



# ECONOMIC REVIEW

4/2021



BULGARIAN NATIONAL BANK

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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. External environment developments are also analysed since they directly affect the Bulgarian economy. The Review contains quantitative assessments of short-run developments in major macroeconomic indicators like inflation, economic growth, exports, imports, trade balance and the balance of payments current account, foreign direct investment, monetary and credit aggregates dynamics. Given the magnitude of the economic shock from the spread of COVID-19, the charts in this issue cover the period from the start of 2008, which allows to compare the changes in economic variables during the global financial and economic crisis of 2008–2009.

The Economic Review, issue 4/2021 was presented to the BNB Governing Council at its 24 February 2022 meeting. It employs statistical data published up to 31 January 2022. Expectations of economic trends in Bulgaria in the short term (until the second quarter of 2022), as described in this issue, are based on the BNB macro-economic forecast prepared as of 13 January 2022. The estimates and projections published in this issue should not be regarded as advice or recommendation. Exclusively the information user is liable for any consequences thereof.

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## ABBREVIATIONS

APP	Asset Purchase Programme
APRC	Annual percentage rate of charge
BIR	Base interest rate
BOP	Balance of Payments
b.p.	basis points
CFP	Consolidated Fiscal Programme
CIF	Cost, insurance, freight
CNY	Chinese Yuan
CPI	Consumer Price Index
EA	Employment Agency
EC	European Commission
ECB	European Central Bank
EIB	European Investment Bank
EMBI	Emerging Markets Bond Index
EONIA	Euro OverNight Index Average
ESA 2010	European System of National and Regional Accounts
EU	European Union
EURIBOR	Euro Interbank Offered Rate
EWRC	Energy and Water Regulatory Commission
FDI	Foreign Direct Investment
FOB	Free on Board
FOMC	Federal Open Market Committee
FRS	Federal Reserve System
GDP	Gross Domestic Product
HICP	Harmonized Index of Consumer Prices
HUF	Hungarian forint
IBEX	Independent Bulgarian Energy Exchange
IEA	International Energy Agency
IMF	International Monetary Fund
ISM	Institute for Supply Management
LEONIA	LEv OverNight Index Average
LFS	Labour Force Survey
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
NRRP	National Recovery and Resilience Plan
NSI	National Statistical Institute
OPEC	Organization of Petroleum Exporting Countries
OTC	over-the-counter
PBoC	People's Bank of China
PCE	Personal Consumption Expenditures
PEPP	Pandemic Emergency Purchase Programme
PELTRO	Pandemic Emergency Longer-Term Refinancing Operations
PMI	Purchasing Managers' Index
p.p.	percentage points
PPI	Producer Price Index
PPP	Purchasing Power Parity
PSPP	Public Sector Purchase Programme
RON	Romanian new leu
SITC	Standard International Trade Classification
SNA	System of National Accounts
VAT	Value Added Tax
UMBF	Updated Medium-Term Budget Forecast
€STR	Euro Short-Term Rate



# SUMMARY

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In the fourth quarter of 2021 global PMIs signalled a slowing pace of recovery of the global economic activity, with preliminary data for January 2022 concerning some leading economies, such as the US, the euro area, Japan, the UK and Australia, indicating further deterioration in the economic situation. The global spread of the SARS-CoV-2 Omicron variant led to a more substantial slowdown of economic activity in the sector of services in early 2022. Over the last quarter of 2021 global inflation increased significantly on an annual basis in both developed and emerging market economies. Inflation acceleration was mainly driven by the increase in energy product prices and continued growth in consumer demand in the context of highly accommodative fiscal and monetary policy. Over the review period the US Federal Reserve System began to withdraw step by step its monetary policy stimulus after considering that the US inflation has remained for a sufficiently long period above the target level and a rapid progress toward the employment target has been achieved. The Federal Reserve System showed also signs of significant rises in the federal funds interest rate during 2022–2024. In December the ECB also announced its intention to start reducing its quantitative easing, though maintaining its opinion of a temporary nature of accelerating inflation in the euro area.

In the first and second quarters of 2022 external demand for Bulgarian goods and services is projected to grow on an annual basis, with its rate expected to moderate gradually compared to that in the last quarter of 2021.

For January–November 2021 the total current and capital account surplus of Bulgaria decreased from the same period of 2020, reflecting mainly a higher deficit on the trade balance. Over the first half of 2022 the total current and capital account surplus is expected to expand as a share of GDP from the end of 2021, mainly due to the projected increase of the positive balance on net secondary income and the persistent upward trend in the net services surplus.

Since the end of the third quarter of 2021 the annual growth rate of non-government sector's deposits has tended to decelerate. Retention of very low deposit interest rates coupled with accelerating inflation likely stimulate economic agents to redirect part of their free funds from savings to consumption or to seek investment opportunities as alternatives to deposits. The annual growth rate of credit to the private sector continued to accelerate, driven mainly by the strong acceleration of credit to households. In the first half of 2022 the trend toward a gradual slowdown in the growth of deposits on an annual basis is expected to be sustained. The projected slowdown in the growth rate of private consumption in real terms will limit credit growth. At the same time, still low lending rates along with projected high consumer price inflation and sustained expectations of a continuous increase in house prices will support demand for loans by households.

Based on NSI seasonally adjusted data, in the third quarter of 2021 real GDP of Bulgaria increased by 0.6 per cent on a quarterly basis, reaching 99.8 per cent of its pre-pandemic value. By final demand component, the growth in economic activity was mainly driven by private consumption. During the third quarter labour market conditions improved, with an increase on a quarterly basis in employment and hours worked *per* person employed along with a decline in the unemployment rate.

Economic indicators in the fourth quarter of 2021 signalled continuous growth in real GDP at a rate similar to that of the previous quarter. In the first half of 2022 real GDP growth is expected to slow down from the second half of 2021, with the contribution of private consumption likely to decline and that of fixed capital formation rising amid strengthened investment activity of the government.

In the fourth quarter of 2021 the upward inflation trend since the beginning of the year strengthened, with year-on-year HICP growth reaching in December 6.6 per cent. Price rises were broad-based across HICP components, reflecting largely direct and indirect effects of increased prices in primary energy



commodities (oil, natural gas and electricity) and food in international markets. Core inflation also accelerated in the context of increased consumption expenditure of households, higher consumer goods prices in Bulgaria's major trading partners and indirect effects of more expensive energy resources and food. Inflation in the group of administratively controlled prices accelerated slightly from the end of 2020, reflecting mainly higher prices of electricity and heating, as approved by the Energy and Water Regulatory Commission since 1 July 2021, and increased regulated prices of gaseous fuels in April–December 2021.

Inflation is anticipated to continue rising over the first half of 2022. There are risks of a stronger increase in prices *vis-à-vis* the baseline scenario, reflecting mainly possible changes in regulated prices of electricity, water and sewerage services and heating after the expiry on 31 March 2022 of the moratorium on these prices introduced by the government in December 2021.

# 1. EXTERNAL ENVIRONMENT

In the fourth quarter of 2021 global PMIs signalled a slowing pace of recovery of the global economic activity, with preliminary data for January 2022 concerning some leading economies, such as the US, the euro area, Japan, the UK and Australia, indicating further deterioration in the economic situation. The global spread of the SARS-CoV-2 Omicron variant led to a more substantial slowdown of economic activity in the sector of services in early 2022. Over the last quarter of 2021 global inflation increased significantly on an annual basis in both developed and emerging market economies. Inflation acceleration was mainly driven by the increase in energy product prices and continued growth in consumer demand in the context of highly accommodative fiscal and monetary policy. Over the review period the US Federal Reserve System began to withdraw step by step its monetary policy stimulus after considering that the US inflation has remained for a sufficiently long period above the target level and a rapid progress toward the employment target has been achieved. The Federal Reserve System showed also signs of significant rises in the federal funds interest rate during 2022–2024. In December the ECB also announced its intention to start reducing its quantitative easing, though maintaining its opinion of a temporary nature of accelerating inflation in the euro area.

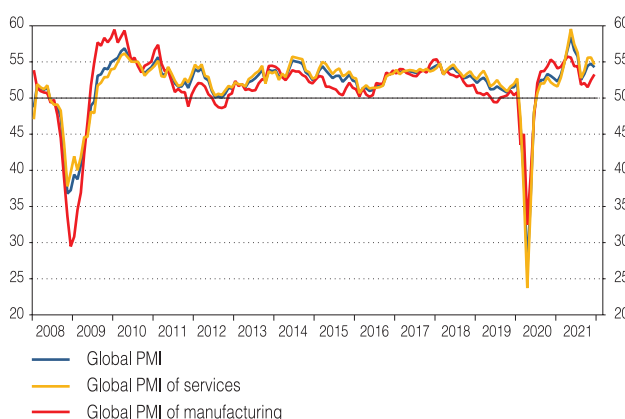
In the first and second quarters of 2022 external demand for Bulgarian goods and services is projected to grow on an annual basis, with its rate expected to moderate gradually compared to that in the last quarter of 2021.

## Current Business Situation

In the fourth quarter of 2021 global PMI dynamics showed signs of a slowing pace of recovery of the global economic activity, with preliminary data for January 2022 concerning some leading economies, such as the US, the euro area, Japan, the UK and Australia, indicating further deterioration in the economic situation. Over the last quarter global PMI remained above the neutral limit of 50 points, however it did fall from the average values in the third quarter of 2021. There was divergent dynamics across regions in the fourth quarter, with euro area PMIs signalling significant moderation in the growth of economic activity, while the US economic recovery accelerated slightly.

Across economic sectors, PMIs in the fourth quarter of 2021 indicated a slowdown in the recovery of global economic activity in manufacturing, with suppliers' delivery times component index recording its lowest level of 34.7 points in October. At the end of the year this component rose slightly, which could be interpreted as a moderate easing of global supply chain bottlenecks. Services PMI recoded a higher average value in the last quarter compared to the third quarter of 2021. However, in January 2022 preliminary data on some leading economies showed signs of a substantial slowdown, reflecting the rapid spread of the new Omicron variant

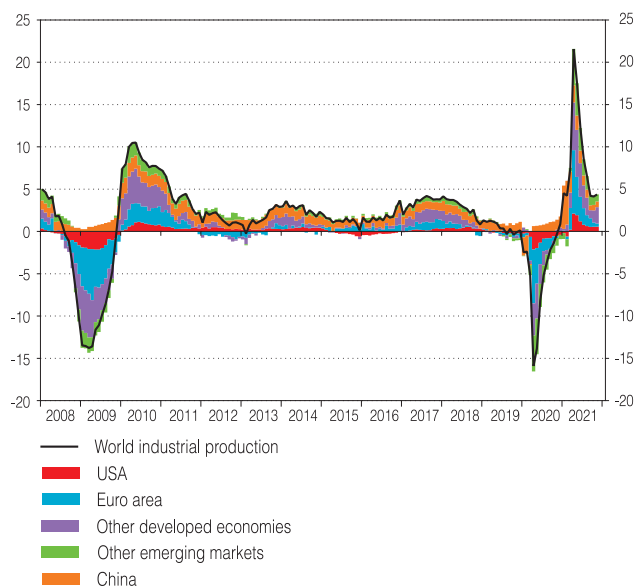
Global PMIs



Source: JP Morgan.

## Global Industrial Production

(annual rate of volume change and contribution by region, per cent)



Sources: CPB Netherlands Bureau for Economic Policy Analysis and BNB calculations.

of SARS-CoV-2 and the related containment measures.

From August to November 2021 the volumes of global industrial output and global trade<sup>1</sup> increased further on an annual basis, with growth reported in all major regions.

Over the last quarter of 2021, global inflation<sup>2</sup> accelerated significantly year on year in both developed and emerging market economies. Preliminary World Bank estimates for December show that global inflation reached 5.6 per cent on an annual basis, from 4.1 per cent in September 2021. Higher energy product prices contributed most to the inflation increase globally, in particular the price growth in natural gas and electricity in most EU countries, reflecting both constraints on the supply side and higher demand resulting from industrial output recovery. Additional factors for global inflation acceleration included leading central banks' highly accommodative policies and continuing bottlenecks in global supply chains of goods, commodities and equipment.

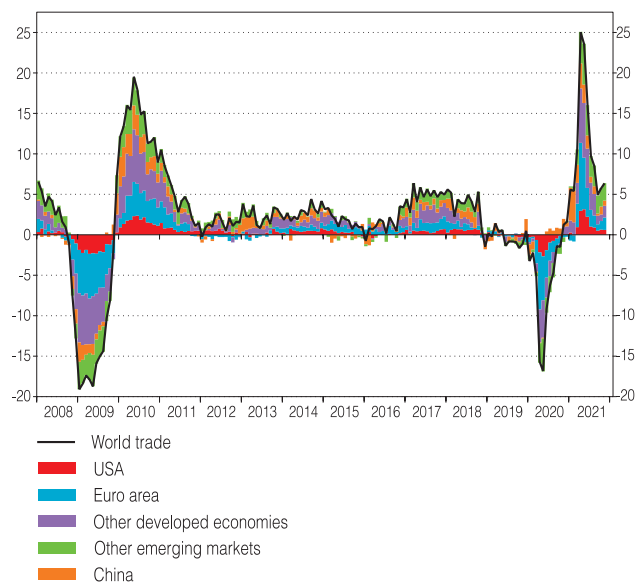
Given the international economic developments described and the expected economic activity in Bulgaria's major trading partners, in the first and second quarters of 2022 external demand for Bulgarian goods and services is projected to

<sup>1</sup> CPB Netherlands Bureau for Economic Policy Analysis data as of 21 January 2022.

<sup>2</sup> Based on the World Bank data as of 6 January 2022.

## World Trade

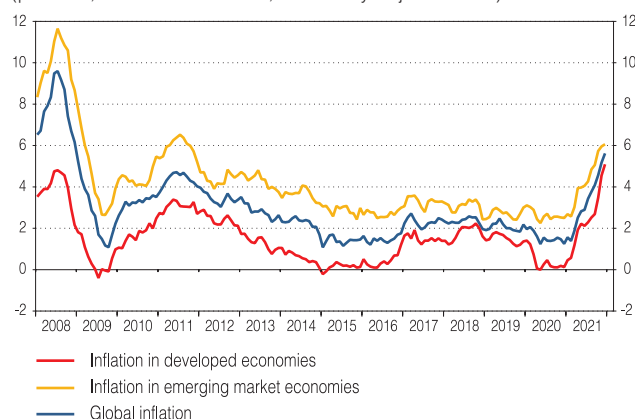
(annual rate of volume change and contribution by region, per cent)



Sources: CPB Netherlands Bureau for Economic Policy Analysis and BNB calculations.

## Inflation Measured through CPI

(per cent, on an annual basis; 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 to calculate country weights. Groups include only World Bank Member States classified by the World Bank as emerging market economies and developed economies.

Source: the World Bank.

grow on an annual basis, with its rate slowing down gradually compared to that in the last quarter of 2021<sup>3</sup>.

