumption also decelerated over the third quarter of 2019 both on an annual and quarterly basis, which was consistent with developments in compensation *per* employee. Costs of durable goods recorded a lower contribution to the overall growth in final consumption expenditure, according to national account data. Data on retail trade turnover were also consistent with above developments, with turnover growth at current prices slowing down. The group of household appliances, furniture

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[63] Unemployment rate is the proportion between the number of unemployed and the labour force based on Labour Force Survey data.

[64] The definition of unemployment rate according to Employment Agency data corresponds to that referred to in note 62, but the analysis employs a constant rate of labour force comprising the number of persons in the respective age group since the last census of population.

[65] For details, see *Behaviour of Firms and Competitiveness* Section in Chapter 3.

and other household goods and that of retail trade in automobile fuels and lubricants made the largest negative contributions to this change.

Slowing real growth in private consumption was not in line with consumer confidence indicator, which went up in October 2019 due to improved household expectations of their financial position and the overall economic situation in Bulgaria, as reported in the NSI Consumer Survey. A comparatively large improvement was also observed in consumers' intentions to purchase or build a house over the next 12 months which is in line with monetary statistics data showing an accelerated annual growth rate of housing loans in October and November 2019.

The NSI Household Budget Survey shows that the share of savings in household disposable income increased strongly in the third quarter of 2019. Households intending to increase their savings in the following 12 months also retained their high share (according to the NSI Consumer Survey of July 2019). Savings increased in the context of continuous growth in wages in the total economy and a varying degree of an improvement in households' financial situation across individual income groups.[66] In the third quarter of 2019 household assets measured by their net position in the banking system remained at levels similar to those in the previous quarter, reflecting the simultaneous increase in deposits and loans.

Over the first half of 2020 labour supply measured by labour force is expected to rise slightly, triggered by the expected acceleration in income growth. The improved situation in the labour market and maintenance of comparatively low interest rates will further support consumer expenditure, but its growth will be partly limited by persistently high savings rates.

Household Propensity to Save and Expectations

(per cent; seasonally adjusted data)　　　　(BGN million; seasonally adjusted data)

- Net household position *vis-à-vis* banking system* (quarterly change, right scale)
- Savings as a share of disposable income** (left scale)
- Net borrowing/lending as a share of disposable income** (left scale)
- Economic situation expectations in the following 12 months** (balance of opinions, left scale)
- Financial position expectations in the following 12 months** (balance of opinions, left scale)

* BNB data.
** NSI data.

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

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[66] According to European Commission data, in the fourth quarter of 2019 households' assessments of their personal financial situation increased in the population with the highest incomes and decreased in the lowest income group using most of the funds for consumption.

Employment and Income Dynamics

	2015				2016				2017				2018				2019		
	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III
(per cent, quarter-on-quarter; seasonally adjusted data)																			
Employed persons	0.3	-0.1	0.1	0.1	0.3	0.5	-0.7	0.5	0.3	0.1	1.0	0.4	0.0	-0.2	-0.3	-0.2	0.3	0.0	-0.1
Nominal wage *per* employee*	0.9	1.9	1.4	2.9	1.6	0.8	1.6	1.0	2.9	3.0	2.8	2.2	2.2	1.9	2.6	2.0	1.5	1.7	0.0
Real wage *per* employee**	1.3	1.8	1.8	3.6	1.9	1.3	1.4	0.9	2.5	2.5	2.9	1.1	1.7	1.0	1.6	1.7	0.6	1.1	0.0
Wage bill, nominal terms	1.6	2.0	1.8	3.1	1.7	1.5	1.9	1.6	2.9	2.7	3.1	2.4	2.8	2.1	2.2	2.4	1.7	2.4	1.4
Wage bill, real terms**	2.0	1.9	2.2	3.8	2.0	2.1	1.6	1.5	2.5	2.2	3.2	1.3	2.4	1.2	1.2	2.1	0.9	1.8	0.4
(per cent, on corresponding quarter of previous year, non-seasonally adjusted data)																			
Employed persons	0.8	0.2	0.2	0.3	0.9	1.5	-1.0	0.6	1.2	0.9	2.7	2.4	1.2	0.2	-0.9	-0.8	0.1	0.2	0.1
Nominal wage *per* employee*	5.5	5.1	4.2	8.1	8.2	5.8	7.4	3.6	6.9	9.3	11.3	11.7	9.4	9.0	9.5	10.3	7.1	7.5	0.0
Real wage *per* employee**	7.4	5.8	5.2	9.2	9.4	8.4	8.6	4.4	6.1	7.8	10.4	9.8	7.7	6.5	5.6	7.1	4.5	4.6	0.0
Wage bill, nominal terms	6.4	5.7	5.6	9.5	9.9	8.0	9.0	5.7	8.0	9.1	11.5	12.0	10.9	10.6	9.5	10.9	7.6	9.3	6.8
Wage bill, real terms**	8.3	6.3	6.6	10.6	11.1	10.6	10.2	6.5	7.2	7.6	10.6	10.1	9.1	8.0	5.7	7.7	5.0	6.3	4.4

* 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.
** Data deflated by HICP.

Sources: NSI – SNA, BNB calculations, Eurostat.

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

	2015				2016				2017				2018				2019			
	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV*
Retail trade, excluding motor vehicles and motorcycles incl.	7.9	-1.1	1.4	2.1	1.6	1.9	1.1	0.8	2.4	0.5	1.4	1.1	1.0	1.4	0.7	1.1	-0.9	0.4	1.1	0.3
Food, drinks and tobacco products	2.1	1.4	1.9	2.2	1.9	1.9	1.0	0.7	0.2	0.4	1.5	3.2	1.2	2.7	1.0	1.1	-9.9	8.1	2.0	1.4
Textile, clothing, footwear and leather	-0.8	0.1	3.9	2.9	2.5	2.9	1.3	-0.2	12.6	-2.7	-5.3	0.5	-0.8	2.6	1.0	2.6	1.1	-2.7	5.2	3.8
Household appliances, furniture and other household goods	0.7	-0.1	1.8	-0.2	2.3	0.3	1.2	2.0	1.0	2.9	1.5	1.2	0.7	2.5	2.8	-1.0	12.2	-7.1	-0.7	3.3
Computer and communication equipment	16.4	-5.5	0.3	-2.7	-1.8	5.3	1.9	7.7	-1.8	0.5	0.5	2.1	-4.2	1.1	-1.8	-3.6	8.5	-1.0	1.4	2.3
Pharmaceutical and medical goods, cosmetics and toiletries	2.4	1.6	1.9	2.5	2.0	3.5	3.6	0.9	0.9	2.4	1.3	1.3	6.4	2.0	2.9	5.3	-14.2	0.6	2.0	1.1
Unspecialised shops with different kinds of goods	1.3	0.4	1.5	2.3	0.0	1.2	2.5	1.4	4.2	2.0	2.1	0.3	-1.2	1.6	1.1	-1.0	6.6	-2.3	1.5	1.7
Automobile fuels and lubricants	38.6	-6.5	-0.4	5.4	0.8	1.5	-2.2	-3.0	6.8	-2.3	1.2	-1.1	-2.3	2.3	0.1	5.5	2.5	-2.9	1.0	-4.1

* Data for the fourth quarter of 2019 refer to October and November.

Source: the NSI, short-term business statistics.

Fiscal Policy Effects on the Economy

In the first eleven months of 2019 the fiscal policy had a positive effect on economic activity in Bulgaria mostly in terms of government investments and government consumption.

By end-November consolidated fiscal programme surplus was BGN 1300.8 million (1.1 per cent of projected GDP).[67] Compared with the same period of previous year, a BGN 1596 million decline was recorded in the budgetary balance, with August one-off capital expenditure on defence of USD 1.2 billion contributing significantly to this.

