BULGARIAN NATIONAL BANK

1879

ECONOMIC REVIEW

3/2019

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

The Economic Review, issue 3/2019 was presented to the BNB Governing Council at its 31 October 2019 meeting. It employs statistical data published up to 30 September 2019.

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

The Economic Review is available at the BNB website, Research and Publications menu, periodical Publications sub-menu. Please address notes, comments and suggestions to the BNB Economic Research and Projections Directorate at 1000 Sofia, 1, Knyaz Alexander I Square.

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This issue includes materials and data received up to 4 November 2019.

ISSN 2367 – 4962 (online)

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Abbreviations

ABSPP	Asset-Backed Securities Purchase Programme
APP	Asset Purchase Programme
APRC	Annual percentage rate of charge
BIR	Base interest rate
BOP	Balance of Payments
BTC	Bulgarian Telecommunications Company
b.p.	basis points
CBPP3	Covered Bond Purchase Programme
CEECs	Central and East European countries
CEFTA	Central European Free Trade Association
CFP	Consolidated Fiscal Programme
CIF	Cost, insurance, freight
CNY	Chinese Yuan
CPI	Consumer Price Index
DXY	an index measuring the exchange rate of the US dollar against the basket of six major currencies
EA	Employment Agency
EC	European Commission
ECB	European Central Bank
EIB	European Investment Bank
EMBI	Emerging Markets Bond Index
EONIA	Euro OverNight Index Average
EU	European Union
EURIBOR	Euro Interbank Offered Rate
EWRC	Energy and Water Regulatory Commission
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

Summary

In the first eight months of 2019 global economic activity continued to slow down. By the end of the second and in the beginning of the third quarter global sentiment indicators in industry signalled a contraction in economic activity, while those in services continued to record a slowdown. At the same time, growth rates of industrial production decelerated along with contracting global trade. Protectionist measures launched in the course of a continuous trade dispute between China and the USA was the major factor behind the observed processes. In the third quarter of 2019 the US and euro area central banks initiated changes in monetary policy stance to stimulate their economies. These measures stemmed from both institutions' reports on deteriorating international economic situation and increased risks that inflation will remain below desired levels. In the third quarter the ECB Governing Council changed twice the forward guidance on reference rates and approved a package of monetary stimulus measures, which includes a 10 basis point deposit facility rate cut to -0.50 per cent, renewed net purchases under the Asset Purchase Programme (APP), introduction of a two-tier system for bank reserve remuneration and a change in modalities of the new series of targeted longer-term refinancing operations. The forward guidance on reference rates shows that the key ECB interest rates will remain at their present or lower levels until the robust convergence of inflation to the target level and consistent strengthening in underlying inflation. The US Federal Open Market Committee (FOMC) cut in two steps the federal funds rate corridor by overall 50 basis points to 1.75–2.00 per cent and decided to stop reducing Federal Reserve's holdings of debt securities.

Given the expected global economic activity slowdown, low growth rates in industrial production and year-on-year declines in international trade, growth in external demand for Bulgarian goods and services is projected to remain weak over the fourth quarter of 2019 and first quarter of 2020. Risks to the external demand forecast point to lower growth deriving from a decreased demand by Turkey, a more lasting deceleration of economic activity in some euro area countries, a heightened uncertainty around Brexit and a potential additional escalation of foreign trade conflicts worldwide.

Despite the continuously worsening international environment, the annual growth rate in real exports of Bulgarian goods in the first half of 2019 was significantly higher than that of real imports, mainly reflecting one-off factors. In combination with favourable developments in the terms of trade for Bulgaria, this dynamics led to a decline in the trade balance deficit compared to the same period of 2018, contributing most significantly to the strong increase in balance of payments current account surplus. Higher capital transfers received under EU programmes were a driving factor for the increased capital account surplus. In the context of a projected rise in net primary income deficit, in the fourth quarter of 2019 and first quarter of 2020 the total current and capital account surplus is expected to fall as a share of GDP on an annual basis compared to the first half of 2019.

Maintaining favourable conditions in the labour market along with a slightly deteriorating consumer confidence indicator and a preserved household propensity to save contributed to a comparatively high growth rate of non-government sector's deposits. In the first eight months of 2019 annual growth of credit to non-financial corporations slowed down due mainly to the lower amount of bad and restructured loans. Housing loans continued to grow at an accelerated pace.

In the fourth quarter of 2019 and the first quarter of 2020 non-government sector's deposits are expected to increase further at comparatively high rates. Projections of lending rates remaining at the current low levels will continue to support demand for loans by corporations and households. Factors expected to have a limiting effect on credit growth relate mainly to the projected subdued investment activity of corporations, reflecting the sustained economic uncertainty in important trading partners of Bulgaria and worsened business expectations about the future economic activity in some sectors in Bulgaria.

In the second quarter of 2019 growth of real GDP decelerated on the previous quarter to 0.8 per cent. This dynamics reflected the weaker domestic demand which was due to a significant slowdown in quarter-on-quarter private consumption growth and the reported fall in government consumption. Over the quarter net exports contributed positively to real GDP growth, reflecting the stronger decrease in goods and services imports than that in exports.

In the second quarter of 2019 the seasonally adjusted number of employed in total economy matched the previous quarter's level. The unemployment rate declined further reaching 4.2 per cent amid enhanced demand for labour by corporations. The nominal compensation *per* employee rose by 2.4 per cent on a quarterly basis, with industry and services sectors contributing to this growth and agriculture posting a decline.

Consumer confidence and business climate indicators went down in the third quarter of 2019, though remaining at comparatively high historical levels. Wage growth and concurrent rises in household purchasing power, coupled with persistently low interest rates are expected to continue favouring private consumption growth at the end of 2019 and in early 2020. Government investments are projected to be an additional factor stimulating economic activity, whereas the external environment will remain a source of uncertainty and will curb investment activity of corporations and exports of goods and services. Given these factors, quarterly real GDP growth in the fourth quarter is anticipated to be weaker compared with the rate reported in the first half of 2019 and to slightly accelerate in the first quarter of 2020.

In August 2019 annual inflation slightly accelerated compared to the end of 2018 reaching 2.5 per cent. The services and food groups contributed the most. Goods and services with administratively controlled prices, and tobacco products also contributed positively to overall inflation. In the context of a year-on-year decline in euro-denominated international oil prices, energy products contributed negatively to the overall inflation in August.

The projected slight acceleration in overall inflation in the fourth quarter of the year compared with August, followed by a certain slowdown in the first quarter of 2020, largely reflects the expectations for international oil price dynamics over the projection horizon. In the context of decreasing oil prices energy products are expected to contribute negatively to overall inflation. The inflation rate in the services group is projected to moderate due to exhausted base effects in accommodation services and insurance connected with travel, and the lower contribution of transport services, but to retain its relatively high contribution to overall annual inflation. The food group is also expected to retain its high positive contribution, driven, to a large extent, by meat price dynamics.

1. External environment

The slowdown in global economic activity which started in 2018 persisted in the first eight months of 2019. By the end of the second and in the beginning of the third quarter global sentiment indicators in industry signalled a contraction in economic activity, while those in services continued to record a slowdown. At the same time, growth rates of industrial production decelerated along with contracting global trade. Protectionist measures launched in the course of a continuous trade dispute between China and the USA was the major factor behind the observed processes. Global inflation in the first eight months of the year stabilised at levels around 2.0 per cent on an annual basis.

In the third quarter of 2019 the US and euro area central banks initiated changes in monetary policy stance to stimulate their economies. These measures stemmed from both institutions' reports on deteriorating international economic situation and increased risks that inflation will remain below desired levels. In the third quarter the ECB Governing Council changed twice the forward guidance on reference rates and approved a package of monetary stimulus measures, which includes a 10 basis point deposit facility rate cut to -0.50 per cent, renewed net purchases under the Asset Purchase Programme (APP), introduction of a two-tier system for bank reserve remuneration and a change in modalities of the new series of targeted longer-term refinancing operations. The US Federal Open Market Committee (FOMC) cut in two steps the federal funds rate corridor by overall 50 basis points to 1.75–2.00 per cent and decided to stop reducing Federal Reserve's holdings of debt securities.

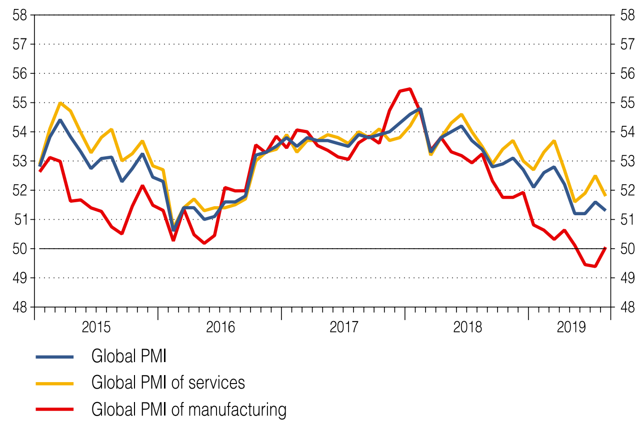
Given the expected global economic activity slowdown, low growth rates in industrial production and year-on-year declines in international trade, growth in external demand for Bulgarian goods and services is projected to remain weak over the fourth quarter of 2019 and first quarter of 2020. Risks to the external demand forecast point to lower growth deriving from a decreased demand by Turkey, a more lasting deceleration of economic activity in some euro area countries, the uncertainty around Brexit and a potential additional escalation of foreign trade conflicts worldwide.

Current Business Situation

The decline in the global economic indicator (global PMI) since early 2018 was sustained in the first eight months of 2019 signalling a further moderation in global economic activity growth. The downward trend was more strongly pronounced in manufacturing PMI, which in July and August remained below its level of the second quarter of 2019 and remained below 50 points on average for the two months. These values are indicative of a slowdown in global industrial production in the second half of the year. Lower PMI for the services sector, though less strongly pronounced, additionally pushed up risks to global economic growth. By region, the downward trend in PMIs was more strongly pronounced in developed countries. A decline was reported in the USA and the euro area in July and August compared with the the second quarter of the year. China's leading economic indicators showed similar dynamics.

In the first seven months of the year the annual global growth rate of industrial output continued

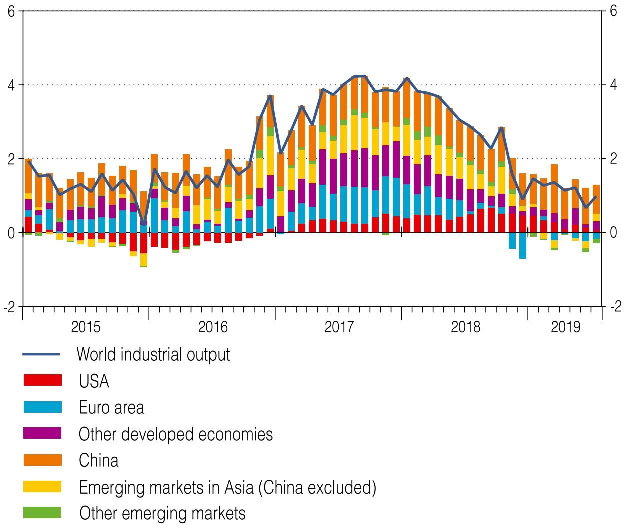
Global PMIs



Source: JP Morgan.

Global Industrial Production

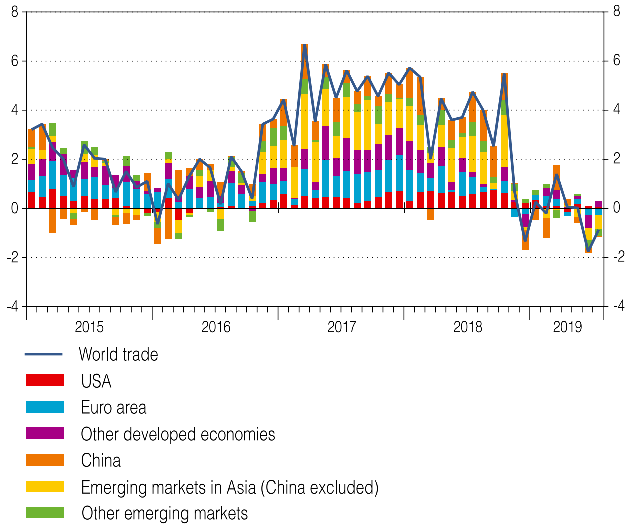
(annual rate of change in volumes, per cent, contribution of individual economies, percentage points)



Source: CPB Netherlands Bureau for Economic Policy Analysis.

World Trade

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



Source: CPB Netherlands Bureau for Economic Policy Analysis.

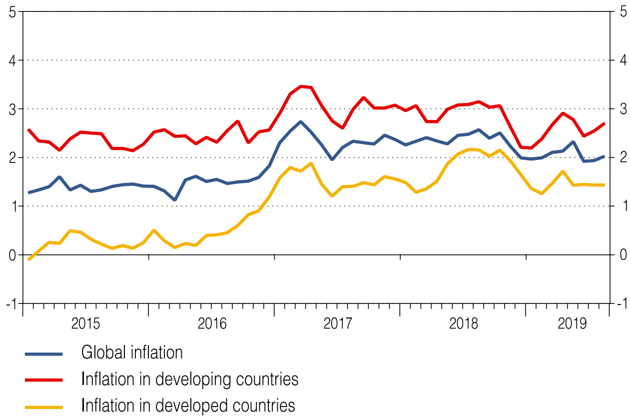
to slow down (a trend observed since early 2018). In July the index reported a decrease in the euro area, Japan and non-Asia emerging market economies. In line with this dynamics world trade[1] remained subdued since the beginning of the year due to the ongoing uncertainty ensuing from international trade conflicts. In June and July the volume of world trade posted a decline on an annual basis after the slight rise in March, April and May. The fall reflected mainly the decrease of foreign trade in the euro area and emerging market economies. Asian countries contributed most strongly to negative growth of emerging market economies' trade. This may be explained by the slowdown in China's domestic demand growth and the role of the country in the regional value chains.

In August global inflation remained unchanged[2] from the end of 2018, reaching 2.0 per cent. The growth rate of consumer prices in emerging markets accelerated, while those in advanced economies slowed down.

Given the expectations of a global economic activity slowdown (in line with the dynamics of short-term economic indicators), low growth rates in industrial production and year-on-year declines in international trade, growth in external demand for Bulgarian goods and services is expected to remain weak over the fourth quarter of 2019 and the first quarter of 2020. Risks to the external demand forecast tilt to lower growth deriving from

Inflation Measured through CPI

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



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.

[1] CPB Netherlands Bureau for Economic Policy Analysis data as of 24 September 2019.

[2] Based on the World Bank data as of 24 September 2019.

lower than projected demand from Turkey, a more lasting decrease of economic activity in some euro area countries, uncertainty around Brexit and a possible escalation of global foreign trade conflicts.

Euro Area

In the second quarter of 2019 quarterly growth of euro area real GDP slowed down to 0.2 per cent against 0.4 per cent in the previous quarter. By GDP component, investment, private and government consumption had a positive contribution to quarterly growth (by 0.1 per cent each), while the contribution of net exports was negative, though insignificant at -0.1 percentage points. By country, Germany, reporting a decline of 0.1 per cent on a quarterly basis from growth of 0.4 per cent in the previous quarter, had the strongest negative contribution to the change in the euro area GDP.

In the third quarter of 2019 euro area leading economic indicators, including PMI and European Commission (EC) indices, decreased from the previous quarter. In general, indices signalled a weak economic activity in the euro area and a continuous fall of the activity in manufacturing.

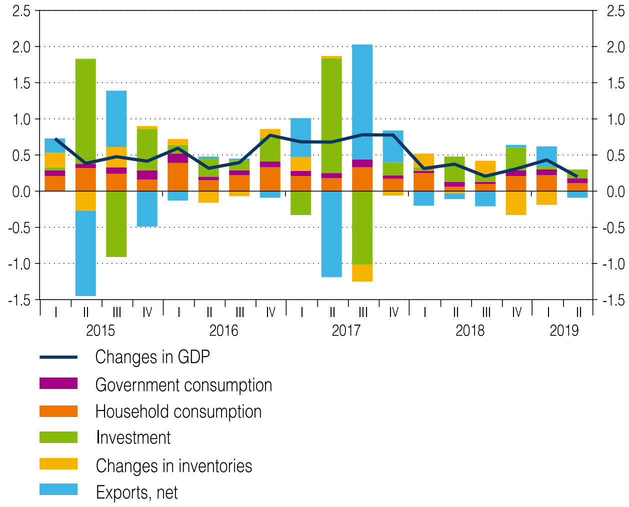
No significant changes occurred in the euro area labour market indicators. The euro area unemployment rate in August 2019 was 7.4 per cent, which was the lowest level since May 2008. The indicator of expected unemployment rate over the following 12 months, included in the EC consumer confidence index, shows a deterioration in consumer expectations of labour market developments.

In July and August 2019 inflation in the euro area, as measured by the Harmonised Index of Consumer Prices (HICP), continued slowing down year on year and averaged 1.0 per cent against 1.4 per cent on average for the second quarter of 2019. Lower euro area inflation reflected mainly the lower contribution of energy products, which was partly offset by the increasing contribution of food. In July and August energy product prices fell by 0.1 per cent on an annual basis and core inflation (excluding food and energy product prices) accounted for 0.9 per cent on average in July and August on an annual basis against 1.1 per cent in the second quarter.

In September 2019 the ECB revised downwards its euro area real GDP growth forecast for 2019 and 2020 (by 0.1 and 0.2 percentage points) leaving its expectations for 2021 unchanged. According to the ECB, risks to the projection still point to slower than expected growth. They reflect

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

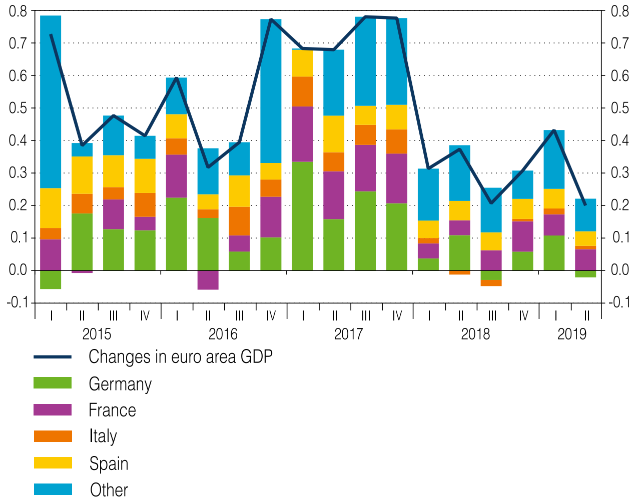
(per cent; percentage points; quarter-on-quarter)



Source: Eurostat.

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

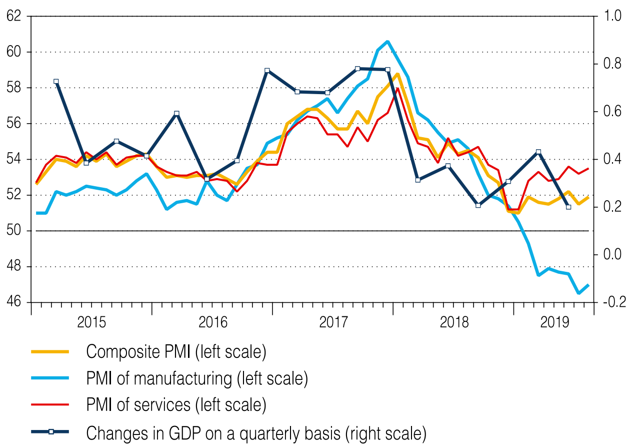
(per cent; percentage points; quarter-on-quarter)



Sources: Eurostat and BNB calculations.

GDP Change and Manufacturing and Services PMIs in the Euro Area

(per cent)



Sources: Eurostat, Markit.

mainly the prolonged period of uncertainty related to geopolitical factors, a possible launch of new protectionist measures in international trade and the vulnerability of some emerging market economies.

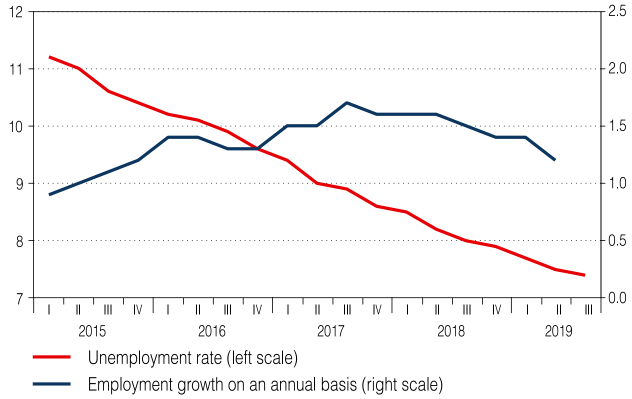
The ECB euro area inflation forecast for the 2019–2021 was revised downwards to 1.2, 1.0 and 1.5 per cent (against the previous projection of 1.3, 1.4 and 1.6 per cent) due to expected lower prices of energy products. The euro area core inflation forecast remained unchanged for 2019 at 1.1 per cent, and those for 2020 and 2021 were revised downward by 0.2 and 0.1 percentage points to 1.2 and 1.5 per cent.

With a view to increasing risks to the inflation target, over the third quarter of 2019 the ECB launched a number of monetary policy measures intended to stimulate the euro area economy. At its 25 July monetary policy meeting the ECB Governing Council changed the forward guidance on reference rates as it was announced that the key ECB interest rates were expected to remain 'at their present or lower levels' (the previous wording was 'at its present level') at least through the first half of 2020, and in any case for as long as necessary to ensure the continued sustained convergence of inflation to its aim over the medium term. In addition the Governing Council stands ready to launch additional measures if the medium-term inflation outlook continues to fall short of its aim. At its monetary policy meeting of 12 September, the ECB Governing Council approved a package of measures for monetary accommodation of the euro area economy. The package of measures is aimed at preserving favourable financial conditions to support euro area economic growth and to enhance further inflationary expectations and accordingly to ensure the continued sustained convergence of inflation to its aim over the medium term. At the meeting the Governing Council took the following decisions:

• The interest rate on the deposit facility will be decreased by 10 basis points to -0.50 per cent. The interest rate on the main refinancing operations and the rate on the marginal lending facility will remain unchanged at 0.00 and 0.25 per cent respectively. The ECB Governing Council expects the key ECB interest rates to remain at their present or lower levels until it has seen the inflation outlook robustly converge to the inflation target, and such convergence has been consistently reflected in core inflation.

Euro Area Unemployment Rate and Employment Growth

(per cent) (per cent)

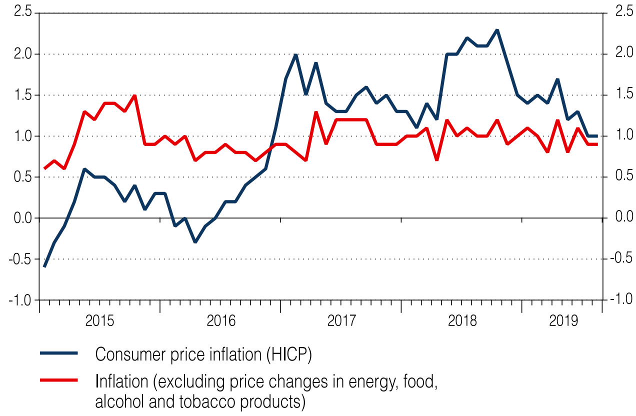


Note: The chart on unemployment in the third quarter of 2019 does not include data for September.

Source: Eurostat.

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)

Institution	Date of release	2019		2020		2021	
		latest	previous	latest	previous	latest	previous
ECB	IX.2019	1.1	1.2	1.2	1.4	1.4	1.4
EC	VII.2019	1.2	1.2	1.4	1.5	-	-

Sources: the ECB, the EC.

Projections of Euro Area Annual Inflation Rate

(per cent)

Institution	Date of release	2019		2020		2021	
		latest	previous	latest	previous	latest	previous
ECB	IX.2019	1.2	1.3	1.0	1.4	1.5	1.6
EC	VII.2019	1.3	1.4	1.3	1.4	-	-

Sources: the ECB, the EC.

• Net purchases will be restarted under the Governing Council's asset purchase programme (APP) at a monthly pace of EUR 20 billion as from 1 November and are expected to end shortly before raising the key ECB interest rates. Purchases of assets with yields below the deposit facility rate are allowed on all APP parts.

• As of 30 October 2019 a two-tier system for reserve remuneration of euro area banks will be introduced. Part of banks' holdings of excess liquidity will be remunerated at a rate of 0.0 per cent. The volume of this part will be equal to the minimum required reserves of each bank and a multiplier initially set at 6 will be applied. The multiplier and the remuneration rate of this part of bank's holdings of excess liquidity are subject to change.

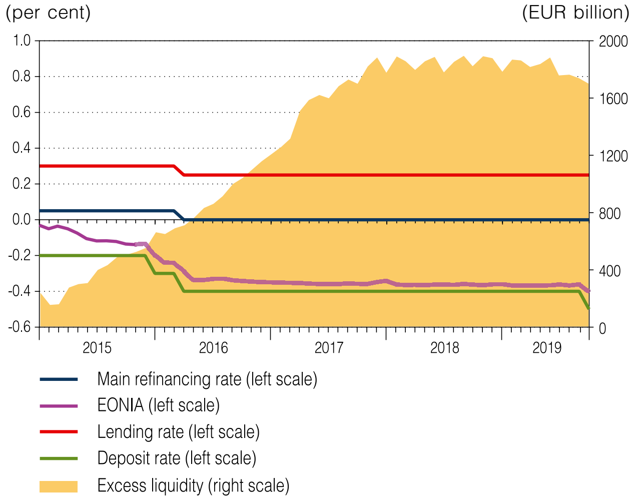
• Reinvestments of receipts from maturing securities purchased under the APP will continue, in full, for an extended period of time past the date of raising the key ECB interest rates.

• The modalities of the new series of targeted longer-term refinancing operations (TLTRO III) will be changed. The interest rate in each operation will be set at the level of the average rate applied in the Eurosystem's main refinancing operations over the life of the respective TLTRO. For banks whose eligible net lending exceeds a benchmark, the rate applied in TLTRO III operations will be lower, and can be as low as the average interest rate on the deposit facility over the life of the operation. The maturity of the operations will be extended from two to three years with early repayment option after two years.

On 30 September 2019 excess liquidity in the euro area banking system decreased to EUR 1702.5 billion, from EUR 1759.9 billion by end-June, the Eurosystem balance sheet figure reaching EUR 4638.1 billion.

In the third quarter of 2019 the average value of EONIA rate fell to -0.38 per cent from -0.37 per cent in the previous quarter. The volume of overnight deposits in euro area's interbank market trade increased as their daily average value over the same period was EUR 2.2 billion (against EUR 2.1 billion in the second quarter). EURIBOR unsecured deposit rates decreased. On 30 September 2019 one-month deposit rates were -0.46 per cent against -0.39 per cent by end-June, while six-month and twelve-month deposit rates were -0.39 per cent and -0.33 per cent respectively (against -0.31 per cent and -0.21 per cent by end-June).