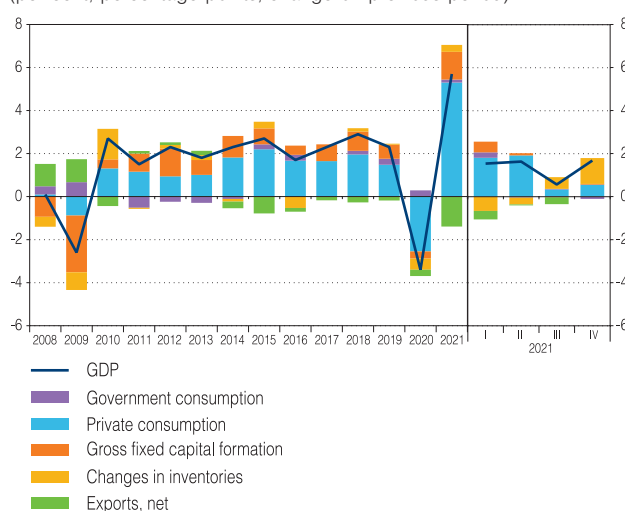
## The United States

In the third quarter of 2021, the US real GDP posted growth of 0.6 per cent quarter on quarter, with preliminary estimates showing growth acceleration to 1.7 per cent in the fourth quarter. Unlike the first half-year, the contribution of private consumption in the second half was significantly lower, while that of inventories increased substantially. The lower contribution was due to a large extent to the termination of tax credit payments to households. Throughout 2021, the US real GDP growth came to 5.7 per cent against a fall of 3.4 per cent in 2020. GDP growth in 2021 was the highest since 1984, largely owing to both the US government programmes worth nearly USD 6 trillion intended to counter the negative effects of the COVID-19 pandemic on the economy and to the Federal Reserve's accommodative policy.

In the fourth quarter of 2021 and in January 2022 leading economic indicators remained at a relatively high level compared to their historical average value, declining slightly at the end of the period as a result of the fast-spreading SARS-CoV-2 Omicron variant. Concurrently, demand exceeded supply in both manufacturing and services sectors. Supply disruptions were due to the limited production capacity, labour and raw materials shortage, as well as logistical difficulties. In the fourth quarter the average value of the *ISM* Manufacturing PMI was 60.1 points against 60.0 points on average in the third quarter, amounting to 58.8 points in December. The average value of the respective Services PMI in the fourth quarter rose to 65.8 points against an average of 63.0 points in the third quarter of 2021, reaching its historic high of 68.4 points in November. Consumer confidence indicators declined between October 2021 and January 2022 compared to the third quarter of 2021 driven by consumer price hikes and to a lesser degree by the effects of the coronavirus spread. US labour market conditions continued to improve gradually in the fourth quarter of 2021. Over the review period total

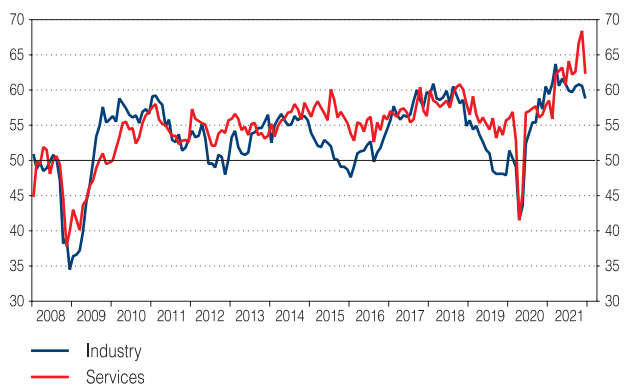
## Contribution to the Change in Real GDP in the United States by Component

(per cent, percentage points; change on previous period)



Source: Bureau of Economic Analysis.

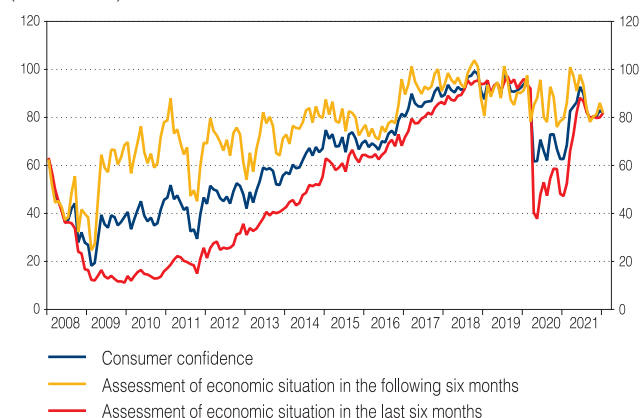
## US ISM-PMIs



Sources: Institute for Supply Management (ISM) and Bureau of Economic Analysis.

## US Consumer Confidence Indices

(2000 = 100)



Source: The Conference Board.

<sup>3</sup> The assumption for growth in external demand for Bulgarian goods and services is based on the [ECB Macroeconomic Projections](#) of December 2021.

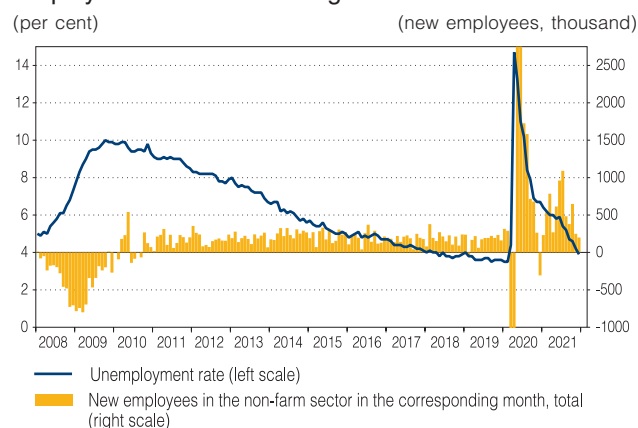
employment in the US non-agricultural sector rose by 1.1 million jobs against an increase of around 2.0 million jobs in the previous quarter. Throughout 2021, employment went up by 6.4 million jobs, but the total number of employed declined by 3.6 million compared to the pre-pandemic period. In December 2021 the unemployment rate went down to 3.9 per cent, from 4.7 per cent in September. At the same time, the labour force participation rate in the USA rose to 61.9 per cent against 61.7 per cent at the end of the third quarter. Overall, data available by end-January 2022 indicated a slowdown in quarterly growth of real GDP over the first quarter of 2022.

In the fourth quarter of 2021 consumer price inflation remained significantly above the 2 per cent target level set by the US Federal Reserve System. In December the annual rate of change of the price index of personal consumption expenditure (PCE) was 5.8 per cent against 4.4 per cent in September, which was the highest value of the index since 1982. Inflation growth was largely attributable to the disturbed supply in product and labour markets coupled with the continuing strong consumer demand. The annual growth rate of the core PCE price index (excluding food and energy products) accelerated to 4.9 per cent in December, from 3.7 per cent in September. Energy products, housing expenditure, second-hand cars and food contributed most to inflation on an annual basis in December.

In the fourth quarter of 2021, the US Federal Open Market Committee (FOMC) maintained its target range for the federal funds rate at 0.00–0.25 per cent and announced at its November 2021 meeting that the central bank would begin asset purchase tapering. The initially announced pace of tapering monthly purchases of US Treasury bonds and mortgage-backed securities by USD 10 billion<sup>4</sup> and USD 5 billion, respectively, was revised upwards at the December 2021 meeting to USD 20 billion and USD 10 billion monthly. In December the passage of the press release reflecting FOMC members' intention expressed at ten consecutive meetings to maintain for a certain period of time inflation above its 2 per cent target was removed and replaced by an assessment that inflation has already stayed long enough above the target level.

<sup>4</sup> Referred to as the US dollar below.

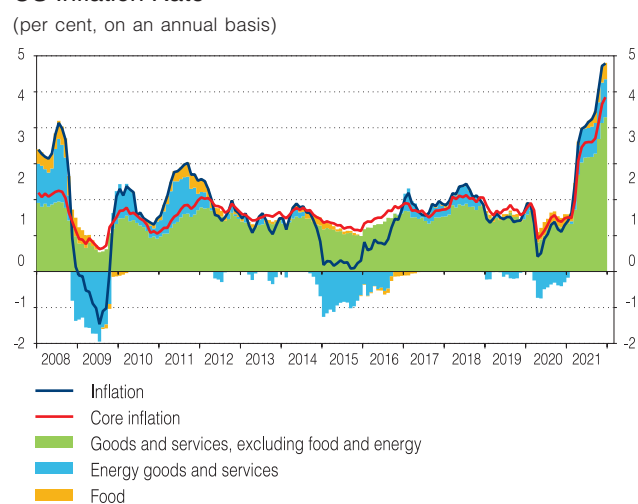
## US Unemployment Rate and Number of New Employees in the US Non-Agricultural Sector



Notes: New employees in the non-farm sector for April and June 2020 are not presented in the chart and are -20 679 and 4846 thousand, respectively.

Source: Bureau of Labour Statistics.

## US Inflation Rate



Notes: Inflation is measured by personal consumption expenditure index. Core inflation is measured by personal consumption expenditure index, excluding food and energy expenditure.

Source: Bureau of Economic Analysis.

In December FOMC members' individual forecasts about real GDP growth were revised downwards in 2021 and upwards in 2022, with lower unemployment rates than projected in September. The median of the projections for overall and core inflation increased substantially for 2021 and 2022 and to a lesser degree for 2023. FOMC long-term equilibrium value assessments of all economic indicators remained broadly unchanged compared to previous projections. The median of FOMC members' individual forecasts about the federal funds rate showed expectations of increasing by 75 basis points in 2022 and 2023, and by 50 basis points in 2024.

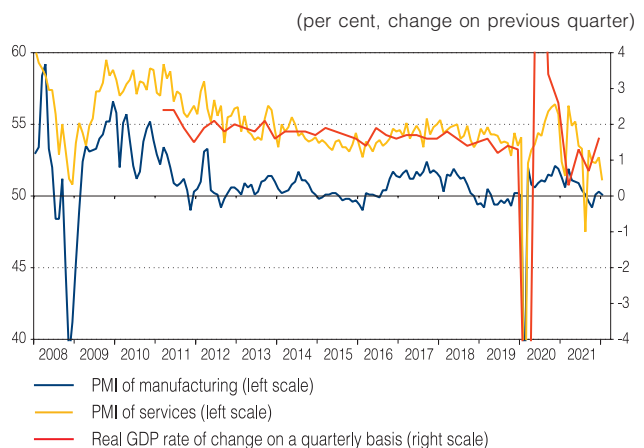
In the fourth quarter of 2021, total assets in the US Federal Reserve balance sheet rose by USD 309 billion to USD 8.76 trillion (41.9 per cent of GDP in 2020).

## China

In the fourth quarter of 2021, China's real GDP growth rate accelerated to 1.6 per cent on a quarterly basis, from 0.7 per cent in the third quarter, and economic activity rose to 8.1 per cent throughout 2021. Growth accelerated over the last three months driven by the strong external demand for goods from China and a higher growth pace of industrial output (to 0.4 per cent on average on a monthly basis against 0.2 per cent on average in the third quarter) after overcoming the temporary shortage of electricity in some of the major industrial regions of the country. In line with this dynamics, manufacturing PMI recovered gradually over the last months of the year, reaching 50.3 points in December against 49.6 in September, 49.2 in October and 50.1 in November. The index short-term decline below the 50 point limit in September and October was also driven by the stringent anti-epidemic measures launched in certain regions of China in response to local epidemic waves. In the fourth quarter of 2021, services PMI stayed above the 50 point limit, its dynamics, however, exhibiting higher volatility as a result of the local epidemic waves, which had a negative impact on consumer demand in certain sub-sectors, as tourism, trade and entertainment.

In the fourth quarter of 2021 annual inflation in China increased to 1.5 per cent in December compared to 0.8 per cent on average in the third quarter of 2021. Accelerating inflation over the period was mainly due to non-food

**Manufacturing and Services PMIs and Change in China's Real GDP**



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



goods, while annual price growth of food slightly declined. Concurrently, production price inflation in the fourth quarter started to decrease somewhat, reaching 10.3 per cent on an annual basis in December against 12.9 per cent in November and 13.5 per cent on average in October. The reason behind the decline in the growth rate of producer prices was the renewed work of a number of energy-intensive producers in mining and metal processing industry.

In December 2021 the People's Bank of China cut by 50 basis points the minimum required reserve rate of most banks, whereby liquidity amounting to CNY 1.2 trillion (USD 188 billion) was released in the banking system. Exceptions are only those banks that already apply a rate of 5.0 per cent. According to the central bank, this does not constitute a change in the monetary policy, as part of the released funds will be used by financial institutions for repayment of maturing medium-term lending facilities, while a small part will be used for long-term lending. In January 2022, the central bank aiming to support the economic growth in the country cut the reference interest rate on one-year prime loan rate by 10 basis points to 3.70 per cent, and on five-year maturity loans by 5 basis points to 4.60 per cent.

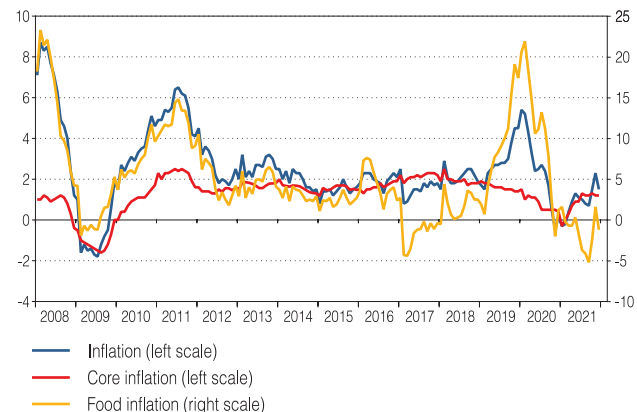
## Euro Area

In the third quarter of 2021 quarterly growth of euro area real GDP came to 2.3 per cent. As in the previous quarter, economic growth was mainly supported by private consumption, which was positively influenced by the easing of containment measures over that period. The four largest euro area economies reported an increase in economic activity on a quarterly basis, with France contributing most to the quarterly real GDP growth. Services sector made the major contribution to the growth, while the bottlenecks in the supply chain of equipment and commodities continued to dampen manufacturing growth.

Based on preliminary data as of end-January 2022, euro area real growth in the fourth quarter of 2021 moderated to 0.3 per cent on a quarterly basis, reflecting the tightened containment measures launched over the period in some euro area countries. As of the fourth quarter of 2021 euro area real GDP reached its level of the fourth quarter of 2019.

## China's Inflation Rate

(per cent, on an annual basis)

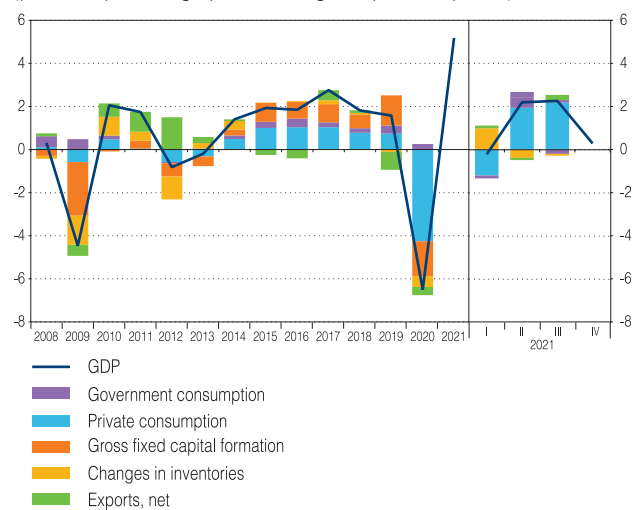


Notes: Inflation is measured by consumer price index. Core inflation is measured by consumer price index, excluding food and energy expenditure.

Source: National Bureau of Statistics of China.

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

(per cent, percentage points; change on previous period)

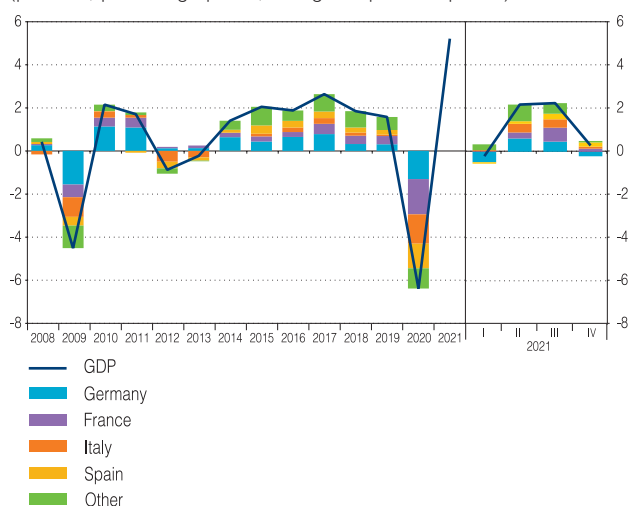


Sources: Eurostat and BNB calculations.