As of November total budget revenue grew by 11.3 per cent, with moderation *vis-à-vis* the first half year reflecting a lower growth rate of non-tax and grant revenue.

The downward trend in annual non-tax revenue growth in the second half of the year was mainly driven by a lower increase in revenue into the Electric Power System Security Fund's budget.[68] A significant drop was reported in the growth rate of grants *vis-à-vis* the first half year, reflecting a decelerated absorption of funds under EU 2014–2020 operational programmes.

Between January and November 2019 the annual growth rate of tax revenue remained relatively high (9.3 per cent), further underpinned by the increased revenue from social and health insurance contributions and value added tax (both rising by 11.3 per cent as of November). The sustainable increase in this revenue reflected strong domestic demand, favourable labour market conditions and developments in compensation *per* employee in the economy which was also positively affected by legislative amendments adopted in early 2019.[69] Part of these factors brought about a comparatively high growth rate of personal income tax revenue to 9.3 per cent in November. The annual growth

Contributions of Major Groups of Revenue to Growth in Total Revenue and Grants, Cumulatively (on an Annual Basis)

(per cent; percentage points)

- Total growth
- Non-tax revenue
- Tax revenue
- Grants
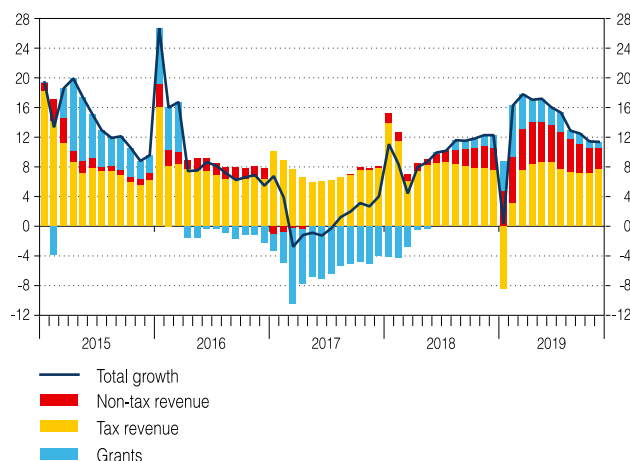
Sources: the MF, BNB calculations.

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[67] GDP forecasts of the Ministry of Finance for 2019 based on the autumn macroeconomic forecast for the 2019–2022 period, published in October 2019.

[68] Lower growth in Electric Power System Security Fund's revenue over the second half of 2019 reflected a decision taken by the Energy and Water Regulatory Commission in July 2019 to cut the 'obligation to society' fee from BGN 36.75/MWh in 2018–2019 to BGN 19.57 in 2019–2020.

[69] Maximum social security income, minimum wage and minimum social security income were raised from 1 January 2019.

rate of corporate tax revenue accounted for 4.1 per cent in November.

Revenue from indirect taxes recorded similar growth rates to those of nominal private consumption in the economy as of the end of the January–September period. This growth was triggered by the strong increase in VAT revenue (annual growth of 9.0 per cent for the first nine months), which offset the slowdown in excise revenue growth.

The annual growth rate of total expenditure under the consolidated fiscal programme for the first eleven months of 2019 was 17.1 per cent. Capital expenditure (8.0 percentage points), personnel costs (3.3 percentage points) and social expenses (2.8 percentage points) contributed most substantially to this growth. In August total expenditure accelerated significantly from the preceding month (19.5 per cent on an annual basis in August against 10.8 per cent in July), reflecting entirely one-off capital expenditure on defence. Slowing growth in capital expenditure in the following months was explained by the gradual exhaustion of defence expenditure effects. Excluding this one-off factor, capital expenditure growth for the first eleven months of the year would be maintained at comparatively high levels driven mainly by increased national investments (28.2 per cent year on year in November). Concurrently, in November annual growth in EU co-funded investment expenditure (10.2 per cent) slowed down compared to the first half of the year. CFP capital expenditure dynamics suggests a comparatively strong influence of public investment on total investment growth in the economy by the year end.[70]

In the first eleven months of 2019 the growth rate of social payments accelerated gradually triggered by the 5.7 per cent increase in pensions from the beginning of July and strong growth in health insurance payments[71]. As a result, social expenditure continued to contribute positively to household disposable income dynamics. Growth in personnel costs did not

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[70] Expenditure incurred under the Ministry of Defence budget for acquiring a new type of fighter aircraft should not affect general government' investments. For further details, see *Economic Review*, 3/2019, p. 51.

[71] Based on MF Monthly Bulletin on Budget Performance and Major Indicators under the Consolidated Fiscal Programme for November 2019.

Contributions of Major Tax Groups to Tax Revenue Growth, Cumulatively (on an Annual Basis)
(per cent; percentage points)

- Total growth of tax revenue
- Social security contributions
- Direct taxes (excluding social security contributions)
- Value added tax
- Other indirect taxes
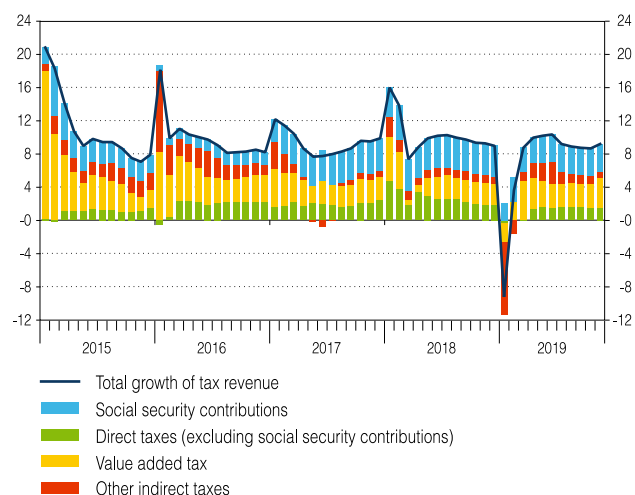
Sources: the MF, BNB calculations.

Contribution of Major Groups of Expenditure to Total Expenditure Growth, Cumulatively (on an Annual Basis)
(per cent; percentage points)

- Total growth
- Staff and operating expenditure
- Social and health insurance payments
- Interest expenditure
- Contribution to EU budget
- Capital expenditure and net growth of state reserve
- Subsidies
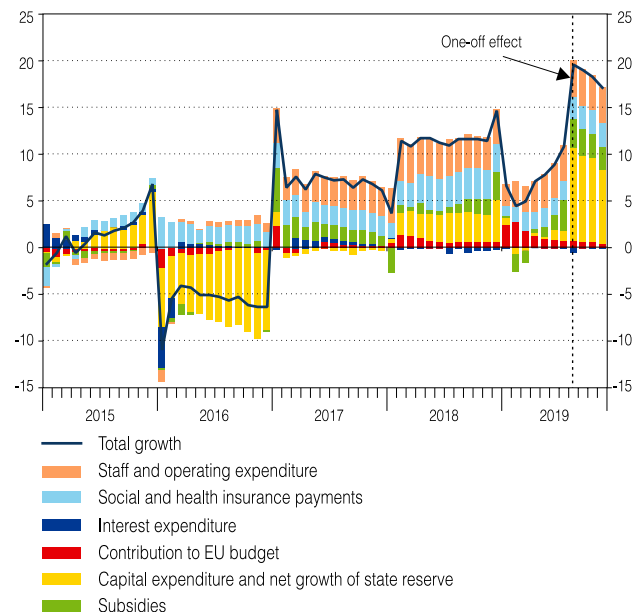
Notes: The one-of effect results from August 2019 payments under the investment project 'Acquiring a New Type of Fighter Aircraft' to the amount of USD 1.2 billion. In the Consolidated Fiscal Programme reports of January 2016, staff costs include wage, insurance and other remuneration expenditure, while in the reports for past periods, the latter is included in the operating expenditure. To prevent data inconsistencies prior to and after January 2016 resulting from the methodological change, staff costs and operating expenditure are presented aggregately in the chart and separately in the table *Key Budget Indicators Performance for 2018 and 2019*.