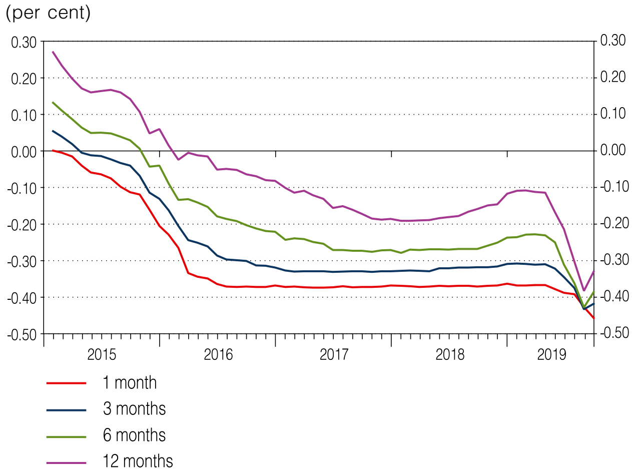
ECB Interest Rates, EONIA and Excess Liquidity in the Euro Area Banking System



Note: Average EONIA values for the month.

Source: the ECB.

EURIBOR Dynamics



Source: the ECB.

Key Characteristics of the €STR, the New Euro Unsecured Overnight Rate

In March 2019 the ECB announced[3] that on 2 October 2019 it will start publishing a new euro unsecured overnight rate, €STR (Euro Short-Term Rate), which will replace EONIA. With effect from the same date and until the end of 2021, EONIA (euro overnight index average) will be computed by applying a fixed spread to the €STR.

Launching a new euro unsecured overnight rate is a result of a process which had begun after 2012 events involving market manipulation of global reference rates in international interbank markets. Consequently, a number of international and national institutions undertook coordinated actions to change the methodology for calculating these interest rates. In 2013 the International Organisation of Securities Commissions published Principles for Financial Benchmarks,[4] which provided the new framework for reliable determination of reference rates and the mechanisms for their governance, quality and accountability. In 2014 the Financial Stability Board published recommendations[5] to improve the methodology for existing unsecured interbank rates and promote the development and adoption of alternative risk-free reference rates.[6] To adapt these recommendations and guidelines to the respective market, national working groups have been set up jointly with the private sector. Initially, these groups focused on creating an overnight market benchmark since, as data show, major money market volumes are traded in this particular maturity sector.

The ECB decided to create the €STR based on the activities of the working group on euro risk-free rates which was set up in September 2017. In September 2018 the working group recommended[7] introduction of the €STR[8] as a replacement of EONIA and by the end of 2018 it released a report[9] outlining the transition to the new overnight benchmark rate. Working group's analyses are based on the dynamics of the so-called pre-€STR, or €STR (preliminary), for which data have been collected since March 2017.

Like EONIA, the €STR is a rate based on euro unsecured overnight transactions despite the essential differences between them. The main differences are, as follows:

- EONIA is computed as a weighted average of all overnight unsecured lending transactions in the interbank market and based on a voluntary panel of contributors (each bank provides a weighted average rate), while the €STR is derived from data on the volumes and price of all unsecured transactions of participating banks by removing top and bottom quartiles of transactions grouped by volume.[10] These data represent daily confidential statistical information on euro unsecured overnight transactions, as compiled in accordance with the Regulation concerning statistics on the money market.[11]
- Data submitted by banks for the purposes of EONIA compilation reflect only interbank money market transactions. The €STR is based on bank data about wholesale money market transactions, including transactions with both other banks and non-bank institutions located in and outside the euro area. In addition, the panel of banks supplying data for €STR calculation includes the 52 largest euro area banks (according to their balance sheet figure at the time of their selection) unlike EONIA for whose computation a panel of 28 data supplier banks is currently used.
- The €STR reflects interest rates paid by banks on unsecured borrowing deposits in the wholesale money market, whereas EONIA reflects unsecured overnight lending rates.

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[3] See the ECB's press release of 14 March 2019.

[4] Principles for Financial Benchmarks. IOSCO. July 2013.

[5] Reforming major interest rate benchmarks. Financial Stability Board, Official Sector Steering Group, 2014.

[6] Following this report, the Financial Stability Board releases every year a progress report on the transition to alternative reference rates. The last report was published in November 2018.

[7] The group consists of 21 credit institutions from the private sector of the euro area, the ECB, the Belgian Financial Services and Markets Authority, the European Securities and Markets Authority and the European Commission. For details, see ECB's press release of 13 September 2018.

[8] Initially, the new short-term reference rate is called ESTER.

[9] Report by the working group on euro risk-free rates; on the transition from EONIA to ESTER. European Central Bank, December 2018.

[10] For details, see the methodology for calculating the €STR.

[11] Regulation (EU) 1333/2014 of the European Central Bank concerning statistics on the money market (ECB/2014/48).

– EONIA is administered by the private sector *via* the European Money Market Institute (EMMI), while the €STR is administered by the ECB.

The broader scope of the €STR is intended to reflect developments in the wholesale money market over the recent years. Specifically, the share of the interbank market in the total volume of the euro wholesale money market has declined in recent years due to a number of reasons, some of them involving market participants' reassessments of counterparty risks, amendments to regulations and changes in liquidity conditions of the euro area. Reflecting these changes, banks increased significantly the volume of money market transactions concluded with non-bank financial institutions, as money market funds, insurers, pension funds and investment firms. This led to an increase in the role of non-bank financial institutions in determining the cost of financing for banks in the wholesale money market.

The €STR scope aims to ensure that the interest rate is a more precise reflection of the real cost of overnight borrowings for banks in the wholesale market where they interact not only with other banks but also with non-bank institutions. Some of these institutions may not have access to ECB instruments (because they are non-bank institutions or located outside the euro area) which means that ECB rates will not serve as a strict top and bottom limitation of the cost of their transactions in the euro money market. As a result, such transactions may be concluded at a rate below the ECB's deposit facility rate or above the marginal lending facility rate. The €STR aim is to reflect this market reality. For instance, in situations marked by excess liquidity, the €STR can be expected to be below the ECB's deposit facility rate. However, since the €STR will reflect interest rates on a strongly liquid market with plenty of participants conducting transactions in a severely competitive environment, it may be expected that this interest rate will follow to a large extent the change in the ECB reference interest rates.

The €STR is calculated for each business day of TARGET2 as a value rounded to three decimal digits. Preliminary data on the interest rate (the so-called pre-€STR)[12] for the 15 March 2017–30 September 2019 period suggest that it is 9 basis points lower on average than EONIA, and the volume of transactions included in its calculation is significant and sustainable, exceeding that of EONIA.

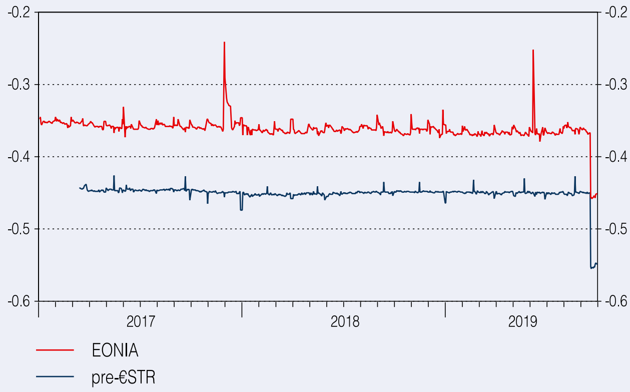
At the end of May 2019 the ECB announced that the spread between the €STR and EONIA, to be used in calculating EONIA from 2 October 2019, would be 8.5 basis points. This spread has been calculated as an arithmetic average based on daily EONIA and pre-€STR data between 17 April 2018 and 16 April 2019, excluding the highest and lowest 15 per cent of the data.

Pre-€STR data suggest that this rate is less volatile than EONIA, and values of BNB LEONIA Plus Reference Rate of Concluded Unsecured Overnight Deposit Transactions in Bulgarian levs are much closer to the pre-€STR than to EONIA. On 30 September the spread between the pre-€STR and LEONIA Plus was -2 basis points with the pre-€STR at -0.55 per cent and LEONIA Plus at -0.53 per cent.

EONIA and Pre-€STR

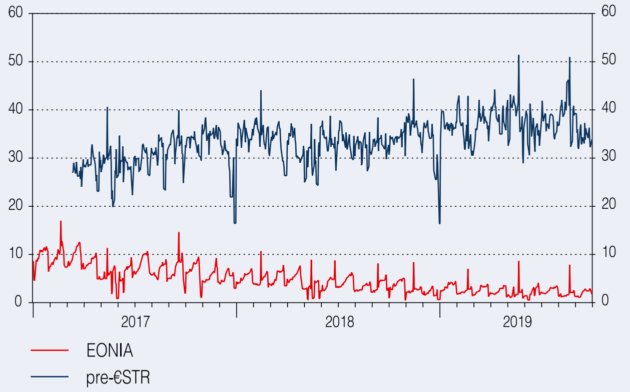
Interest rate

(per cent)



Volume

(EUR billion)



Note: Data available on the pre-€STR cover the period from 15 March 2017 to 30 September 2019.

Source: the ECB.

[12] For details, see the methodology for calculating the pre-€STR.

United States

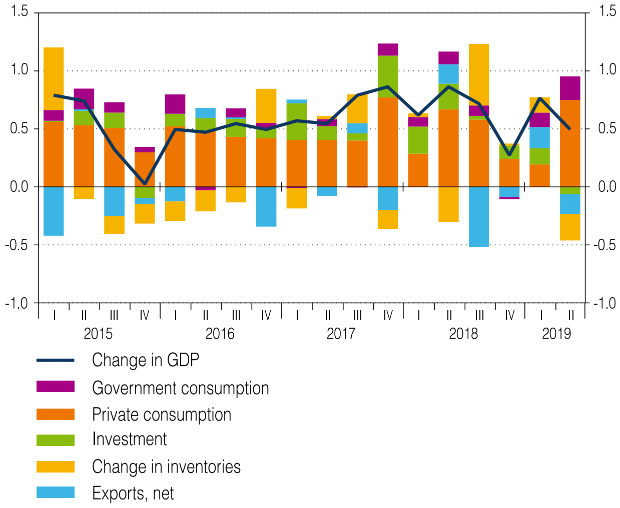
In the second quarter of 2019 US real GDP growth moderated to 0.5 per cent on a quarterly basis from 0.8 per cent in the first quarter. Lower growth reflected the decline in inventories, net exports and business investments which could not be offset by accelerated growth in private and government consumption.

In July and August 2019 the US leading economic indicators showed volatile, mostly downward changes. Between July and August ISM-PMI manufacturing index fell and it was slightly above 50 points on average over the period, in August reaching its lowest level since January 2016. This change of the indicator signalled a significant slowdown of activity in the manufacturing industry. In July and August ISM-PMI of services remained over 50 points almost matching the value of the second quarter. Consumer confidence indicators saw hesitant changes over the third quarter. For the nine months of 2019 average values of the Conference Board Consumer Confidence Index and the analogous University of Michigan Consumer Sentiment Index were lower than the averages in 2018. In July and August US household consumption and retail rates grew at rates close to those reported in the second quarter. Data on the construction sector showed a slightly accelerating economic activity as compared with the previous quarter. Overall, early October 2019 data signal slightly slower GDP growth over the third quarter.

In August 2019 the annual rate of inflation remained under 2 per cent (a target level set by the US Federal Reserve System). The annual inflation measured by the personal consumption expenditure index (PCE) remained at a level of 1.4 per cent for a fourth consecutive month, whereas core inflation (excluding food and energy) increased year on year to 1.8 per cent from 1.7 per cent in July and 1.6 per cent in June. CPI data – the other key US inflation indicator – pointed to a temporary acceleration in the annual rate of inflation to 1.8 per cent in July from 1.6 per cent in June, followed by a decrease to 1.7 per cent in August. The annual rate of core inflation in consumer prices (excluding food and energy) increased to 2.4 per cent in August from 2.2 per cent in July and 2.1 per cent in June. September data on expectations of consumer

Contribution to US GDP Growth by Component (Quarterly)

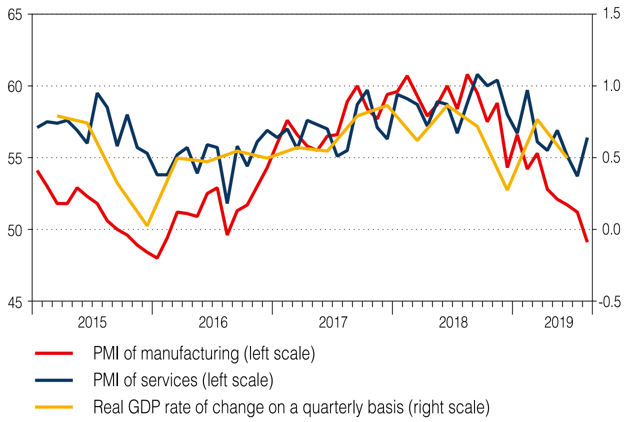
(per cent; percentage points)



Source: Bureau of Economic Analysis.

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

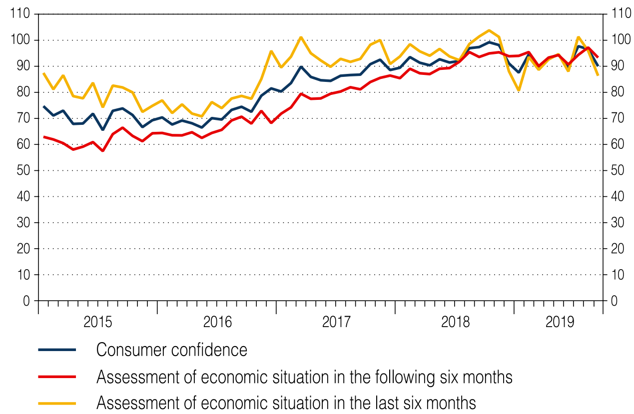
(per cent)



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

US Consumer Confidence Indices

(2000 = 100)



Source: The Conference Board.

price changes in one to five years ahead, which are part of the consumer confidence index of the University of Michigan, showed an increase in short-term inflation expectations and a decrease in long-term inflation expectations.

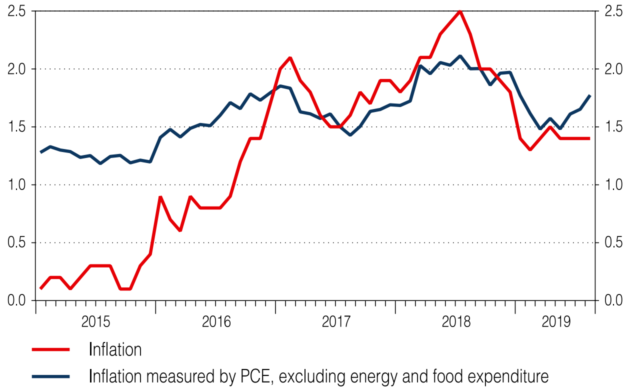
In July and August 2019 the US labour market conditions did not change substantially from the previous period but in the eight months since early 2019 employment growth slowed down significantly compared with 2018. The average quarterly number of new employees in the US non-farm sector in July and August 2019 decreased on the second quarter to 145,000, which was considerably lower than the average for 2018 (223,000). The US unemployment rate stabilised in July and August and rose to 3.7 per cent on average for the two months against 3.6 per cent on average in the second quarter. The US economically active population rate rose to 63.1 per cent on average in July and August from 62.8 per cent in the second quarter of 2019 and 62.9 per cent in 2018. Current employment data suggest that US labour market conditions may worsen until the end of 2019.

Taking into account labour market developments and increasing risks to US economic growth and inflation, in the third quarter of 2019 the US Federal Open Market Committee (FOMC) at its meetings on 30–31 July and 17–18 September decided to cut in two steps the federal funds rate corridor by 25 basis points to 2.00–2.25 per cent and 1.75–2.00 per cent. The decisions were not taken unanimously. At both meetings Presidents of Federal Reserve Banks of Kansas and Boston were against lowering but maintaining the target range for the federal funds rate unchanged. At the September meeting the President of the Federal Reserve Bank of St. Louis was against the common decision and proposed a stronger cut (by 50 basis points) of the federal funds rate. Decisions on lowering the federal funds rate were expected by market participants and they were almost entirely reflected in financial asset prices by the time of the change. Moreover, at its July meeting the Committee decided to conclude the reduction of its aggregate securities holdings in the System Open Market Account as from 1 August, two months earlier than previously indicated.

Following the September meeting of the Committee the median of FOMC members' individual

US Inflation Rate

(per cent, on an annual basis)

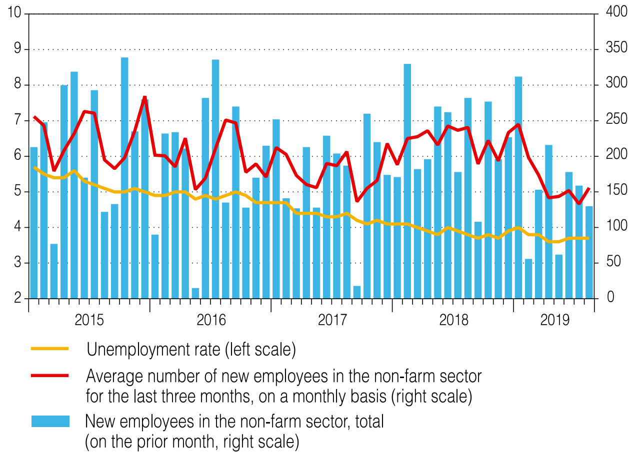


Note: Inflation is measured by the personal consumption expenditure deflator.

Source: Bureau of Economic Analysis.

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

(per cent) (new employees, thousand)



Source: Bureau of Labor Statistics.

forecasts about the expected level of the federal funds rate showed a decrease by 50 basis points at the end of 2019 and by 25 basis points at the end of 2020 and 2021 compared with their June forecast, reflecting the expectations of maintaining target range for the federal funds rate to 1.75–2.00 per cent in 2019 and 2020 and one-off rises by 25 basis points in 2021 and 2022. The estimate of the long-run equilibrium level of the federal funds rate remained unchanged at 2.50 per cent. At the press conference following the September meeting the Chairman of the Board of Governors of the Federal Reserve System reaffirmed that risks to the US economic growth outlook were weighted as to the upside.

China

In July and August 2019 the average values of services and manufacturing PMI in China continued to signal a slowdown of economic growth. The average values of the manufacturing PMI remained under 50 points in July and August and services PMI decreased to 53.8 on average against 54.3 in the previous quarter. Subcomponents of the manufacturing PMI, reporting new orders and current output, slightly increased in July and August reflecting mainly the renewed USA–China trade talks and the stimulating fiscal and monetary policy measures announced by China.

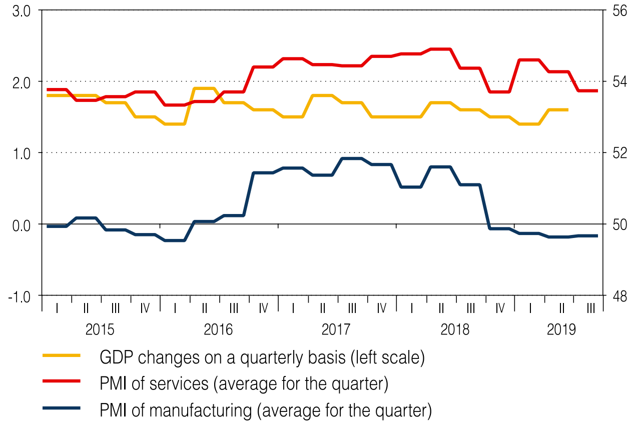
In July and August annual growth in total investment in the Chinese economy continued to slow down due primarily to the lower rise of investment in industrial production.

In July and August the annual inflation rate remained at 2.8 per cent. The annual rate of food price rise accelerated further in July and August. It was partly offset by slower growth in non-food prices. In August food prices rose by 10.0 per cent on an annual basis, which was attributable to continuously appreciating pigmeat by about 50 per cent annually as a result of dramatically decreased supply due to the spread of African swine fever[13]. Concurrently, the annual growth rate of non-food prices slowed down to 1.1 per cent in August from 1.6 per cent on average in the second quarter.

[13] In China the African swine fever was registered in August 2018 and according to FAO data until the end of August the number of pigs in China decreased by 39 per cent.

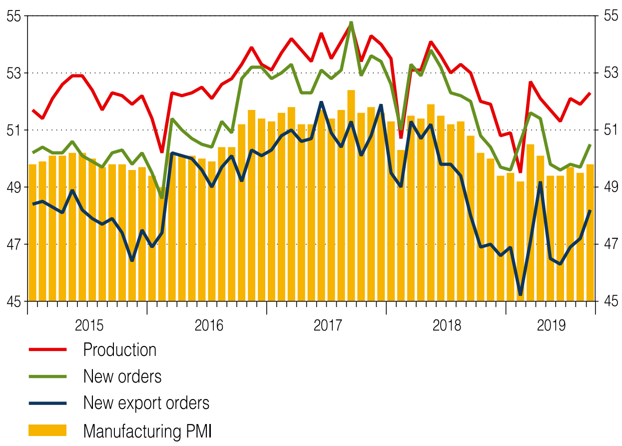
Manufacturing and Services PMIs and GDP Growth (Quarterly) in China

(per cent)



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

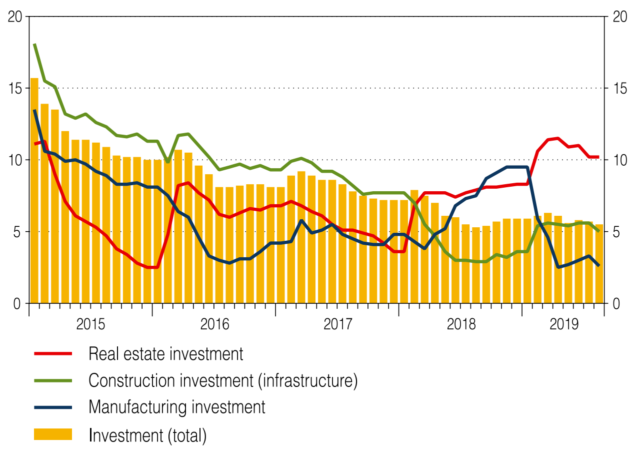
Manufacturing PMI in China and Major Components



Source: China Federation of Logistics and Purchasing.

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

(per cent, on an annual basis)



Source: National Bureau of Statistics of China.

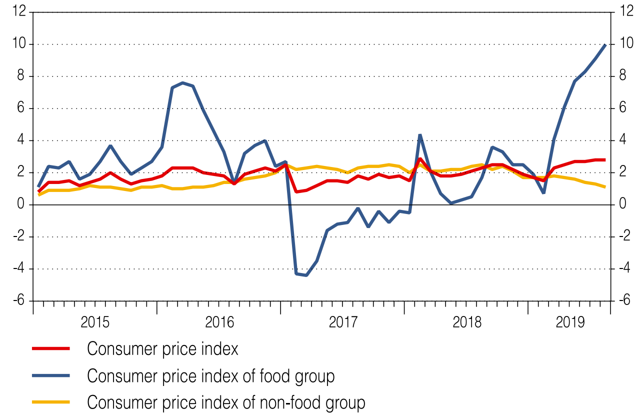
In July and August annual growth of house prices in China continued to moderate due to weaker price rises mostly in smaller towns. The major factor behind the slower price rise both in small towns and big cities was the tight regulatory housing market measures launched in China. Chinese authorities announced that the measures would not be loosen with a view to stimulating the economy.

In the third quarter of 2019 the People's Bank of China made changes to its monetary policy cutting minimum required reserve rates of commercial banks by 50 basis points to 13.0 per cent as from 16 September. Additional cuts in the rate by 100 basis points are projected in October and November 2019 for small regional banks.

In August the People's Bank of China announced changes to the methodology of calculating the loan prime rate, one of the Bank's reference interest rates. This interest index will be used as a benchmark in setting interest rates for non-financial corporations and households and will be calculated using the quotations of 18 banks in China based on the interest rate these banks apply to their best clients (this index has so far been based on the quotations of ten banks). The loan prime rate will be published on the 20th of every month and it will be set for two maturities: one and five years. The rate will be linked to the medium-term lending facility of the central bank. This change is expected to make setting of banks' lending rates for final customers more market-based. According to central bank additional regulations the interest rate on individual mortgage loans for first-home buyers should not be lower than the reference rate set for a five-year maturity. The interest rate on loans for second-home buyers should not be lower than the five-year reference rate plus a margin of 60 basis points.

China's Inflation Rate

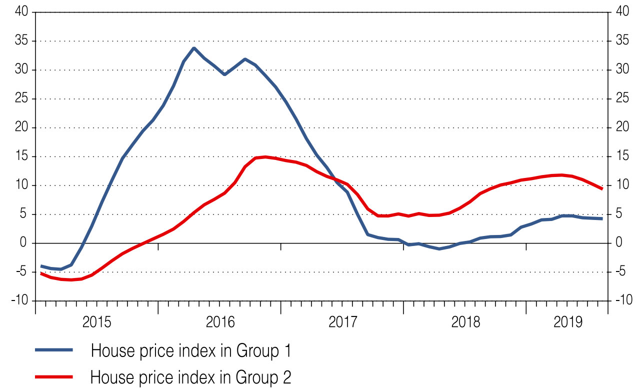
(per cent, on an annual basis)



Source: National Bureau of Statistics of China.

House Prices in China

(per cent, on an annual basis)

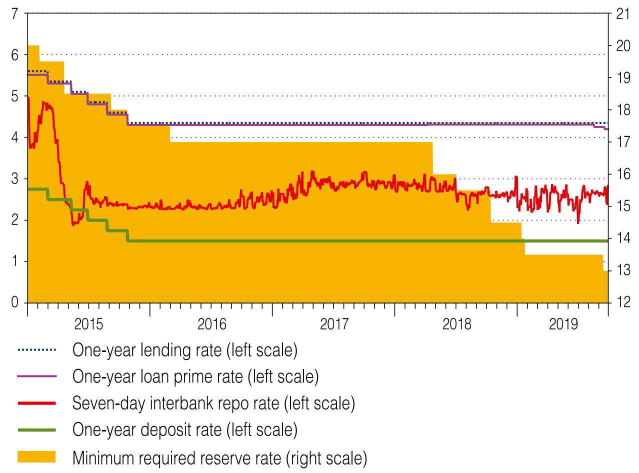


Note: Group 1 includes the four largest cities: Beijing, Shenzhen, Guangzhou, and Shanghai. Group 2 includes the capitals of the rest provinces.

Source: National Bureau of Statistics of China.

People's Bank of China Reference Rates and Minimum Required Reserve Rate

(per cent) (per cent)



Source: People's Bank of China.

International Commodity Prices

Crude Oil

Following the reported rise in the first quarter of 2019 the Brent crude oil price tended to decelerate quarter on quarter and in July and August it was traded at USD 61.6[14] *per* barrel on average, down 8.9 per cent (9.3 per cent in euro) compared with the second quarter of the year. A stronger price fall was registered on an annual basis. In July and August the decline was 16.5 per cent in US dollars (13.2 per cent in euro) compared with the average value for the same period of 2018. Concerns about global economic activity and uncertainty surrounding world trade development outlooks contributed significantly to the decrease in oil prices.

International Energy Agency (IEA) data show that oil supply continued to exceed demand in the first half of 2019. The US oil production recorded significant growth in July and August after the hurricane Barry. In addition, the compliance with the agreement on oil production cuts between OPEC and other oil producers was lower in August[15]. According to the IEA the higher production in the USA, Brazil and Norway will contribute most strongly to the increased oil supply by non-OPEC countries until the end of the year.