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

(per cent, percentage points; change on previous period)

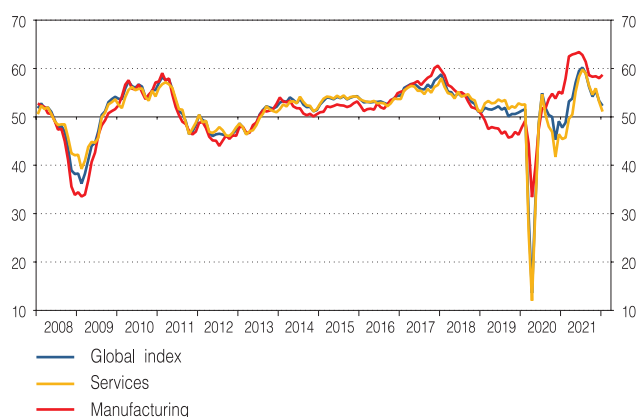


Sources: Eurostat and BNB calculations.

From October 2021 to January 2022 euro area PMI also showed a slowdown in economic activity due to the continuing bottlenecks in supply chains, price hikes in raw materials and the uncertainty surrounding the measures to curb the spread of the new coronavirus variants. A decline was observed in all sectors, in particular in the services sector. In the fourth quarter of 2021 and January 2022 the household confidence indicator also dropped. However, labour market conditions in the euro area improved further in the fourth quarter, the unemployment rate falling to 7.2 per cent in November against 7.4 per cent in September. Concurrently, consumer expectations of the unemployment rate over the next twelve months measured by the EC consumer confidence index remained relatively low in the fourth quarter of 2021 and in January 2022. Overall, data available by end-January 2022 indicated some slowdown in quarterly growth of euro area real GDP in the first quarter of 2022.

The upward inflation dynamics in the euro area measured by HICP also continued in the fourth quarter of 2021. Inflation reached 5.0 per cent on an annual basis against 3.4 per cent in September, the acceleration of HICP annual growth rate being mainly driven by the increase in energy product prices, and to a lesser degree, by that in services prices. Electricity, natural gas and transport fuels contributed most to energy product price growth, while package holidays abroad and hotel services pushed up services prices. Factors on the supply side related to

## PMIs in the Euro Area

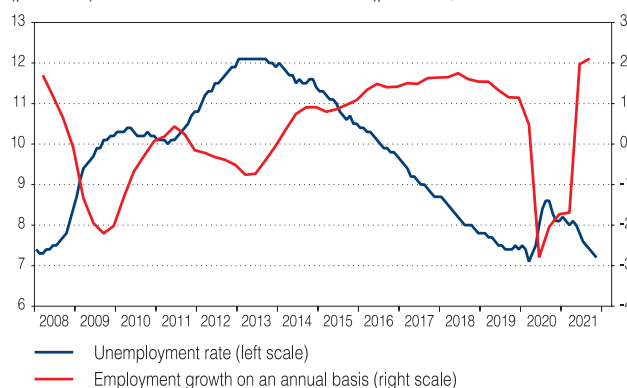


Sources: Eurostat, Markit.

## Euro Area Unemployment Rate and Employment Growth

(per cent)

(per cent; on an annual basis)

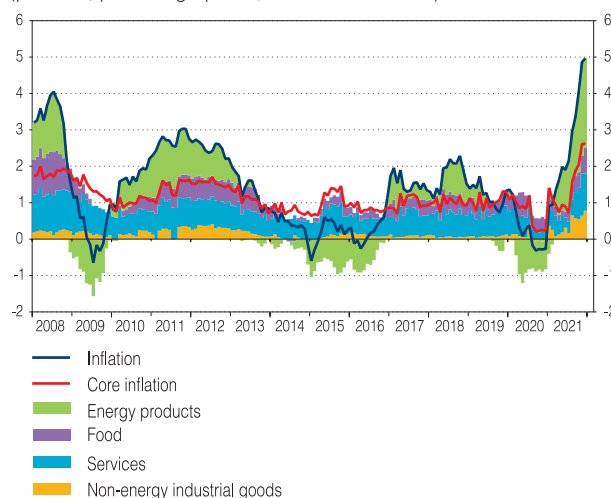


Note: Unemployment data cover the period up to November 2021.

Source: Eurostat.

## Euro Area Inflation Rate

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



Notes: The inflation is measured by HICP. Core inflation is measured by HICP, excluding energy products, food, alcohol and tobacco products.

Source: Eurostat.

disruptions in the supplies of raw materials and equipment coupled with high consumer demand continued to exert an upward pressure on prices. Core inflation, excluding food and energy products, also accelerated to 2.6 per cent on an annual basis in December against 1.9 per cent in September.

In December 2021 the ECB slightly increased its economic growth forecast in the euro area for 2021, while decreasing it for 2022 and rising it substantially for 2023. Compared to its previous forecast of September, the ECB foresees higher inflation in the euro area over the whole projection horizon, expecting it, however, to decline in 2023 below the target of 2 per cent. According to the ECB, the factors behind the consumer price increase are temporary and mainly related to higher energy prices and international and domestic mismatches in demand and supply as economies reopen after the phasing out of containment measures.

The ECB Governing Council left unchanged the reference interest rates in the fourth quarter of 2021. As regards the asset purchase programme (APP), it decided to increase net purchases from EUR 20 billion to EUR 40 billion in the second quarter of 2022 and to reduce them to EUR 30 billion and EUR 20 billion, respectively, in the third and fourth quarter of 2022. As regards the Pandemic Emergency Purchase Programme (PEPP), the ECB Governing Council announced that it would conduct net asset purchases at a lower pace than in the previous quarter and would end net purchases under this programme at the end of March 2022.<sup>5</sup>

At the end of December 2021 the cumulative amount of purchases under the extended APP totalled EUR 3123 billion, up EUR 55 billion compared with the end of the third quarter of 2021. Concurrently, the cumulative amount of the purchases under the PEPP totalled EUR 598 billion as of the end of December (against EUR 1412 billion as of the end of September).

As of 31 December 2021 the Eurosystem balance sheet figure rose to EUR 8566 billion (75.1 per cent of GDP in 2020) compared to EUR 8289 billion (72.7 per cent of GDP in 2020)

<sup>5</sup> Following the ECB's Governing Council meeting, the President Christine Lagarde said on 3 February 2022 that the risk of higher than projected inflation in the euro area in December has increased, particularly in a short-term horizon, and did not exclude the possibility of raising policy rates in 2022.

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

(per cent)

Institution	Date of release	2021		2022		2023	
		latest	previous	latest	previous	latest	previous
the ECB	XII.2021	5.1	5.0	4.2	4.6	2.9	2.1
EC	XI.2021	5.1	4.8	4.4	4.5	2.5	-

Sources: the ECB, the EC.

## Projections of Euro Area Annual Inflation Rate

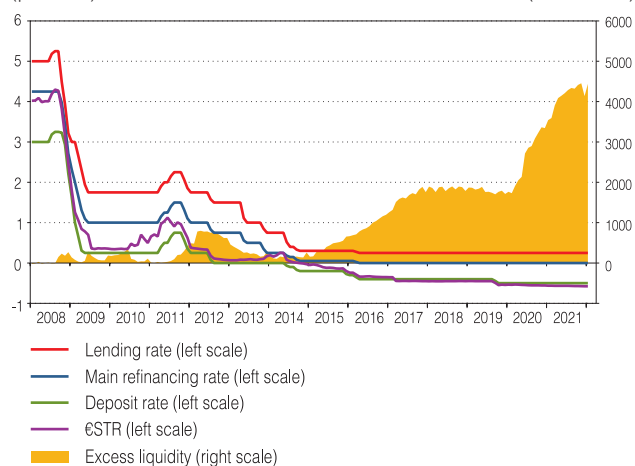
(per cent)

Institution	Date of release	2021		2022		2023	
		latest	previous	latest	previous	latest	previous
the ECB	XII.2021	2.6	2.2	3.2	1.7	1.8	1.5
EC	XI.2021	2.4	1.9	2.2	1.4	1.4	-

Sources: the ECB, the EC.

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

(per cent)



Notes: EONIA and €STR data are average monthly values. Between 15 March 2017 and 30 September 2019 €STR data are on the preliminary €STR interest rate (pre-€STR) and in the period before 15 March 2017 EONIA values are used.

Source: the ECB.

on 1 October 2021. Asset purchases under the APP and PEPP (totalling EUR 229 billion) contributed most to the higher ECB balance sheet figure over the period. The excess liquidity in the euro area banking system continued to grow, its average reaching EUR 4407 billion in the fourth quarter of 2021, up EUR 42 billion above the average in the third quarter of 2021.

The increased excess liquidity in the euro area banking system over the quarter was the main factor behind the maintained low levels of the euro short-term rate in the euro area money market (€STR), and the interest rates on unsecured deposits in the interbank market. The average €STR over the quarter under review matched the third quarter's level (-0.57 per cent). The trade volume of overnight deposits in the unsecured euro area money market rose slightly in the fourth quarter of 2021, with its daily average over the period coming to EUR 48.4 billion, against EUR 47.8 billion in the third quarter of 2021. Over the quarter EURIBOR unsecured deposit rates did not change significantly.

## International Commodity Prices

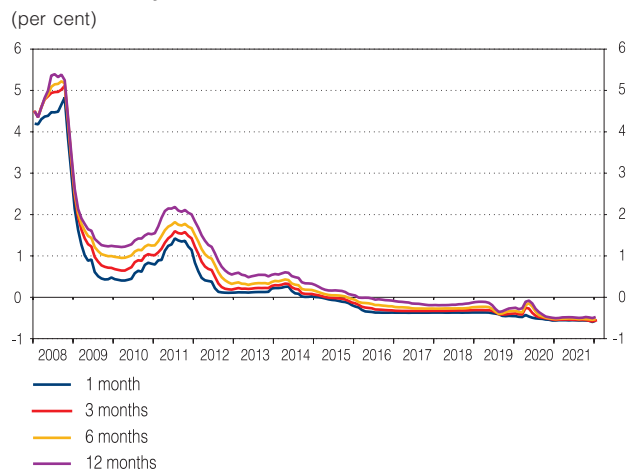
### Crude oil

The average Brent price in the fourth quarter of 2021 reached USD 79.6 per barrel (EUR 69.5 *per barrel*), with significant growth on an annual basis in both US dollars (78.7 per cent), and euro (86.5 per cent). The strong demand for oil was driven by the ongoing recovery of global economic activity, along with significant price rises in other energy resources, including natural gas. As in the previous quarter, the strict compliance with the output cuts agreed by the OPEC+ countries continued to be an important precondition for the significant rise in oil prices.<sup>6</sup> Negative market sentiment mainly related to the expectations of lower oil demand globally due to the spread of SARS-CoV-2 Omicron variant had a major limiting effect on an oil price increase in the last quarter of 2021.

Market participants' expectations of oil prices in the first half of 2022 increased significantly

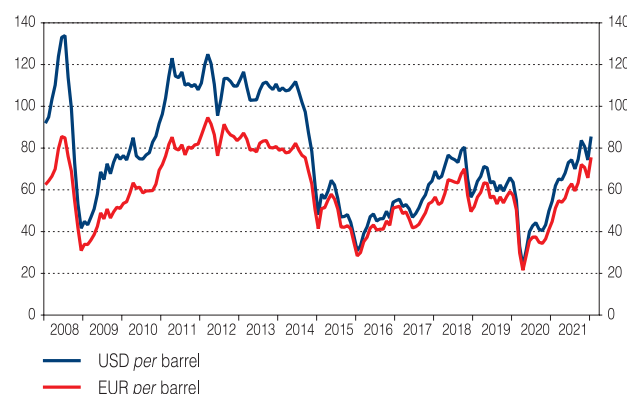
<sup>6</sup> On 18 July 2021, OPEC+, which includes in addition to OPEC member countries, several non-OPEC member countries (including Russia), agreed to increase monthly crude oil production as from August 2021. The agreement provides for total crude oil production to increase by 400,000 barrels *per day* each month until production is fully recovered, which at this rate should be reached in the third quarter of 2022.

### EURIBOR Dynamics



Source: the ECB.

### Brent Crude Oil Price



Sources: the World Bank, the ECB and BNB calculations.

*vis-à-vis* those in December 2021, but the price curve remained downward pointing towards a fall in oil prices in the following months. Futures prices for the next six months fluctuated between USD 84.5 and 80.8 *per barrel*. The higher price level reflected a combination of factors, such as the stronger demand for oil despite the spread of the new coronavirus variant, smaller quantities than expected in advance released from strategic state oil reserves on the market and extraordinary interruptions in oil production in certain regions.

In the fourth quarter of 2021 natural gas prices increased significantly on an annual basis globally, continuing the strong upward trend observed since the third quarter. The price growth in the last quarter of the year compared to the respective period of 2020 was most pronounced in the European market,<sup>7</sup> amounting to 520.6 per cent, reaching the highest historical average level of 38.0 USD/MMBtu in December<sup>8</sup>. The price increase was reflected in the upward electricity price dynamics in Europe. The significant gas price rises were driven by a combination of demand and supply side factors. Low levels of natural gas reserves in Europe and increased demand for both heating in the winter and industrial purposes were of decisive importance. At the same time, the volume of natural gas supplies has not been significantly increased by main suppliers for Europe as compared to previous years. In January 2022 natural gas prices in Europe declined from December 2021, though remaining considerably higher than in January 2021.

### Basic Metals and Food Prices

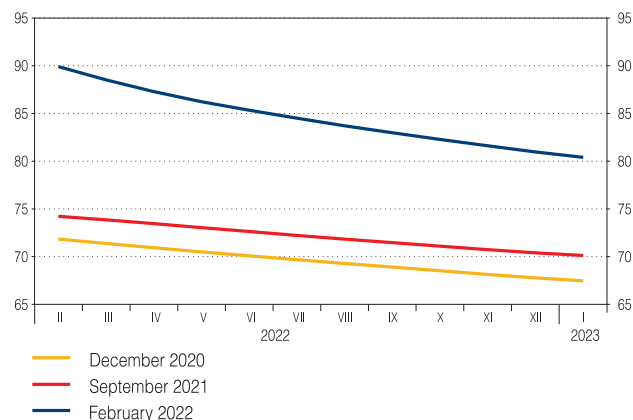
The metal price index posted 21.7 per cent growth in US dollar on an annual basis (26.9 per cent in euro) in the fourth quarter of 2021, with the annual growth rate continuing to slow down significantly for the second consecutive quarter. This was in line with economic indicators, which signalled moderation in the recovery pace of global economic activity in manufacturing. By metal price index components, aluminium and copper prices held the major contribution to the lower growth over the last quarter. The copper

<sup>7</sup> For details, see [ICE Dutch TTF Gas Futures](#).

<sup>8</sup> Based on the World Bank data as of 6 January 2022. Natural gas price is reported in US dollars *per million British thermal unit* (MMBtu).