Sources: the MF, BNB calculations.

change substantially in November (14.0 per cent), with operating expenditure posting moderation in its growth (to 4.4 per cent). Reflecting developments in personnel, operating and healthcare costs, real government consumption rose by 4.7 per cent in the first nine months. Based on CFP budget performance data as of November, government consumption is likely to have a positive contribution to real GDP growth over the fourth quarter of the year.

According to budget framework parameters for 2020, it may be expected that the fiscal policy will further exert a positive influence on economic growth in the first six months of 2020. Favourable dynamics in the labour market and private consumption is expected to contribute to maintaining comparatively strong growth in tax revenue. Government's plans for public sector wage growth, including a continued increase in teaching staff remunerations, coupled with the minimum wage rise will help maintain a positive contribution of government consumption to real GDP growth.[72] Social payments are expected to increase further at rates similar to those of November 2019. Their developments in the first six months of 2020 will reflect mainly higher health insurance expenses, social assistance transfers and increased pensions since the middle of 2019. With EU 2014–2020 project implementation entering a more advanced stage, higher absorption of funds under EU-funded operational programmes could be expected. National investment expenditure, mainly on launching large projects, is anticipated to have an additional positive effect on economic growth over the first half of 2020. However, there is still an uncertainty in the forecast of both EU co-financed government investments and national investments. Possible delays in implementation of investment projects pose a potential risk for lower than projected economic growth to be recorded over the projection horizon.

[72] For further information, see here the *Basic Parameters of the 2020–2022 Budgetary Framework* box.

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Key Budget Indicators Performance for 2018 and 2019

Consolidated fiscal programme	2018 January – November[1]		2019 January – November[1]	
	BGN million	per cent[2]	BGN million	per cent[2]
Total revenue and grants	35 810	12.2	39 854	11.3
Tax revenue	29 273	9.3	31 988	9.3
incl. social security and health insurance contributions	8 586	13.2	9 560	11.3
Non-tax revenue	4 834	24.6	5 899	22.1
Grants	1 703	36.8	1 966	15.5
Total expenditure (incl. the contribution to EU budget)	32 913	11.5	38 553	17.1
Staff	7 859	11.2	8 957	14.0
Operating expenditure	3 527	7.1	3 682	4.4
Interest	653	-14.0	607	-7.0
Social expenditure, scholarships[3]	14 681	6.7	15 585	6.2
Subsidies	2 318	28.7	3 064	32.2
Capital expenditure and government reserve growth	2 881	43.1	5 522	91.7
incl. capital expenditure	2 864	42.9	5 495	91.8
Contribution to the budget of the European Union	994	21.8	1 136	14.2

	BGN million	difference[4] (BGN million)	BGN million	difference[4] (BGN million)
Budget balance, on a cash basis	2 897	511	1 301	-1 596

Tax revenue under the state budget	2018 January – November[5]		2019 January – November[5]	
	BGN million	per cent[2]	BGN million	per cent[2]
Tax revenue	19 772	7.8	21 472	8.6
Corporate tax	1 872	6.8	1 949	4.1
Personal income tax	3 359	10.2	3 671	9.3
Value added tax	9 302	8.3	10 356	11.3
Excise duties	4 845	5.1	5 088	5.0
Customs duties and taxes	213	22.3	213	0.4
Insurance premia tax	37	12.9	45	19.1
Other taxes	144	6.6	150	4.2

Note: The difference between the sum of individual components and total sum is due to rounding.
[1] Based on monthly reports on cash-based performance of the consolidated fiscal programme.
[2] Annual rate of change on the same period of previous year.
[3] Including also expenses on current and capital transfers, which in 2018 are presented in monthly reports on cash-based performance of the consolidated fiscal programme as a separate item in the expenditure side of the budget.
[4] Change of the budget balance on the same period of previous year.
[5] Based on monthly reports on cash-based implementation of the state budget.
Source: the MF.

Main Parameters of the 2020–2022 Budgetary Framework

The updated medium-term budgetary forecast of the government for the 2020–2022 period[1], which complies with 2020 budget law parameters adopted by the National Assembly, provides for a balanced budget on the consolidated fiscal programme (CFP) over the whole projection horizon. General government budget balance (ESA 2010) used for the purposes of the deficit and debt procedure is expected to be slightly negative in 2020 (-0.1 per cent of the projected GDP) and positive in 2021 and 2022 (0.5 per cent and 0.1 per cent of the GDP, respectively). Planned primary surpluses and favourable differential between the projected nominal rate of GDP growth and the implicit interest rate on public debt are expected to support a further decline in both government debt and general government consolidated debt over the 2020–2022 period.

When taking into account the MF estimates of gradually increasing positive deviations of economic activity from potential output over the projection horizon, the change in structural budget balance implies a slight stimulating effect of the fiscal policy on the economic activity in Bulgaria in 2020 and 2022, while in 2021 this effect is expected to be moderately restrictive. The budget objectives on cash and accrual basis remained broadly unchanged in several consecutive updated medium-term budget forecast preparation cycles, while maintaining full compliance with fiscal rules provided for in the Law on Public Finances and EU framework for economic policy coordination.

The increase in CFP revenue in 2020 as projected in the updated medium-term budget forecast (by 7.6 per cent against its expected performance for 2019[2]) reflects MF assumptions of sustainable growth of economic activity in Bulgaria and further progress in project implementation under EU operational programmes of the 2014–2020 programming period. The main factors behind the projected tax and social security revenue rises (by 7.1 per cent) are the domestic demand dynamics, labour income and employment, while the contribution[3] of the positive budget effects of changes to social security policy and minimum wage rises[4], effective as of early 2020, is expected to be much lower. Discretionary measures in 2020 are expected to have a more significant budget impact on non-tax revenue as a result of the toll system launch and one-off receipts from Sofia airport concession. This additional revenue effect is expected to be largely offset by a decline in the revenue into the Electric Power System Security Fund's budget[5], and therefore the increase in non-tax revenue for 2020 (5.5 per cent) is projected to be more limited compared to the accelerated growth rates reported in the 2018–2019 period. The anticipated increase in revenue from grants by 21.2 per cent compared to the expected performance for 2019 implies an accelerated implementation of projects co-financed by the EU budget.

The updated medium-term forecast sets a minimum increase in total CFP expenditure by 1.9 per cent for 2020 (including the contribution to EU budget) *vis-à-vis* the 2019 anticipated performance reflecting, to a large extent, a base effect of one-off substantial expenditure under the Ministry of Defence budget for the acquisition of a new type of fighter aircraft[6]. At the same time, the government maintains its current priorities concerning both income policy, in particular education and social and health and social security policy, and accelerated progress in the implementation of investment

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[1] The updated medium-term budget forecast for the 2020–2022 period is drawn up in October 2019 as reasons to the 2020 draft State Budget Law and adopted by Decision No 631 of the Council of Ministers of 31 October 2019. To ensure compliance with the parameters of 2020 final budget and tax laws adopted by the National Assembly, amendments to the updated medium-term budget forecast were made and approved by Decision No 815 of the Council of Ministers of 30 December. This box discusses government's medium-term budget forecast parameters approved on 30 December 2019.

[2] The October 2019 budget revenue estimate for 2019 remained broadly unchanged in the updated medium-term budget forecast approved on 30 December 2019.

[3] The calculated contribution is based on the estimate of the effects of discretionary measures under the updated medium-term budget forecast on the general government revenue due to the lack of estimates of these effects on CFP tax and social insurance revenue.

[4] As a result of the monthly minimum wage rise in Bulgaria from BGN 560 to BGN 610, effective as of 1 January 2020, the minimum social security income for all self-employed also changed from BGN 560 to BGN 610, with only for registered farmers and tobacco producers the minimum social security income increased from BGN 400 to BGN 420. Minimum social security thresholds of employees for whom the threshold coincides with the minimum wage are also expected to rise.