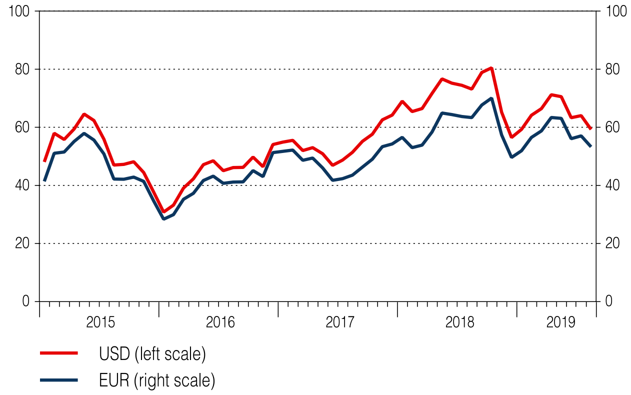
In the middle of September the largest crude oil processing facility in Saudi Arabia was attacked. However, given the strong global supply and the measures launched by Saudi Arabia to recover the production, in September 2019 market expectations for the end of 2019 and early 2020 were for lower oil prices than those prevailing in June and amounted to about USD 60.2 *per* barrel. This reflected the effect of factors as uncertainty in USA–China trade talks and current short-run indicators signalling subdued global economic growth.

[14] Referred to as the US dollar below.

[15] On 6 December 2018 OPEC and Russia agreed on decreasing daily oil production by 1.2 million barrels for a period of 180 days. On 2 July the term of the agreement was extended by nine months until end-March 2020.

Brent Crude Oil Price

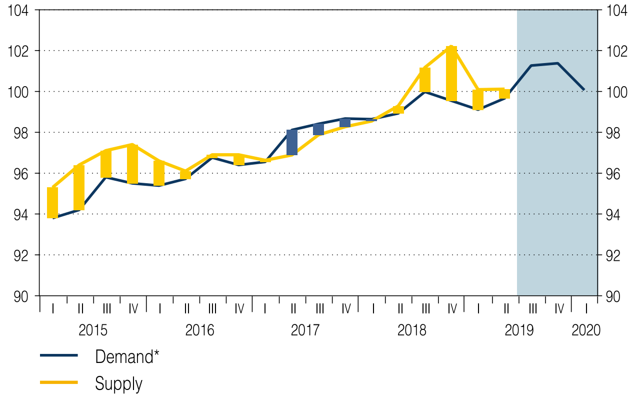
(USD *per* barrel) (EUR *per* barrel)



Source: the World Bank.

World Crude Oil Supply and Demand (Quarterly)

(million barrels *per* day)

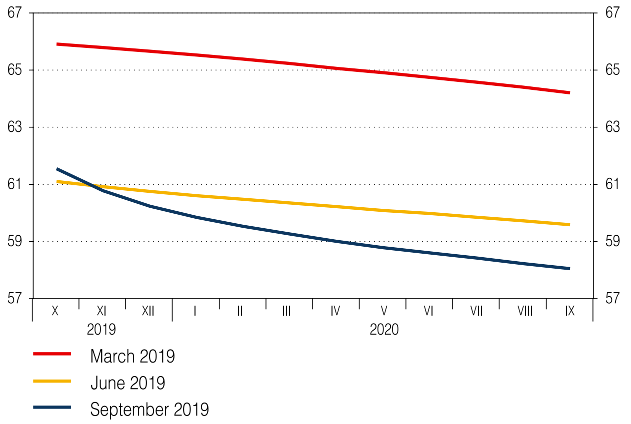


* Including IAE latest available data on crude oil demand in September 2019.

Source: IEA.

Brent Crude Oil Futures Prices

(average monthly price of contract, USD *per* barrel)



Source: JP Morgan.

Commodity and Food Prices

In the first two quarters of 2019 international metal prices tended to increase in US dollars on a quarterly basis, whereas in July and August they fell by 0.4 per cent on average compared with the second quarter of 2019. The fall reflected to a large degree the weak demand due to slower global growth, further escalation of the USA–China trade conflict and the signs of a continuous slowdown in global industrial production growth. In July and August metal prices exhibited a slight increase in euro compared with the second quarter of 2019, reflecting the US dollar appreciation *vis-à-vis* the euro.

The dynamics across metal price index subcomponents was divergent in July and August. Nickel prices rose significantly both in US dollars and euro due to concerns of lower supply after the ban on nickel exports from 1 January 2020 announced by Indonesia. Concurrently, the price of copper, which is of key importance to Bulgarian exports, remained lower than that reported in US dollars and euro in the second quarter. This was ascribable to international trade conflicts, subdued industrial production, high level of global metal inventories, low demand by China, weaker demand of export oriented countries such as Germany, South Korea and Japan. The prices of iron ore also declined significantly in August on a quarterly basis due to the expected resumption of some production processes in the world largest iron ore producer.

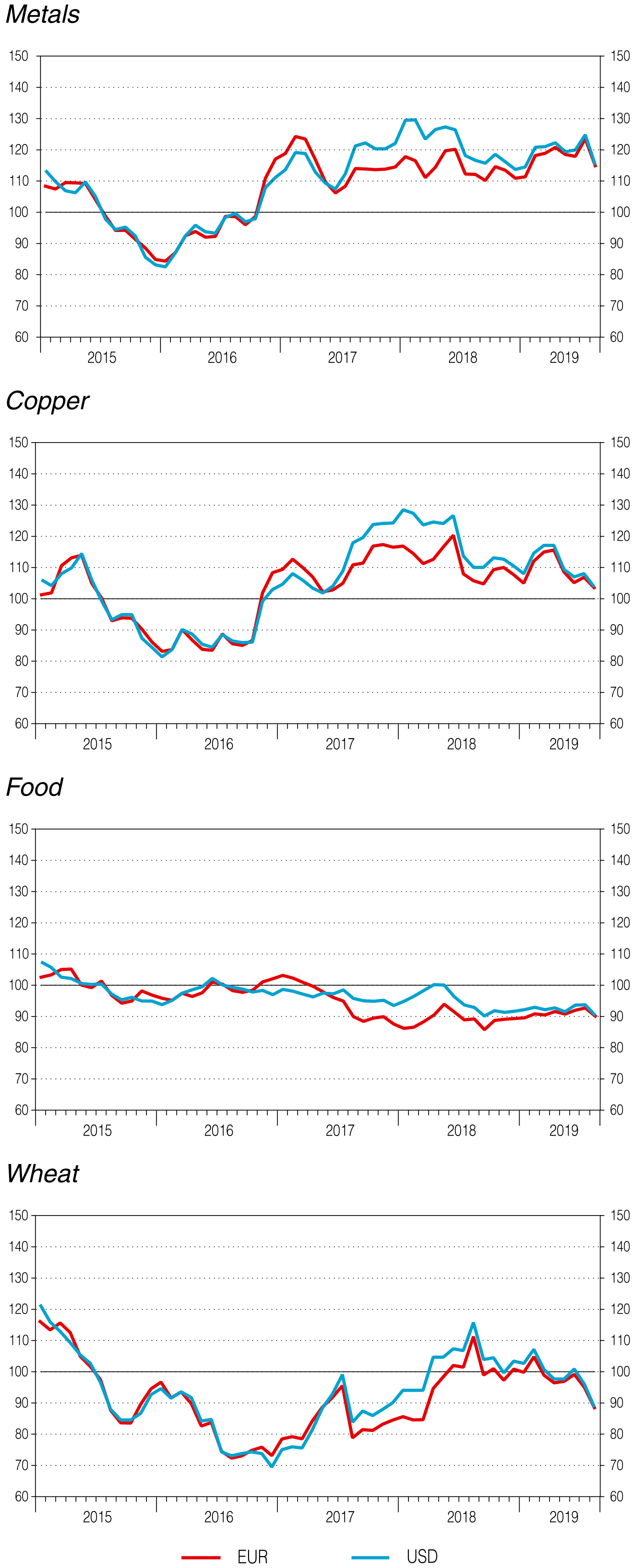
Metal prices in US dollars on an annual basis posted a decline in the first half of 2019, with the rate of decline gradually subsiding. In July and August prices remained higher than those in the corresponding period of 2018. Annual prices of metals in euro have been rising since the beginning of the year due to the appreciation of the US dollar against the euro.

Market expectations point to an increase in annual and quarterly metal prices at the end of 2019 and early 2020 both in US dollars and euro.

In the first and second quarters of 2019 food prices in US dollars also tended to rise on a quarterly basis. However, in July and August 2019 global food price index fell by 0.6 per cent (no change in euro price index) compared with the second quarter of the year, which might be

Price Indices of Major Raw Materials and Commodity Groups

(2015 = 100)



Sources: the ECB, BNB calculations.

explained by subdued demand in combination with high yields of cereals worldwide. The dynamics across food price index sub-components was divergent. Some commodities in the group such as corn and rice registered an increase in the price both in US dollars and euro due to concerns related to unfavourable weather conditions. The price of wheat, which is of key importance to Bulgarian goods exports, decreased both in US dollars and euro from the second quarter of 2019. This was in line with higher harvests worldwide, the forecast of increased wheat inventories in the 2019/2020 season and the expected weaker global demand.

Since the beginning of the year food prices in US dollars remained below the level reported in 2018, while prices in euro increased. In July and August the annual rate of decline of prices in US dollars decreased. Meat prices posted a significant rise, which might be a result of the spread of African swine fever worldwide and enhanced demand for pigmeat in China.

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

Based on the international commodity price dynamics the terms of trade in Bulgaria were positive in the first half of 2019. They are expected to remain positive until the end of the year and to turn negative in the first quarter of 2020.

2. Financial flows, money and credit

Despite the continuously worsening international environment, the annual growth rate in real exports of Bulgarian goods in the first half of 2019 was significantly higher than that of real imports, mainly reflecting one-off factors. In combination with favourable developments in the terms of trade for Bulgaria, this dynamics led to a decline in the trade balance deficit compared to the same period of 2018, contributing most significantly to the strong increase in balance of payments current account surplus. Higher capital transfers received under EU programmes were a driving factor for the increased capital account surplus. In the context of a projected rise in net primary income deficit, in the fourth quarter of 2019 and first quarter of 2020 the total current and capital account surplus is expected to fall as a share of GDP on an annual basis compared to the first half of 2019.

Maintaining favourable conditions in the labour market along with a slightly deteriorating consumer confidence indicator and a preserved household propensity to save contributed to a comparatively high growth rate of non-government sector's deposits. In the first eight months of 2019 annual growth of credit to non-financial corporations slowed down due mainly to the lower amount of bad and restructured loans. Housing loans continued to grow at an accelerated pace.

In the fourth quarter of 2019 and first quarter of 2020 non-government sector's deposits are expected to increase further at comparatively high rates. Projections of lending rates remaining at the current low levels will continue to support demand for loans by corporations and households. Factors expected to have a limiting effect on credit growth relate mainly to the projected subdued investment activity of corporations, reflecting the sustained economic uncertainty in important trading partners of Bulgaria and worsened business expectations about the future economic activity in some sectors in Bulgaria.

External Financial Flows

Between January and July 2019 the positive current account balance[16] rose significantly from the corresponding period of 2018, reflecting primarily the lower trade balance deficit amid stronger growth in real exports of goods as compared to imports due to one-off factors and favourable developments in the terms of trade for Bulgaria. All other sub-items also contributed to the higher current account surplus in the January – July 2019 period compared to January – July 2018, though to a lower extent. The deficit under the net primary income item decreased mainly due to lower dividend payments and distributed profits to non-residents. Between January and July the positive balance in services trade increased substantially on the corresponding period of 2018.[17] This reflected the rise in exports and the fall in imports of services which was mainly due to lower imports of insurance and pension services. The net secondary income item also

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

[17] 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 July 2019
Current account	**1 825.0**	**3 002.2**	**4 739.0**
Trade balance	-765.8	-1 858.0	-1 030.7
Services, net	3 052.8	3 560.6	3 937.1
Primary income, net	-2 316.2	-652.5	-81.0
Secondary income, net	1 854.2	1 952.1	1 913.6
Capital account	**530.4**	**601.5**	**876.7**
Financial account	**2 423.2**	**1 883.2**	**3 049.9**
Change in reserves	**-98.9**	**1 361.6**	**241.2**

(% of GDP)

	2017	2018	On an annual basis as of July 2019
Current account	**3.5**	**5.4**	**8.0**
Trade balance	-1.5	-3.3	-1.8
Services, net	5.8	6.3	6.7
Primary income, net	-4.4	-1.2	-0.1
Secondary income, net	3.5	3.5	3.2
Capital account	**1.0**	**1.1**	**1.5**
Financial account	**4.6**	**3.4**	**5.2**
Change in reserves	**-0.2**	**2.4**	**0.4**

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

Source: the BNB.

recorded a higher surplus in the January–July 2019 period against the corresponding period of 2018, a result of the higher volume of current transfers receivable under EU programmes.

The increase in capital transfers under EU programmes and higher receipts from quotes for greenhouse emissions, to a lesser extent, contributed most strongly to the higher capital account surplus between January and July 2019 as compared with the corresponding period of 2018.

As a result of the described dynamics of flows on individual current and capital account items, in July 2019 the total current and capital account surplus accumulated for the last 12 months rose from December 2018, with trade balance and net primary income deficit declines contributing most substantially.

In line with the accelerated gross operating surplus in the overall economy in 2018 and in early 2019 the net primary income deficit is expected to gradually increase year on year[18] as a percentage of GDP in the last quarter of 2019 and first quarter of 2020 compared with the first half of 2019. This will be the major factor behind the lower current account surplus over the forecast period. With the progress of EU operational programmes implementation for the 2014–2020 period, the surplus on the capital account is expected to increase further as a percentage of GDP.

The financial account balance remained positive in the January–July 2019 period, with foreign assets increasing much stronger than foreign liabilities. Bank operations which increased bank foreign assets mainly in the foreign currency and deposits contributed most significantly to the dynamics of foreign assets.[19] Other sectors' foreign assets also reported a strong rise[20]. Over the review period financial account foreign liabilities increased only in other sectors, reflecting mainly attracted direct investment. In July the financial account balance accumulated in the last 12 months also remained positive.

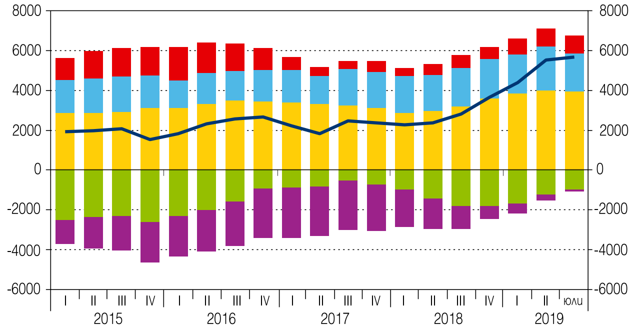
[18] It should read the current and capital account balance for the last four quarters.

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

[20] 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)

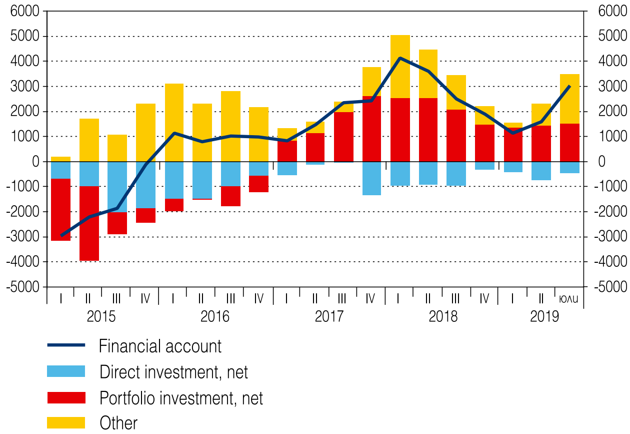


Notes: As of each quarter, the chart shows accumulated balances on items for the last four quarters. Chart data as of July 2019 are accumulated for the last 12 months.

Source: the BNB.

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

(EUR million)



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 July 2019 are accumulated for the last 12 months.

Source: the BNB.

Between January and July 2019 direct investment liabilities (reporting FDI inflows into Bulgaria) slightly increased from the corresponding period of 2018 to EUR 472.7 million.[21] In July funds on direct investment liabilities accumulated for the last 12 months amounted to EUR 1.1 billion and remained largely unchanged from December 2018.

As a result of net flows on the balance of payment current, capital and financial account, in July 2019 Bulgaria's gross international reserves[22] accumulated in the last 12 months rose by EUR 1.4 billion. The international reserve coverage of the average nominal imports of goods and non-factor services over the last 12 months came to 8.7 months in July, posting a slight increase on end-2018.

In July 2019 Bulgaria's gross external debt rose by EUR 1039.4 million from the end of 2018 to EUR 34,195.3 million (59.5 per cent of GDP). The strongest debt rise was reported in intercompany lending and other sectors' external debt (mainly in short-term loans and trade credits). Lower external debt was observed only in the general government sector mainly as a result of external debt repayments. The share of long-term debt in Bulgaria's total gross external debt was 75.4 per cent in July and remained largely unchanged from the end of the previous year.

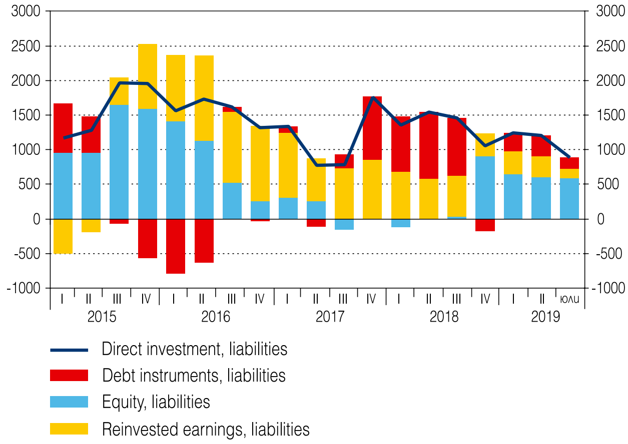
Between January and July 2019 the external debt held by Bulgarian residents increased from the first seven months of 2018 amid persistently low interest rates in international financial markets. New external debt posted an increase over the period, reflecting mainly intercompany lending and higher new external debt of banks. The first seven months of the year saw a decline in foreign debt interest payments compared with the corresponding period of 2018, which signalled that the terms for servicing external obligations of Bulgarian residents remained favourable.

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

[22] 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 July 2019 are accumulated for the last 12 months.

Source: the BNB.

Gross External Debt in July 2019

(EUR million)

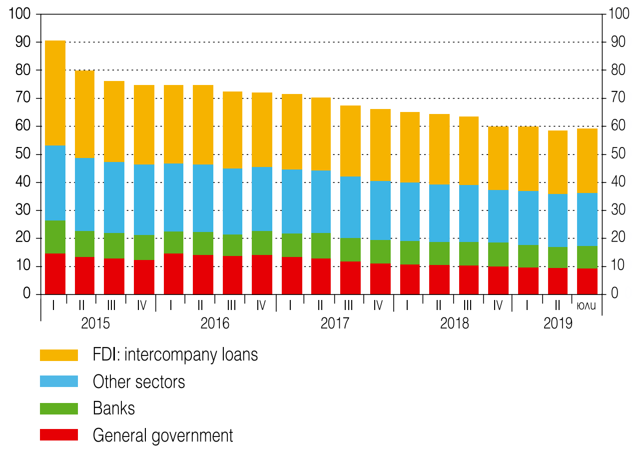
	Amount	Change	
		Since December 2018	for the last 12 months
General government	5 452.7	-88.2	-194.8
Central bank	0.0	0.0	0.0
Banks	4 638.1	35.2	127.1
Other sectors	10 853.7	391.6	-110.4
FDI – intercompany loans	13 250.7	700.8	-81.9
Total	**34 195.3**	**1 039.4**	**-259.9**

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 July 2019 are based on accumulated GDP data for the last four quarters as of June 2019.

Source: the BNB.

Monetary and Credit Aggregates

In the first eight months of 2019 the annual growth rate of broad monetary aggregate M3 remained comparatively high, reaching 7.7 per cent in August, from 8.8 per cent at the end of 2018. Maintaining favourable conditions in the labour market along with a slightly deteriorating consumer confidence indicator and a preserved household propensity to save contributed most strongly to broad money dynamics. Annual growth of M3 slowed down somewhat from May reflecting mainly the lower contribution of deposits with an agreed maturity of up to two years. Concurrently, the contribution of overnight deposits and money outside MFI to total growth of M3 remained relatively stable, almost matching end-2018's levels. Very low deposit rates determined economic agents' preferences to save mostly in overnight deposits because of the flexibility they provide in savings withdrawals.

Non-government sector's deposits[23] continued to form the major part of the total amount of funds attracted from banks, their share reaching 87.2 per cent on average for the first eight months of the year. In August 2019 deposits of the non-government sector rose by 7.3 per cent on an annual basis, from 7.3 per cent by end-2018. Household deposits, rising year on year 8.2 per cent in August (7.7 per cent in December 2018) again contributed most substantially to growth. Concurrently, from May the annual growth rate of deposits of non-financial corporations slowed down due to a decrease on an annual basis in foreign currency deposits with an agreed maturity and the lower growth rate of overnight deposits. In the first eight months of the year both corporations and households again preferred to save mostly in national currency.

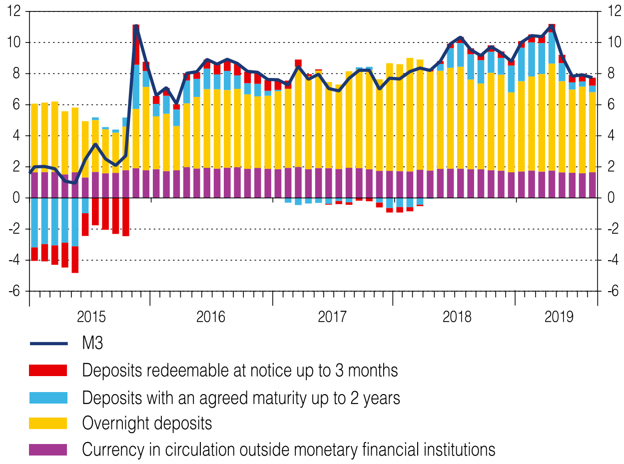
The effective implicit rate of minimum required reserves[24] remained at levels similar to the previous year's levels, reflecting the retained high

[23] 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 August 2019) comprise the major share of all non-government sector's deposits, and the analysis therefore is focused on these two sectors.

[24] 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)

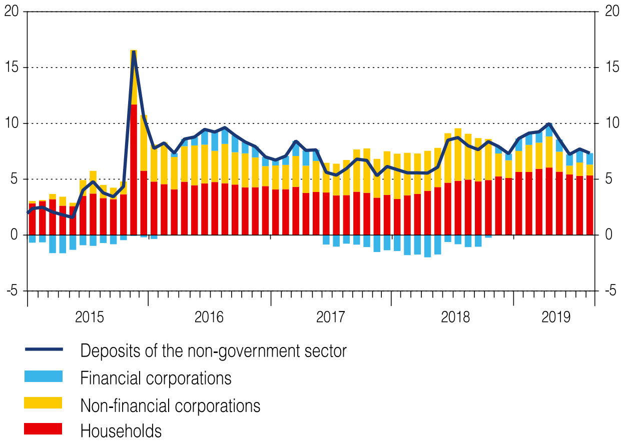


Notes: The marketable instruments component is not shown on the chart due to its insignificant contribution to broad money growth. The annual growth rate of M3 in November 2015 reflects the exhausted base effect of KTB removal as a reporting unit from the monetary statistics in November 2014.

Source: the BNB.

Annual Growth of Non-government Sector's Deposits and Contribution by Sector

(per cent, percentage points)



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.

inflow of attracted funds from residents in the banking system in the January–August 2019. In August it was 9.41 per cent (9.40 per cent in December 2018) with bank deposits with the BNB comprising 8.28 percentage points in the fulfilment of minimum required reserves, and the remaining 1.13 percentage points forming recognised cash balances.

In the first eight months of 2019 the annual growth of reserve money slowed down, accounting for 3.7 per cent in August (10.1 per cent at the end of 2018). The lower growth rate compared with the previous year reflected entirely decreased banks' reserves with the BNB due to reduction of banks' excess reserves and, to a lesser degree, to lower funds of banks in the TARGET2. In August 2019 the excess funds on banks' minimum reserve accounts over the required minimum of reserve assets under Ordinance No 21 was 25.0 per cent on an average daily basis, from 33.1 per cent in December 2018. Concurrently, minimum required reserves' amount continued to grow due to a rise in the deposit base.

Annual growth of currency in circulation slowed down slightly to 9.8 per cent in August 2019, from 10.3 per cent at the end of 2018. This dynamics is likely to be impacted by slower growth in private consumption in the economy.

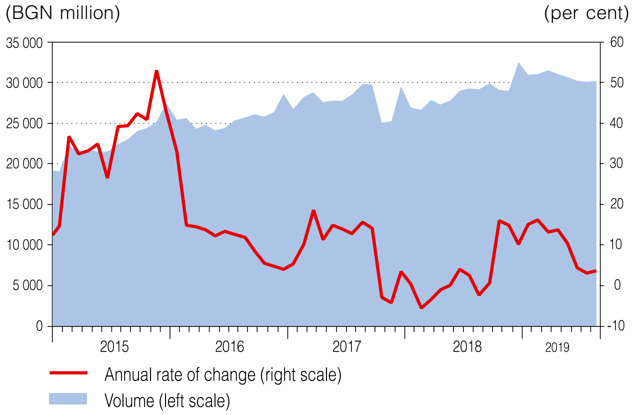
Reserve currency (euro) transactions with the BNB is banks' main lev liquidity management instrument under currency board arrangements. In August 2019 the BNB net purchases of euro from banks amounted to EUR 2.6 billion on an annual basis.

Bank assets grew by 6.5 per cent on an annual basis in August 2019,[25] reflecting mainly the increase in claims on the non-government sector. Higher foreign assets of banks also had a strong positive contribution, which was reflected in the financial account assets of Bulgaria's balance of payments. Concurrently, bank reserves posted a decline on the corresponding period of the previous year.

Low interest rates pushed up demand for loans, with credit to non-financial corporations and

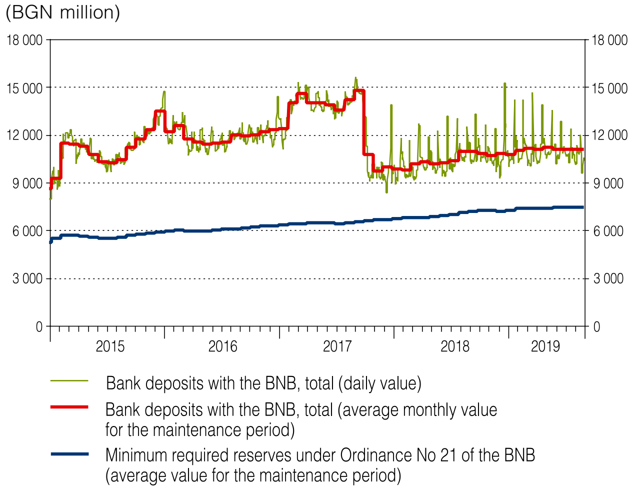
[25] Data from the sectoral monthly reporting of other monetary financial institutions were used.