### Brent Crude Oil Futures Prices

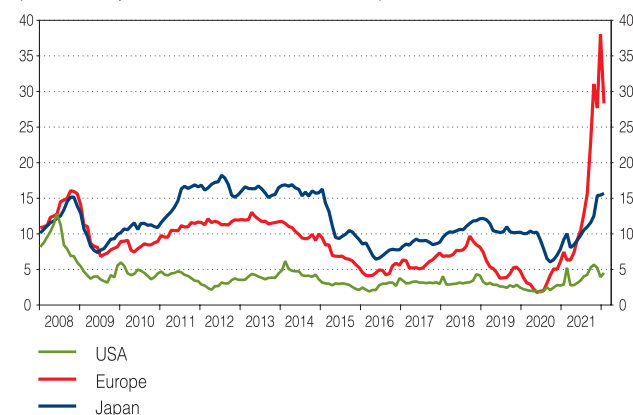
(average monthly price of contract, USD *per barrel*)



Source: JP Morgan.

### Natural Gas Prices

(US dollars *per million British thermal unit*)



Source: the World Bank.

price, which is of key importance for Bulgaria's exports, rose less year on year than in the second and third quarters of 2021, reflecting higher global supply and market participants' expectations of lower demand for copper, including by China's construction sector. As regards to aluminium (the processing of which requires high energy intensity) China's coal price decline recorded in October 2021 eased negative market sentiment for lower supply of aluminium, entailing a slowdown in its annual growth. Market expectations about the global metal price index point to a significantly slower annual growth rate both in US dollars and euro in the first quarter of 2022, compared to the increase observed in the fourth quarter of 2021. In the second quarter of 2022 market participants expect metal prices to fall on an annual basis.

In the fourth quarter of 2021 the food price index recorded 24.7 per cent growth on an annual basis in US dollars and 30.1 per cent in euro, with the growth rate remaining close to that registered in the previous quarter. Almost all major components of the price index increased, except for rice, with coffee, soybeans and wheat making the most significant positive contribution to its annual growth. Wheat prices are of prime importance for Bulgarian exports, which registered strong growth year on year over the quarter, slightly accelerating from the third quarter. Stronger demand for wheat and limited supply by large producer countries were the main prerequisites for its price rises.<sup>9</sup> Coffee's higher price was mainly driven by restrictions in supply related to adverse weather conditions and bottlenecks in supply chains.

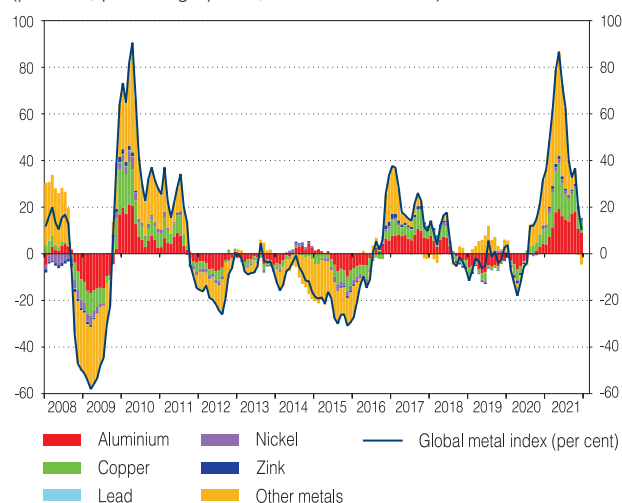
Market participants' expectations of food prices in the first half of 2022 point to a strong rise on an annual basis both in US dollars and euro.

Taking into account the above developments in international commodity prices on an annual basis and assuming that exchange rates remain unchanged, the positive terms of trade for Bulgaria are expected to cease to exist in the first half of 2022. This will be mainly driven by the expected natural gas and oil price increases year on year, of which Bulgaria is a net importer.

## Price Indices of Major Raw Materials and Commodity Groups

### Metals

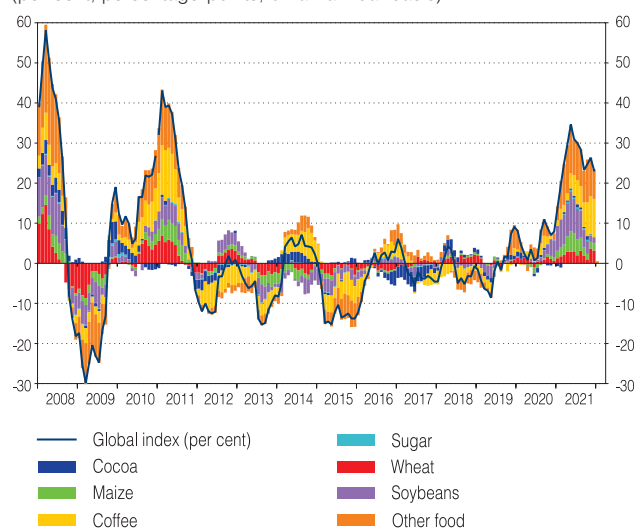
(per cent; percentage points; on an annual basis)



Sources: the ECB and BNB calculations.

### Food

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



Note: Annual rate of change (per cent) and contribution by sub-component (percentage points) of relevant price indices measured in US dollars.

Sources: the ECB and BNB calculations.

<sup>9</sup> For details, see the regular publication of the Food and Agriculture Organization of the United Nations, December, 2021. [FPMA Bulletin](#).

## 2. FINANCIAL FLOWS, MONEY AND CREDIT

For January–November 2021 the total current and capital account surplus of Bulgaria decreased from the same period of 2020, reflecting mainly a higher deficit on the trade balance. Over the first half of 2022 the total current and capital account surplus is expected to expand as a share of GDP from the end of 2021, mainly due to the projected increase of the positive balance on net secondary income and the persistent upward trend in the net services surplus.

Since the end of the third quarter of 2021 the annual growth rate of non-government sector's deposits has tended to decelerate. Very low deposit interest rates coupled with accelerating inflation likely stimulate economic agents to redirect part of their free funds from savings to consumption or to seek investment opportunities as alternatives to deposits. The annual growth rate of credit to the private sector continued to accelerate, driven mainly by the strong acceleration of credit to households. In the first half of 2022 the trend toward a gradual slowdown in the growth of deposits on an annual basis is expected to be sustained. The projected slowdown in the growth rate of private consumption in real terms will limit the credit growth. At the same time, still low lending rates along with projected high consumer price inflation and sustained expectations of a continuous increase in house prices will support demand for loans by households.

### External Financial Flows

In January–November 2021, a deficit was reported on the BOP current account<sup>10</sup> of Bulgaria (compared to a nearly balanced position in the corresponding period of 2020). The current account deficit was driven by the increase in the negative trade balance, while the higher surplus in services trade partly reduced the deficit. As of November, current account deficit for the last 12 months came to -1.0 per cent of GDP (-0.3 per cent of GDP at the end of 2020).

The increased trade balance deficit reflected the strong growth of goods imports in real terms on an annual basis in the first three quarters (12.4 per cent)<sup>11</sup>, which can be partly explained by the low base of 2020 and the enhanced private consumption marked by a high import component. Concurrently, real volumes of goods exports grew at a lower pace of 5.7 per cent due to some extent to one-off supply-side factors<sup>12</sup>. Despite significant price rises in natural gas and oil, of which the country is a net importer, the terms of trade for Bulgaria in the first nine months of 2021 were favourable,

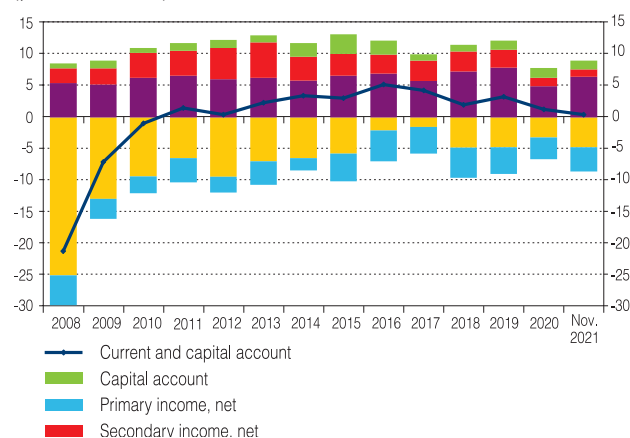
<sup>10</sup> The analysis of balance of payments flows employs information from its analytical reporting. Preliminary data.

<sup>11</sup> Non-seasonally adjusted national account GDP data.

<sup>12</sup> For details, see the Exports and Imports of Goods and Services Section in Chapter 3.

Current and Capital Account Flow Dynamics and Contributions of Individual Components

(per cent of GDP)



Notes: November 2021 data on the current and capital account flows are accumulated for the last 12 months. Nominal GDP data for the last four quarters, including the third quarter of 2021, are used in calculating the GDP ratio for November 2021.

Sources: the BNB, the NSI, BNB calculations.



thus contributing to reducing the trade balance deficit.

From January to November 2021, net primary income deficit increased on the same period of 2020, mainly as a result of higher outflows from Bulgaria on the investment income sub-item<sup>13</sup>. Reinvested profits outside Bulgaria under this sub-item reported growth. Outflows on investment income sub-item were additionally influenced by the increase in distributed dividends, which was entirely attributable to other sectors<sup>14</sup>.

The surplus on net secondary income declined year on year largely driven by lower remittances from Bulgarian citizens working abroad.

The positive balance on net services increased significantly from the same period of 2020. The higher annual growth rate of services exports (24.8 per cent) than that of services imports (11.7 per cent) pushed up the surplus on telecommunications, computer and information services item, with travel services contributing most to the reported growth in services exports. Transport services and higher costs of Bulgarian residents' travel abroad contributed largely to the increase in services imports. Non-seasonally adjusted national account GDP data show that in the first nine months of 2021 the dynamics of both real volumes and price component had a positive effect on the increase in net services surplus.

Between January and November 2021 BOP capital account surplus decreased slightly on an annual basis, reflecting mainly lower receipts from investment grants to the general government sector.

As a result of flow dynamics on individual current and capital account items, as of November 2021 the surplus on the overall balance of the two accounts declined for the last 12 months from the end of 2020, with growing trade balance deficit contributing most substantially. Total current and capital account balance as of November 2021 was 0.5 per cent of GDP (1.3 per cent of GDP at the end of 2020).

<sup>13</sup> Preliminary data subject to revision; revisions usually show an increase in outflows to non-residents.

<sup>14</sup> It should read sectors other than banks. In 2021 banks did not distribute dividends, as in 2020, in line with the BNB decision of January 2021 on capitalisation of entire banking system profits for 2020.

## Flows on Major Balance of Payments Accounts

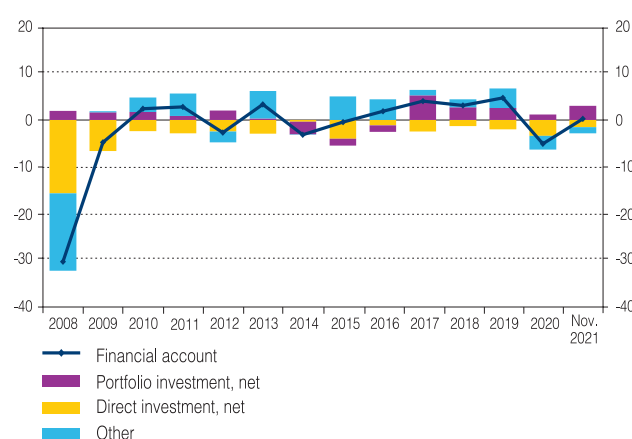
(EUR million)

	2020	January – November 2021	Change compared to January – November 2020
<b>Current account</b>	<b>-161.2</b>	<b>-477.3</b>	<b>-469.7</b>
Trade balance	-1,945.4	-2,802.9	-1,156.0
Services, net	3,059.1	4,027.3	1,194.3
Primary income, net	-2,109.7	-2,436.9	-430.4
Secondary income, net	834.8	735.3	-77.6
<b>Capital account</b>	<b>946.5</b>	<b>840.7</b>	<b>-19.7</b>
<b>Financial account</b>	<b>-3,172.9</b>	<b>2,232.1</b>	<b>3,321.9</b>
<b>Change in reserves</b>	<b>5,793.9</b>	<b>678.9</b>	<b>-</b>

Sources: the BNB, the NSI, BNB calculations.

## Financial Account Flow Dynamics and Contributions of Individual Components

(per cent of GDP)



Notes: The Other item includes Other Investments, Net, and Financial Derivatives (Other than Reserves) and Employee Stock Options, Net. November 2021 data on financial account flows are accumulated for the last 12 months. Nominal GDP data for the last four quarters including the third quarter of 2021, are used in calculating the GDP ratio for November 2021.

Sources: the BNB, the NSI, BNB calculations.



In the first half of 2022 BOP current account is expected to remain in a deficit as a share of GDP on an annual basis<sup>15</sup>, however declining from its level of late 2021. Deficit reduction will be underpinned by the projected increase in the positive balance on net secondary income mainly as a result of the expected gradual growth of remittances to the country by Bulgarian emigrants in the context of improving attitudes of economic agents amid a continuing economic activity recovery. An additional impact will be exerted by the expected further increase in the surplus on net services and lower deficit on net primary income. In the first half of the year the capital account surplus as a share of GDP on an annual basis<sup>16</sup> is expected to remain close to its level of late 2021.

Between January and November 2021, a net outflow of funds on Bulgaria's financial account in the amount of EUR 2.2 billion was reported. The positive balance on the financial account was driven by a significantly stronger increase in Bulgarian residents' foreign assets than foreign liabilities. The increase in foreign assets was mainly due to the higher amount of banks' short-term assets in the form of foreign currency and deposits. Measures announced by the BNB in March 2020 to further strengthen capital and liquidity position of banks, including by imposing limits on their foreign exposures in order to reduce credit and concentration risks in bank balance sheets, remained in force during 2021 as well.<sup>17</sup> As regards other sectors,<sup>18</sup> an increase in assets outside Bulgaria, in particular portfolio investment was reported, which also contributed, though to a lesser extent, to net outflows from Bulgaria. The positive financial account balance was reduced partially as a result of the additional 859 million special drawing rights (SDR) allocated to Bulgaria on 24 August 2021.

As of November 2021, the financial account balance for the last 12 months was positive at 0.2 per cent of GDP (a -5.2 per cent deficit as

<sup>15</sup> It should read current account balance for the last four quarters.

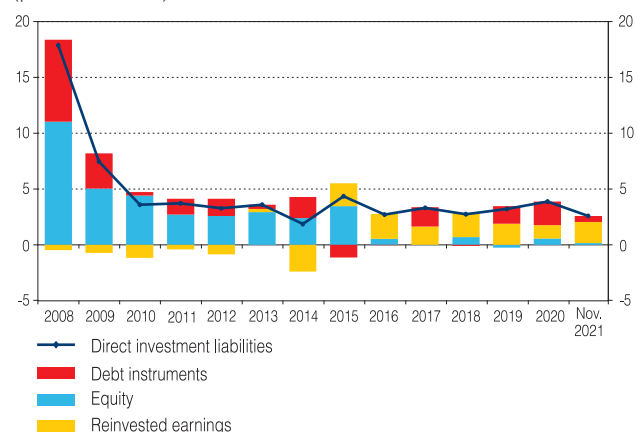
<sup>16</sup> It should read capital account balance for the last four quarters.

<sup>17</sup> For details, see [BNB's press release](#) of 28 February 2021.

<sup>18</sup> It should read sectors other than general government, banks and central bank.