[5] Pursuant to price decision of the Energy and Water Regulatory Commission in force as of July 2019 the 'obligation to the society' fee has been reduced by 50 per cent.

[6] If this one-off expenditure is netted out from the expected total CFP expenditure for 2019, the projected increase for 2020 would be significantly higher (6.8 per cent).

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projects financed by EU funds and exclusively by national funds. The growth in 2020 budget expenditure will be mainly driven by the planned increase in social security and health insurance payments (by 6.7 per cent or BGN 1.2 billion), which, in turn, reflects primarily changes in the amount of pensions paid[7] and, to a lesser extent, the increased funds for healthcare and household benefits and allowances. In 2020 personnel costs are projected to increase by 9.3 per cent or BGN 0.9 billion against the expected performance for 2019 with additional funds provided for both a continuance of the policy of wage increases in education and a 10 per cent income rise in all other budget sectors. As in 2017 and 2018, this updated medium-term budgetary forecast sets declines in other personnel payments in 2020 (by 14.6 per cent against the expected performance for 2019) in order to partly limit the funds necessary to implement the income update policy in the budget sector. All other CFP current expenditure[8] are projected to increase slightly in 2020 by BGN 0.2 billion against the expected performance in 2019, while the increase in operating expenditure and contribution to the EU budget is compensated, to a large extent, by the decline in subsidies due to the above changes in the Electric Power System Security Fund's budget.

Under the updated medium-term budgetary forecast the projected capital expenditure dynamics in 2020 (decline by 17.3 per cent or BGN 1.4 billion) reflects the higher one-off expenditure for defence modernisation incurred in 2019. If the expected performance for 2019 is reduced by the amount of this one-off expenditure, capital expenditure would increase by 12.4 per cent or BGN 0.7 billion in 2020. An increase is projected in both EU co-financed investments due to the advanced stage of project implementation of the 2014–2020 programming period, and national capital expenditure (the one-off effect of the higher expenditure for defence modernisation in 2019 being offset).

Maintaining a balanced budget position over the 2021–2022 period implies a limitation of budget expenditure as a share of GDP to offset the expected decline in budget revenue to GDP ratio. Current expenditure is mainly expected to be limited in the two years and capital expenditure to a lesser degree in 2021.

The updated medium-term budgetary forecast of the government sets declines in the government debt to GDP ratio from 18.6 per cent at the end of 2019 to 17.0 per cent at the end of 2022 and the general government consolidated debt to GDP ratio from 20.4 per cent to 18.2 per cent over the same period. The government seeks to couple the reduction in debt burden with an increase in fiscal reserve funds by BGN 1.8 billion over the 2020–2022 period, which will allow for a BGN 2.2 billion partial refinancing of bonds maturing in early 2023 and issued on international capital markets. In line with MF issuing policy and the debt limits set out in the 2020 State Budget Law, the maximum amount of the new government debt that can be assumed over the year is BGN 2.2 billion. This implies an excess of the new debt over maturity debt payments for the year in compliance with the updated medium-term budgetary forecast objective to accumulate additional funds in the fiscal reserve over the medium term.

Risks to the achievement of the budgetary targets under the updated forecast for the 2020–2022 period continue to be mainly associated with economic and financial developments at a global and EU-wide level. As in the previous updated medium-term budgetary forecast of the government (for the 2019–2021 period), concerns remain that in case of a less favourable international environment compared to that in the MF macroeconomic forecast, tax and social security revenue would remain below the estimated levels, thus hampering the achievement of government budgetary targets. In addition, the 2020 budgetary framework continues to provide for increases in the current expenditure including wage costs and social payments, which are hard to reverse and would further limit the opportunities for budgetary consolidation amid continuously worsening international environment. Risks to the 2020 budgetary framework could arise in implementing policies with an expected positive budget effect, which have been postponed on several occasions since it was impossible to apply them in preceding years. Sofia airport concession and projected declines in other staff payments are examples of such policies.

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[7] From 1 July 2020 pensions awarded by 31 December 2019 are projected to increase by 6.7 per cent and the minimum monthly amount of old-age pension by 13.9 per cent to BGN 250.
[8] Including EU budget contribution costs.

4. INFLATION

At the end of 2019 annual inflation rose to 3.1 per cent on end-2018. Higher inflation in December was due to a large extent to the substantial positive contribution of the food group influenced by higher international food prices in euro and internal factors related to the spread of the African swine fever. Higher international oil prices at the end of 2019 also contributed to higher inflation in the energy products group compared with December 2018. Core HICP components' prices continued to increase though at slower rates than at the end of 2018, reflecting to a large degree the exhausted base effects in the services group. Goods and services with administratively controlled prices and tobacco products contributed further to overall inflation throughout the year.

The forecast for a gradual deceleration of overall inflation in the first half of 2020 reflects primarily market expectations of international oil price developments. Food and core inflation are expected to have the main positive contribution to overall inflation in the first two quarters. Goods and services with administratively controlled prices and industrial goods are expected to have a low positive contribution to overall inflation in early 2020.

At the end of 2019 annual inflation accelerated to 3.1 per cent from the end of 2018 (2.3 per cent in December 2018).[73] Price dynamics in imported goods is among the major factors behind domestic inflation. International fuel, food and commodity prices and their spillover through the supply chain have a strong impact on price developments in Bulgaria. The group of food and HICP core components had the largest positive contributions to overall inflation in December 2019, with the food group inflation rate recording a significant increase from the end of 2018 in line with higher international euro food prices and internal factors associated with African swine fever spread[74]. Increased international oil prices by end-2019 contributed to higher inflation in the group of energy products, reaching 4.1 per cent in December (1 per cent by end-2018). Slowing services inflation in December was driven mainly by exhausted base price effects in insurance connected with travel. Goods and services with administratively controlled prices also made a positive contribution to inflation in December.

In November 2019 the annual rate of the total producer price index (PPI) accelerated to 4.0 per cent in the domestic market, from 2.9 per cent in December 2018. In November the economic sub-sector of production and distribu-

Inflation and Contribution of Major Commodity and Services Groups to It
(per cent; percentage points; on an annual basis)
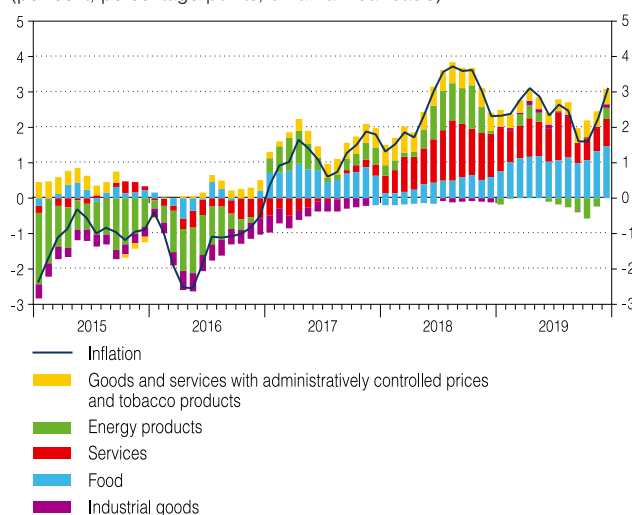
Notes: This structure corresponds to the Eurostat classification; tobacco products and goods and services with administratively controlled prices are presented separately. The index of goods and services with administratively controlled prices is calculated through the elementary aggregates level in the consumer basket.

Sources: the NSI, BNB calculations.

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[73] The analysis in this Section employs NSI data on HICP.
[74] The disease was registered in Bulgaria in July 2019.