Reserve Money



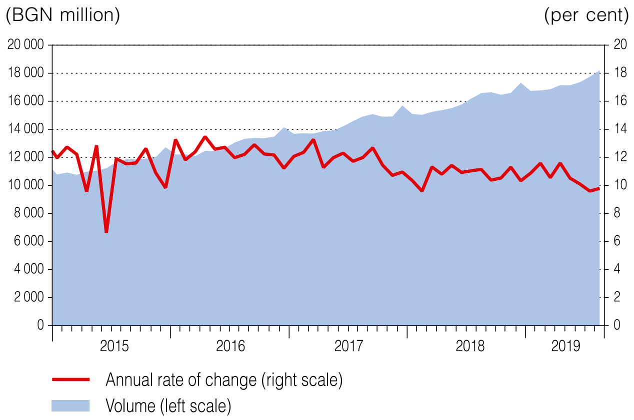
Source: the BNB.

Bank Deposits with the BNB



Source: the BNB.

Currency in Circulation



Source: the BNB.

households[26] growing further at comparatively high rates in the first eight months of 2019. In August credit growth amounted to 5.5 per cent on an annual basis, from 7.7 per cent by end-2018.

Loans to non-financial corporations posted year-on-year growth of 3.3 per cent in August 2019 (5.4 per cent at the end of 2018). The growth rate of loans to non-financial corporations tended to slow down from March 2019, reflecting mainly the lower amount of bad and restructured loans (which prompted a decline in the contribution of loans, excluding overdrafts) and to a lesser degree, the slower rise in overdraft. Concurrently, regular loans to non-financial corporations continued growing at comparatively high rates. Based on the 12-month moving average, new corporate loans recorded a gradual increase from the beginning of the year. In terms of the currency structure, new corporate loans exhibited a slight increase in the share of loans in euro at the expense of loans in national currency.

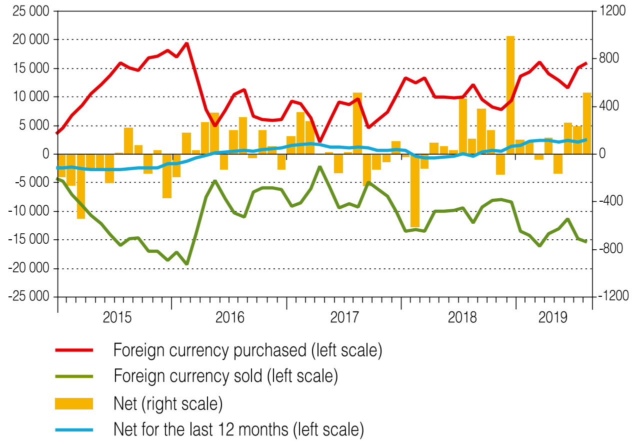
Loans to households rose year on year by 8.8 per cent in August 2019, from 11.2 per cent at the end of 2018. The exhausted effect of a new reporting unit included in the scope of the monetary statistics in April 2018 contributed significantly to the lower growth rate of loans to households.[27] The exhaustion of this effect prompted a strong slowdown in the rate of growth of consumer loans in April 2019, followed by a slight acceleration. Annual growth in housing loans tended to accelerate reaching 12.4 per cent in August (11.4 per cent by the end of 2018). Concurrently, other credit contin-

[26] In August 2019 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, 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, non-financial corporations and financial corporations. The share of loans to households and non-financial corporations in total loans to the non-government sector accounted for 95.0 per cent on average in the last 12 months as of August 2019 and, therefore, developments in loans of these two sectors are addressed.

[27] 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.

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

(EUR million) (EUR million)

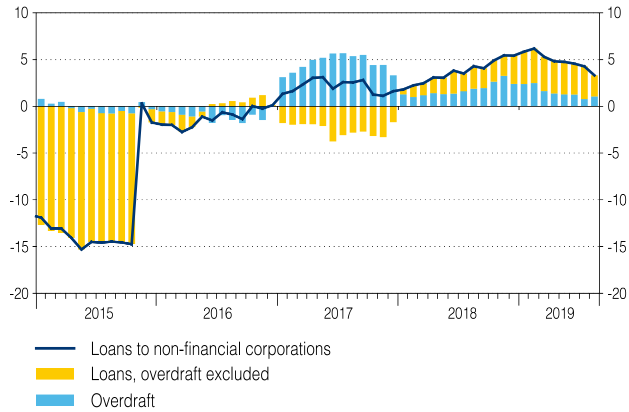


Notes: Net means currency purchased by the BNB minus currency sold by the BNB. Data refer to all bank transactions in foreign currency including liquidity management operations related to the transfer of own funds from lev accounts with the BNB to own accounts with the BNB in euro and *vice versa*.

Source: the BNB.

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

(per cent, percentage points)



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.

ued to contribute negatively to the household loan dynamics largely as a result of government repayments 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 loans posted an increase in the first eight months of the year.[28]

Summarised results of the bank lending survey[29] in the second quarter of 2019 suggest that bank standards[30] remained almost unchanged in approving credit applications of corporations and slightly eased for crediting households. At the same time, banks reported further easing of credit conditions[31] for corporations and households in terms of interest rates and interest rate spread and for households also in terms of fees and commissions charged. Standards were tightened for both consumer and housing loans in terms of premia for riskier loans and collateral requirements. Major factors behind the eased banks' lending policy (lending standards and conditions) over the second quarter included the increasing volume and decreasing price of attracted resources, high liquidity and enhanced competition in the banking sector, as well as lowered risk assessment. In particular, risk assessments reflected the overall macroeconomic environment improvement, favourable prospects in the housing market, increased borrowers' solvency and lower collateral risk. Concurrently, bank risk aversion was a factor for tighter lending policies regarding corporations and households during the quarter. Between July and September 2019 bank expectations are for keeping lending standards for corporate and housing loans unchanged and slightly easing the standards for consumer loans.

Demand for loans by corporations and households increased further in the second quarter of

[28] Based on 12-month moving average.

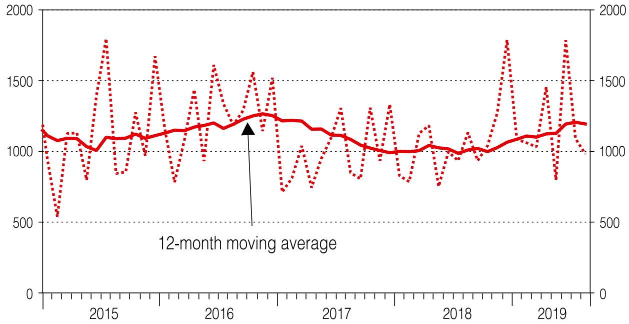
[29] Summarised results of the bank lending survey are presented through weighting bank responses by their market share in the relevant credit segment.

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

[31] 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)

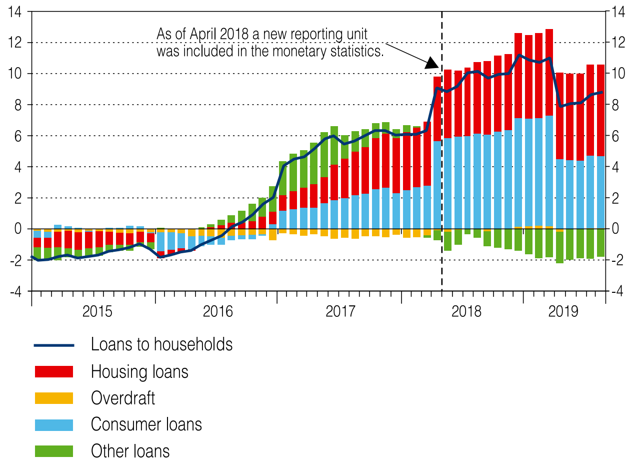


Note: For data characterised by a significant volatility, additionally moving averages computed for suitably a selected periods are provided, in order to smooth the fluctuations in corresponding time series and present the trends in their development.

Source: the BNB.

Annual Growth of Household Credit and Contributions by Individual Loan Types

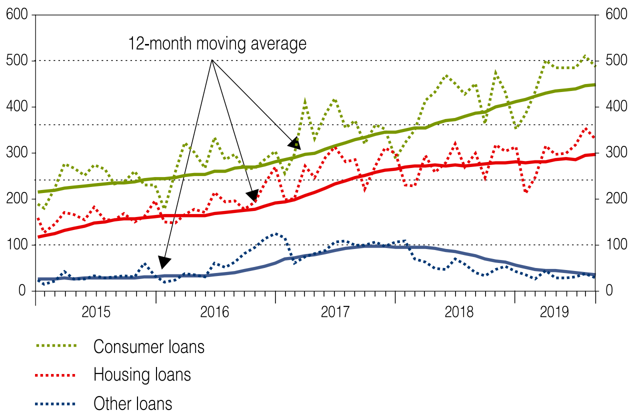
(per cent, percentage points)



Source: the BNB.

New Loans to Households (Monthly Volumes)

(BGN million)



Source: the BNB.

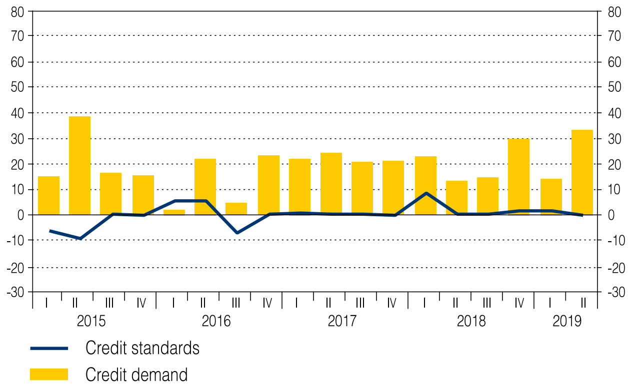
2019. According to banks' weighted responses demand for financing working capital and inventories and low interest rates contributed most markedly to enhanced demand for bank funds by corporations over the April–June 2019 period. The need of funds for investment purposes, refinancing, restructuring or renegotiating debts, and for mergers and acquisitions also weigh on the rising demand for corporate loans. Major factors behind the enhanced demand for consumer loans in the second quarter of 2019 involved demand for financial resources by households for purchasing durable goods, the favourable macroeconomic environment and low interest rates. In addition, favourable housing market prospects and household demand for funds for purchasing first or additional home contributed strongly to the higher demand for housing loans over the quarter. Bank expectations for the July–September 2019 period show that demand for corporate and household loans will further increase.

In the fourth quarter of 2019 and first quarter of 2020 non-government sector's deposits are expected to increase further at comparatively high rates impacted by household deposits. Factors driving growth of household deposits relate to sustained favourable trends on the labour market and the continuously increasing labour income, which amid an uncertainty enduing from the external environment, will encourage savings growth. Concurrently, very low interest rates will be a factor which will somewhat limit deposit growth. Projections of holding lending rates at the achieved low levels will support demand for loans. Factors expected to have a limiting effect on credit growth relate mainly to the projected subdued investment activity of corporations, reflecting the sustained economic uncertainty in important trading partners of Bulgaria and worsened business expectations about future economic activity in some sectors in Bulgaria. Retained bank policies of writing-off non-performing loans and selling credit portfolios and the increase in the countercyclical capital buffer to 0.5 per cent since early October 2019 may also have a limiting effect on credit growth.

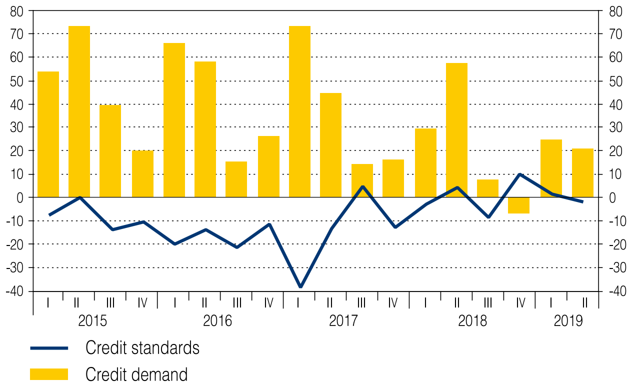
Changes in Demand and Credit Standards

(balance of opinions, percentage points)

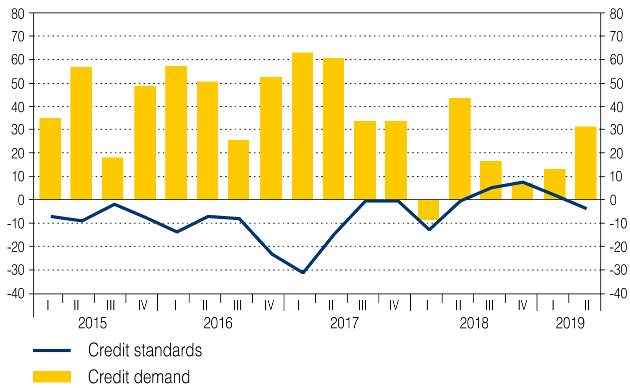
a) in corporate loans



b) in consumer loans



c) in housing loans



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.

Interest Rates

In the context of growing inflows of attracted funds, ample liquidity in the Bulgarian banking system and persistently low interest rates in the euro area, in the first eight months of 2019 interest rates on new time deposits stabilised at the achieved low levels. Increasing volumes and low cost of borrowing, strong banking competition and lowered risk assessments affected the continued weak decline in new business rates.

From the beginning of 2019 to August, LEONIA Plus[32] index followed a slight upward trend, while EONIA displayed no fluctuations. Reflecting both indices' dynamics, the negative spread between LEONIA Plus and EONIA contracted over the reporting period. The ECB September decision to cut by 10 basis points the deposit facility rate and to relaunch the APP within the policy stimulus package added to the EONIA decrease by 4 basis points compared to August to -0.4 per cent.[33] The LEONIA Plus index reacted almost immediately, decreasing by approximately the same amount. In September the spread between LEONIA Plus and EONIA was -7 basis points. Traded volumes declined in the interbank money market, reaching in September BGN 3.6 billion (BGN 4.5 billion in August 2019).

In the first eight months of 2019 deposit interest rates retained their low levels. In August 2019 the average weighted interest rate on new time deposits of non-financial corporations and households was 0.2 per cent, down 11 basis points from the end of 2018. A stronger decline was observed in the non-financial corporations sector, whereas new time household deposit rates remained comparatively stable in the first eight months of 2019. The volatility in corporate deposit rates was entirely due to US dollar rate dynamics. Concurrently, new deposit rates in levs and euro recorded no significant changes from the end-2018 levels.

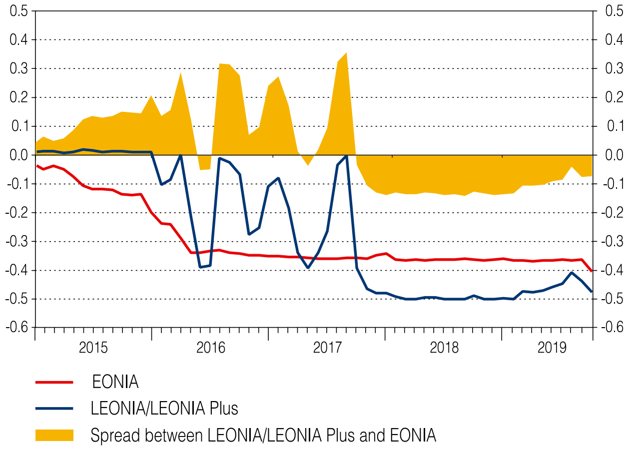
In August 2019 the breakdown of average weighted interest rates on new time lev deposits of households showed a decrease from June in

[32] LEONIA Plus captures real transactions in unsecured deposits on the interbank overnight money market in levs.

[33] For a detailed description of the ECB package of measures adopted in September 2019, see Chapter 1.

Interbank Money Market Interest Rates (Monthly Average Amount) on Overnight Deposits

(per cent, percentage points)



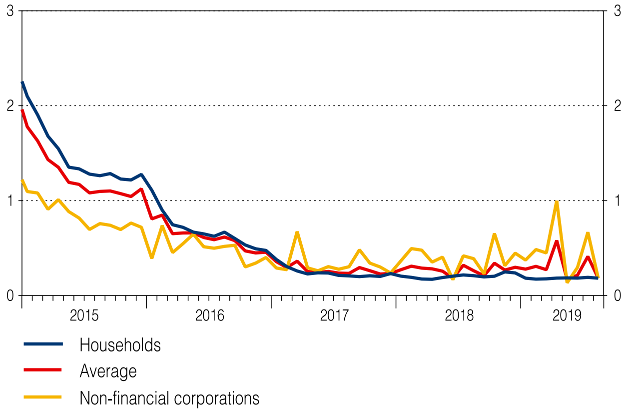
Notes: From 1 July 2017 LEONIA Plus replaced LEONIA index. Monthly values of LEONIA Plus index are calculated as the averages of the values for the days when unsecured overnight deposits in levs are concluded in the interbank market.

Sources: the BNB and the ECB.

Interest Rates on New Time Deposits

a) by sector

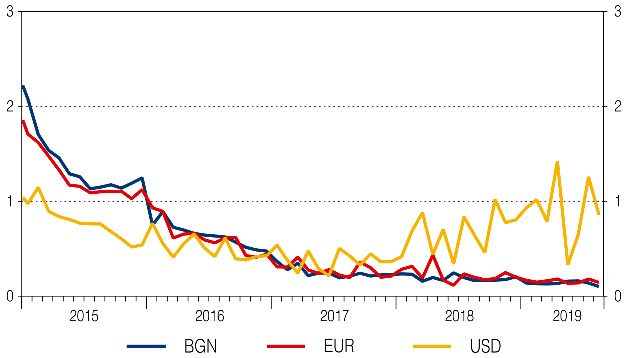
(per cent)



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)

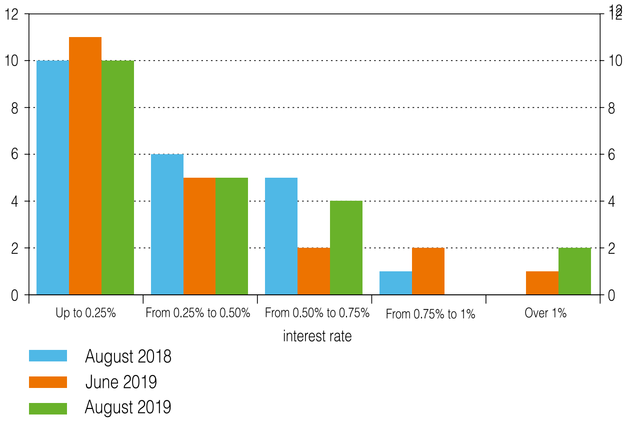


Note: The average interest rate by currency is calculated using the interest rates in all sectors and maturities weighted by relevant new deposit volumes.

Source: the BNB.

Distribution of Interest Rates on New Household Time Lev Deposits

(frequency – number of banks)



Source: the BNB.

the number of banks with average interest rates of up to 0.25 and between 0.75 and 1.0 per cent and an increased number of banks offering rates from 0.50 to 0.75 and over 1.0 per cent. The standard deviation measuring the variation of interest rates offered by banks remained stable at 0.31 per cent in August.

The tendency toward slightly decreasing rates in new loans to non-financial corporations and households was sustained in the first eight months of 2019. Bank lending survey results for the second quarter of 2019 show that major factors affecting lending rate dynamics were the increasing volume and decreasing cost of attracted funds, high liquidity, strong competition in the banking sector and reduced risk assessments.

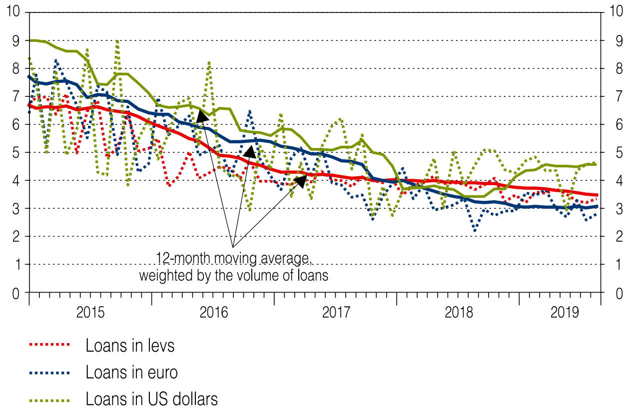
Within the currency structure of new loans to non-financial corporations, a slight drop in lev-denominated, retention in euro-denominated and an increase in US dollar-denominated lending rates were recorded during the first eight months of 2019. As of August 2019 interest rates on new corporate loans were 3.5 per cent in levs, 3.1 per cent in euro and 4.6 per cent in US dollars.[34]

In the first eight months of 2019 the annual percentage rate of charge (APRC) on housing loans to households continued to follow a slight downward trend to reach in August 3.6 per

[34] The above values are weighted averages of interest rates on loans to non-financial corporations on a 12-month basis.

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

(per cent)

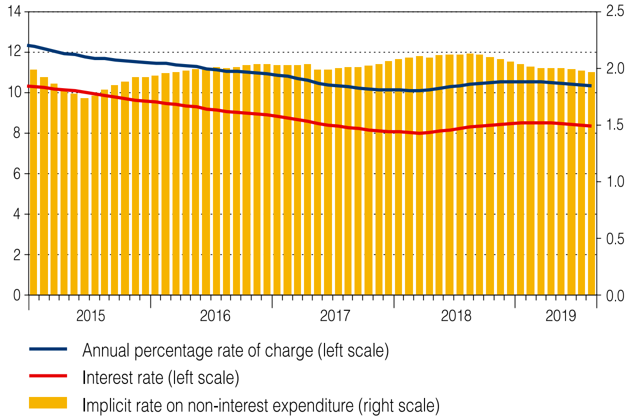


Source: the BNB.

Interest Rates and APRC on Newly Extended Household Loans

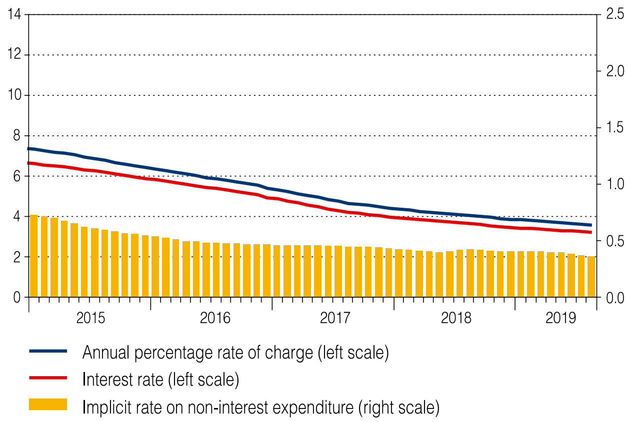
a) consumer loans

(per cent) (percentage points)



b) housing loans

(per cent) (percentage points)



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.

cent.[35] This dynamics was largely driven by the interest rate component rather than the implicit rate of non-interest expenditure. The APRC on consumer credit decelerated from the end of 2018 to reach in August 10.3 per cent.

In August 2019 the breakdown of average weighted interest rates on new housing euro loans showed an increase in the number of banks offering average rates between 5.0 and 6.0 per cent and a decreased number of those with up to 3.0 per cent. The standard deviation indicating the variation of interest rates offered by banks rose in August by 8 basis points *vis-à-vis* June to 1.11 per cent.

Spreads between interest rates on new corporate and housing loans in Bulgaria and the euro area continued to contract to reach in August historical lows of 182 and 149 basis points, respectively.[36]

In the fourth quarter of 2019 and first quarter of 2020 interest rates on new time deposits and loans are expected to remain at the current low levels. This will reflect high liquidity, continuing inflows of attracted funds and ECB's accommodative stance of monetary policy announced in September, which will keep euro area money market rates at their low levels.

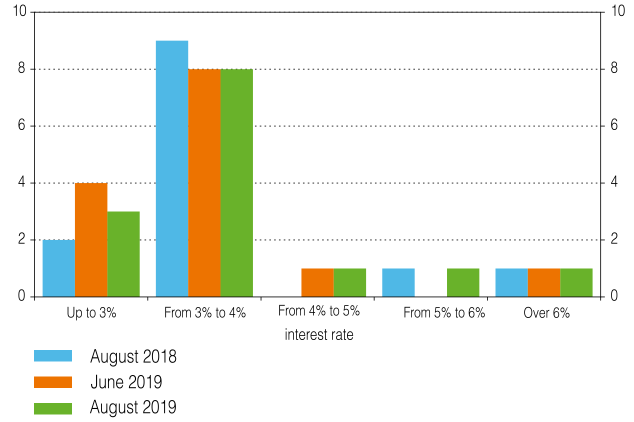
In the third quarter of 2019 three BGN-denominated government securities auctions were held to the amount of approved bids of BGN 200 million *per* each of them. The average weighted yield attained in the single reopening of the issue with an original maturity of ten years and six months was 0.32 per cent and that is a decrease of 9 basis points compared to the yield achieved in the June auction. The average weighted yield achieved in the two government securities auctions with an original maturity of 20 years was 1.52 and 1.42 per cent, respectively (compared to 1.60 per cent during the first opening in June). The reported drop in the primary market yield reflected strong demand by resident financial institutions in the context

[35] 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.

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

Distribution of Interest Rates on New Housing Loans in Euro

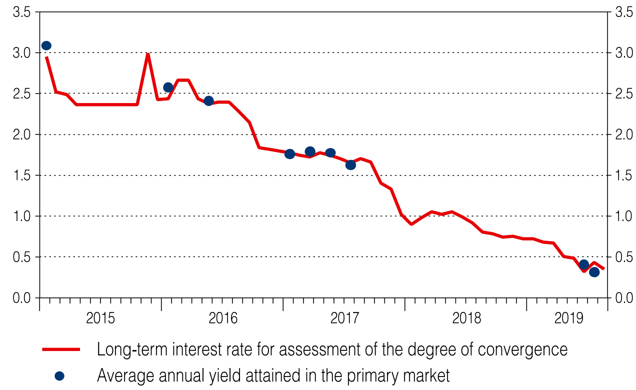
(frequency – number of banks)



Source: the BNB.

Interest Rates on Ten-Year-and-Six-Month Government Securities on the Primary and Secondary Market

(per cent)



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.

of persistently high banking liquidity. These are the factors explaining retention of the long-term interest rate used for assessing the degree of convergence at historical lows (0.35 per cent in August against 0.32 per cent in June).

Between July and September the yields of the Bulgarian Eurobonds issued in international capital markets sustained their downward trend, most strongly pronounced in the long end of the maturity curve. Bulgarian government bond yield dynamics corresponded to the drop in long-term interest rates in the euro area and worldwide, reflecting expectations for more prolonged retention of rates at the current low levels under conditions of more pessimistic prospects for economic growth and an increased uncertainty as to the global trade relations.

By the end of 2019 and in early 2020 Bulgarian government bond yields are expected to remain under the effect of both external and domestic factors. ECB's package of monetary policy measures approved in September, including the renewed APP since 1 November, is likely to cause an additional drop in government bond yields of euro area countries, which would largely affect Bulgarian government securities yields. Concurrently, internal factors, among which legal restrictions on assuming a new debt until the end of 2019 and concentration of a substantial amount of government bond maturity payments in the first quarter of 2020, suggest even a stronger excess of demand over supply of government securities.