### Direct Investment Liabilities by Type of Investment

(per cent of GDP)



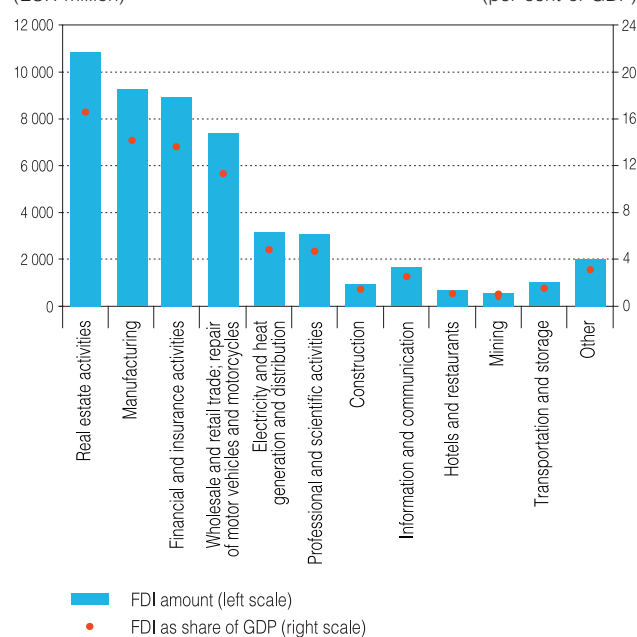
Notes: November 2021 data on direct investment liabilities flows are accumulated for the last 12 months. Nominal GDP data for the last four quarters including the third quarter of 2021, are used in calculating the GDP ratio for November 2021.

Sources: the BNB, the NSI, BNB calculations.

### FDI by Sector as of the End of the Third Quarter of 2021

(EUR million)

(per cent of GDP)



Note: Nominal GDP data for the four quarters, including the third quarter of 2021, are used in the FDI to GDP ratio denominator.

Sources: the BNB, the NSI, BNB calculations.

of end-2020), mainly driven by the increase in foreign short-term assets of bank institutions as compared to their level at end-2020.

Between January and November 2021 direct investment liabilities (reporting FDI inflows into Bulgaria) decreased year on year to EUR 1828.7 million (against EUR 2527.6 million in the same period of 2020).<sup>19</sup> Lower inflow of funds on debt instruments largely driven by the base effect in July 2020 when direct investment in the country in the form of debt instruments rose substantially was instrumental for the reported decline. The rise in reinvested profit in other sectors and to a lesser extent in banks had a limiting effect on the decrease in direct investment liabilities. At the end of the third quarter of 2021 total FDI amounted to 75.6 per cent of GDP.

In line with the dynamics of net flows on the balance of payments current, capital and financial account, gross international reserves based on the balance of payments data<sup>20</sup> for January–November 2021 rose from the end of 2020, mainly due to additional SDR received. In November 2021 the international reserve coverage of the average nominal imports of goods and non-factor services for the last 12 months remained high: 9.2 months against 11.1 months in December 2020. The ratio of Bulgaria's international reserves<sup>21</sup> to short-term external debt remained also high: 474.1 per cent in November against 507.8 per cent in December 2020.

In November 2021 Bulgaria's gross external debt came to EUR 42.0 billion (64.1 per cent of GDP), marking a rise of EUR 2384.9 million from December 2020. The increase reflected mainly the SDR received, which according to the new methodological requirements, applied as from July 2021 in producing gross external debt statistics, are to be reported as liabilities of the central bank. The share of long-term debt in Bulgaria's total gross external debt was 84.1 per cent in November, remaining broadly unchanged on the end of 2020.

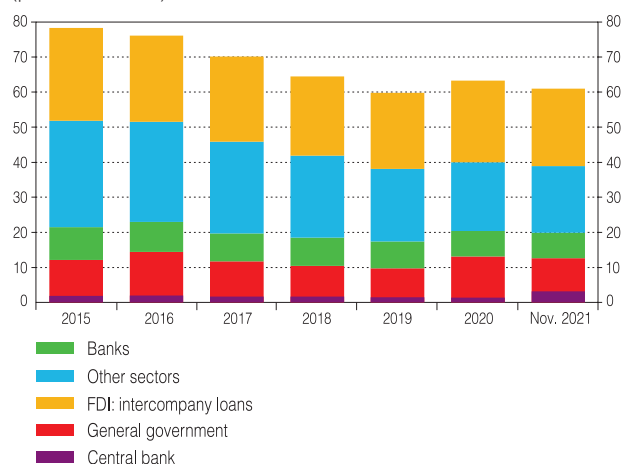
<sup>19</sup> Preliminary data subject to revision.

<sup>20</sup> Valuation adjustments and price revaluation excluded.

<sup>21</sup> The analysis is based on gross international reserves on the BNB Issue Department balance sheet. The market value of international reserves includes changes stemming from transactions, valuation adjustments and price revaluation.

## Gross External Debt

(per cent of GDP)



Notes: Since July 2021 the BNB has started to publish its monthly statistical data on gross external debt in line with External Debt Statistics: Guide for Compilers and Users, IMF 2014. Further details on individual institutional sectors are available on the BNB website, Statistics, External Sector/Gross External Debt. Nominal GDP data for the last four quarters, including the third quarter of 2021, are used in calculating gross external debt to GDP ratio for November 2021.

Sources: the BNB, the NSI, BNB calculations.

## Gross External Debt in November 2021

(EUR million)

	Amount	Change	
		From December 2020	For the last 12 months
General government	8,254.7	232.4	220.0
Central bank	2,072.7	1,247.6	1,244.7
Other monetary financial institutions	4,758.0	297.8	840.3
Other sectors	12,445.3	387.4	328.0
Financial corporations other than MFIs	2,310.7	283.9	273.4
Non-financial corporations	10,029.1	112.4	57.9
Households and NPISHs	105.5	-9.0	-3.4
FDI: Intercompany loans	14,481.2	219.7	29.6
<b>Total</b>	<b>42,012.1</b>	<b>2,384.9</b>	<b>2,662.5</b>

Source: the BNB.

## Monetary and Credit Aggregates

Following strong non-government sector deposit growth<sup>22</sup> in the banking system over the first eight months of 2021, from the end of the third quarter annual growth tended to slow down, accounting for 9.1 per cent in December (12.0 per cent in August 2021). Growth slowed down both in household and non-financial corporation sectors, with deposits of non-financial corporations moderating more pronounced compared with August. Most likely, factors responsible for this dynamics include the retention of very low deposit rates, the fee introduced by most banks for cash deposited over a certain amount and the gradual decrease of the threshold to which it applies. These factors coupled with accelerating inflation are likely to stimulate households to redirect part of their free funds from savings to consumption or to seek alternative investment or store-of-value options to deposits. Amid nominal interest rates close to zero, both corporations and households continued to keep their savings in overnight deposits, and in terms of currency, their savings remained preferably in national currency. Continued growth of overnight deposits was most probably driven by the policy implemented by some banks to convert time deposits into demand deposits and to stop offering new time deposits.

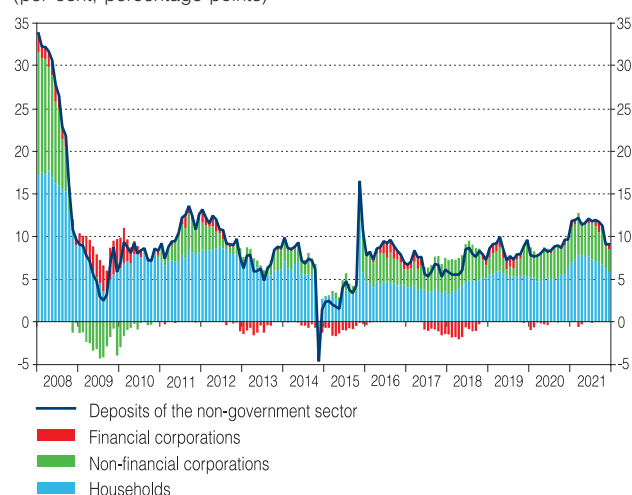
In the context of sustained relatively high inflow of attracted funds from residents in the banking system, the effective implicit rate of minimum required reserves<sup>23</sup> in 2021 remained at levels close to those of the previous year. In December this rate was 9.39 per cent (9.43 per cent in December 2020). Commercial banks deposits with the BNB comprised 8.27 percentage points in the fulfilment of minimum required reserves and remaining 1.12 percentage points formed recognised cash balances.

<sup>22</sup> Non-government sector's deposits include deposits of households, non-financial corporations and financial corporations. Deposits of households and non-financial corporations comprised the largest share in non-government sector's deposits (96.3 per cent on average for the last 12 months as of December 2021), and therefore the analysis is focused on these two sectors.

<sup>23</sup> According to Article 3 of BNB Ordinance No 21 on the Minimum Required Reserves Maintained with the Bulgarian National Bank by Banks, the rate of minimum required reserves on funds attracted from residents is 10 per cent of the reserve base, from non-residents 5 per cent and from the state and local government budgets 0 per cent.

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

(per cent, percentage points)

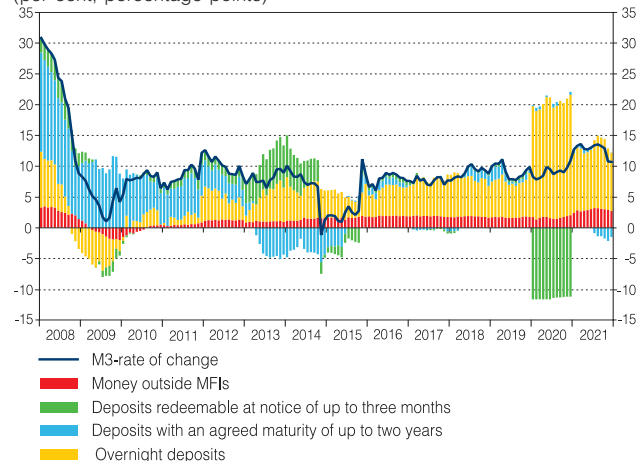


Note: The annual growth rate of non-government sector deposits in November 2015 reflects the exhausted base effect of KTB removal as a reporting unit from the monetary statistics in November 2014.

Source: the BNB.

### Annual 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. In view of the analysis of the banking products and in line with the methodological requirements based on January 2020 data, transferable savings deposits have been reclassified from the Deposits redeemable at notice of up to three months indicator to the Overnight deposits of the household sector indicator.

Source: the BNB.

Since early 2021 the annual growth rate of reserve money has tended to slow down, accounting for 9.1 per cent in December (34.9 per cent at end-2020). Decelerated growth was mainly due to the lower amount of banks' excess reserves. In December 2021 excess funds on banks' minimum reserve accounts over the required minimum of reserve assets under Ordinance No 21 was 52.2 per cent on an average daily basis, from 81.1 per cent in December 2020.<sup>24</sup> The sustained negative interest rate on bank excess reserves at -0.70 per cent<sup>25</sup> continued to stimulate banks to look for higher earning opportunities for investing free liquid funds in the banking system. In 2021 minimum required reserves continued growing under the influence of the rising deposit base. Concurrently, from mid-August the funds maintained by banks in TARGET2 have fallen to a certain degree.

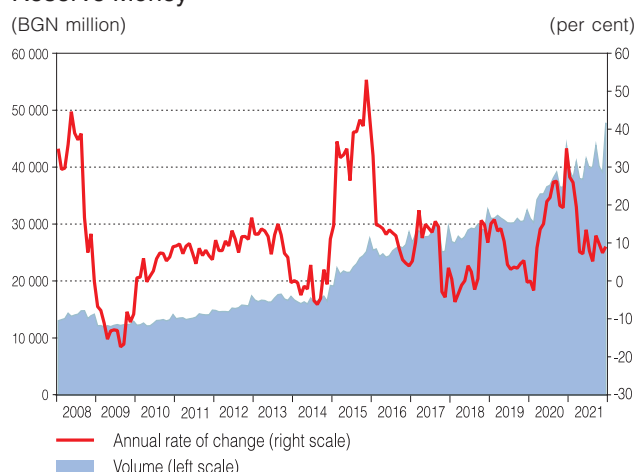
Following relatively high historical growth rates in the currency in circulation between October 2020 and August 2021, since September annual growth has tended to gradually slow down, accounting for 16.23 per cent at the end of the year (19.4 per cent in August). This dynamics can be partly explained by the base effect of the strong increase in the currency in circulation in the last quarter of 2020. At the same time, accelerating inflation, while implying greater demand for currency in circulation for transaction purposes, is likely to affect the economic agents' sentiment and weaken their incentives to hold cash for accumulating reserves.

Reserve currency (euro) trading with the BNB is the main lev liquidity management instrument of banks under currency board arrangements. In 2021 BNB purchases (net) from banks amounted to EUR 200 million.

<sup>24</sup> Ordinance No 21 Article 5, paragraph 1, in force as of 4 January 2016, defines excess reserves as the excess of the holdings in reserve assets by more than 5 per cent over the required amount of minimum required reserves. The amendments to Ordinance No 21, in force since 4 June 2021, changed the definition of excess reserves. According to the new definition, excess reserves shall be the excess of the holdings in reserve assets over the required amount of minimum required reserves.

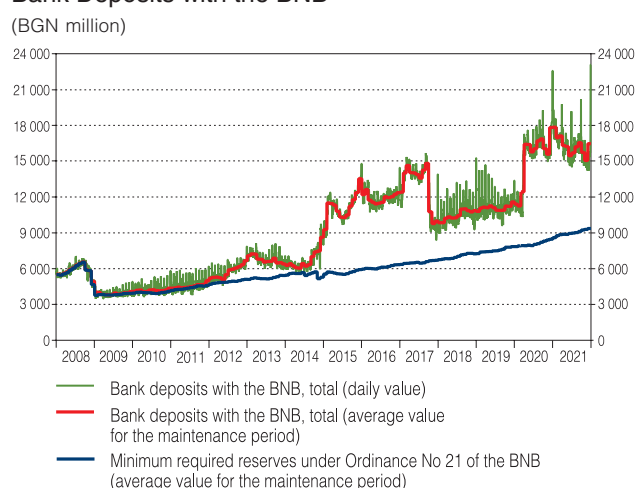
<sup>25</sup> In line with the approved methodological changes, effective as of 4 October 2017, the BNB applies on bank excess reserves whichever is lower between 0 per cent and ECB deposit facility rate reduced by 20 basis points. As from September 2019 the ECB deposit facility rate is -0.50 per cent.

## Reserve Money



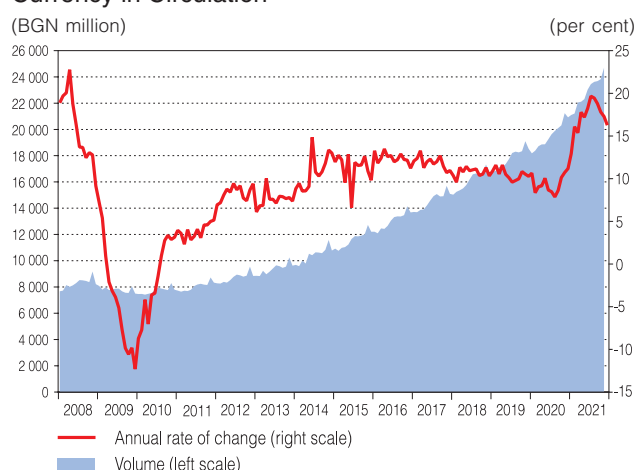
Source: the BNB.

## Bank Deposits with the BNB



Source: the BNB.

## Currency in Circulation



Source: the BNB.

At the end of 2021 bank assets grew by 8.5 per cent year on year.<sup>26</sup> Growth in claims on the non-government sector and Bulgarian government bond portfolios contributed most to bank asset growth. Banks' foreign liabilities posted an increase on end-2020 (by BGN 1.7 billion), which was higher than growth in banks' foreign assets (by BGN 1.3 billion). As a result, net foreign assets fell by BGN 419 million to BGN 7.5 billion in December.