**Rates of Change in
Brent Crude Oil and A95 Petrol Prices**

(per cent; on a monthly basis)

- Brent crude oil price in euro
- A95 petrol price, excluding VAT and excise duty in levs
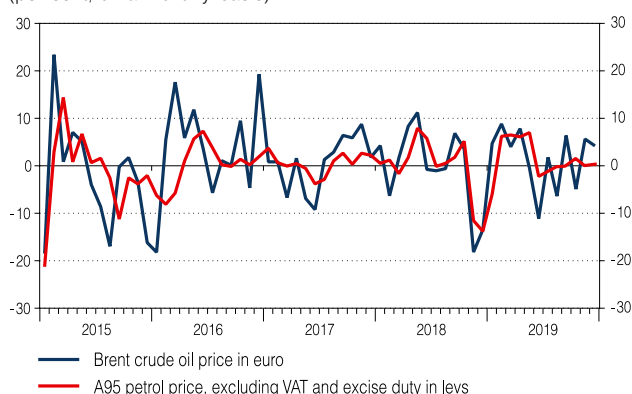
Sources: the ECB, the NSI, BNB calculations.

**Rate of Change in Industrial PPI on the Domestic
Market and Contributions by Major Sub-sectors**

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

- Total industry
- Water supply; sewerage, waste management and remediation
- Production and distribution of electricity, heating and gaseous fuels
- Manufacturing
- Mining and quarrying

Source: the NSI.

**Rates of Change in Producer Prices on the Domestic
Market by Major Industrial Groupings**

(per cent, on an annual basis)

- Intermediate consumption goods
- Consumer non-durables
- Consumer durables
- Energy products
- Investment products

Source: the NSI.

Rate of Change of Food Price Index

(per cent, on an annual basis)

- Unprocessed food (meat and meat products; fish and seafood; fruit; vegetables)
- Processed food
- Food, total

Sources: the NSI, BNB calculations.

tion of electricity and heating[75] had the major contribution to the increased producer prices on an annual basis, which was consistent with more expensive electricity and heating since 1 July 2019.[76] The increase in year-on-year prices in manufacturing between January and November reflected largely production of food, beverages and tobacco products. In addition, the end-use classification shows that consumer non-durables prices increased by 2.4 per cent in November with the strongest contribution of the group of processing and preserving of meat[77] (0.87 percentage points). These developments were in line with higher inflation in the food group, which rose to 6.2 per cent in December (from 3.1 per cent by end-2018).

At the end of 2019 processed food inflation was 3.4 per cent, from 2.5 per cent by end-2018, driven mainly by the group of food products not elsewhere classified. Inflation in this group was mainly triggered by ready-to-eat foods available in food shops and supermarkets, reflecting most likely price increases due to African swine fever spread in Bulgaria. At the same time, the positive contribution of bread and cereals to processed food inflation declined throughout the year.

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[75] This refers to the group of production and distribution of electricity, heating, and gaseous fuels
[76] For details, see the EWRC press release of 1 July 2019.
[77] This refers to the sub-group of processing and preserving of meat and production of meat products, excluding prepared meals.
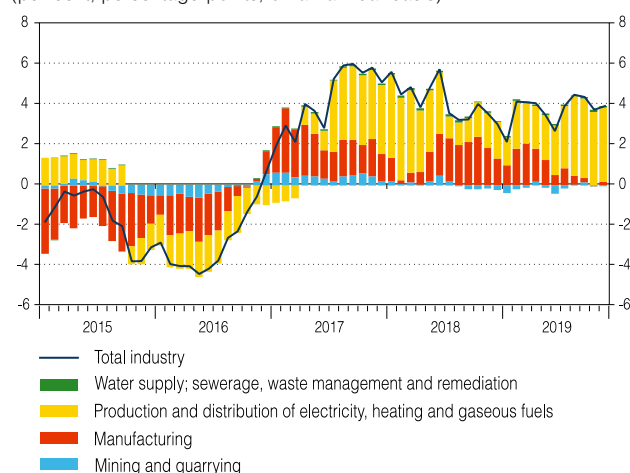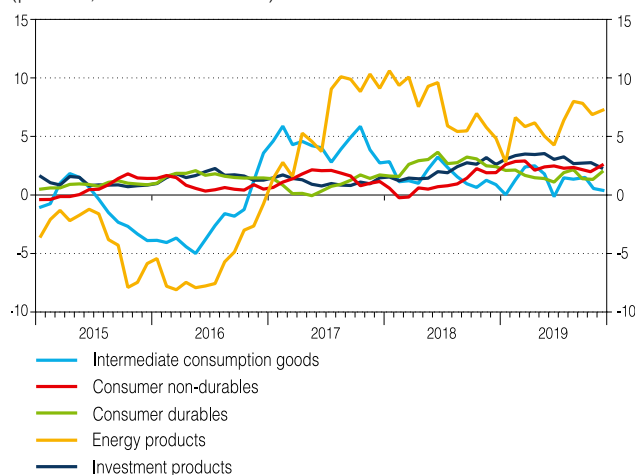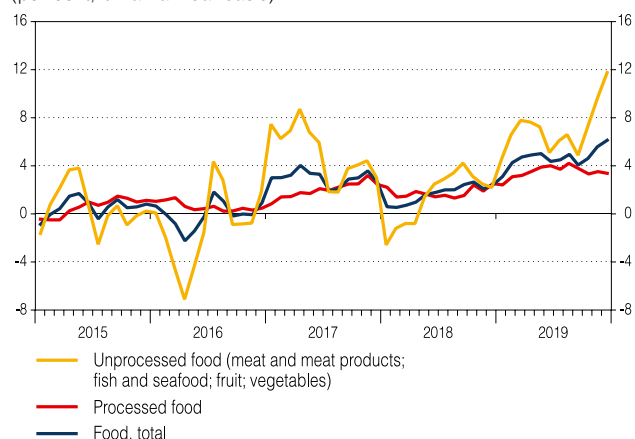
Contribution of Major Sub-groups of Processed Food to Overall Inflation

(percentage points; on an annual basis)

Total contribution of processed food to annual inflation
Bread and cereals
Milk, dairy products and eggs
Animal and vegetable fats and oils
Other processed food

Sources: the NSI, BNB calculations.

Contribution of Major Sub-groups of Unprocessed Food to Overall Inflation

(percentage points; on an annual basis)

Total contribution of unprocessed food to annual inflation
Meat and meat products
Fish and seafood
Fruit
Vegetables
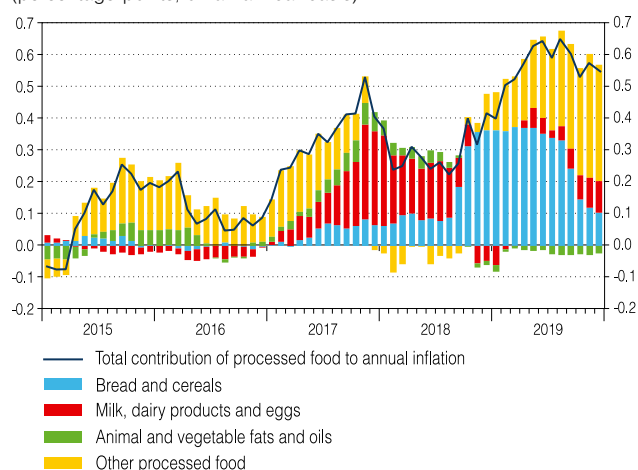
Sources: the NSI, BNB calculations.

Annual inflation in unprocessed food rose significantly to 11.8 per cent in December 2019, from 2.2 per cent in December 2018, largely reflecting prices of meat and meat products. In November pigmeat prices recorded essential growth of 30.3 per cent on an annual basis (from -4.4 per cent by end-2018), this group contributing most significantly to non-processed food inflation. Increased prices resulted from reduced supply, and higher producer[78] and import prices reflecting African swine fever spread worldwide and in Bulgaria. Vegetables also had a strong positive contribution to non-processed food inflation by end-2019, with their price rises matching growth in producer prices[79] of these products.