Financial Flows between the Consolidated Budget and Other Sectors of the Economy

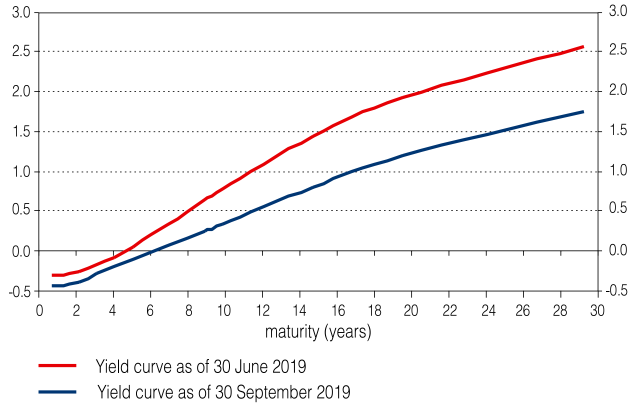
Government's revenue and expenditure policy and budget financing operations affect the allocation of liquidity across economic sectors.[37]

Over the second quarter the external sector was the main source of liquidity for the budget, accounting for 3.0 per cent of GDP for the quarter. Between April and June EU grants (BGN 577 million) and reimbursed funds under the EU Common Agricultural Policy (BGN 705 million) exceeded significantly EU budget

[37] Breakdown by economic sector in this Section is made on the basis of available information in monthly reports under the consolidated fiscal programme (CFP) and does not therefore coincide with the sector classification used in the National System of Accounts.

Benchmark Government Securities Yield Curve in Bulgaria

(per cent)



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.

contribution (BGN 251 million) and foreign debt payments (BGN 148 million).[38] The financial sector (excluding the BNB) was also a source of liquidity to the budget, amounting to 1.3 per cent of GDP over the quarter, reflecting mainly government securities issued in the primary market at the end of June (BGN 300.6 million) and lack of maturing government securities. In the second quarter of 2019 the fiscal policy had almost a neutral effect on non-government non-bank sector's liquidity. Net positive financial flows from the external and financial sectors led to an increase in the government deposit with the BNB by BGN 1237 million on the end of March (4.2 per cent of GDP for the review quarter).

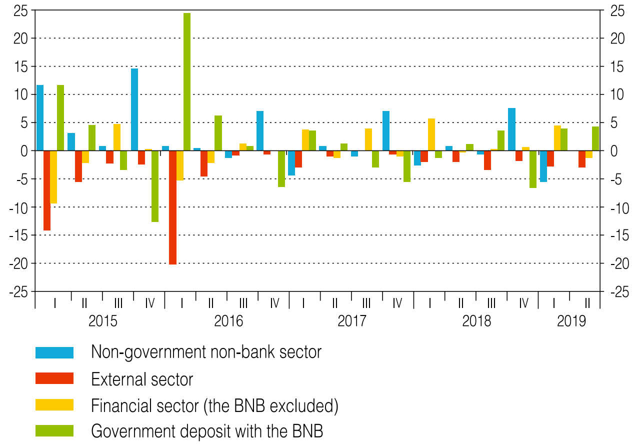
Based on preliminary monthly data as of end-September 2019, substantial resource reallocation from the budget to the external sector may be expected in the third quarter, reflecting the August payment from the Ministry of Defence budget under the Acquisition of a New Type of Fighter Aircraft investment project (USD 1.2 billion). Hence, outflows from the budget exceeded significantly redirected liquidity from the financial sector (excluding the BNB) to the budget as a result of government securities issued in July and August in the primary market to the amount of BGN 600 million. By end-September, therefore, the government's deposit with the BNB decreased by BGN 1102 million from the end of June.

Developments in financial flows generated in the process of external and internal economic factor interaction contributed to the growth in gross international reserves. By end-September the market value of international reserves (including valuation and price adjustments) – assets on the BNB Issue Department balance sheet, rose by EUR 0.2 billion from the end of 2018 to EUR 25.3 billion (BGN 49.4 billion). According to the currency board principles, the increase in international reserves corresponds to the growth in Issue Department balance sheet liabilities. By end-September the increased government's deposit with the BNB had the major contribu-

[38] Including interest payments on external loans under the CFP (BGN 31 million and central budget repayments on foreign loans and government investment loans managed by ministries and agencies (BGN 117 million). Data on repayments on government budget loans are based on Ministry of Finance Monthly Bulletin on Budget Performance and Major Indicators under the Consolidated Fiscal Programme for June 2019.

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

(share of GDP, per cent)



Sources: the MF, the BNB.

tion to the growth in BNB Issue Department's liabilities compared to December 2018, reflecting the excess of budget revenue over expenditure, even after taking into account the significant August payment on army modernisation. Year-on-year growth was also observed in currency in circulation followed by BNB Banking Department's deposit. At the same time, bank reserves with the BNB declined due largely to decreased excess reserves.

In the fourth quarter of 2019 and first quarter of 2020 bank reserves are expected to follow a slight downward trend due to excess reserves dynamics. Decreased excess reserves will possibly reflect the ECB's cut in the deposit facility rate by 10 basis points to -0.5 per cent in September, resulting in a lower bank excess reserve rate from -0.6 to -0.7 per cent.[39] Projected higher budget expenditure and EU Common Agricultural Policy payments at the end of the year are expected to entail a reduction in government's deposit with the BNB by end-2019. In early 2020 an increase in government's deposit may be expected assuming a potential budget surplus for the period and EC reimbursements of agricultural subsidies in the previous quarter. Retained favourable trends in the labour market and persistently low deposit rates will contribute to a relatively high growth rate of currency in circulation over the projection horizon.

[39] The methodology for setting interest rates on accounts with the BNB was amended by BNB Governing Council decision, with effect from 4 October 2017. This change suggests that an interest rate equal to the lower than 0 per cent or the ECB's deposit facility rate minus 20 basis points is applied to excess reserves.

3. Economic Activity

In the second quarter of 2019 growth of real GDP decelerated on the previous quarter to 0.8 per cent. This dynamics reflected the weaker domestic demand which was due to a significant slowdown in quarter-on-quarter private consumption growth and the reported fall in government consumption. Over the quarter net exports contributed positively to real GDP growth, reflecting the stronger decrease in goods and services imports than that in exports.

In the second quarter of 2019 the seasonally adjusted number of employed in the total economy matched the previous quarter's level. The unemployment rate declined further, reaching 4.2 per cent amid enhanced demand for labour by corporations. The nominal compensation per employee rose by 2.4 per cent on a quarterly basis, with industry and services sectors contributing to this growth and agriculture posting a decline.

Consumer confidence and business climate indicators went down in the third quarter of 2019, though remaining at comparatively high historical levels. Wage growth and concurrent rises in household purchasing power, coupled with persistently low interest rates are expected to continue favouring private consumption growth at the end of 2019 and in early 2020. Government investments are projected to be an additional factor stimulating economic activity, whereas the external environment will remain a source of uncertainty and will curb investment activity of corporations and exports of goods and services. Given these factors, quarterly real GDP growth in the fourth quarter is anticipated to be weaker compared with the rate reported in the first half of 2019 and to slightly accelerate in the first quarter of 2020.

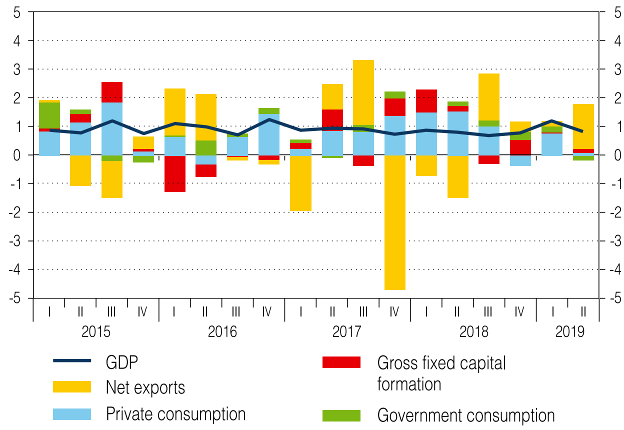
Current Economic Environment

In the second quarter of 2019 real GDP growth decelerated from the previous quarter to 0.8 per cent, according to seasonally adjusted NSI national account data. Economic activity dynamics was driven by the essential moderation in the quarterly growth of private consumption and the reported drop in government consumption. Quarterly fixed capital investment growth accelerated, though insufficiently to offset the unfavourable developments in other components of domestic demand. Net exports had a positive contribution to real GDP growth, reflecting the stronger decline in goods and services imports compared to exports.

Household final consumption expenditure growth over the second quarter was underpinned by the retained long-term upward trend in real labour income of households and low interest rates stimulating demand for consumer loans. Factors limiting household consumption involved the reported slight deterioration in consumer confidence indicator[40] and escalation of the uncertainty. This contributed to the increased share of savings in disposable income of households.

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.

[40] The analysis employs BNB's seasonally adjusted data on consumer confidence indicator.

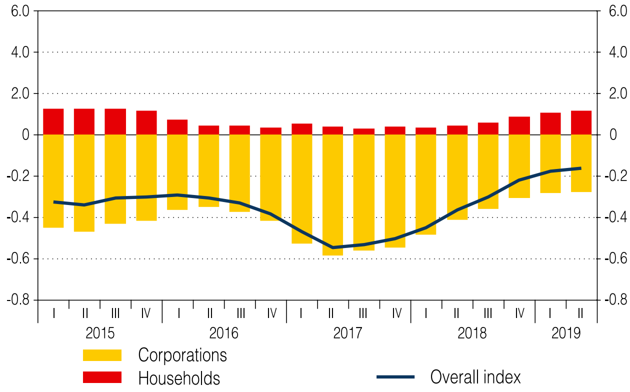
In the second quarter of 2019 government consumption contributed negatively to the quarterly growth of real GDP, as a higher growth rate of the deflator was recorded *vis-à-vis* nominal consumption. Despite fluctuations in its quarterly growth (an increase in the first quarter and a drop in the second quarter), real government consumption rose year on year by 5.4 per cent for the first half of the year, reflecting the increasing operating, personnel and healthcare costs since the beginning of the year.[41]

Fixed capital investment had a positive contribution to quarterly real GDP growth over the second quarter, and yet its dynamics remained broadly subdued. Potential factors limiting growth in private investment related to the persistent economic uncertainty in Bulgaria's important trading partners, slowing growth in external demand for Bulgarian goods and services and the associated deterioration in industrial firms' expectations of the future production activity. In terms of the type of assets, investment in machines, information and communication equipment[42] and in residential buildings had a more significant contribution to the increased gross fixed capital formation.

Net exports contributed positively to economic activity dynamics in the second quarter of 2019, driven by the stronger declining quarterly rate of goods and services imports compared to exports.[43] July data indicates a recovery in the quarterly growth of both nominal and real exports of goods[44], signalling that overall exports dynamics was negatively influenced by temporary supply-side factors and, to a lesser degree, by slowing growth in external demand for Bulgarian goods and services.

Although declining in the second quarter of 2019, the overall business climate indicator remained on average at a comparatively high historical level, signalling that the economy is still in an expansion phase. This is consistent with persistently high consumer confidence by historical standards, continuous growth in

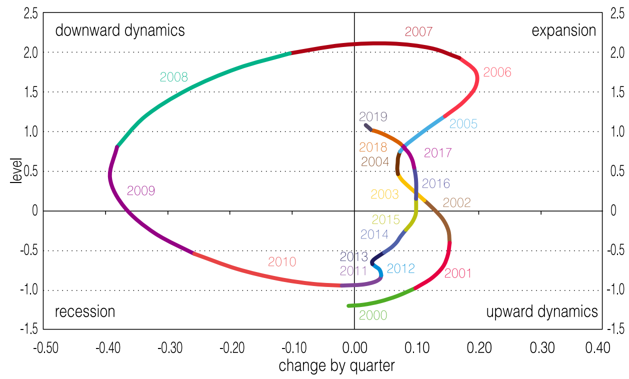
Uncertainty Indicator in the Economy (Corporations and Households)



Note: Higher values of this indicator should be interpreted as an increase in uncertainty. Positive/negative values of the overall index show that the uncertainty in economy is above/below its long-run level. This indicator is constructed under a methodology presented in: *Ivanov, E. 'Constructing an Uncertainty Indicator for Bulgaria', BNB Discussion Papers 109/2018*, and corresponds to the indicator *U1* constructed in the paper.

Sources: the EC, BNB calculations.

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.

[41] For further information, see *Fiscal Policy Effects on the Economy* Section in Chapter 3.

[42] This refers to the group of information and communication equipment, weapon systems and other machinery and equipment.

[43] For further information, see *Exports and Imports of Goods and Services* Section in Chapter 3.

[44] The analysis employs Eurostat's seasonally adjusted data on external trade in nominal and real terms.

domestic demand and favourable dynamics in the labour market. At the same time, divergent developments were observed in business climate dynamics by economic sector. According to the indicator constructed by the BNB, construction and retail trade are still in an expansion phase, while manufacturing and services moved to the quadrant identifying the downward dynamics phase.

Assessments of the cyclical position of the economy on the basis of a macroeconomic model show that in the second quarter Bulgaria's economic activity still exceeded the potential level of output.[45] This signals that, in terms of supply, part of production factors in the economy are utilised over their optimal level, which corresponds to the long-term downward trend in unemployment, the robust increase in compensation *per* employee and retention of a high capacity utilisation rate.

Short-term economic indicators over the third quarter of 2019 give diverging signals about the economic development in the following months. Between July and September 2019 the business climate indicator measuring business sentiment worsened *vis-à-vis* the second quarter, reflecting more unfavourable managers' assessments in all sectors excluding construction.[46] In addition to this, the previous year's upward trend in the uncertainty indicator constructed by the BNB was sustained which is a precondition for subdued dynamics in investment activity of corporations over the coming quarters. In July 2019 nominal industrial turnover increased on both quarterly and annual basis, which was due to the simultaneous rise in prices and traded volumes.[47] On a quarterly basis, growth in volumes was reported in both internal and external markets, giving positive signals about goods export dynamics in the third quarter of the year.

The NSI Consumer Survey of July 2019[48] recorded a slight worsening in the composite consumer confidence indicator *vis-à-vis* April. The uncertainty indicator constructed by the BNB

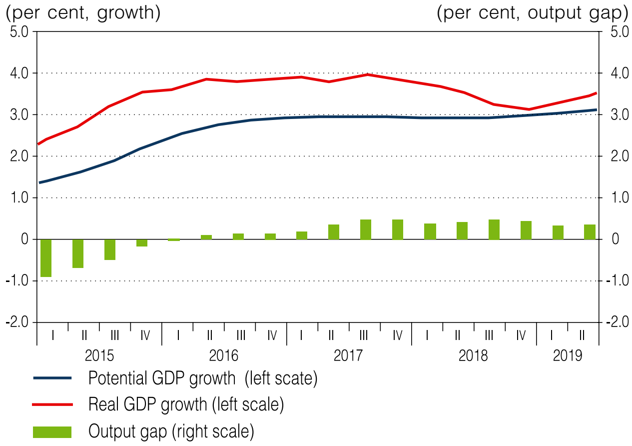
[45] The potential output and cyclical position of the economy are assessed by using a multi-factor production function model, the Phillips curve and Okun's law presented in *Economic Review*, 1/2019.

[46] BNB's seasonally adjusted data.

[47] For more information on industrial turnover dynamics, see *Behaviour of Firms* Section in Chapter 3.

[48] BNB's seasonally adjusted data.

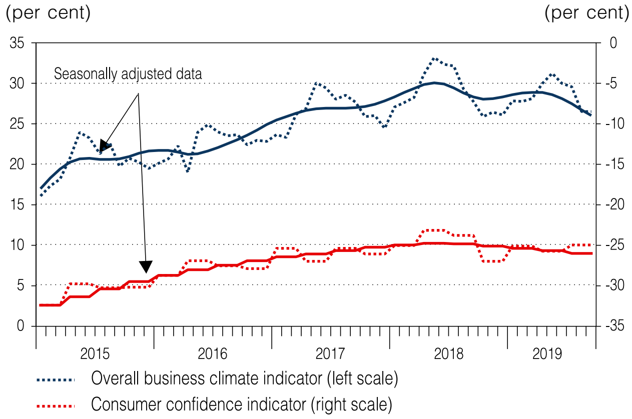
Potential GDP Growth and Output Gap



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.

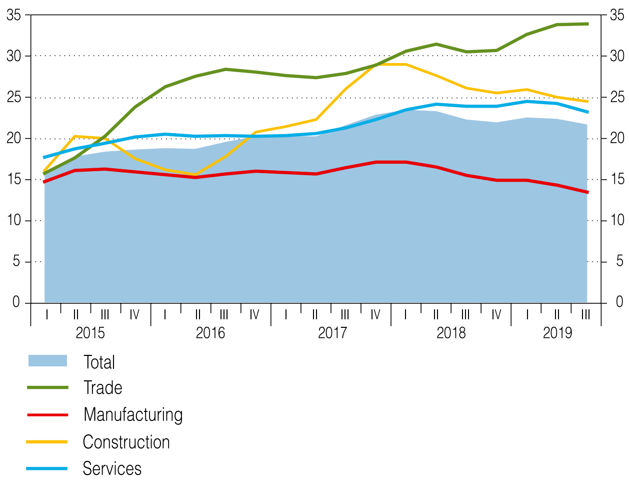
Business Climate and Consumer Confidence



Sources: the NSI, BNB calculations.

Expectations about Future Economic Activity

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



Sources: the NSI, BNB calculations.

shows a continuing polarisation of households in terms of their assessments of the economic situation in Bulgaria, which is a prerequisite for them to postpone consumption.[49] This dynamics is likely to reflect the increased uncertainty in the international environment since the year's start and divergent economic tendencies in various sectors of the economy. In July 2019 retail trade volumes at constant prices continued to rise on both quarterly and annual basis, which is a precondition for retention of the positive contribution of private consumption to real GDP growth.[50]

In the fourth quarter of 2019 and first quarter of 2020, real GDP is expected to continue growing on both quarterly and annual basis, though at weaker rates than those in early 2019, reflecting the negative contribution of net exports. In the following two quarters a slight revival is expected in real exports of goods and services[51]. Domestic demand growth will be a driver for a stronger increase of goods and services imports compared to exports. Private consumption is projected to continue contributing positively to the quarterly and annual GDP growth. This will reflect retained positive developments in the labour market and low interest rates stimulating demand for consumer credit. At the same time, an expected slowdown in the quarterly and annual growth of nominal compensation *per* employee in the following months will dampen the growth rate of real disposable income of households. Government consumption and projected growth in public investment will have a positive contribution to domestic demand over the projection horizon. Private investment dynamics is expected to remain comparatively subdued, likely to reflect the retained uncertainty in the international environment and weaker annual growth of external demand for Bulgarian goods and services.

Prevailing risks to the projection point to lower than expected growth in real GDP. This reflects primarily the external environment where there are risks of lower than projected economic activity growth in important trading partners for Bulgaria.

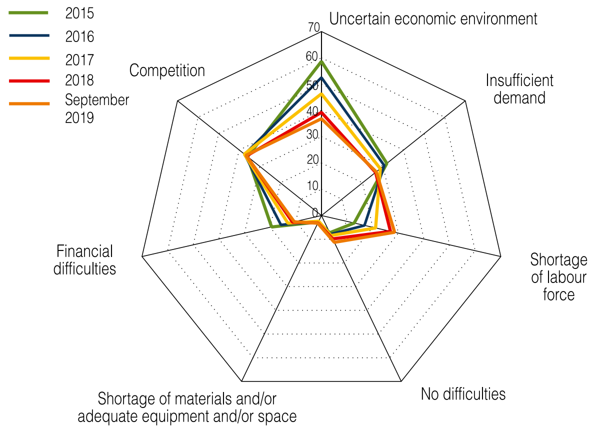
[49] BNB's seasonally adjusted data.

[50] For details on nominal retail trade developments and household propensity to save, see *Behaviour of Households* Section in Chapter 3.

[51] For further information, see *Exports and Imports of Goods and Services* Section in Chapter 3.

Factors Limiting Economic Activities of Corporations

(relative share of all corporations)

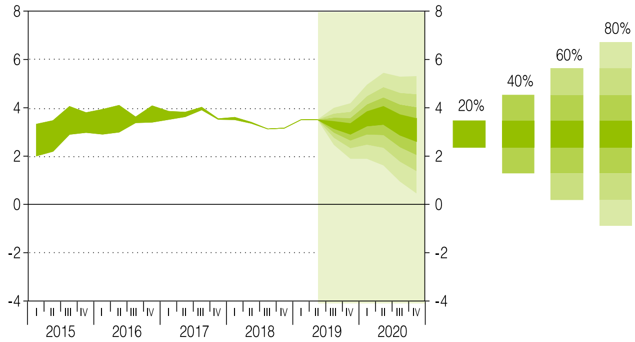


Note: Average data for the period calculated as sector-weighted (manufacturing, construction, trade and services).

Sources: the NSI, BNB calculations.

Expected Annual Rate of Change in Real GDP

(per cent, seasonally adjusted data)



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

Source: the BNB.

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
Consumption	1.4	1.4	2.0	0.2	0.9	0.4	0.7	1.8	0.5	1.1	1.4	1.7	1.8	1.8	1.4	-0.1	1.3	-0.1
incl.																		
Household consumption	1.2	1.7	2.8	0.2	1.0	-0.5	1.0	2.2	0.3	1.3	1.2	2.1	2.3	2.2	1.4	-0.6	1.1	0.1
Government final consumption expenditure	2.0	2.3	-0.9	-0.5	-0.9	3.2	0.0	2.2	1.3	-1.9	1.4	0.3	1.0	0.1	0.5	0.0	2.4	-0.6
Collective consumption	5.0	-1.2	0.7	-0.1	-0.5	2.6	1.3	1.1	1.0	0.3	1.9	1.7	-0.1	1.0	1.0	2.0	1.1	-0.4
Gross fixed capital formation	0.5	1.5	3.5	0.4	-5.9	-2.2	-0.3	-0.9	1.2	4.0	-1.9	3.2	4.1	1.1	-1.5	2.8	0.2	0.7
Exports of goods and non-factor services	2.2	-0.8	-3.3	3.9	3.0	4.0	0.7	1.9	0.7	1.4	3.5	-2.1	-1.7	-1.6	1.7	3.1	1.9	-2.9
Imports of goods and non-factor services	2.1	0.8	-1.3	3.1	0.4	1.5	0.8	2.1	3.5	0.1	0.2	4.8	-0.7	0.7	-0.8	2.4	1.5	-5.0
GDP	**0.9**	**0.8**	**1.2**	**0.8**	**1.1**	**1.0**	**0.7**	**1.2**	**0.9**	**1.0**	**0.9**	**0.7**	**0.9**	**0.8**	**0.7**	**0.8**	**1.2**	**0.8**

Source: the NSI.

Exports and Imports of Goods and Services

In the first half of 2019 nominal goods exports and imports rose on an annual basis by 4.5 and 0.6 per cent, respectively.[52] Non-seasonally adjusted national accounts GDP data show that real goods exports increased by 5.1 per cent in the first half of 2019 compared to the first half of 2018. By quarter, however, a more essential slowdown was observed in the annual growth for the second quarter *vis-à-vis* the first quarter of the year. This slowdown reflected both one-off factors and continued deterioration in the international environment. Concurrently, real goods imports grew by 0.9 per cent on an annual basis for the January to June period. This growth was concentrated in the first quarter, unlike the second quarter when a decline was recorded (partially due to one-off factors). Cross-checking goods exports and imports in nominal and real terms suggests that international price dynamics over the first half year has contributed positively to the growth of foreign trade flows in nominal terms.

Exports of mineral products had the most sizeable contribution to the growth in goods exports in the first half of 2019 in both nominal and real terms.[53] This can be explained, to a large extent, by the low basis of the corresponding period of the previous year when a key enterprise in this sector reduced significantly its production due

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

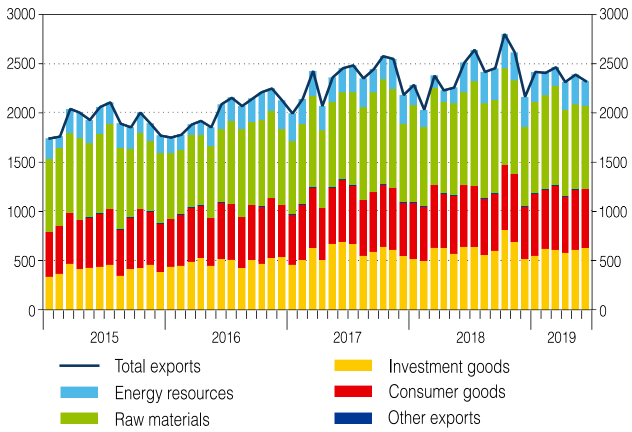
	Balance (EUR million)	Change* (EUR million)	Growth of exports** (per cent)	Growth of imports** (per cent)
Consumer goods	18.6	-118.9	3.7	7.4
Raw materials	-271.5	79.7	-2.1	-3.3
Investment goods	-777.2	-58.5	3.5	4.3
Energy resources	-280.2	617.1	45.4	-7.4
Other exports	-53.1	1.7	18.0	4.3
Total	**-1363.5**	**521.1**	**4.5**	**0.6**

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

Source: the BNB.

Exports of Commodity Groups by Use

(EUR million)



Source: the BNB.

[52] Foreign trade data.

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

Exports by Commodity Group, January–June 2019

	Value (EUR million)	Change* (EUR million)	Growth** (per cent)	Contribution**, percentage points
Wood products, paper, ceramics and glass	699.2	24.5	3.6	0.2
Machines, vehicles, appliances, instruments and weapons	4 036.3	283.5	7.6	2.1
Mineral products and fuels	1 757.0	498.9	39.7	3.7
Base metals and related products	2 091.0	-441.1	-17.4	-3.2
Animal and vegetable products, food, drinks and tobacco	2 035.3	119.2	6.2	0.9
Textiles, leather, clothing, footwear and other consumer goods	1 712.5	-58.3	-3.3	-0.4
Chemical products, plastics and rubber	1 911.8	183.4	10.6	1.3
Total exports	14 243.0	610.2	4.5	-

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

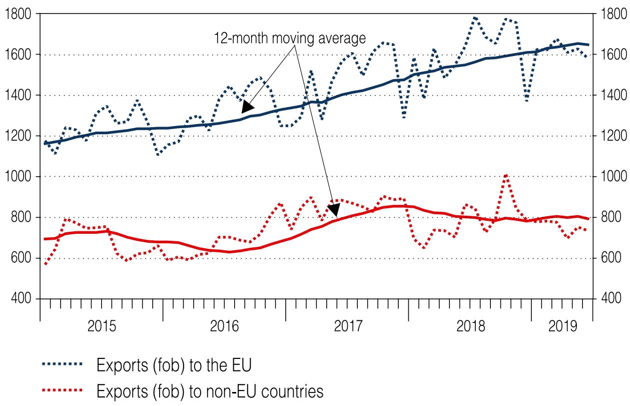
Source: the BNB.

to a planned production capacity renovation.[54] In the first half year machines exports[55] retained its essential positive contribution to the export growth. Broken by commodity group, a decrease on an annual basis was recorded only in exports of base metals and, to a much lesser extent, in textile product exports. All other groups reported an increase on an annual basis, though in the second quarter their growth rate slowed down significantly in the context of prevailing negative signals surrounding the international environment. The reported drop in metals in both nominal and real terms was due mainly to weaker exports of copper products.[56] This dynamics was driven by one-off factors involving a temporary interruption of production in a key sector enterprise.[57]

In the first half of 2019 exports of goods to EU Member States continued increasing on an annual basis (by 5.1 per cent) reflecting mainly exports to Greece and Romania. At the same time, exports to the EU was largely limited by decreased exports to Italy. Exports to non-EU countries rose by 3.2 per cent from the first half of 2018 despite the sizeable drop in exports to Turkey (mainly due to the group of base metals). In the first half of 2019 the share of exported goods to EU Member States in total goods

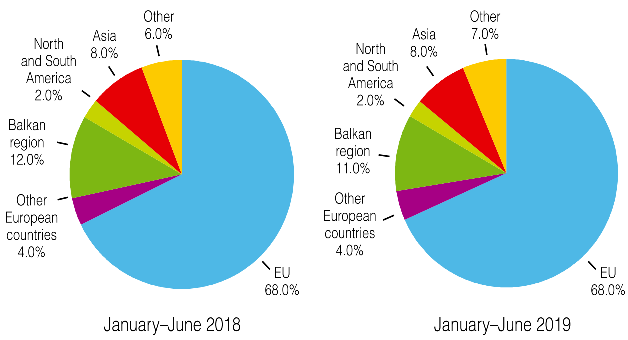
Dynamics of Goods Exports to the EU and non-EU Countries

(EUR million)



Source: the BNB.