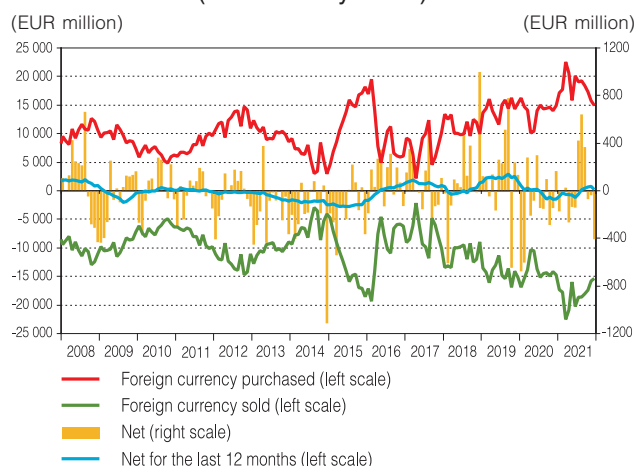
The upward trend from March 2021 in annual growth of credit to non-financial corporations and households<sup>27</sup> was sustained and in December it reached 8.3 per cent, from 4.5 per cent at the end of 2020. The accelerated growth rate in credit to households contributed most to this dynamics. Developments in private sector lending were shaped by factors involving both demand and supply. Retained historically low nominal lending rates coupled with accelerating inflation and a favourable housing market outlook have stimulated demand for credit, especially for the purchase of a first home or additional property. Negative real deposit rates boosted further the increasing demand for real estate. On the supply side, the significant volume and low cost of attracted funds, competition and high liquidity in the banking sector have contributed to the easing of credit standards after their significant tightening in 2020, with the easing being most pronounced in mortgage lending.

The annual growth rate of credit to non-financial corporation did not accelerate significantly from the rates recorded in 2020. Most likely, these developments were impacted by comparatively subdued investment activity of corporations. Results of the bank lending survey indicate that demand for working capital and inventory financing contributed most strongly to the enhanced demand for credit resources by companies in

<sup>26</sup> Data from sectoral monthly reporting of other monetary financial institutions were used.

<sup>27</sup> Loans represent the bulk of bank claims on the non-government sector with a share of 97.1 per cent on average for the last 12 months as of December 2021, and the analysis was therefore focused on them. In addition to loans, claims also include repurchase agreements, securities other than shares, and shares and other equity. Loans to the non-government sector in turn, include loans to households, loans to non-financial corporations and loans to financial corporations. The share of loans to households and non-financial corporations in total loans to the non-government sector accounted for 93.2 per cent on average in the last 12 months as of December 2021, and therefore developments in these two sectors are addressed.

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

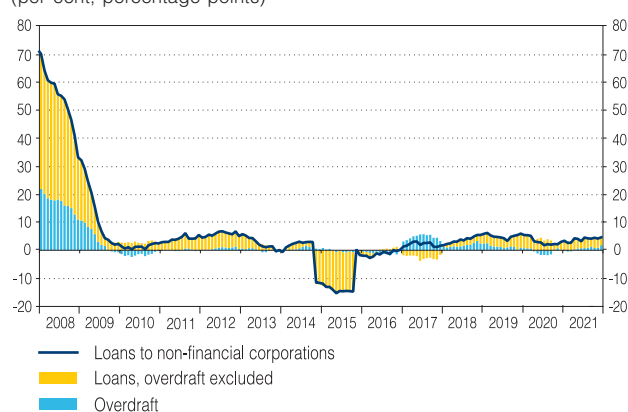


Note: Net means currency purchased minus currency sold by the BNB. Data refer to all bank transactions in foreign currency, including liquidity management operations related to the transfer of own funds from lev accounts with the BNB to own accounts with the BNB in euro and vice versa.

Source: the BNB.

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

(per cent, percentage points)



Note: The annual growth rate of loans to non-financial corporations 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.



the first three quarters of the year. In December the annual growth rate of credit to non-financial corporations was 4.6 per cent (3.0 per cent by end-2020), with the main contribution of loans, excluding overdraft and, to a much lesser extent, overdrafts. Newly extended<sup>28</sup> corporate loans posted a slight decline throughout the year compared with end-2020.<sup>29</sup> In terms of the currency structure, the share of newly extended loans to corporations in levs increased at the expense of those in euro and US dollars. In December loans in national currency comprised 55.7 per cent of total new corporate loans, euro-denominated loans accounted for 43.1 per cent and those in US dollars 1.2 per cent.<sup>30</sup>

Annual growth in credit to households accelerated markedly to 13.4 per cent in December, from 6.6 per cent at end-2020. These developments reflected both the accelerated rate of growth in housing purchase loans to 17.6 per cent in December 2021, from 11.6 per cent at end-2020, and growth in consumer loans to 11.1 per cent at the end of 2021, from 5.0 per cent in December 2020. New consumer and housing loans have tended to increase in volumes throughout the year<sup>31</sup>, more pronounced in housing loans.

Summarised weighted results of the bank lending survey<sup>32</sup> for the third quarter of 2021 suggest easing of credit standards<sup>33</sup> in approving credit applications of corporations and households. Credit conditions were most markedly eased in terms of interest rates. Concurrently, banks' credit conditions regarding fees and commissions in the household sector further tightened. Credit policy easing (credit standards

<sup>28</sup> The terms 'new' and 'newly extended' hereinafter referred to as the statistical category 'new business'.

<sup>29</sup> Based on 12-month moving average.

<sup>30</sup> The share of loans in national currency, euro and US dollars for the last 12 months as of December 2021.

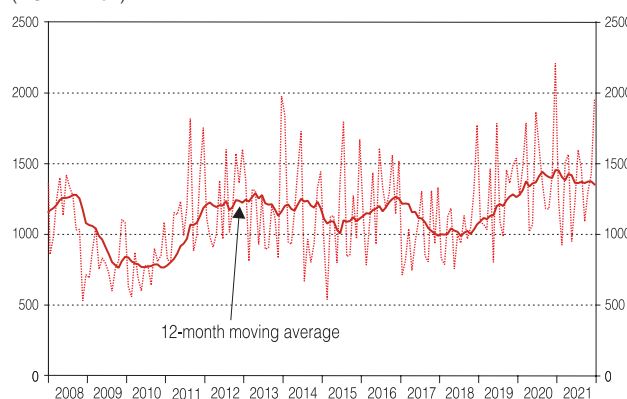
<sup>31</sup> Based on 12-month moving average.

<sup>32</sup> Bank Lending Survey in Bulgaria is carried out by the BNB on a quarterly basis. Summarised results of the survey are presented through weighting bank responses by their market share in the relevant credit segment.

<sup>33</sup> Credit standards are understood as internal bank guidelines or criteria for loan approvals established prior to negotiating the terms of extended loans. Credit standards determine the type of the loan and collateral considered eligible by banks, taking into account specific priorities by sector, etc. Credit standards specify also all relevant conditions to be met by a borrower.

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

(BGN million)

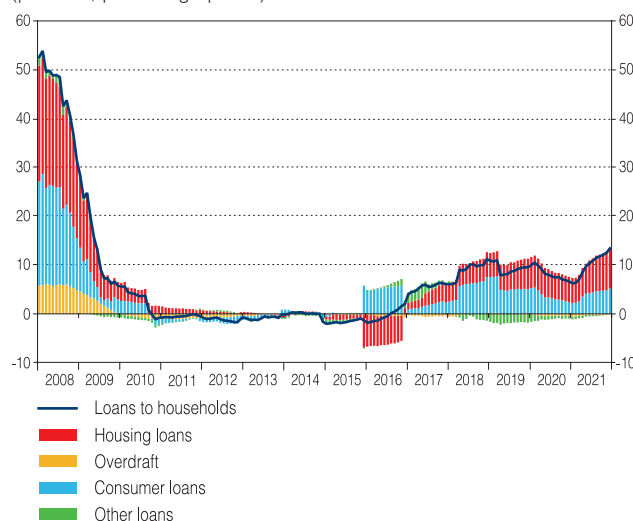


Note: For data characterised by significant volatility, additionally moving averages computed for suitably selected periods are provided, in order to smooth the fluctuations in corresponding time series and present the trends in their development.

Source: the BNB.

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

(per cent, percentage points)

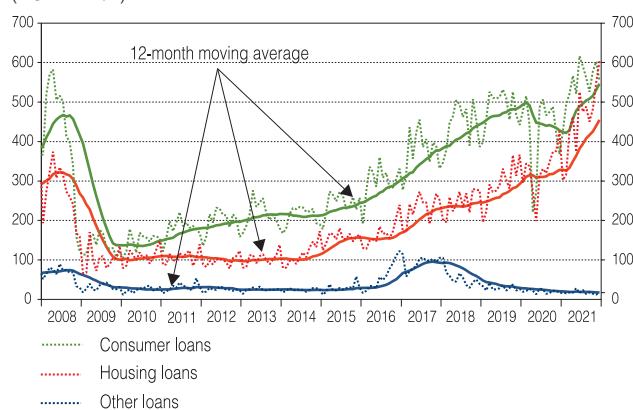


Note: Based on additional information received from reporting units, a revision of household loans was carried out according to their purpose of use for the December 2015–August 2019 period.

Source: the BNB.

## New Loans to Households (Monthly Volumes)

(BGN million)



Source: the BNB.

and credit conditions<sup>34</sup>) over the quarter continued to be impacted mainly by the significant volume and low cost of attracted funds, competition and high liquidity in the banking sector. At the same time, increased risk assessments and lower risk appetite, in particular in terms of loans to corporations, led to tightening of the lending policy. Bank expectations for the last quarter of 2021 are for a slight easing of lending standards for consumer, housing and corporate loans.

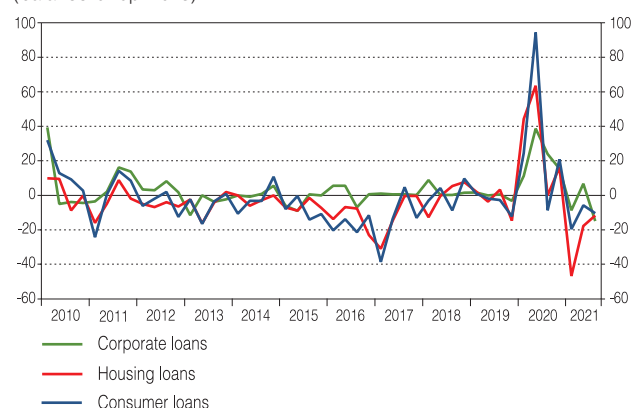
Over the third quarter of 2021 banks reported an increase in demand for corporate and household loans, with household loans posting significantly higher growth. Financial resources required for working capital and inventories are considered by banks to be the main factor behind higher demand for corporate loans over the quarter. Major factors behind the increased demand for consumer loans were low interest rates and the desire of certain households to finance their consumer expenditure by loans secured by real estate. In addition to low interest rates, households' needs of funds for purchasing first home and additional property, the overall macroeconomic environment and housing market prospects contributed essentially to the surge in demand for housing loans over the quarter. In the third quarter of 2021 banks expect a further increase in demand for loans by both households and corporations, with consumer loans expected to grow most strongly.

Over the first half of 2022 annual growth of non-government sector's deposits in the banking system is expected to further slow down. These developments will reflect the 'storage' fee introduced by most banks for cash above a certain amount and negative real interest rates on deposits. In the context of a continuous increase not only in income but also in prices, a portion of the liquid funds is expected to be used for consumption or investment opportunities are to be sought as alternatives to deposits. Growth in credit to the non-government sector is also expected to moderate somewhat compared with end-2021 due to the slowdown in credit to households. This dynamics will partly reflect the projected slower growth rate in private

<sup>34</sup> Credit conditions typically involve the reference interest rate surcharge, the loan amount, conditions for its utilisation and other conditions such as fees and commissions, collateral or guarantees to be provided by a borrower.

## Changes in Credit Standards

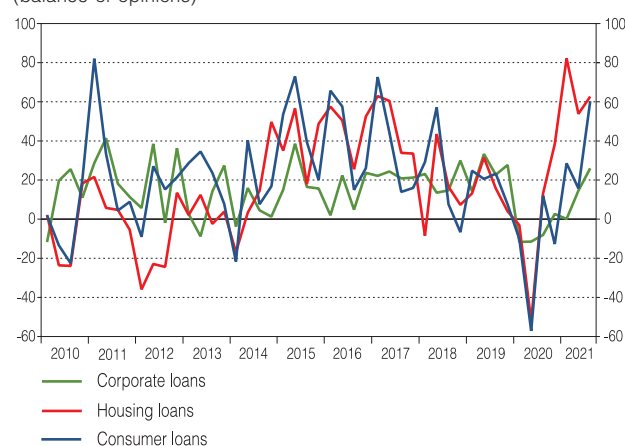
(balance of opinions)



Source: the BNB.

## Changes in Credit Demand

(balance of opinions)



Source: the BNB.

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

Source: the BNB.



consumption in real terms. Other factors that are expected to have a potential dampening effect on credit growth on the supply side include BNB increases in the countercyclical buffer and the introduction of new regulatory measures related to the minimum requirements for own funds and eligible liabilities (MREL) of credit institutions. Concurrently, still low lending rates along with projected high consumer price inflation and expectations of a continuous increase in house prices would support demand for loans by households. Negative real deposit rates will additionally boost demand for loans for real estate purchases.

## Interest Rates

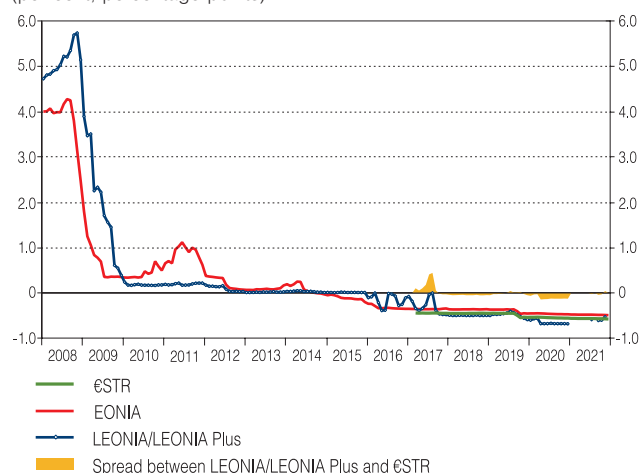
Interest rate dynamics in the interbank money market in 2021 reflected the lack of incentives for banks to trade in this market amid ample banking system liquidity. Over the year unsecured overnight deposit transactions of marginal volumes in levs were concluded only in July, September, October and November. In the months when no transactions were concluded, LEONIA Plus index was not available. In November it was -0.53 per cent, and its spread with €STR was 0.04 basis points (-13 basis points in December 2020).

In 2021 deposit rates fluctuated around zero. Interest rates on household deposits remained slightly positive posting a new fall compared with end-2020, while the average weighted interest rate in the non-financial corporations sector was negative in most months of the year. These developments reflected the ample liquidity and comparatively high inflow of attracted resources in the banking system. The obligation of banks to pay 0.7 per cent for maintaining excess liquidity as a reserve at the BNB is also likely to create incentives for partial pass-through of negative interest on borrowed funds.

In December 2021 the average weighted interest rate on new time deposits of non-financial corporations and households was 0.02 per cent, down 8 basis points from the end of 2020. These developments reflected mainly the fall in the average interest rate on corporations' deposits, accounting for -0.19 per cent in December (-0.02 per cent at end-2020). The negative average weighted interest rates on deposits of non-

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

(per cent, percentage points)



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

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

Sources: the BNB, the ECB.

financial corporations throughout the year were almost entirely due to negative interest rates on their deposits in levs, which pushed the total weighted rate on lev-denominated deposits into a negative territory from May 2021. Interest rates on deposits denominated in euro and US dollars remained positive but close to zero.

The significant volume and low cost of attracted resources, competition and high banking liquidity remained the main factors responsible for the slight fall in lending rates on new loans to corporations and households throughout the year.