At the end of 2019 core inflation which includes services and non-food prices slowed down from December 2018 to 1.8 per cent. Lower inflation in the group of services was the driving factor to the slowdown, whilst non-food goods registered low positive inflation compared to the 0.5 per cent deflation in December 2018.

Annual services inflation moderated to 2.9 per cent at the end of 2019 (5.0 per cent in December 2018), although this group retained its essential positive contribution to overall inflation. The continuing trend toward cheaper telecommunication services and insurance connected

Core Inflation

(per cent, on an annual basis)

HICP, excluding food, energy products, administratively controlled prices and tobacco products (core inflation)

Services inflation (administratively controlled prices excluded)

Non-food inflation (fuels and administratively controlled prices excluded)

Sources: the NSI, BNB calculations.

[78] NSI data on producer prices and indices of agricultural produce for the second quarter of 2019.
[79] See footnote 78.
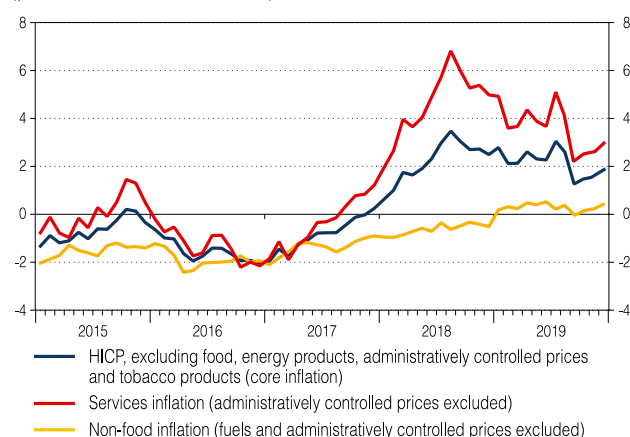
Inflation

Contribution of Services and Major Services
Sub-groups to Overall Inflation

(percentage points; on an annual basis)

Total contribution of services to annual inflation
Telecommunication services
Other services
Transport services
Catering services
Short-stay accommodation, package holidays and travel

Sources: the NSI, BNB calculations.

Contribution of Major Non-food Sub-groups (Excluding
Energy Products) to Overall Inflation

(percentage points; on an annual basis)

Total contribution of industrial goods to annual inflation
Other consumer non-durables, excluding clothing and footwear
Other consumer durables, excluding automobiles
Clothing and footwear
Automobiles

Sources: the NSI, BNB calculations.

with travel over the most of the year was the main factor for observed downward dynamics in this group. The negative contribution of insurance connected with travel to inflation reflected primarily the exhausted base effect of the summer of 2018 when its prices rose due to the Supreme Court of Cassation' decision to extend the circle of persons entitled to claim compensation for death of a relative[80]. At the same time, enhanced demand for insurance was observed due to termination of an insurance company's activities in August[81]. Catering services recorded an accelerated annual rate of inflation from the end of 2018, having the highest positive contribution to overall inflation among services components. This was attributable to the stronger consumer demand *vis-à-vis* the end of 2018 and upward dynamics in food prices.

Deflation observed in non-food goods since early 2010 was reversed in the beginning of 2019, and inflation of 0.5 per cent on an annual basis was registered in December (-0.5 per cent in December 2018). The upward price dynamics in non-food goods was mainly attributable to slightly positive inflation in the motor vehicles group. At the same time, non-durable goods had a major positive contribution to non-food inflation, whereas durable goods prices declined further on an annual basis.

[80] For details, see the SCC interpretative decision of 21 June 2018.
[81] For details, see the Financial Supervision Commission press release of 14 August 2018.
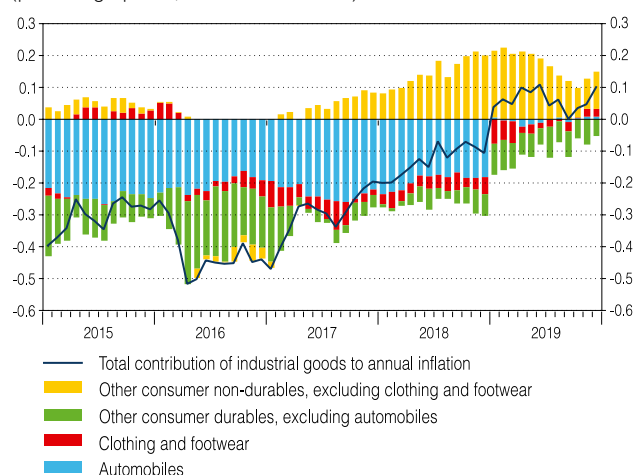
Contribution of Major Sub-groups of Administratively Controlled Prices and Tobacco Prices to Overall Inflation

(percentage points; on an annual basis)

- Total contribution of administratively controlled prices and tobacco products to annual inflation
- Tobacco products
- Water supply and sewerage services
- Urban public transport
- Heating
- Electricity
- Other administratively controlled prices
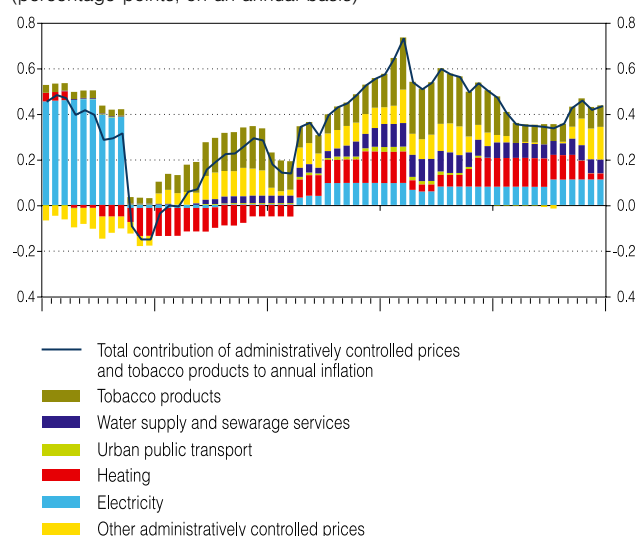
Sources: the NSI, BNB calculations.

In 2019 tobacco products and goods and services with administratively controlled prices continued to contribute positively to overall inflation, with their annual growth rate at the end of the year decelerating slightly to 2.1 per cent (2.3 per cent in December 2018). This reflects lower tobacco inflation unlike that in administratively controlled prices which rose insignificantly. The exhausted base effect of increased excise duties on cigarettes in early 2018[82] was a decisive factor for limiting the positive contribution of tobacco products and inflation slowdown in the group to 2.2 per cent by year's end (4.1 per cent in December 2018). Of particular importance for higher inflation in administratively controlled prices (2 per cent by end-2019 *vis-à-vis* 1.9 per cent in December 2018) was the Energy and Water Regulatory Commission (EWRC) decision to raise the average electricity and heating prices by 2.9 and 3.5 per cent, respectively.[83] Medicines prices had also an essential contribution to inflation in this group.[84] Increased prices

[82] An increase in the specific tobacco excise duty from BGN 101 to BGN 109 *per* 1000 cigarettes; 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 became effective from early 2018.

[83] See footnote 76.

[84] From 6 August 2019, amendments to the Ordinance on Terms, Rules and Procedures for Regulation and Registration of Prices of Medicinal Products entered into force. Fore more information, see the document on the website of the National Council on Prices and Reimbursement of Medicinal Products.