Geographical Breakdown of Goods Exports



Source: the BNB.

[54] NSI data on production and deliveries of oil and oil products.

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

[56] According to BNB calculations on real volumes of imports by commodity group under the Standard International Trade Classification (SITC) based on NSI data on import prices and nominal import values under SITC.

[57] For details, see the Interim Report for the period from 1 October 2018 to 31 March 2019 of the Aurubis Group, p 20.

exports remained almost unchanged from the first half of 2018 reaching 68.3 per cent.

In the first six months of 2019 nominal goods imports increased slightly on an annual basis. Growth was recorded in the first quarter, unlike the second quarter when a decline was observed on an annual basis. By end use, this decline was due to the decreased imports of raw materials and energy resources. Lower imports of raw materials reflected mainly metal ores and non-ferrous metals whose imports dropped, according to BNB calculations,[58] in both nominal and real terms under the influence of one-off factors.[59] Developments in nominal imports of mineral products were driven by a fall in real volumes.[60]

Imports of goods from EU Member States rose by 4.8 per cent on the first six months of 2018, with imports from Greece and Netherlands having the most significant contribution. Concurrently, imports from non-EU countries fell on an annual basis by 4.0 per cent as a result largely of the decreased imports of mineral products and fuels from Russia and Chile. The share of imports from the EU rose by 2.2 percentage points from the first half of 2018 to 54.2 per cent.

Balance of payments data for the beginning of the third quarter indicate a continuous year-on-year increase in nominal goods exports and imports, with exports growth outstripping that of imports.

At the close 2019 and in early 2020 real exports of goods are expected to continue rising on an annual basis, though at lower rates than those in the first half year. This slowdown will reflect the exhausted base effect in exports of mineral products in the context of a continuous subdued increase rise of external demand.

Expectations for real goods imports in the fourth quarter of 2019 and first quarter of 2020 point to a revival in their growth compared to the reported annual drop in the second quarter

[58] Real volumes of imports by commodity group under the Standard International Trade Classification (SITC) are constructed using NSI data on import prices and nominal import values under SITC.

[59] See footnote 57.

[60] According to BNB calculations on real volumes of imports by commodity group under the Standard International Trade Classification (SITC) based on NSI data on import prices and nominal import values under SITC.

Imports of Commodity Groups by Use, January–June 2019

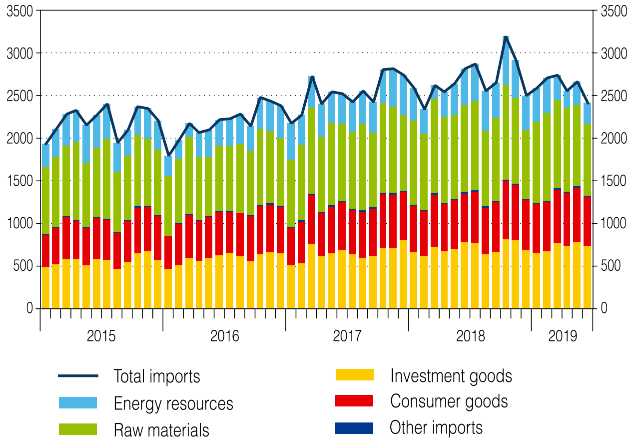
	Value (EUR million)	Change* (EUR million)	Growth** (per cent)	Contribution** (percentage points)
Consumer goods	3 592.8	246.6	7.4	1.6
Raw materials	5 786.7	-198.0	-3.3	-1.3
Investment goods	4 343.4	180.7	4.3	1.2
Energy resources	1 795.4	-143.8	-7.4	-0.9
Other imports	88.3	3.7	4.3	0.0
Total	**15 606.5**	**89.1**	**0.6**	**-**

* 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

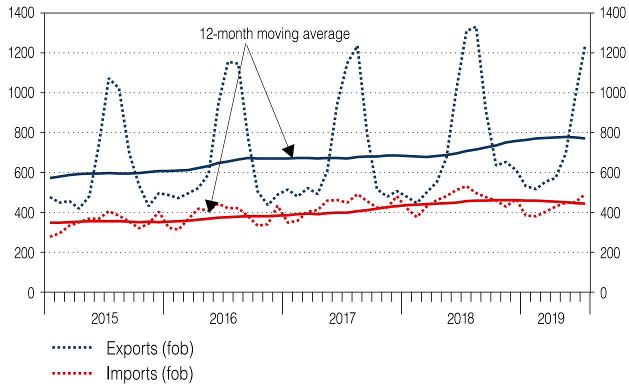
(EUR million)



Source: the BNB.

Dynamics of Services Exports and Imports

(EUR million)



Source: the BNB.

of 2019. The projected dynamics is based on expectations of accelerating annual growth in investment and private consumption.

Based on market sentiment of international commodity prices,[61] import and export prices are expected to rise on an annual basis at the end of 2019 and in early 2020, which will contribute positively to the nominal change in foreign trade flows.

According to balance of payments data for the January to July period, services exports grew on an annual basis, while services imports dropped against the same period of 2018. National accounts data show that both real volumes and the price component contributed to the growth in services exports. At the same time, decreased imports of services reflected the reported annual fall in import prices of services over the first half of 2019 and lower year-on-year real imports of services in the second quarter of the year.

Services exports between January and July rose by 1.6 per cent on an annual basis in nominal terms, with growth in information[62] and technical services[63] contributing most significantly to this. Earnings from visits of foreign nationals to Bulgaria decreased by 0.6 per cent on an annual basis. According to NSI data, between January and July 2019 visits of foreign nationals to Bulgaria increased slightly by 0.3 per cent on the corresponding period of 2018, mainly due to the visits from Ukraine and the United Kingdom.

Between January and July 2019 services imports decreased by 8.2 per cent on an annual basis, primarily due to the lower imports of insurance and pension services. NSI data show that Bulgarians' visits abroad increased by 4.7 per cent on an annual basis, with visits to Turkey and Greece recording the largest contribution to this growth.

By the end of 2019 and in early 2020 nominal services exports are expected to grow year on year, while services imports growth is anticipated to recover following the reported annual drop. This will be driven by both the price component and projected growth in traded real volumes amid increasing external and domestic demand.

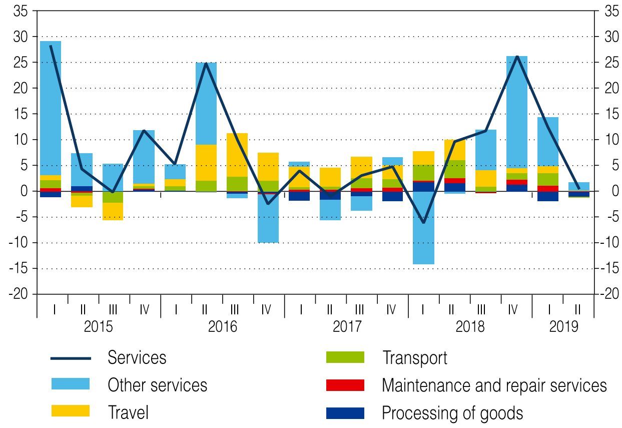
[61] Here, in the Section *International Commodity Prices* in Chapter 1, you can find a more detailed analysis of market expectations about international commodity prices.

[62] It shod read the sub-group of telecommunication, computer and information services.

[63] It should read the sub-group of technical, trade-related, and other business services.

Annual Change of Services Exports and Contribution by Sub-component

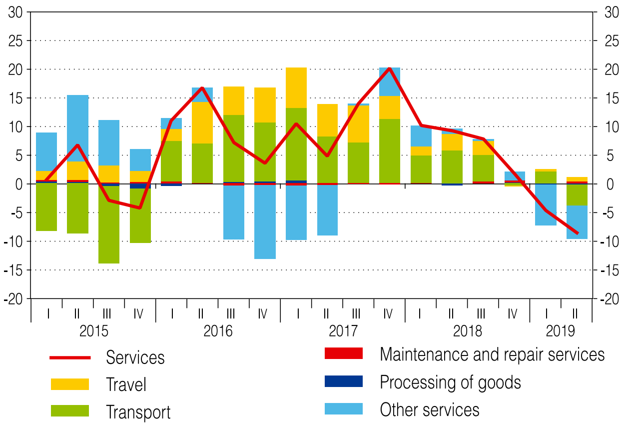
(per cent, percentage points)



Source: the BNB.

Annual Change of Services Imports and Contribution by Sub-component

(per cent, percentage points)



Source: the BNB.

Behaviour of Firms and Competitiveness

In the second quarter of 2019 real value added in the total economy accelerated its growth rate to 1.1 per cent compared to the previous quarter. All sectors had a positive contribution to growth, with the services sector continuing to contribute most significantly.

Over the second quarter real value added in industry rose by 0.7 per cent on a quarterly basis driven by both manufacturing and construction. 2019 second quarter data on short-term business statistics (industry turnover dynamics and construction production) did not correspond to the value added dynamics with industry turnover declining and construction production growth slowing down on the previous quarter. In terms of geographical distribution, the growth of industrial turnover (at constant prices) was driven by domestic market turnover, while it decreased in international markets in line with weakened external demand for Bulgarian goods and one-off factors limiting exports in the second quarter. During that period the decline in construction production index was mainly due to decreased engineering construction and, to a lesser extent, to building construction.

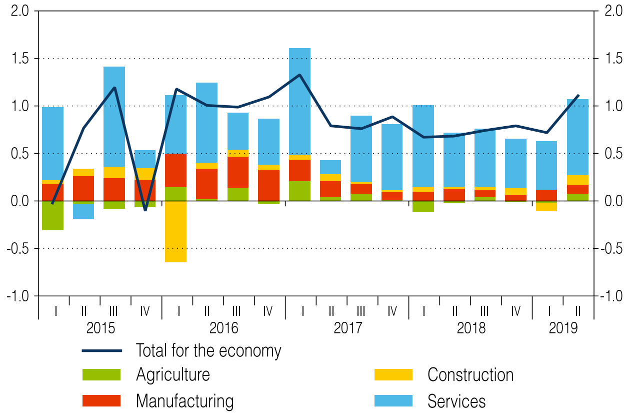
Services value added accelerated its quarterly growth rate to 1.2 per cent in the second quarter of 2019 against 0.7 per cent in the previous quarter. Real estate activities and financial and insurance activities sub-sectors made the major positive contribution. Slower value added growth in wholesale and retail trade; transportation and storage; accommodation and food service activities was not consistent with the acceleration in the turnover sub-indices in transportation and storage; accommodation and food service activities and the increased nominal retail trade volumes registered in the second quarter of 2019.

NSI data on short-term business statistics on output and turnover in industry, trade and construction production for July 2019 indicate positive dynamics of gross value added in the respective sectors in the third quarter of 2019.

In the second quarter of 2019 employment in the total economy remained unchanged quarter on quarter, according to seasonally adjusted NSI data. Services sector continued to contribute to the increasing number of employed which corresponded to the accelerated growth rate of value added over the quarter. In the context of a sus-

Value Added Growth in Real Terms and Contribution by Sector

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

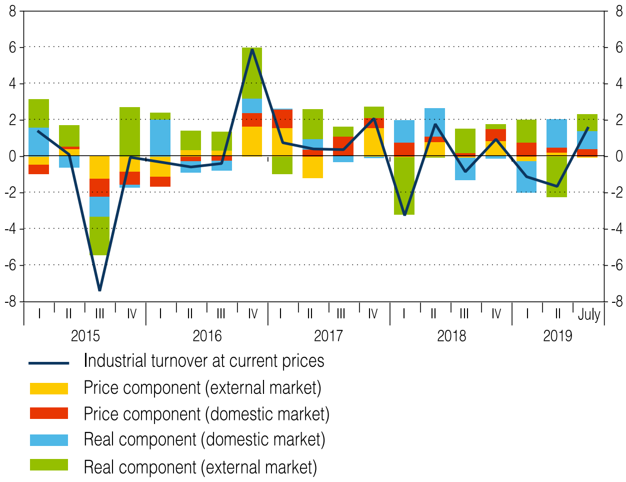


Note: Non-additive data on contributions due to direct seasonal adjustment of value added and its components.

Sources: the NSI, BNB calculations.

Industrial Turnover Dynamics

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

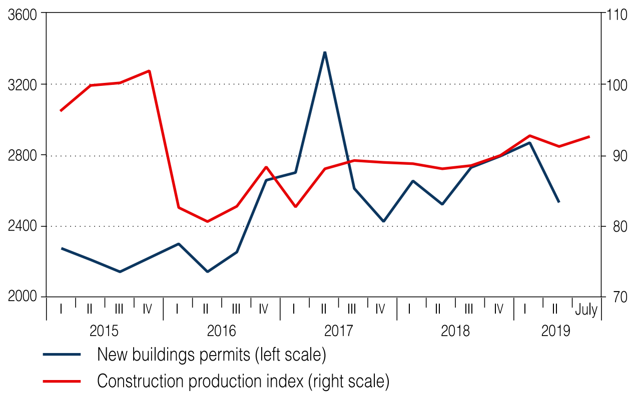


Note: Data for the second quarter of 2019 are for April and May.

Sources: the NSI, BNB calculations.

Construction Production Dynamics and New Buildings Permits Issued

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

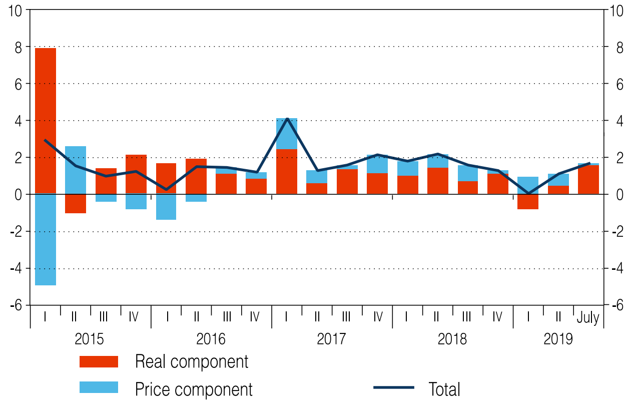


Note: Data for the second quarter of 2019 are for April and May.

Sources: the NSI, BNB calculations.

Dynamics of Nominal Retail Trade Volumes

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



Sources: the NSI, BNB calculations.

tained upward trend in house prices, the number of employed in the construction sector also went up on a quarterly basis. The agricultural sector where the number of self-employed continued to decline made the strongest negative contribution to total growth of employed. Over the quarter the decreased number of employed in export-oriented industry was in line with the registered decline in industry turnover most likely due to the economic activity slowdown in some of the major trade partners of Bulgaria and one-off factors that limited Bulgarian exports in the second quarter of 2019. Employment is expected to continue increasing slightly in the fourth quarter of 2019 and the first three months of 2020. Growth will be driven by the anticipated increase in minimum wage and public sector wages[64] in early 2020, which is expected to boost household labour supply.

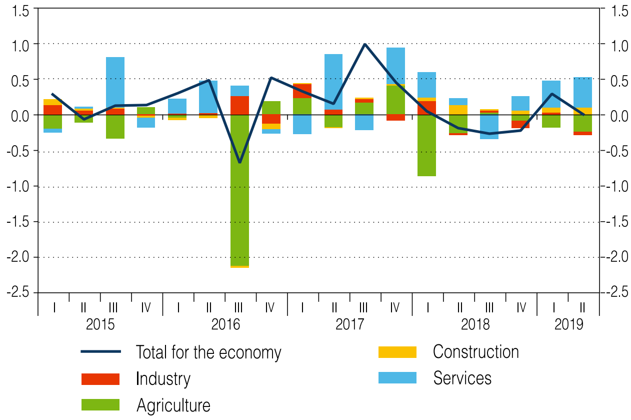
As a result of the stronger growth rate in value added compared to that in employment in the second quarter of 2019, labour productivity continued to increase quarter on quarter, accelerating in all sectors of the economy. Higher growth in hours worked *per* person over the quarter compared to that in employed persons also contributed to the improved labour productivity.

Compensation *per* employee in nominal terms decelerated on a quarterly basis in the second quarter of 2019 reflecting lower growth in services and a compensation decline in agriculture. Over the quarter economic activity growth measured by gross value added continued to have positive effects on the wage increase.

[64] For further details, see Impact of Fiscal Policy on the Economy Section in Chapter 3.

Employment Growth Rate in the Total Economy and Contribution to Changes in the Number of Employed by Economic Sector

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

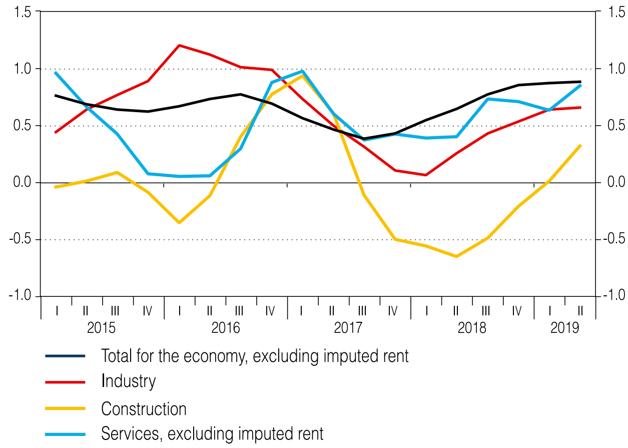


Note: Non-additive data on contributions due to direct seasonal adjustment of the total amount and its components.

Sources: the NSI, BNB calculations.

Labour Productivity Developments (Value Added *per* Employee)

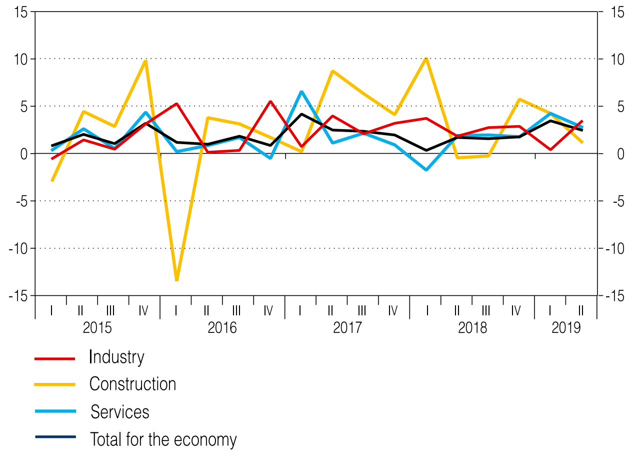
(per cent, quarter-on-quarter; seasonally adjusted data)



Sources: the NSI, BNB calculations.

Compensation *per* Employee at Current Prices

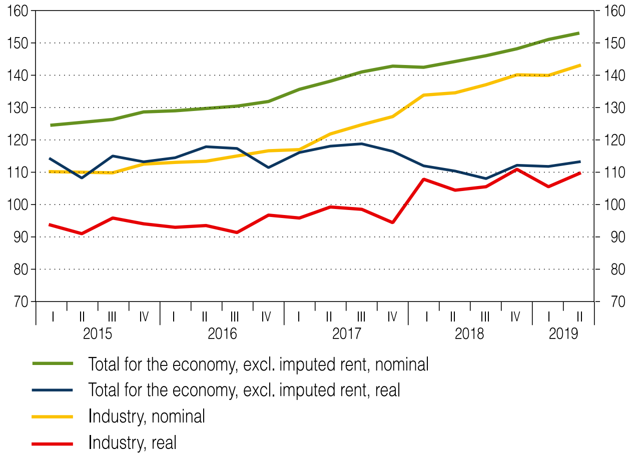
(per cent, quarter-on-quarter; seasonally adjusted data)



Sources: the NSI, BNB calculations.

Unit Labour Costs

(2010 = 100; seasonally adjusted data)



Sources: the NSI, BNB calculations.

The trend to sustainable labour demand in the context of limited supply[65] was also maintained, exerting a further upward pressure on wages. In the fourth quarter of 2019 and the first three months of 2020 the compensation *per* employee is expected to continue increasing on a quarterly basis, albeit at a slower pace due to worsened business expectations of production activity.

In the second quarter of 2019 unit labour costs went up further, though at a slower rate, reflecting dynamics in labour productivity and compensation *per* employee. Growth above the average for the economy was registered in the industry sector and services sub-sectors, wholesale and retail trade, repair of motor vehicles and motorcycles; transportation and storage; accommodation and food service activities.

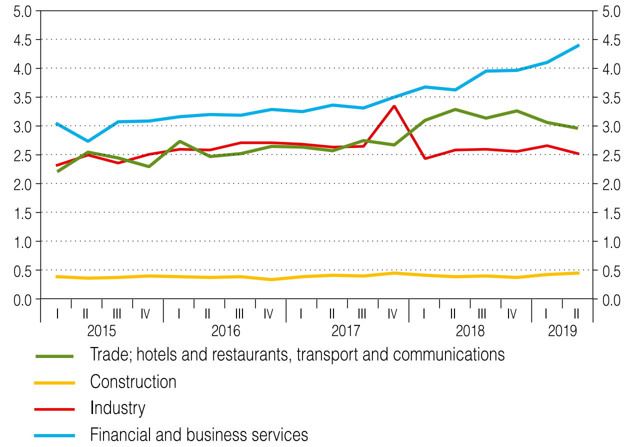
In the second quarter of 2019 the gross operating surplus slowed down its growth rate on the previous quarter due to industry's negative contribution, reflecting the decline in industrial turnover over the period. In the second quarter operating surplus in services grew faster, however, insufficiently to offset slower growth in the other sectors of economy.

Financing of firms' activities from sources other than gross operating surplus involved mainly attracting foreign direct investments in services (excluding public services and financial intermediation) and industry. Construction and agriculture were financed mainly through financial leasing.

[65] According to NSI survey of business developments labour demand is measured by business expectations to hire staff and labour supply is measured by unemployment rate.

Gross Operating Surplus at Current Prices

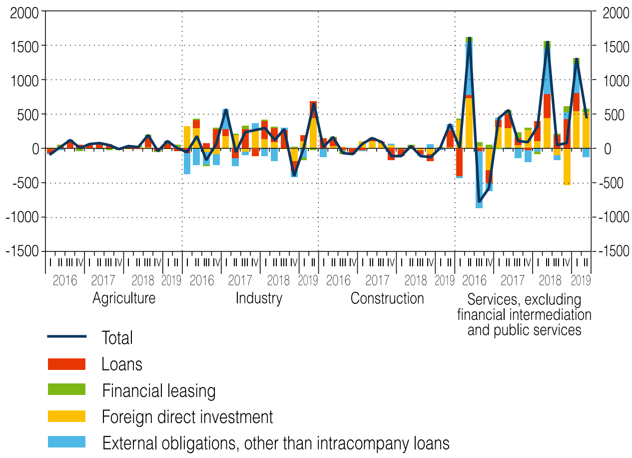
(billion BGN; seasonally adjusted data)



Sources: the NSI, BNB calculations.

Financing Sources*

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

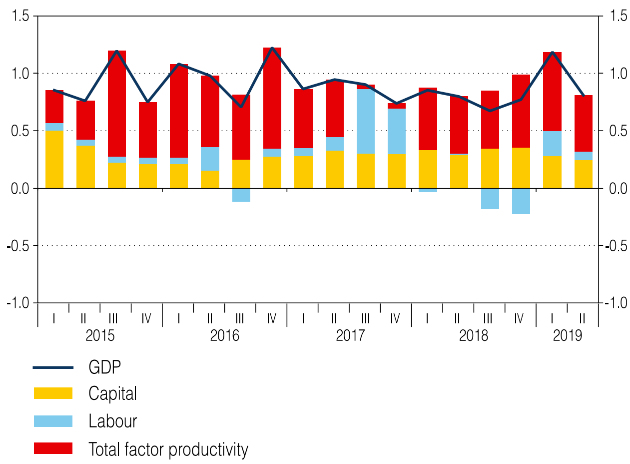


* Sources of financing other than gross operating surplus.

Source: the BNB.

Contribution of Changes in Production Factors to GDP Growth

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



Sources: the NSI, BNB calculations.

Gross Value Added Growth

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

	2015				2016				2017				2018				2019	
	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II
Agriculture, forestry and fishing	-6.6	-0.8	-1.9	-1.4	3.5	0.5	3.3	-0.6	4.9	1.0	1.8	0.3	-2.7	-0.4	0.9	-0.2	-0.6	1.9
Mining and quarrying; manufacturing; electricity, gas, steam and air conditioning supply; water supply; sewerage, waste management and remediation activities	0.8	1.2	1.1	1.0	1.6	1.4	1.5	1.5	1.0	0.7	0.4	0.3	0.4	0.6	0.4	0.3	0.6	0.4
Construction	0.7	1.3	1.9	2.1	-10.2	1.1	1.2	1.0	1.0	1.2	0.4	0.4	1.0	0.4	0.5	1.3	-1.5	1.8
Wholesale and retail trade; repair of motor vehicles and motorcycles; transportation and storage; accommodation and food service activities	2.7	-0.2	2.1	-0.8	0.1	1.8	0.5	1.2	0.6	0.6	0.2	0.8	1.0	0.4	0.5	0.5	1.1	0.2
Information and communication	0.2	0.3	0.9	1.0	15.3	-1.7	-0.4	1.0	1.7	2.1	1.7	1.6	1.2	1.6	0.8	0.9	0.8	0.8
Financial and insurance activities	-1.7	-4.6	6.0	1.6	1.9	2.9	-0.3	-1.3	1.9	-2.4	1.0	0.7	4.2	-0.3	0.6	3.0	-0.2	2.7
Real estate activities	0.4	0.9	1.0	0.8	1.5	1.4	1.6	1.7	1.9	1.8	1.6	1.9	1.7	1.7	2.7	0.8	1.1	1.9
Professional, scientific and technical activities; administrative and support service activities	3.6	0.9	1.5	2.1	-1.4	1.3	0.3	-0.6	1.2	-0.3	0.6	1.4	0.5	1.3	0.4	0.2	0.9	1.2
Public administration, education, human health and social work activities	0.1	0.0	0.0	-0.6	-3.2	0.8	1.2	0.5	3.4	-1.2	1.4	0.6	0.8	0.8	0.2	0.2	0.4	1.4
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	2.1	2.0	-2.2	1.4	-1.9	0.2	-0.9	1.5	2.1	-0.1	3.5	-0.1	-2.6	0.8	0.1	-0.2	0.1	1.3
Gross value added, total for the economy	**0.0**	**0.8**	**1.2**	**-0.1**	**1.2**	**1.0**	**1.0**	**1.1**	**1.3**	**0.8**	**0.8**	**0.9**	**0.7**	**0.7**	**0.7**	**0.8**	**0.7**	**1.1**

Source: NSI.