As regards non-financial corporations, loans in US dollars posted the strongest decline by 98 basis points to 2.5 per cent in December 2021 compared to the end of 2020, while loans in national currency fell to a lesser extent: by 31 basis points to 2.6 per cent. Concurrently, interest rates on new loans in euro remained almost unchanged from the end of the previous year.<sup>35</sup> In the household sector, the gradual decrease in annual percentage rate of charge (APRC) on new housing loans was sustained (by 18 basis points from the end of 2020 to 3.0 per cent in December), reflecting entirely lower interest rates. The APRC on newly extended consumer loans tended to decline in the first half of the year, while in the second half it remained unchanged. This dynamics was largely driven by the implicit rate of non-interest service charges.

In 2021 interest rates on new loans to corporations and households tended to decline both in Bulgaria and the euro area. As a consequence of the stronger cut of interest rates in Bulgaria, the spreads with the euro area were slightly narrowing from the end-2020 levels.<sup>36</sup>

Amid continuous inflows of attracted funds and high liquidity in the banking system, deposit and lending rates are projected to be maintained at levels close to current ones in the first half of 2022.

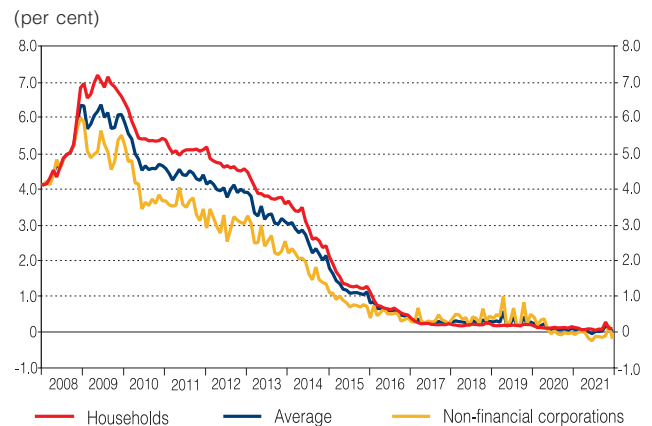
Five auctions for BGN-denominated government securities were held in the fourth quarter of

<sup>35</sup> Indicated values of interest rates on loans to non-financial corporations and households are weighted averages on a 12-month basis.

<sup>36</sup> Spreads are calculated as a difference between average interest rates in Bulgaria and the euro area across all maturities for the relevant type of credit, overall in national currency and euro, weighted by relevant volumes of new loans for a 12-month period.

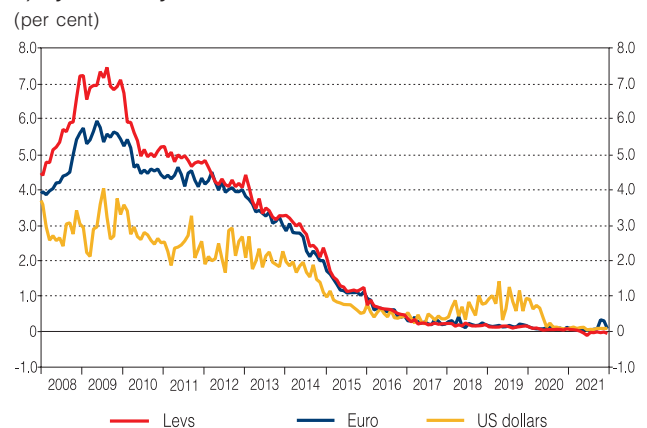
## Interest Rates on New Time Deposits

### a) by sector



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

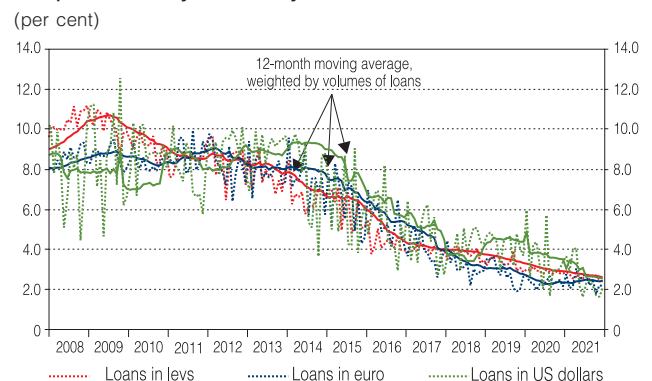
### b) by currency



Notes: The average interest rates by currency are based on rates for all sectors and maturities weighted by relevant volumes of new deposits.

Source: the BNB.

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



Source: the BNB.

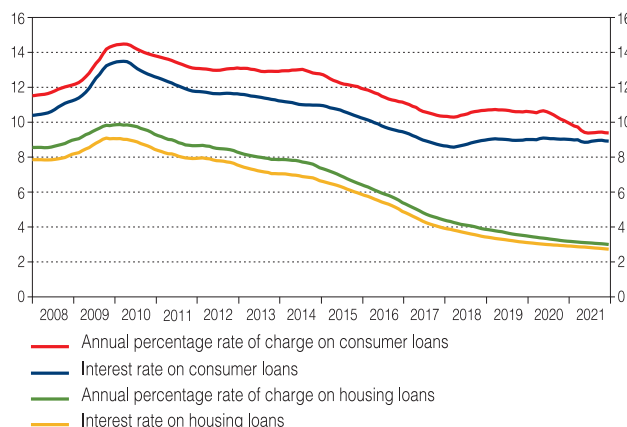
2021, with securities sold totalling BGN 2.5 billion. In October two government securities issues were reopened: a ten-year-and-six-month original maturity issue (0.10 per cent coupon interest), which is a benchmark of the long-term interest rate for assessing the degree of convergence, and a five-year original maturity issue (0.00 per cent coupon interest). The nominal value of bids approved for both issues totalled BGN 500 million. The average weighted annual yields attained at the auctions were 0.53 per cent on bonds with maturity of ten years and six months and -0.02 per cent on bonds with maturity of five years, which were sold at a lower bid-to-cover ratio and posted a rise in the yield from the third quarter of the year. At November auctions the issue of government securities with maturity of five years was reopened and two new issues were offered: a three-year-and-six month issue (0.00 per cent coupon interest) and a seven-year-and-six-month issue (0.25 per cent coupon interest). The nominal value of bids approved was BGN 500 million for each of the issues. The average weighted annual yield of the reopened issue rose to 0.27 per cent and yields of the issues with maturity of three years and six months, and seven years and six months amounted to 0.13 and 0.49 per cent, respectively. The concentration of a large number of issues on the domestic market in the fourth quarter pushed up the cost of debt financing.

Concurrently, the long-term interest rate for assessing the degree of convergence rose to 0.44 per cent in December, from 0.15 per cent in September. At the end of December the spread between yields of Bulgarian and German government securities with maturity of ten years and six months widened compared with September due to the higher yield of Bulgarian government securities and a marginal fall in the German government bond yield recorded over the review period.

In the fourth quarter of the year yields of Bulgarian Eurobonds issued on the international capital markets rose in all maturity sectors, with an increase reported also in euro area countries. A possible tightening of the ECB monetary policy in the first half of 2022 would result in a further rise in yields of euro area government bonds, which would largely boost yields of Bulgarian government bonds. The phase-out of the Federal

### Interest Rates and APRC on New Household Loans

(per cent)

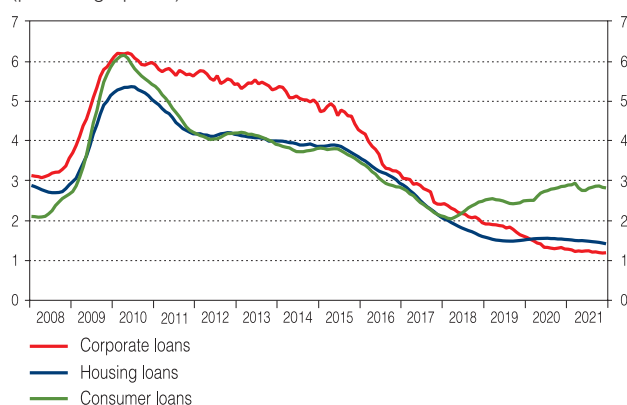


Notes: Interest rates in all maturities and currencies are weighted by the relevant volumes of new loans for a 12-month period. The difference between the APRC and the relevant interest rates reflects the approximate per cent of all non-interest service charges on loans (including fees and commissions).

Source: the BNB.

### Interest Rates on New Corporate and Household Loans: the Spread between Bulgaria and the Euro Area

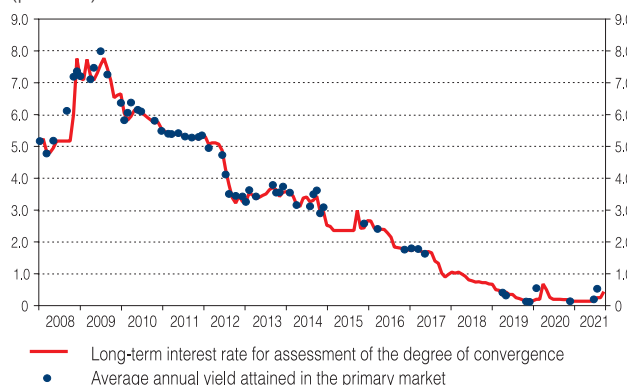
(percentage points)



Sources: the BNB, the ECB.

### Long-term Interest Rates in the Primary and Secondary Markets

(per cent)



Notes: The chart shows the yields reported on the primary and secondary markets on government bonds with ten-year-and-six-month original maturity. The frequency of auctions for issues with this maturity corresponds to the number of observations marked in blue.

Source: the BNB.

Reserve's securities purchases, which started in November 2021, and the announced possible increase in the federal funds rate will also stimulate the rise in yields of euro area and Bulgarian government securities. Concurrently, a significant escalation of tensions in Ukraine could lead to an increased uncertainty in financial markets, investors' reorientation to lower risk assets and a decline in government bond yields, including in Bulgarian bonds.

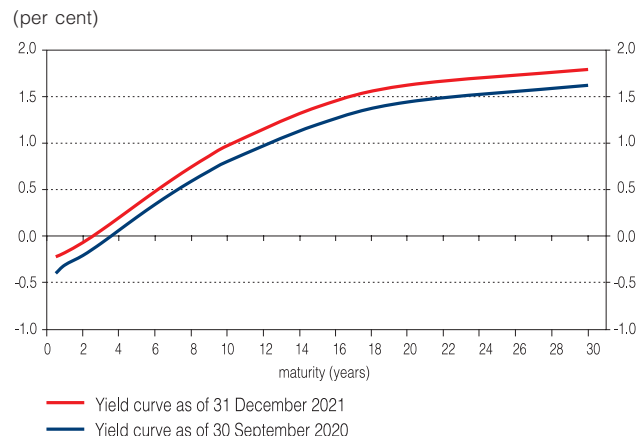
## Financial Flows between Consolidated Budget and Other Sectors of the Economy

Government revenue and expenditure policies and budget financing operations affect the allocation of liquidity across economic sectors.<sup>37</sup>

Data on consolidated fiscal programme performance in the fourth quarter of the year show that the financial sector, excluding the BNB, was the main net source of liquidity to the budget as a result of government securities issued on the domestic market in October and November amid a lack of payments on maturing government securities. Liquidity flows between the budget and the external sector were limited in value over the quarter, with revenue from grants received slightly exceeding the payments on Bulgaria's contribution to the EU budget and interest paid on external loans. Concurrently, there was a significant redirection of liquidity from the budget to the non-government non-bank sector, which was entirely concentrated in December. Funds redirected to the non-government sector over the quarter reflected mainly the continuing operation of government anti-crisis measures, end-year advance budget payments under the EU Common Agricultural Policy and greater payments of budget spending units for this period of the year. As a result of the excess of redirected funds from the budget to the non-government non-bank sector over the funds received from the financial sector (the BNB

<sup>37</sup> Division of economic sectors in this Section of the Economic Review is based on information available from monthly reports under the Consolidated Fiscal Programme and does not therefore coincide with the sector classification used in the National System of Accounts.

## Reference Government Securities Yield Curve in Bulgaria



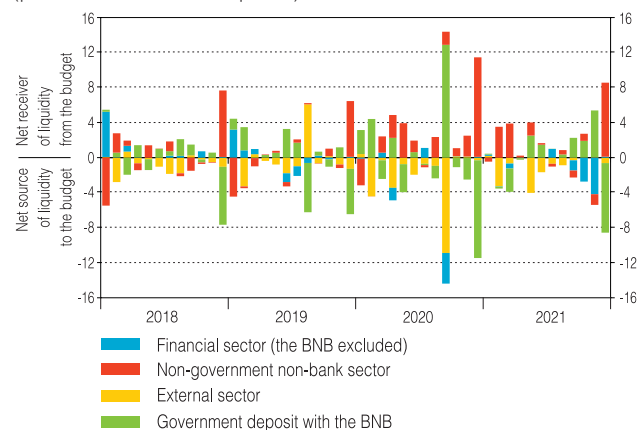
Notes: The reference yield curve of Bulgarian government securities is based on BNB own calculations under the extended version of Nelson–Siegel–Svensson model (1994). The yield change refers to the previous quarter.

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

Sources: the MF, BNB calculations.

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

(per cent of GDP for the quarter)



Notes: This chart is based on monthly data of CFP implementation by including also information obtained from MF monthly bulletins on state budget performance and major CFP indicators, and MF Central Government Debt and Guarantees monthly bulletins. GDP data from the BNB macroeconomic forecast of January 2021 are employed to assess liquid flows in the fourth quarter of 2021.

Sources: the MF, the BNB.

excluded) the government deposit with the BNB posted a decrease by BGN 247 million from the end of September and amounted to BGN 9170 million at the end of December.

Additional spending on allowances to pensions in the first six months of 2022 and on compensating corporate customers of electricity and natural gas in the first three months of the year, approved by the National Assembly at the end of 2021<sup>38</sup>, will prompt a redirection of liquidity from the budget to the non-government non-bank sector in the first half of 2022. The increase in social and operational costs projected in the 2022 draft state budget compared to 2021 will be a potential factor for injection of additional liquidity from the budget to the non-government non-bank sector. Pending payments at the end of the first quarter of the year on maturing government securities issued on international capital markets worth EUR 1.25 billion, including EUR 860.62 million held by residents at end-November, will constitute a factor for redirecting liquidity from the budget to both external and financial sectors (the BNB excluded). At the same time, EU reimbursements under the Common Agricultural Policy typical for the beginning of the year are a prerequisite for the external sector to be a source of liquidity for the budget.

By the end of December 2021 the market value of Bulgaria's international reserves (including currency valuation adjustments and price revaluations) was EUR 34.6 billion (BGN 67.7 billion), increasing by EUR 3.7 billion (BGN 7.3 billion) compared with the end of 2020. The amount of gross international reserves reflects the dynamics of financial flows generated by the interaction of external and internal economic factors and corresponds to the BNB Issue Department balance sheet liabilities according to the currency board principles. The increase in banknotes and coins in circulation contributed most to increased liabilities of the BNB Issue Department at the end of December 2021 *vis-à-vis* December 2020. The higher Banking Department deposit due to allocation of additional SDR to Bulgaria and the increased government deposit with the BNB had a weaker impact.

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<sup>38</sup> For details, see the Fiscal Policy Effects on the Economy Section in Chapter 3.