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

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

- Industry
- Retail trade
- Services
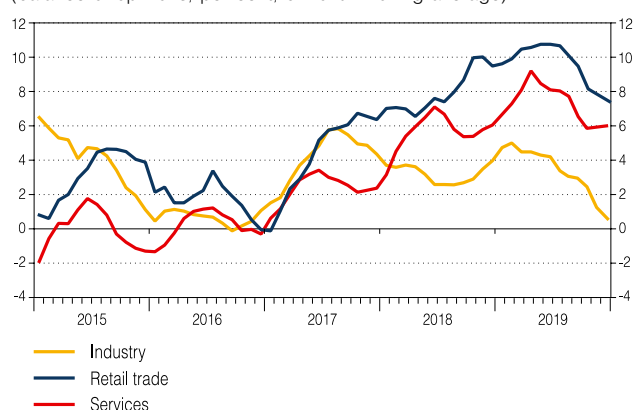
Note: Final results of the survey of business developments in the industrial sector, services and trade represent balances of opinions calculated as a difference between the relative shares of positive and negative opinions on raised issues.

Source: the NSI.

Rate of Change of the House Price Index

(per cent, on an annual basis)

- Existing housing
- New housing
- House price index
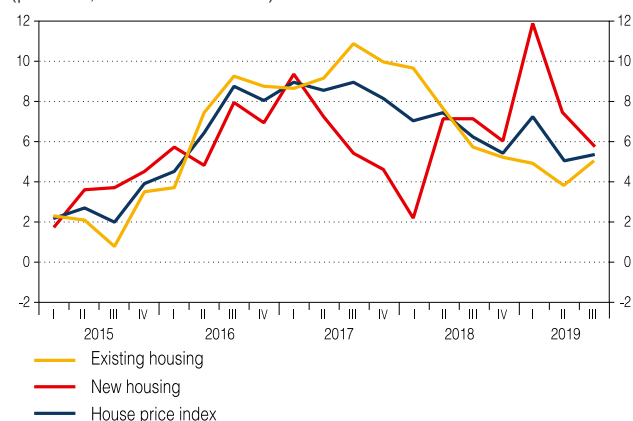
Source: the NSI.

of water and sewerage services in Bulgaria, as approved by the EWRC,[85] were an additional factor for accelerating inflation in this group. EWRC' decisions to decrease the regulated natural gas price in the third and fourth quarters of 2019 had a restricting effect on price rises in this group.[86]

According to NSI business surveys, in December 2019 the majority of managers in services (91.4 per cent), retail trade (89.9 per cent) and industry (89.7 per cent) expect stagnation in selling prices over the coming three months, with balance of opinions in each of the three sectors decreasing from the end of 2018. In the sectors of services and retail trade, most managers expecting certain changes in selling prices project price increases.

In the third quarter of 2019 the annual growth rate in the house price index remained close to that of the end of 2018, reaching 5.4 per cent, from 5.5 per cent at the end of 2018. Retention of end-2018 growth rates was observed in both existing and new houses. Despite their continuous growth, over the recent years domestic house prices have remained 14.4 per cent lower than the maximum values recorded in the third quarter of 2008.

House price growth was consistent with strongly improved home purchase sentiment of households in the following 12 months.[87] The annual percentage rate of charge (APRC) on new housing loans continued to decline, reaching 3.6 per cent in the third quarter of 2019 (against 3.9 per cent at the end of 2018),[88] thus improving further housing affordability. In the context of an accelerated increase in labour income of households, which creates conditions for savings growth, attained low levels of new time deposit rates were an additional factor for households to look for alternative investment opportunities in the form of real estate purchases. BNB-constructed indicator for the price-to-rent ratio which compares the value of a property to the return

Household Sentiment for Home Purchase in the Following 12 Months

(balance of opinions)

Sources: the NSI, BNB calculations.

Price-to-Rent Ratio (percentage deviation from long-term average value)

(percentage points; on an annual basis)

Sources: the NSI, BNB calculations.

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[85] For details, see the EWRC press release of 28 December 2018.

[86] For details, see the EWRC press releases of 28 June 2019 and 30 September 2019.

[87] The analysis employs NSI survey data on household sentiment for home purchase in the following 12 months.

[88] Values indicating APRC on housing loans to households are averages weighted by the relevant volumes of new loans for a 12-month period.
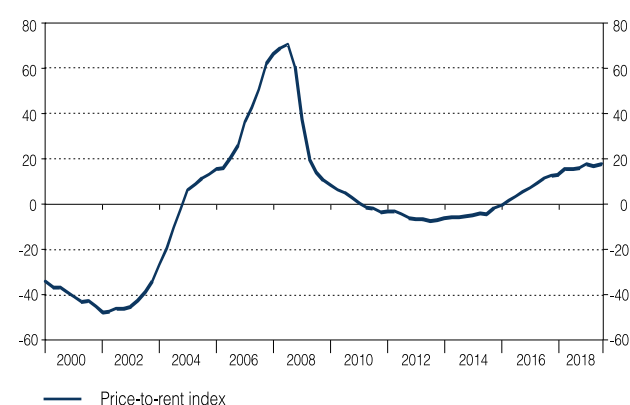
Key Indicators of the Housing Market in Bulgaria
(per cent; year-on-year change)

Indicators	2015	2016	2017	2018	2018		2019	
					III	IV	I	II
Price developments								
House price index, total	2.8	7.0	8.7	6.6	5.5	7.3	5.0	5.4
New dwellings	3.5	6.4	6.7	5.7	6.1	11.9	7.5	5.8
Existing dwellings	2.3	7.3	9.7	7.0	5.3	5.0	3.8	5.1
Inflation (HICP)	-1.1	-1.3	1.2	2.6	3.0	2.5	2.8	2.2
House rentals, paid by tenants (HICP)	0.7	0.6	1.0	1.9	2.4	3.1	3.7	3.3
Lending								
New housing loans	38.6	7.4	32.7	14.9	7.1	6.2	9.7	14.8
Annual percentage rate of charge on new housing loans (per cent, at the end of the period)*	6.4	5.4	4.4	3.9	3.9	3.8	3.7	3.6
Housing loans balances	0.8	-15.3	12.6	18.4	-0.5	-0.3	0.2	13.6
Construction and investment								
Permits issued for the construction of new residential buildings (square meters)	13.0	4.8	32.5	39.0	61.1	26.6	5.4	-5.4
Value added in construction (at average annual prices for 2015)	4.3	-7.3	4.5	1.4	3.9	-1.9	6.6	3.2
Constriction production index, building construction	8.9	-16.1	10.9	2.6	1.4	10.2	7.8	9.8
Fixed investment; residential buildings**	-10.3	102.1	19.2	-2.2	-2.5	-0.5	0.2	0.2
Construction cost index for new buildings	1.3	0.8	2.5	2.9	2.0	4.7	5.2	4.5

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

** The high annual growth of fixed investment in 2016 is due to repayments under the Energy Efficiency of Multi-Family Residential Buildings National Programme.

Sources: the NSI, the BNB, Eurostat.

it could earn as a financial asset[89] remained above its long-term average value in the third quarter of 2019. Estimates obtained on the basis of a BNB macroeconomic model[90] suggest that in the third quarter of 2019 residential property prices in Bulgaria remained slightly above their long-term equilibrium value dependent on funda-mental factors, such as the income level, interest rates on housing loans and FDI inflows.