The decomposition of growth by production factors shows that total factor productivity contributed most substantially to the growth in the second quarter of 2019. As a result of low investment activity of corporations, capital's positive contribution declined.

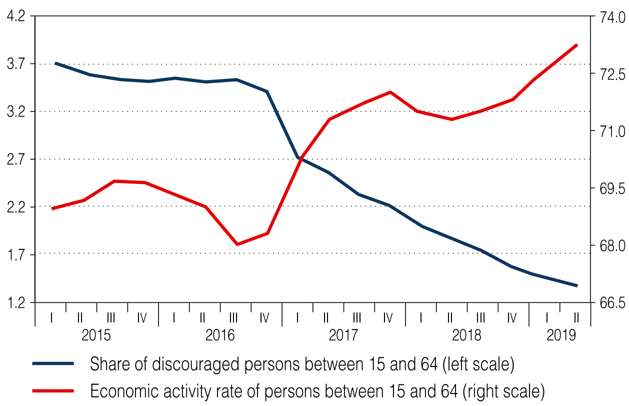
Household Behaviour

In the second quarter of 2019 the labour market indicators continued improving. However private consumption went up slightly, while deposit growth accelerated. This could be explained by increased household uncertainty[66] and lower consumer confidence over the period.

According to the Labour Force Survey conducted by the NSI, in the second quarter of 2019 labour supply measured by labour force[67] increased. Concurrently, a long-term downward trend in working-age population continued in the second quarter. As a result, the labour force

Economic Activity and Share of Discouraged Persons

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



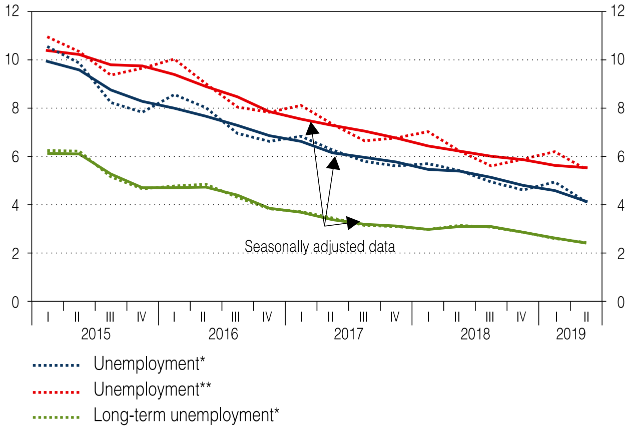
Sources: NSI Labour Force Survey, BNB calculations.

[66] According to the indicator constructed by the BNB.

[67] The labour force (currently economically active population) comprises persons aged 15 and older who provide the supply of labour for the production of goods or services. The labour force includes both employed and unemployed persons.

Unemployment Rate

(per cent, share of labour force)



* NSI data.

** Employment Agency data.

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

participation rate[68] increased both on the previous quarter and on an annual basis.

The Labour Force Survey data show that in the second quarter of 2019 the seasonally adjusted unemployment rate[69] continued its downward trend, reaching 4.2 per cent (according to non-seasonally adjusted data, the unemployment rate was also 4.2 per cent). Long-term unemployed (unemployed for more than a year) and, to a lesser extent, unemployed for less than a year made the major contribution to the unemployment rate drop. The seasonally adjusted unemployment rate[70] calculated using the Employment Agency data also continued to fall, reaching 5.7 per cent in August (5.3 per cent, according to non-seasonally adjusted data).

In the second quarter of 2019 wages continued to increase relatively strongly (both annually, according to non-seasonally adjusted data on the wage bill and average wage *per* employee and quarterly, according to seasonally adjusted national accounts data)[71].

According to NSI Consumer Survey conducted in July 2019, consumer confidence indicator

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

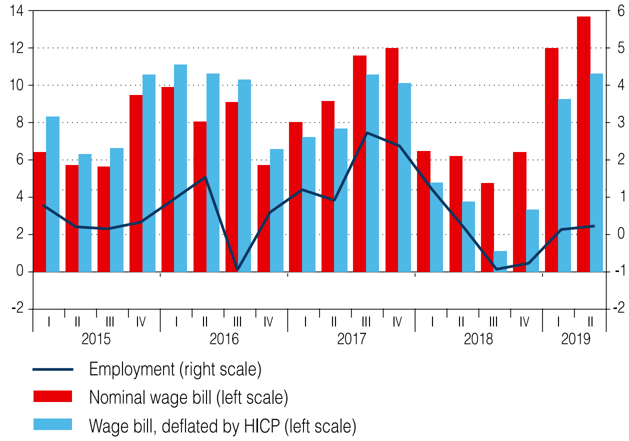
[69] Unemployment rate is the proportion between the number of unemployed and the labour force based on Labour Force Survey data.

[70] The definition of unemployment rate according to the Employment Agency corresponds to that referred to in footnote 68, but using a constant rate of labour force comprising the number of persons in the respective age group since the last census of the population.

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

Employment and Nominal Wage Bill

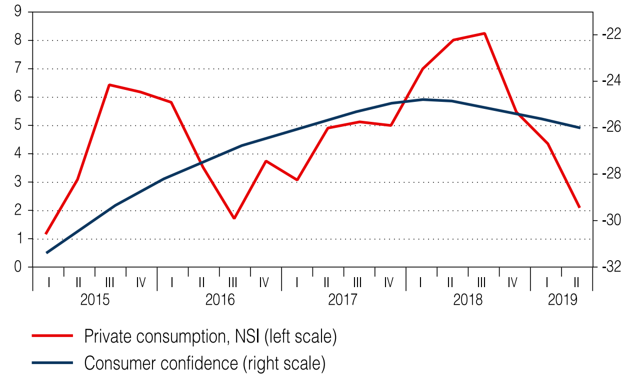
(per cent, annual change) (per cent, annual change)



Sources: the NSI – SNA, BNB calculations.

Private Consumption and Consumer Confidence

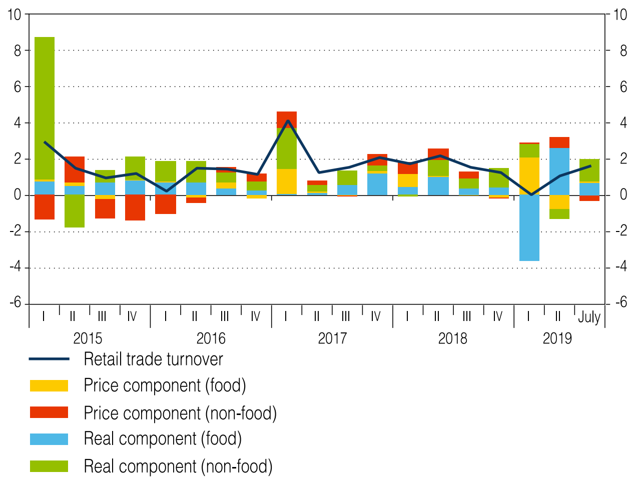
(quarterly change, per cent; seasonally adjusted data) (balance of opinions)



Sources: the NSI, BNB calculations.

Retail Trade Turnover

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



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

Sources: the NSI, BNB calculations.

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
(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
Nominal wage *per* employee*	0.9	2.0	1.3	3.1	1.6	0.8	1.7	0.8	3.6	2.6	2.1	1.8	0.2	1.4	1.6	1.6	3.2	2.5
Real wage *per* employee**	1.3	1.8	1.8	3.6	2.0	1.3	1.4	0.7	3.2	2.0	2.5	0.8	-1.4	1.1	1.5	1.9	3.1	1.8
Wage bill, nominal terms	1.6	2.0	1.7	3.2	1.6	1.5	1.9	1.4	3.5	2.3	2.4	2.0	0.8	1.6	1.2	2.0	3.4	3.2
Wage bill, real terms**	2.0	1.9	2.2	3.8	2.0	2.1	1.6	1.3	3.2	1.8	2.7	1.0	-0.8	1.3	1.0	2.3	3.3	2.6
(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
Nominal wage *per* employee*	5.5	5.1	4.2	8.1	8.2	5.9	7.4	3.6	6.9	9.3	11.3	11.7	5.0	4.7	4.7	5.8	11.4	11.9
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	3.4	2.3	1.0	2.7	8.7	8.8
Wage bill, nominal terms	6.4	5.7	5.6	9.5	9.9	8.0	9.1	5.7	8.0	9.1	11.5	12.0	6.4	6.2	4.7	6.4	12.0	13.7
Wage bill, real terms**	8.3	6.3	6.6	10.6	11.1	10.6	10.3	6.5	7.2	7.6	10.6	10.1	4.8	3.7	1.1	3.3	9.2	10.6

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

Sources: NSI – SNA, BNB calculations, Eurostat.

Retail Trade Turnover

(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	July
Retail trade, excluding motor vehicles and motorcycles	**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**	**1.6**
incl.																			
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	1.8
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	3.1
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	-0.1
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	5.0
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	2.1
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	0.6
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	1.6

Source: the NSI, short-term business statistics.

declined reflecting worsened expectations about households' financial state and overall economic situation in the country.

Despite the increased household disposable income in the context of the maintained employment rate in the second quarter of 2019 private consumption growth moderated significantly on a quarterly basis. National accounts data were not consistent with short-term business statistics, which showed a quarter-on-quarter accelerated growth rate in retail trade volumes during the same period. Nominal retail trade data for July 2019 point to a quarterly increase in private consumption over the third quarter, supported by higher consumer loans.

The NSI Household Budget Survey data show that the share of savings in household disposable income went up further in the second quarter of 2019. The share of households, which intend to increase their savings in the following 12 months remained also high (according to the NSI Consumer Survey of July 2019). In the second quarter of 2019 households' assets measured through their net position in the banking system rose as a result of a higher increase in deposits compared to loans.

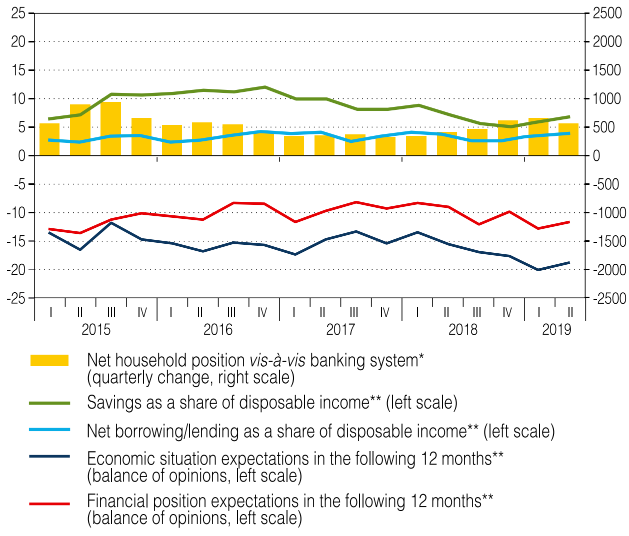
Over the fourth quarter of 2019 and the first three months of 2020 labour supply measured by labour force is expected to continue rising driven by the strong growth in wages. Improved labour market situation along with maintained relatively low interest rates will be factors behind consumer expenditure, while its growth will be partly limited by the increased uncertainty and slower increase in compensation *per* employee in the following quarters.

Fiscal Policy Effects on the Economy

The continued good implementation of budget revenues in the first eight months of the year ensured sufficient resources to maintain a position of budget surpluses, while retaining relatively strong growth in non-interest expenditure. Concurrently, in August payments from the budget of the Ministry of Defence were made under Acquisition of a New Type of Fighter Aircraft investment project amounting to USD 1.2 billion)[72]. This operation resulted in a significant acceleration of cash capital expenditure followed by a decline in the accumulated surplus on the consolidated fiscal programme by BGN 2111 million compared to July to a level of BGN 1113 million in August. According to the EASA 2010 methodology, this capital expenditure should not affect the general government net lending[73] and GDP data in the current year.

Household Propensity to Save and Expectations

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

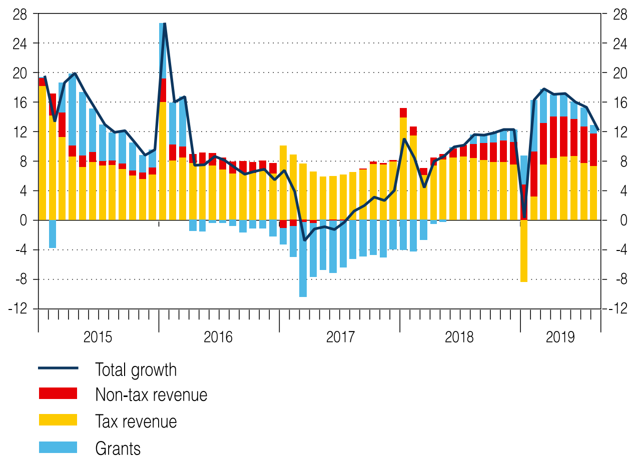


* BNB data.
** NSI data.

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

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

(per cent; percentage points)



Sources: the MF, BNB calculations.

[72] Payments were made after adoption of the Law on Amendment of State Budget Law for 2019 and ratification by the National Assembly of the international agreements for purchase of F-16 Block 70 aircraft, weapons and related systems for long-term operation and maintenance, as well as a comprehensive training of pilots and ground crew.

[73] According to the methodological principles of European System of National and Regional Accounts 2010 (ESA 2010) and the Manual on Government Deficit and Debt payments made for the purchase of a military equipment do not affect gross fixed capital formation and the net lending of the general government sector until actual delivery of the equipment.

In August 2019 the annual growth of total budget revenue was 12.8 per cent and continued to be driven by the upward tax revenue dynamics (growth of 9.0 per cent on an annual basis). Increasing employment and labour income coupled with the amendments introduced in the tax and social security legislation[74] in the beginning of the year contributed to the sustainable increase in revenue from social security and health insurance contributions (11.4 per cent) and personal income tax (9.9 per cent). Although household consumption rose relatively slightly on an annual basis, the January–August period saw strong performance of indirect taxes, with VAT and excise revenue boosting by 9.2 per cent and 6.8 per cent on an annual basis.

Non-tax revenue also made a significant contribution to total budget revenue growth in the first eight months of the year. However, the gradual fading-out of effects of the changes in the Electric Power System Security Fund's budget introduced in July 2018 will lead to a further moderation in revenue dynamics at the end of the year. Increased grant revenue also fostered, though to a lesser extent, the good implementation of budget revenue.

In August 2019 total expenditure on the consolidated fiscal programme rose on an annual basis at accelerated rates (19.5 per cent) mainly driven by the reported increase in capital expenditure associated with the payments for purchasing new military aircraft. Excluding this one-off factor, capital expenditure growth in the first eight months of the year would be sustainable, mainly reflecting the investment growth under EU programmes (15.7 per cent). Such capital expenditure dynamics points to a relatively strong positive impact of public investment on total investment growth in the economy over the nine-month period.

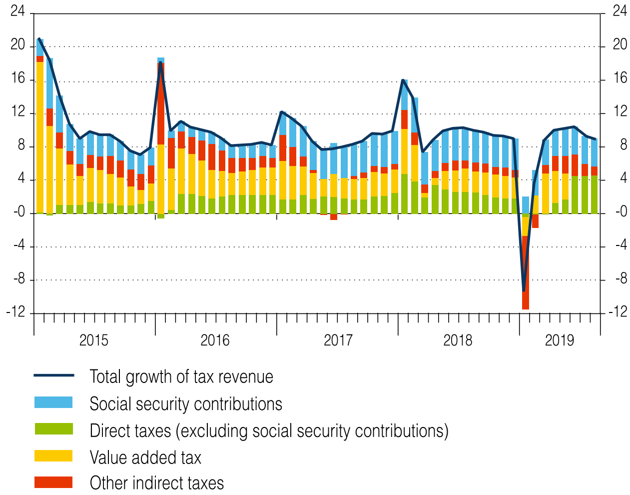
In August the growth rate of personnel costs did not change substantially, amounting to 13.4 per cent, while operating and healthcare costs[75] posted a slightly higher increase compared to May (reaching 6.4 per cent and 7.2 per cent, respectively). Reflecting the dynamics of this current non-interest expenditure, real government

[74] For further information, see Basic Parameters of the 2019–2021 Budgetary Framework box, Economic Review, 4/2018.

[75] Based on data from Ministry of Finance Monthly Bulletin on Budget Performance and Major Indicators under the Consolidated Fiscal Programme for August 2019.

Contributions of Major Tax Groups to Tax Revenue Growth, Cumulatively (on an Annual Basis)

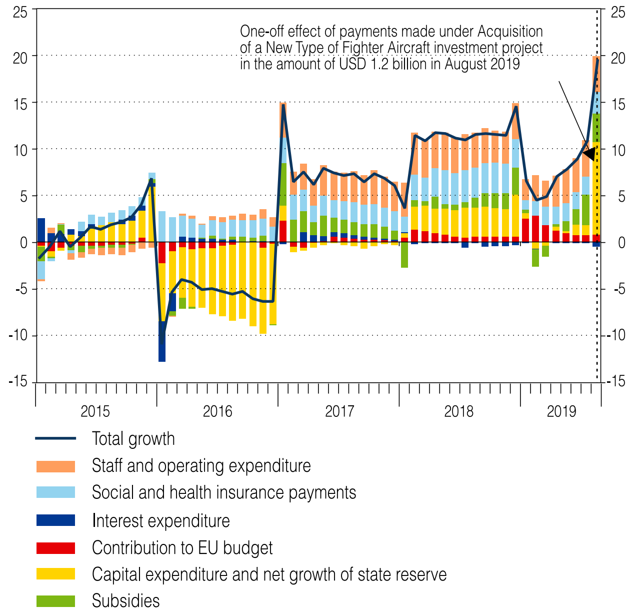
(per cent; percentage points)



Sources: the MF, BNB calculations.

Contribution of Major Groups of Expenditure to Total Expenditure Growth, Cumulatively (on an Annual Basis)

(per cent; percentage points)



Notes: 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, they are included in the operating expenditure. To prevent data inconsistencies prior to and after January 2016 resulting from the methodological change, staff 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.

consumption grew by 5.4 per cent in the first half of the year and should make a tangible positive contribution to GDP growth both on an annual basis and for the nine-month period. Social payments, most of which pensions and transfers to households, grew, as expected, at accelerated rates (to 5.4 per cent on an annual basis) following the entry into force of a pension average increase of 5.7 cent since July 2019. This implies a stronger positive impact of the fiscal policy on household disposable income.

In the last quarter of 2019 as in the first three months of 2020, wages and employment growth along with minimum wage and social security threshold rises as planned in the latest revision of the medium-term budget projections of April 2019 are expected to continue supporting the increase in the revenue from contributions and personal income tax. The projected dynamics of indirect taxes is relatively less favourable provided the high savings rate of households is maintained.

In the last quarter of 2019 government's current expenditure is expected to continue to underpin economic growth to a degree similar to that in the first half of the year. In the beginning of 2020 we may expect that fiscal stimuli to economic growth will be retained through both a government consumption increase and support to household disposable income. The positive impact of public finance on domestic demand will largely depend on the final parameters of 2020 budget laws.

At the end of the current and in the beginning of the next year public investment should make a more tangible contribution to annual growth of total investment, assuming an accelerated growth rate of investment both co-financed by the EU and financed by national budget, as implementation of major infrastructure projects advances. The high uncertainty regarding the expected government investment expenditure remains as any delay in execution would pose a potential risk of lower than projected real economic growth over the shorter term.

Key Budget Indicators Performance for 2018 and 2019

Consolidated Fiscal Programme	2018 January – August[1]		2019 January – August[1]	
	BGN million	per cent[2]	BGN million	per cent[2]
Total revenue and grants	**25 976**	**11.6**	**29 306**	**12.8**
Tax revenue	21 344	10.0	23 256	9.0
incl. social security and health insurance contributions	6 184	13.7	6 891	11.4
Non-tax revenue	3 344	15.8	4 463	33.5
Grants	1 288	29.5	1 586	23.1
Total expenditure (incl. the contribution to EU budget)	**23 588**	**11.6**	**28 193**	**19.5**
Staff	5 622	11.5	6 374	13.4
Operating expenditure	2 488	8.5	2 647	6.4
Interest	588	-4.4	470	-20.1
Social expenditure, scholarships[3]	10 681	6.9	11 244	5.3
Subsidies	1 575	16.3	2 284	45.0
Capital expenditure and government reserve growth	1 896	53.3	4 271	125.3
incl. capital expenditure	1 899	54.3	4 266	124.7
Contribution to the budget of the European Union	738	21.5	904	22.4
	BGN million	difference[4] (BGN million)	BGN million	difference[4] (BGN million)
Budget balance, on a cash basis	**2 388**	**237**	**1 113**	**-1 276**

Tax revenue under the state budget	2018 January – August[5]		2019 January – August[5]	
	BGN million	per cent[2]	BGN million	per cent[2]
Tax revenue	**14 440**	**8.5**	**15 616**	**8.1**
Corporate tax	1 516	8.2	1 587	4.6
Income tax for individuals	2 450	14.4	2 693	9.9
Value added tax	6 777	8.0	7 402	9.2
Excise duties	3 386	5.3	3 616	6.8
Customs duties and taxes	157	26.5	153	-2.6
Insurance premia tax	28	10.7	33	19.2
Other taxes	125	6.2	133	5.8

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] The 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.

4. Inflation

In August 2019 annual inflation slightly accelerated compared to the end of 2018 reaching 2.5 per cent. Higher services and food prices contributed most substantially to overall inflation in August. Goods and services with administratively controlled prices and tobacco products had a low positive contribution, while energy products contributed negatively to overall inflation due to the lower oil price in euro on an annual basis.

The projected slight acceleration in overall inflation in the fourth quarter of the year compared with August, followed by a certain slowdown in the first quarter of 2020, largely reflects the expectations for international oil price dynamics over the projection horizon. In the context of decreasing oil prices energy products are expected to contribute negatively to overall inflation. The inflation rate in the services group is expected to moderate due to exhausted base effects in accommodation services and insurance connected with travel, and the lower contribution of transport services, but to retain its relatively high contribution to overall annual inflation. The food group is also expected to retain its high positive contribution, driven, to a large extent, by meat price dynamics.

In August annual inflation accelerated to 2.5 per cent from the end of 2018 (2.3 per cent in December 2018).[76] Core HICP components (mainly services and, to a lesser extent, industrial goods) and food had a major positive contribution to overall inflation, with their inflation rate accelerating significantly from end-2018.

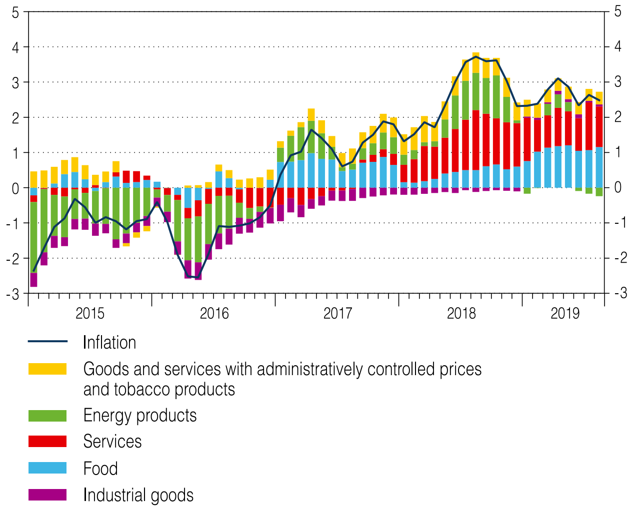
Goods and services with administratively controlled prices also contributed positively to annual inflation, which was consistent with price hikes in electricity and heating in July 2019 and water supply in early 2019.

In line with lower international euro oil prices in August 2019 compared to the same month of 2018, energy products reported deflation (-2.7 per cent in August against 1 per cent at the end of 2018).

The effect of the international prices of fuels, food and commodities on inflation may be seen through price developments of goods imported in Bulgaria. According to national accounts data, annual growth in the price deflator for imported goods accelerated to 1.5 per cent in the second quarter of 2019, from 1.0 per cent at the end of 2018. HICP food[77] developments were in line with the observed increase in import prices.[78]

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.

[76] The analysis in this Section employs NSI data on HICP.

[77] This refers to the group of food and live animals under the SITC.

[78] Based on Standard International Trade Classification (SITC) import data.

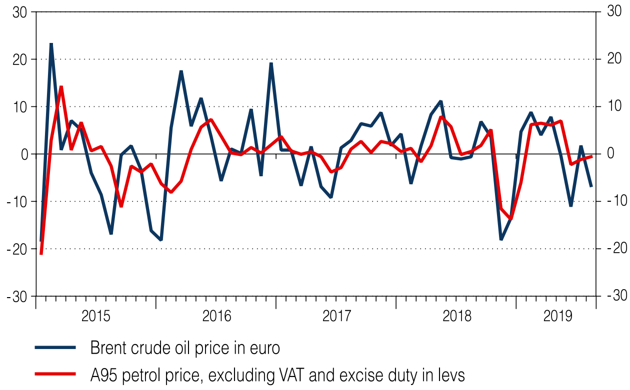
BNB calculations[79] show that prices of imported vegetables[80], meat[81] and cereals[82] increased in the first and second quarters of 2019, with their end prices measured by HICP also rising. This points to external factors contributing to the positive annual inflation of some food products.

In August 2019 the total producer price index (PPI) in the domestic market increased by 4.5 per cent on an annual basis, from 2.9 per cent in December 2018. The production and distribution of electricity and heating sub-sector[83] contributed most substantially to the increase in annual producer prices in August, which was consistent with the price hikes in electricity and heating since 1 July 2019.[84] Production of food, beverages and tobacco products had the largest contribution to price rises in manufacturing on an annual basis, in line with the upward inflation dynamics in the HICP food component. According to the end-use classification, in August consumer non-durables prices registered an increase, largely attributable to the manufacture of bakery and farinaceous products and processing and preserving of meat groups[85].

Higher producer prices were a precondition for rising final consumer prices of both unprocessed and processed food. The annual inflation growth rate of processed food (4.1 per cent in August 2019 against 2.5 per cent at the end of 2018) was driven primarily by the milk, dairy products and eggs and other processed food groups. Concurrently, in August the bread and cereals group, recording a 10.3 per cent annual price increase, retained its highest contribution to the inflation of processed food. Among the internal factors potentially driving these developments are the poorer wheat harvests in Bulgaria due

Rate of Change in Brent Crude Oil and A95 Petrol Prices

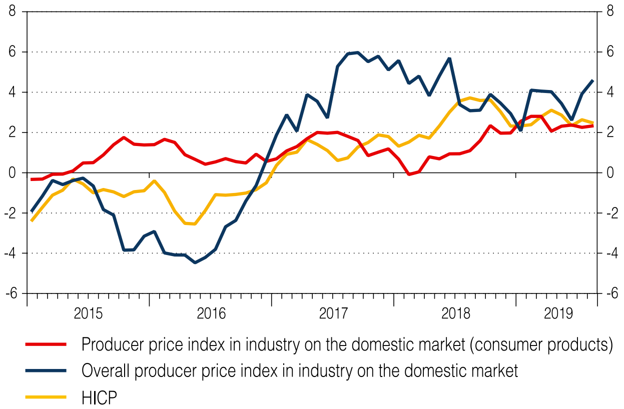
(per cent; on an monthly basis)



Sources: the ECB, NSI, BNB calculations.