[89] The price-to-rent ratio measures house price dynamics only in terms of the return which a property could earn in its use as a financial asset. The economic literature suggests that in a long-term period this ratio is a fixed value which may temporarily diverge from its long-term average value in indi-vidual phases of the business cycle. Where this ratio is above its long-term average value, this means that due to price increases, the return on a house investment is lower than the expected long-term average return, which signals overvalu-ation. Housing prices reflect also factors other than return. They relate to housing affordability (measured by the level of income and interest rates on housing loans), FDI inflows and other factors (households' preferences to live in their own house, internal migration to large cities). To reflect the impact of part of these other factors, an economic model has been constructed to provide an alternative estimate of undervalua-tion/overvaluation of house prices.
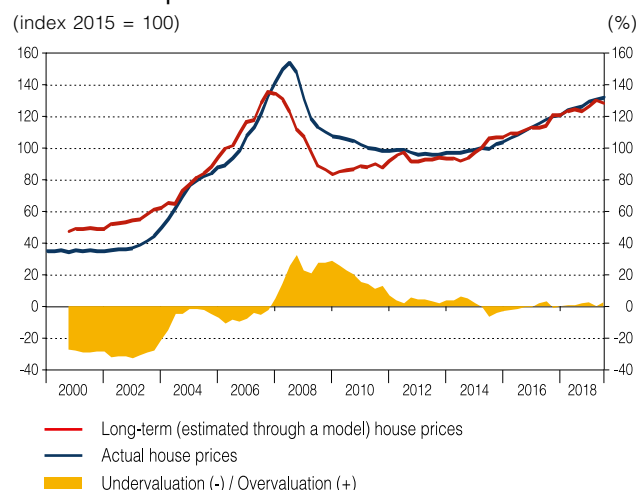[90] Additional information on this model is available in the the-matic research *Dynamics of House Prices in Bulgaria between 2000 and 2016,* Economic Review, issue 1 of 2017.

Firms' behaviour in the construction sector was also in line with house price dynamics. Higher growth rates in housing prices compared to construction costs in the third quarter of 2019 are a precondition for enhancing economic activity in the sector. Over the third quarter the construction production index (building construction) accelerated from the end of 2018, recording an increase of 9.8 per cent (1.4 per cent by end-2018). For the first nine months of the year, new dwellings rose by over 30 per cent, according to residential building statistics. Should these developments be retained, house prices are expected to grow at moderate rates in the following months.

Our forecast for a gradual deceleration in overall inflation for the first half of 2020 *vis-à-vis* December 2019 reflects primarily market expectations of international oil price dynamics. Food and commodity group, reported in the core inflation are expected to make the main positive contribution to overall inflation in the first two quarters of 2020. Projected increases in food prices reflect the expected strong growth in international food prices in euro along with price effects of swine fever spread in Bulgaria. Our forecast of accelerating core inflation stems primarily from expected higher inflation in the group of services. Among the factors contributing to the expected upward dynamics in services prices are higher food prices having an indirect effect on inflation in some services groups and increased compensation of employees. Goods and services with administratively controlled prices and industrial goods are anticipated to have a further low positive contribution to overall inflation since early 2020.

Risks to the inflation outlook are assessed as tilting upwards in the first half of 2020, arising mainly from the groups of energy products and goods and services with administratively controlled prices. Higher than expected international oil prices in euro would be a precondition for higher inflation in energy products and in some services groups and administratively set prices.

Actual and Equilibrium House Prices

(index 2015 = 100)   (%)

- Long-term (estimated through a model) house prices
- Actual house prices
- Undervaluation (-) / Overvaluation (+)

Sources: the NSI, BNB calculations.

Construction Production Dynamics and New Residential Building Permits Issued

(number of buildings;   (2015 = 100;
seasonally adjusted data,   seasonally adjusted data)

- Permits for the construction of new residential buidings (left scale)
- Construction production index, building construction (right scale)

Sources: the NSI, BNB calculations.

Rates of Change in Commodities and Services Prices and Their Contribution to Inflation

	Annual rate of inflation as of December 2018 (December 2017 = 100)		Annual rate of inflation as of December 2019 (December 2018 = 100)	
Inflation (per cent)	2.3		3.1	
	inflation rate by group (per cent)	contribution (percentage points)	inflation rate by group (per cent)	contribution (percentage points)
Food	2.4	0.6	6.2	1.47
Processed food	2.5	0.4	3.4	0.54
Unprocessed food	2.2	0.2	11.8	0.93
Services	5.0	1.2	2.9	0.77
Catering	4.3	0.2	5.8	0.31
Transport services	3.6	0.1	1.9	0.06
Telecommunication services	2.4	0.1	-3.4	-0.17
Other services	6.7	0.8	4.4	0.56
Energy products	1.0	0.1	4.1	0.33
Transport fuels	-0.4	0.0	5.5	-0.49
Industrial goods	-0.5	-0.1	0.5	0.09
Goods and services with administratively controlled prices*	1.9	0.3	2.0	0.35
Tobacco products	4.1	0.2	2.2	0.09

* 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 2019–2021

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

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

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

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

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

Forecast

The BNB forecast of key macroeconomic indicators is based on data published as of 20 December 2019. ECB, EC and IMF assumptions on global economic developments and international commodity price dynamics as of 12 December 2019 are used in the analysis. Based on these assumptions, global economic growth in 2019 is lower than in 2018 due to subdued global industrial production and investment in combination with the increased uncertainty surrounding foreign trade conflicts and Brexit. Given the anticipated relatively weak growth in 2019, ECB and IMF forecasts for the remainder of the projection horizon point to a gradual acceleration in global economic activity, primarily due to emerging and developing economies, excluding China. A less positive output gap in developed economies, retained

downward trends in China's economic growth as a result of trade conflicts with the USA and continuous rebalancing of the economy away from investments and exports toward consumption are expected to be the limiting factors for the global growth in 2020–2021.

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

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

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

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

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

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

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

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

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

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

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

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

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

Forecast Revisions

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

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

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

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

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

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

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

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

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

Source: the BNB.

Risks to the Forecast

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

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

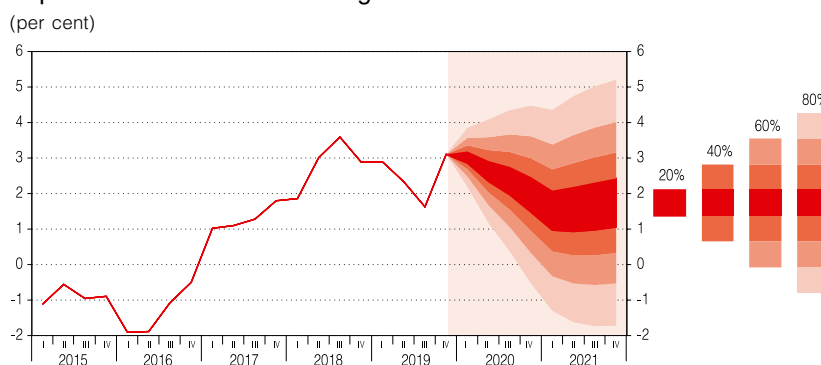### Expected Annual Rate of Change in Real GDP
(per cent)
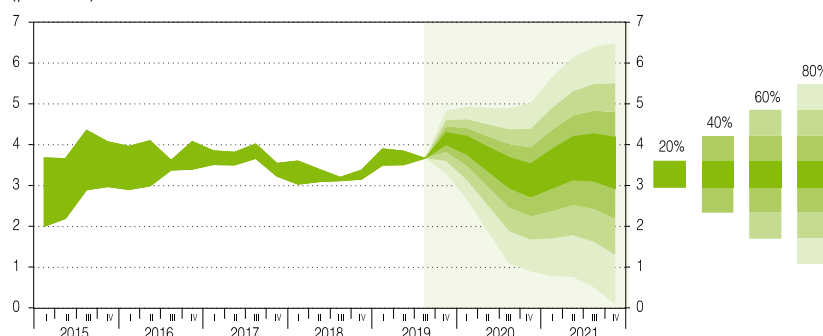
Note: The fan chart shows expert views of the forecasters on the uncertainty around the projected value based on probability distribution. The reporting period includes revised GDP growth estimates, with the latest reporting periods revised on fewer occasions, thus narrowing the band. The middle band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

Source: the BNB.

[95] For more information, see Chapter 4.

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

Expected Annual Rate of Change in Inflation at the End of the Period
(per cent)

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

Source: the BNB.

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

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

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

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

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

BNB Forecast of Key Macroeconomic Indicators for 2019–2021

(per cent)

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

* Actual data for 2019 is reported.
** Data refer to non-financial corporations.

Source: the BNB.