Rate of Change in PPI in Industry and HICP

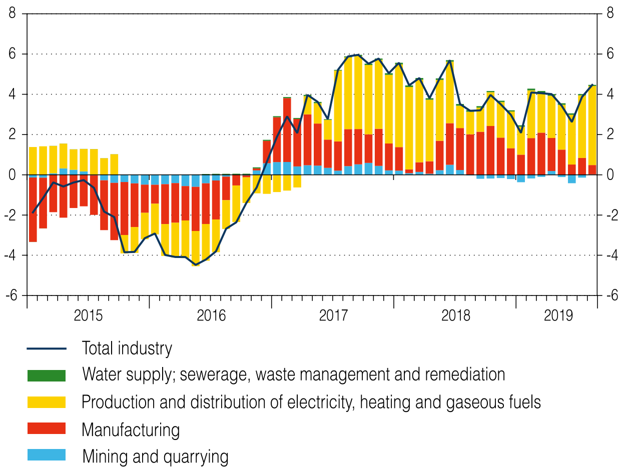
(per cent, on an annual basis)



Source: the NSI.

Rate of Change in PPI in Industry for the Domestic Market and Contribution by Major Sub-sectors

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



Source: the NSI.

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

[80] This refers to the sub-group of vegetables and fruit under the SITC.

[81] This refers to the sub-group of meat and meat products under the SITC.

[82] This refers to the group of cereals and mill products under the SITC.

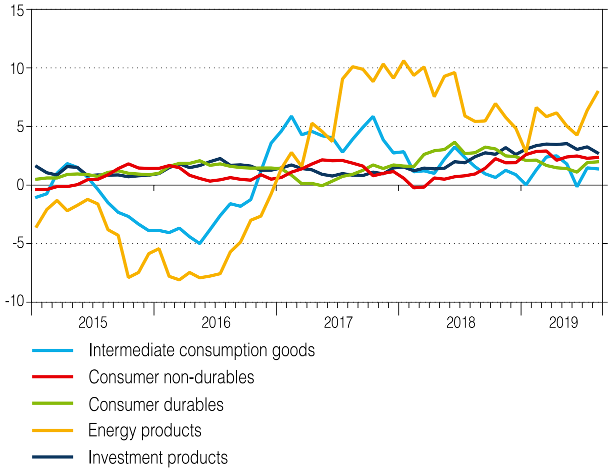
[83] This refers to the group of production and distribution of electricity, heating, and gaseous fuels.

[84] For details, see the respective decisions of the Energy and Water Regulatory Commission (EWRC).

[85] This refers to the sub-group of processing and preserving of meat and production of meat products.

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

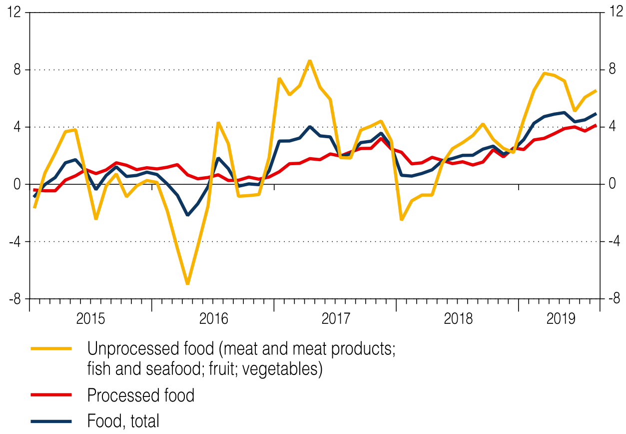
(per cent, on an annual basis)



Source: the NSI.

Rate of Change of Food Price Index

(per cent, on an annual basis)



Sources: the NSI, BNB calculations.

to unfavourable weather conditions[86] and higher producer prices[87].

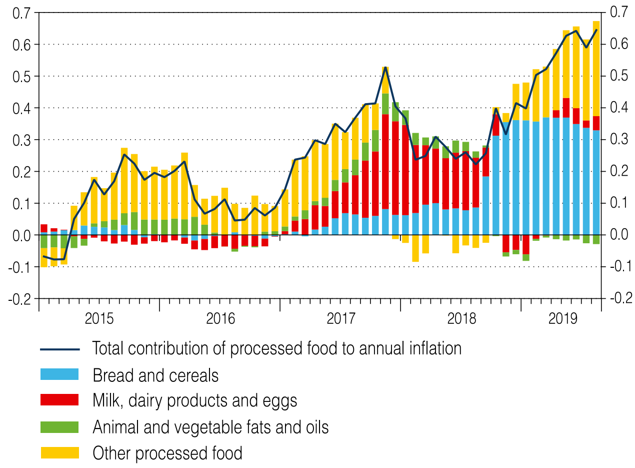
Annual inflation in unprocessed food rose to 6.5 per cent in August 2019, from 2.2 per cent in December 2018, largely reflecting the strong positive contribution of the meat and meat products group. Inflation in this group was entirely driven by the pigmeat price increase as a result of the limited supply, higher producer prices[88] and higher import prices due to the spread of African swine fever both worldwide and in Bulgaria[89]. Vegetables were another group that made a significant positive contribution to unprocessed food inflation, their price increase being consistent with registered producer price[90] rises in these products along with higher prices of imported vegetables.

In August 2019 core inflation, which includes services and non-food prices, stayed at its December 2018 level of 2.5 per cent. It reflected the slowdown in services inflation and the concurrent increase in overall industrial goods price index.

Annual inflation in services moderated to 4.2 per cent in August 2019, from 5.0 per cent at end-2018. The decline in prices of telecommunication

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

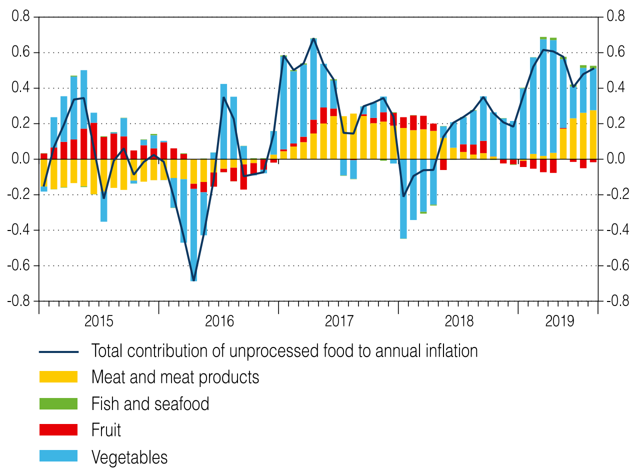
(percentage points; on an annual basis)



Sources: the NSI, BNB calculations.

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

(percentage points; on an annual basis)



Sources: the NSI, BNB calculations.

[86] NSI data derived from Economic Accounts for Agriculture are used in the analysis.

[87] NSI data on producer prices and indices of agricultural produce for the second quarter of 2019.

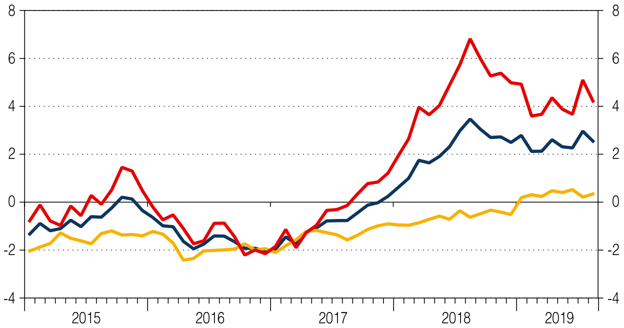
[88] See footnote 86.

[89] The disease was registered in Bulgaria in July 2019.

[90] See footnote 86.

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.

services and insurance connected with travel since the beginning of the year was a major factor behind the developments in this group. Lower prices of insurance connected with travel resulted from the exhausted base effect from the summer of 2018 when the Supreme Court of Cassation extended the circle of persons entitled to claim compensation for death of a relative.[91] Inflation in catering and accommodation services[92] accelerated on end-2018 driven by consumer demand and the upward dynamics of food prices, the groups contributing most significantly to overall inflation of service components.

The deflation observed in non-food goods since early 2010 was reversed in early 2019 and in August 2019 annual inflation in this group reached 0.3 per cent (-0.5 per cent at the end of 2018). The upward price dynamics in the non-food goods was attributable to the significant decline in the negative contribution of the motor vehicles group. Concurrently, non-durable goods had a major positive contribution to inflation in the non-food goods. Durable goods prices continued to decline, though at slower rates. Developments in nominal volumes of retail trade indicate retention of the positive trends in household demand for goods from the group, with nominal non-food retail trade[93] turnover posting annual growth of 5.4 per cent in July 2019 (1 per cent at end-2018), driven largely by the higher traded volumes.

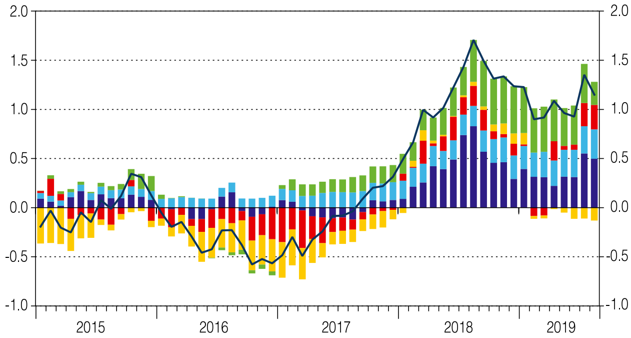
[91] For details, see the SCC interpretative decision.

[92] This refers to short-stay accommodation services and package holidays and accommodation services.

[93] Retail trade in non-food goods, excluding automobile fuels and lubricants.

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

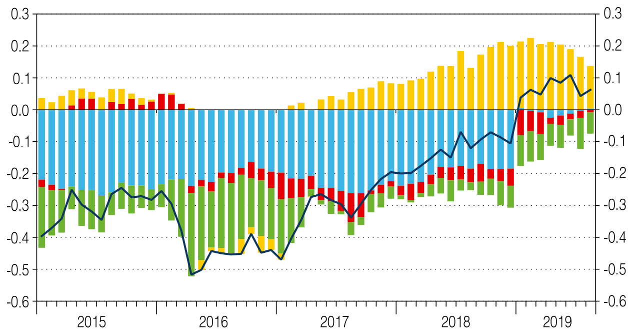
Catering services

Short-stay accommodation, package holidays and travel

Sources: the NSI, BNB calculations.

Contribution of Major Non-food Goods 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

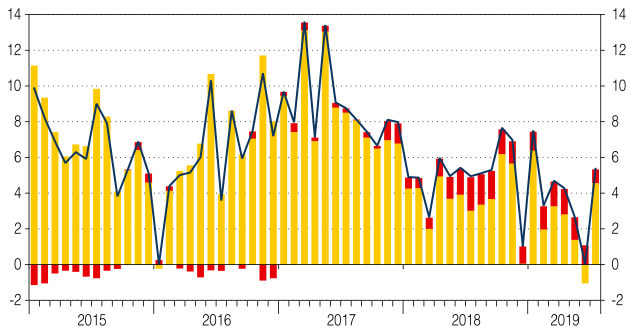
Clothing and footwear

Automobiles

Sources: the NSI, BNB calculations.

Growth Rate of Nominal Retail Trade in Non-food Goods Excluding Trade in Motor Vehicles and Lubricants

(per cent; percentage points; on an annual basis; working-day adjusted data)



Retail trade in non-food goods (excluding automobile fuels and lubricants)

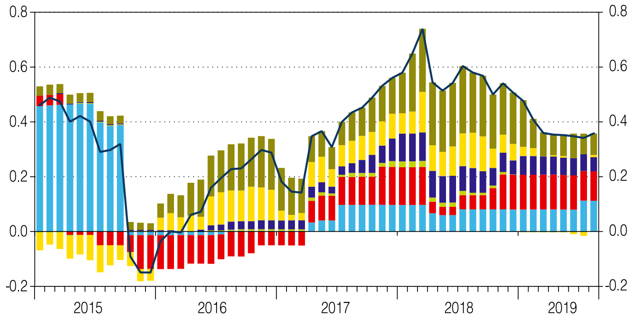
Price component

Real componenet

Sources: the NSI, BNB calculations.

Contribution of Major Sub-groups of Goods with Administratively Controlled Prices and Tobacco Prices to Overall Inflation

(percentage points; on an annual basis)



Sources: the NSI, BNB calculations.

In the first eight months of 2019 prices in the group of goods and services with administratively controlled prices and tobacco slowed their annual growth rate to 1.7 per cent in August, from 2.3 per cent in December 2018. The exhausted base effect from increases in excise duties on cigarettes in early 2018[94] was a decisive factor for the decreased positive contribution of tobacco products and an inflation slowdown in the group. In early 2019 the Energy and Water Regulatory Commission (EWRC) approved the price rises of water and sewerage services in Bulgaria[95], which contributed to the accelerated price increase in water supply on an annual basis. Inflation in this group was also driven by the EWRC's decision to raise from 1 July 2019 electricity and heating prices by 2.9 and 3.5 per cent on average for a period of one year[96]. At the same time, EWRC' decisions to decrease the regulated natural gas price in the third and fourth quarters of 2019 had a restricting effect on consumer price rises in this group[97].

[94] 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 as from early 2018..

[95] For details, see the EWRC decision.

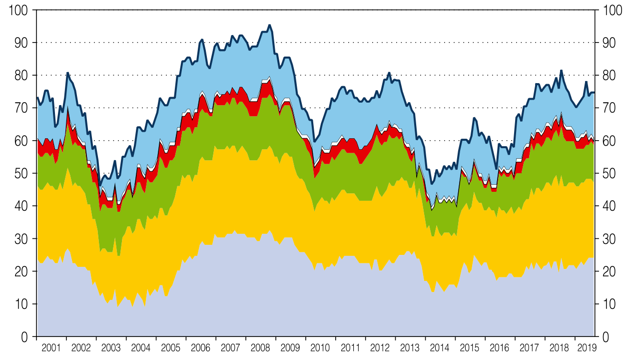
[96] For details, see the EWRC decision.

[97] For details, see the EWRC decision of 28 June 2019 and EWRC decision of 30 September 2019.

Diffusion Index of Major Goods and Services Groups

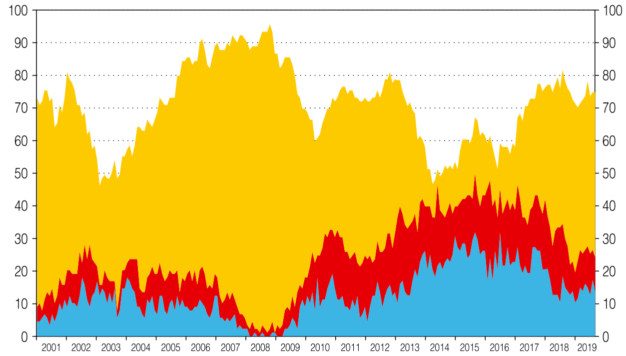
a) relative shares of increasing HICP sub-indices on an annual basis)

(per cent)



b) relative shares of increasing HICP sub-indices on an annual basis)

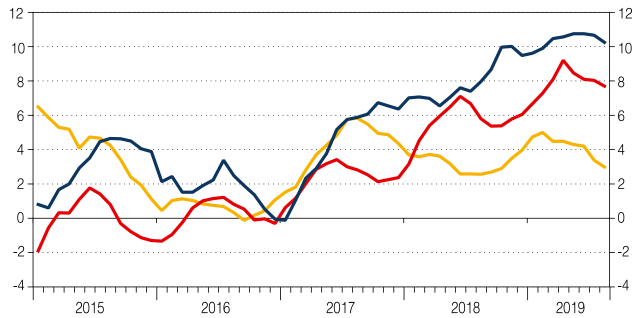
(per cent)



Sources: the NSI, BNB calculations.

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

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



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.

In August 2019 the diffusion index, showing the share of groups of goods and services with increasing prices on an annual basis, went up to 74.7 per cent, from 71.3 per cent at the end of 2018. This was mainly attributable to the growing number of food and services sub-groups with increasing prices. At the same time, the lower number of goods and services sub-groups with price growth of more than 2 per cent compared to end-2018 is a prerequisite for a downward HICP inflation trend in the coming months.

According to the NSI business survey, in September 2019 most managers in the industry (92.2 per cent), services (90 per cent) and retail trade (89.2 per cent) expect selling prices over the coming three months to remain close to their current levels, with an increasing balance of opinions in services and retail trade sectors compared to the end of 2018. The majority of managers expecting a change in selling prices foresee a price increase. This trend is more pronounced in the services and retail trade sectors, the closest sectors to end users along the supply chain.

In the second quarter of 2019 the annual growth rate in the house price index slowed down compared to the end of 2018, reaching 5.0 per cent against 5.5 per cent at end-2018. The lower increase registered in the last quarter was driven by the prices of both existing and new houses. In the second quarter of 2019 higher year-on-year house prices were reported in each of the six largest cities in Bulgaria (whose population is over 120,000 citizens). Despite the continued growth, house prices remained lower by 15.4 per cent than the maximum values recorded in the third quarter of 2008.

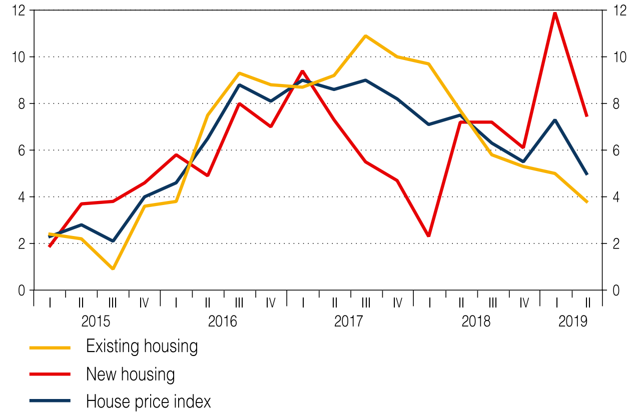
House price growth was consistent with the improving home purchase sentiment of households in the following 12 months.[98] The annual percentage rate of charge (APRC) on new housing loans continued to decline, reaching 3.7 per cent in the second quarter of 2019 (against 3.9 per cent at the end of 2018),[99] thus improving further housing affordability. In the context of an accelerated increase in the labour income of households, which creates conditions for sav-

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

[99] Data on the APRC on housing loans to households are averages weighted by the relevant volumes of new loans for a 12-month period.

Rate of Change of the House Price Index

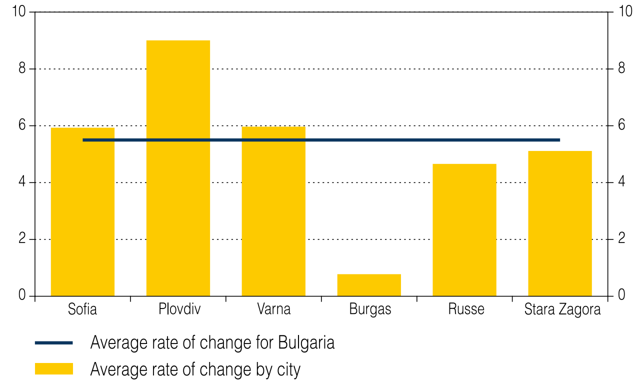
(per cent, on an annual basis)



Source: the NSI.

Rate of Change in the House Price Index in Cities of More Than 120,000 Inhabitants over the Second Quarter of 2019

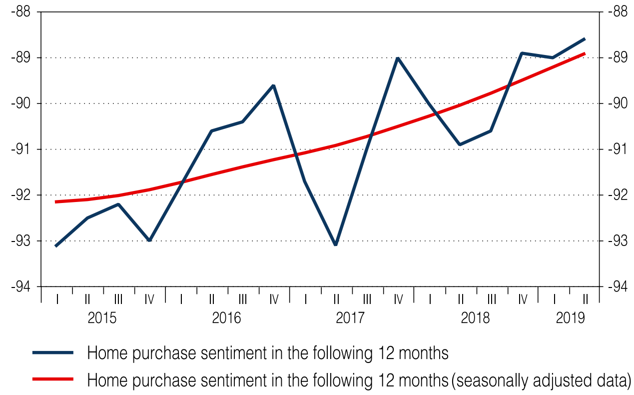
(per cent, on an annual basis)



Source: the NSI.

Household Sentiment for Home Purchase in the Following 12 Months

(balance of opinions)



Sources: the NSI, BNB calculations.

Key Indicators of the Housing Market Developments 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	6.3	5.5	7.3	5.0
New dwellings	3.5	6.4	6.7	5.7	7.2	6.1	11.9	7.5
Existing dwellings	2.3	7.3	9.7	7.0	5.8	5.3	5.0	3.8
Inflation (HICP)	-1.1	-1.3	1.2	2.6	3.6	3.0	2.5	2.8
House rentals, paid by tenants (HICP)	0.7	0.6	1.0	1.9	2.2	2.4	3.1	3.7
Lending								
New housing loans	39.2	17.0	38.1	15.5	10.3	5.5	3.3	4.9
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	4.0	3.9	3.8	3.7
Housing loans balances	-1.8	0.6	5.3	9.7	9.9	11.4	11.5	11.8
Construction and investment								
Permits issued for the construction of new residential buildings (square meters)	13.0	4.8	32.5	39.0	25.6	61.1	26.6	5.4
Value added in construction (at average annual prices for 2010)	2.8	-6.8	4.4	4.0	2.1	6.6	-1.9	6.6
Constriction production index, building construction	8.9	-16.1	10.9	2.6	-2.6	1.4	10.2	7.8
Fixed investment; residential buildings	-10.3	102.1	19.2	15.0	11.2	15.1	8.6	9.3
Construction cost index for new buildings	1.3	0.8	2.5	2.9	4.0	2.0	4.7	5.2

* 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.

Sources: the NSI, the BNB, Eurostat.

ings growth, the 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. According to the results of the BNB quarterly lending survey, in the second quarter of 2019 credit standards applied to housing loans to households eased somewhat.[100]

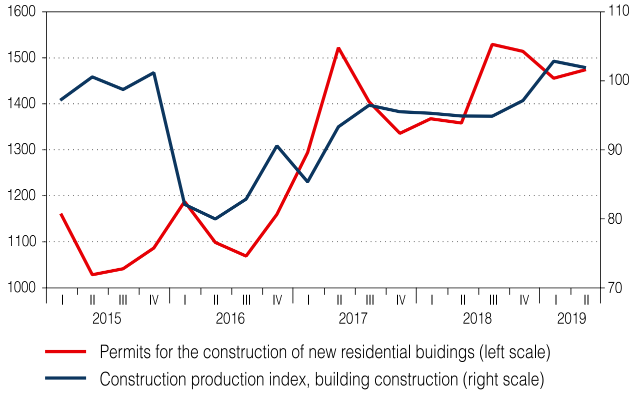
The behaviour of firms in the construction sector was also in line with house price dynamics. In the second quarter of 2019 the construction production index accelerated compared to end-2018, increasing by 7.8 per cent (against 1.4 per cent at the end of 2018), while real added value in the sector reported growth of 6.6 per cent, similar to that registered at the end of 2018. Concurrently, residential building permits issued over the second quarter of 2019 (measured by building floor area) slowed down to 5.4 per cent on the corresponding quarter of the previous year (61.1 per cent in the fourth quarter of 2018). In the context of the accelerated supply of new housing, we may expect that house price growth will slow down somewhat in the following months.

[100] For details, see *Monetary Aggregates* Section in Chapter 2.

Construction Production Dynamics and New Residential Building Permits Issued

(number of buildings; seasonally adjusted data,

(2015 = 100; seasonally adjusted data)



Sources: the NSI, BNB calculations.

Rates of Change in Major Goods and Services Groups Prices and Contribution of These Groups to Inflation

	Inflation accumulated as of August 2018 (December 2017 = 100)		Inflation accumulated as of August 2019 (December 2018 = 100)		Annual rate of inflation as of August 2019 (August 2018 = 100)	
Inflation (per cent)	2.8		3.0		2.5	
	inflation rate by group (per cent)	contribution (percentage points)	inflation rate by group (per cent)	contribution (percentage points)	inflation rate by group (per cent)	contribution (percentage points)
Food	1.1	0.3	3.5	0.84	4.9	1.15
Processed food	0.7	0.1	2.3	0.36	4.1	0.64
Unprocessed food	1.9	0.2	6.1	0.48	6.5	0.51
Services	7.7	1.9	6.9	1.81	4.2	1.15
Catering	2.3	0.1	3.5	0.19	5.6	0.30
Transport services	9.8	0.3	14.2	0.45	7.8	0.25
Telecommunication services	1.8	0.1	-3.1	-0.15	-2.6	-0.13
Other services	11.9	1.4	10.4	1.32	5.3	0.73
Energy products	6.7	0.6	2.9	0.23	-2.7	-0.24
Transport fuels	7.9	0.5	4.1	0.25	-3.9	-0.11
Industrial goods	-1.5	-0.3	-0.7	-0.13	0.3	0.06
Goods and services with administratively controlled prices*	1.4	0.2	1.2	0.21	1.7	0.28
Tobacco products	3.7	0.2	1.4	0.06	1.8	0.08

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

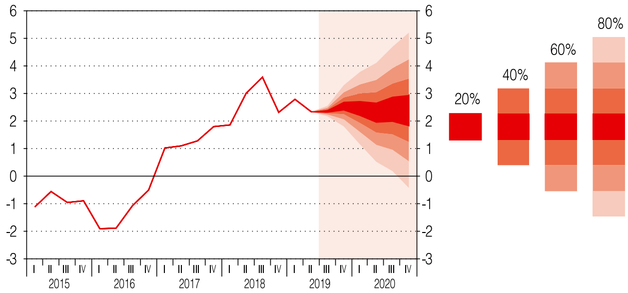
Sources: the NSI, BNB calculations.

Inflation expectations for the fourth quarter of 2019 and first three months of 2020 and the related uncertainty are presented in the fan chart of the annual rate of HICP changes.[101] Projected slight acceleration in overall inflation in the fourth quarter of the year compared with August, followed by a certain slowdown in the first quarter of 2020 largely reflects the anticipated international oil price dynamics over the projection horizon. In the context of decreasing oil prices, energy products are expected to contribute negatively to the overall inflation. The inflation rate in the services group is projected to moderate from its current levels due to exhausted base effects in accommodation services and insurance connected with travel, and the expected lower contribution of transport services, driven by declining oil prices. Low positive inflation in industrial goods is expected to remain unchanged. The food group is expected to continue having a substantial contribution to overall inflation, for which meat price dynamics will be of prime importance.

[101] For details, see the box entitled Measurement and Presentation of Uncertainty in Forecasting Economic Indicators, *Economic Review*, 1/2012.

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

(per cent)



Note: The fan chart shows the expert views of the forecasters on the uncertainty surrounding the projected value based on a 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.

Risks to the inflation outlook in the fourth quarter of 2019 and first quarter of 2020 are assessed as balanced. Potential weaker than expected global economic growth implies risks of lower than projected annual inflation. Lower than expected international oil prices in euro would be a precondition for both lower inflation in energy products and decreased inflation in some services groups and administratively controlled prices. Concurrently, a stronger than projected increase in labour costs and possible spillover effects on end prices of some services coupled with a higher growth rate in household consumption are likely to contribute to higher inflation. The uncertainty surrounding food price dynamics is also among the risks to the forecast.

ISSN 2367–4962
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