Banks' excess reserves with the BNB are expected to decrease further in the first half of 2022, whereby this fall will be driven by banks' demand for higher earning opportunities for investing free liquid funds. Minimum required reserves are anticipated to continue growing in line with the rising deposit base. Currency in circulation is expected to retain its comparatively high growth rates, tending however to slow down. In the first six months of 2022 developments in the government deposit with the BNB will reflect mainly the budget balance and the MF issuing policy. A factor behind lower government deposit will be the additional expenditure on pension allowances and energy subsidies approved by the National Assembly at the end of 2021 and pending payments at the end of the first quarter of the year on maturing government securities issued on international capital markets.



### 3. ECONOMIC ACTIVITY

Based on NSI seasonally adjusted data, in the third quarter of 2021 real GDP of Bulgaria increased by 0.6 per cent on a quarterly basis, reaching 99.8 per cent of its pre-pandemic value. By final demand component, the growth in economic activity was mainly driven by private consumption. During the third quarter labour market conditions improved, with a simultaneous increase in employment and hours worked per person reported on a quarterly basis along with a decline in the unemployment rate.

Economic indicators in the fourth quarter of 2021 signalled continuous growth in real GDP at a rate similar to that of the previous quarter. In the first half of 2022 real GDP growth is expected to slow down from the second half of 2021, with the contribution of private consumption likely to decline and that of fixed capital formation rising amid strengthened investment activity of the government.

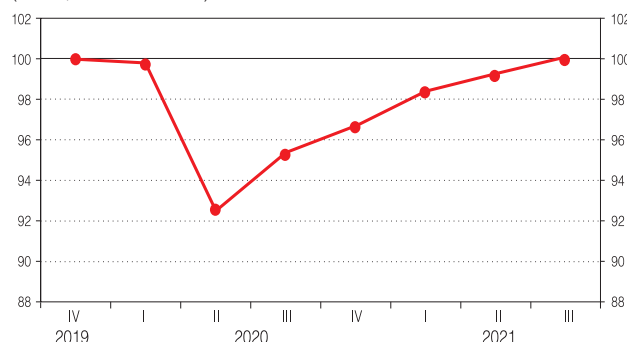
#### Current Economic Environment

According to seasonally adjusted NSI national account data, in the third quarter of 2021 the upward trend in Bulgaria's economic activity observed since the second half of 2020 was sustained, with a quarterly growth rate reaching 0.6 per cent. As a result, real GDP reached 99.8 per cent of its level before the spread of the COVID-19 pandemic (the fourth quarter of 2019). Quarterly growth of economic activity in the third quarter of 2021 continued to be driven by final consumption (primarily private and, to a lesser degree, government consumption), while net exports and fixed capital investment had negative contributions to GDP dynamics.

Over the third quarter of 2021 private consumption increased in real terms by 1.6 per cent quarter on quarter, having the largest positive contribution to the economic activity over the period. Growth in final consumption expenditure of households was underpinned by the increase in nominal compensation of employees (by 2.4 per cent on a quarterly basis), higher net fiscal transfers to households<sup>39</sup> and retained government measures of subsidised employment.<sup>40</sup> Additional factors behind the increased private consumption involved an improved indicator of consumer confidence and reported growth in

#### Profile of Recovery of Real GDP after the COVID-19 Crisis

(Index, Q4 2019 = 100)



Sources: the NSI, BNB calculations.

<sup>39</sup> This reflected the 5 per cent indexation of the minimum amount of pension benefit for length of service since 1 July 2021. For further information, see Fiscal Policy Effects on the Economy Section in this Chapter.

<sup>40</sup> The effect of short-term measures in support to employment was extended until the end of the calendar 2021.



newly extended consumer loans. In terms of final consumer expenditure structure, in the third quarter of 2021 the trend to a stronger rise in expenditure on durables was retained, likely to reflect the spread of the pandemic and related shift of part of household consumption from services to goods.

Government consumption also had a positive contribution to the GDP growth over the third quarter of 2021, rising by 2.8 per cent on a quarterly basis. This reflected mainly the increase in employee compensation costs in the public sector.

Between July and September 2021 investment in fixed capital fell by 2.9 per cent on a quarterly basis in real terms. According to the BNB estimates,<sup>41</sup> the decline in total investment was entirely due to the private sector, while public investment recorded growth. Factors potentially limiting firms' investment activity were the available spare capacities in industry and the continuing comparatively high economic uncertainty, according to NSI Business Survey data. Concurrently, the increase in general government sector's investment in the third quarter of the year is probably associated with the implementation of projects funded by the national budget.

Net exports had a negative contribution to the quarterly change in real GDP over the third quarter of 2021, driven by both export declines and import growth. The downward export dynamics was attributable to the component of goods, likely to reflect supply-side temporary factors.<sup>42</sup> Imports of goods and services over the third quarter of 2021 was underpinned by the growth in private consumption marked by a high import component.

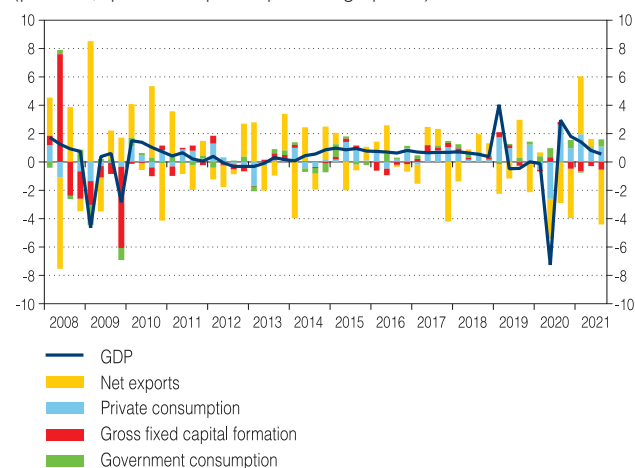
Economic indicators for Bulgaria in the fourth quarter of 2021 signalled continuous growth in real GDP at a rate similar to that of the third

<sup>41</sup> The NSI does not provide official data on the breakdown of total investments into private and public. The series on private investment is constructed by the BNB as a difference between total investment and the estimated amount of public investment on an accrual basis in real terms. The estimate of public investment is based on data from quarterly non-financial accounts of the general government sector and reports on the implementation of the consolidated fiscal programme published by the NSI and the MF, accordingly.

<sup>42</sup> In the third quarter goods exports was negatively affected by repairs in a key sector copper mining and manufacture company. For details, see the Exports and Imports of Goods and Services Section in this Chapter.

## Contribution to GDP Growth by Final Use Component

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

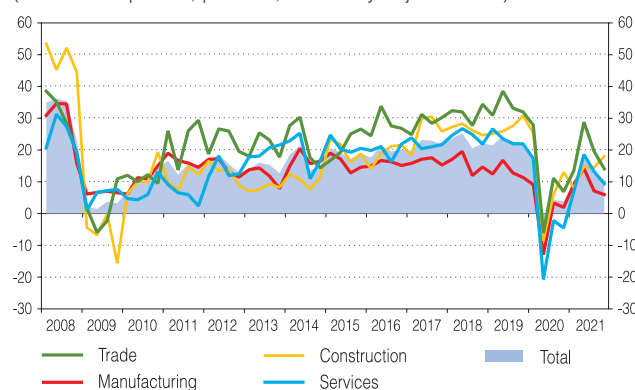


Notes: Non-additive data due to direct chain-linking and seasonal adjustment of GDP and its components. The contribution of the change in inventories has not been included.

Sources: the NSI, BNB calculations.

## Expectations about Future Economic Activity

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



Sources: the NSI, BNB calculations.

quarter. On the one hand, reporting data of high frequency indicators for October–November 2021, such as indices of industrial production, construction and retail trade volumes at constant prices, show an accelerating growth rate of economic activity. On the other hand, certain deterioration of economic agents' sentiment was observed in the fourth quarter, which is a precondition for a more cautious behaviour in respect of their consumption and investment expenses.

BNB seasonally adjusted data show that in the fourth quarter of 2021 the overall business climate indicator worsened slightly from the previous quarter, with the contribution of all major sectors. The uncertain economic environment continued to be among the main factors hampering business activities, with the share of firms pointing to this factor as one having a dissuasive effect on their activity increasing in the fourth quarter of 2021. This is consistent with the dynamics of the BNB uncertainty indicator in the economy, which rose somewhat at the end of the year.<sup>43</sup> Eurostat seasonally adjusted data on consumer confidence also indicated worsened sentiment in the fourth quarter of 2021. This reflected largely more negative assessments of households about the economic situation in Bulgaria (current and expected), labour market developments in the next months and households' financial position. This was likely influenced by the reported increase in households' inflation perceptions in Bulgaria, which accelerated at the end of the year.<sup>44</sup>

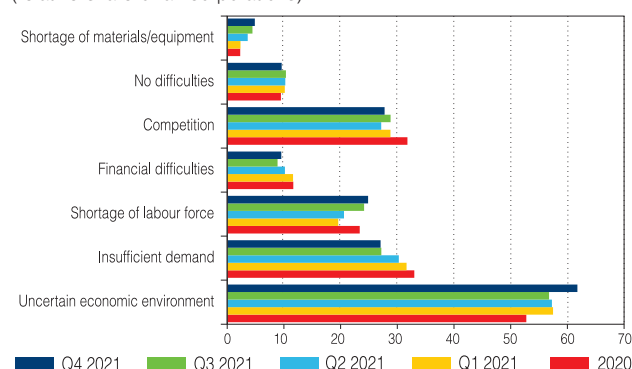
Despite the above developments, high frequency data of NSI short-term business statistics for October–November 2021 registered an improvement in economic activity compared to the third quarter of the year. According to retail trade volumes on average, sales increased in both real and nominal terms from the third quarter of 2021. In October–November 2021 the industrial production index also posted growth on a quarterly basis, with output increases reported in all major sectors: mining and quarrying, manufacturing, and production and distribution of electricity and heating and gas. This dynam-

<sup>43</sup> According to the construction of the indicator, an increase in the indicator means that economic agents have different expectations about economic environment developments.

<sup>44</sup> For more information, see Chapter 4 *Inflation*.

## Factors Hampering Business Activities of Corporations

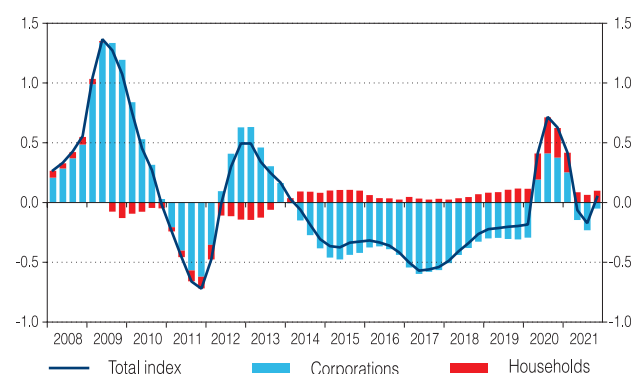
(relative share of all corporations)



Note: Average for the period calculated as a weighted average based on economic sectors' shares in total economy (industry, construction, trade and services).

Sources: the NSI, BNB calculations.

## Uncertainty Indicator in the Economy (Corporations and Households)

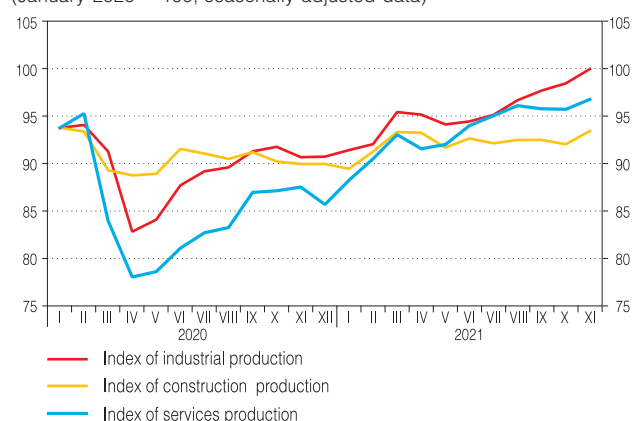


Notes: Higher values of this indicator should be interpreted as an increase in the uncertainty. Positive/negative values of the global indicator show that the uncertainty in economy is above/below its long-run level. This indicator is constructed under a methodology presented in: Ivanov, E. "Constructing 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.

## Dynamics of the Index of Industrial, Construction and Services Production

(January 2020 = 100; seasonally adjusted data)



Sources: the NSI, Eurostat, BNB calculations.

ics corresponds to increased assuring of firms' production with orders from Bulgaria and abroad at the end of 2021. Over the reviewed period quarterly growth was also reported in the index of construction production, reflecting the component of building construction. Services production activity statistics data<sup>45</sup> reported an improvement for October–November 2021 compared to the third quarter of 2021, with all main sub-sectors contributing to this, except for hotels and restaurants (which continue to be negatively affected by the spread of COVID-19) and professional activities and research services.

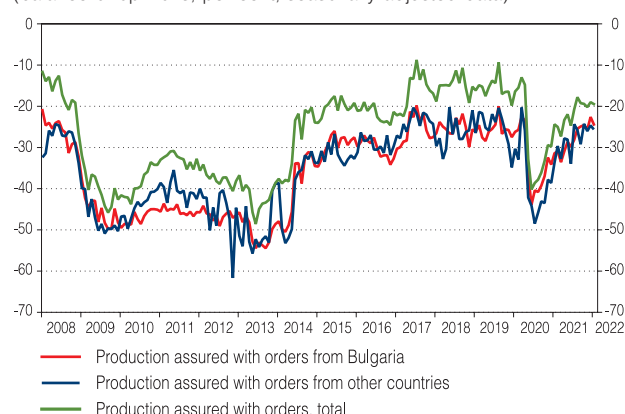
In the first half of 2022 economic activity growth is expected to slow down from the second half of 2021, with a change in its structure involving a decreased contribution of private consumption and an increased contribution of gross fixed capital formation amid strengthened investment activity of the government. The main driver for slowing GDP growth in terms of private consumption is the projected acceleration of inflation until mid-2022 and its negative effects on real disposable income and household sentiment. In the first quarter of 2022 a quarterly drop in real terms government consumption is expected followed by slight quarterly growth in the second quarter of 2022.<sup>46</sup> Gross fixed capital formation will follow an upward trend over the first half of 2022, underpinned by the absorption of EU funds in the last phase of the 2014–2020 programming period and increased public investment financed by the national budget. The contribution of net exports to the economic growth in the first and second quarters of 2022 is expected to remain close to neutral.

<sup>45</sup> Eurostat seasonally adjusted data are used.

<sup>46</sup> The forecast of government consumption dynamics is prepared in the absence of a budgetary framework for 2022. This forecast is based on BNB staff assumptions on the dynamics of government consumption and does not reflect the effect of possible fiscal measures which may be initiated by the government with Bulgaria's new budgetary framework after the expiry of the temporary fiscal measures in force during 2021.

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

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



Sources: the NSI, BNB calculations.

## Real GDP Growth by Final Use Component

(per cent, on a quarterly basis; seasonally adjusted data)

	2016				2017				2018				2019				2020				2021		
	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III
Consumption incl.	1.1	-0.4	0.4	1.9	-0.4	1.3	1.1	1.6	1.1	0.5	1.1	-0.1	2.4	1.5	-0.2	2.4	-0.8	-1.7	3.1	1.0	2.8	1.1	1.8
Household consumption	0.9	-0.8	0.3	1.5	-0.3	1.2	1.3	1.7	0.9	0.2	0.8	0.3	2.8	1.6	0.0	1.9	-0.8	-4.0	4.0	1.5	2.9	1.6	1.6
Government final consumption expenditure	-1.0	2.7	0.0	2.0	0.8	-0.8	1.5	0.4	2.9	1.3	1.1	-0.1	0.1	1.7	1.2	1.8	3.2	4.0	-0.2	2.3	-0.7	1.4	1.4
Collective consumption	-0.8	2.7	1.5	1.1	1.9	0.5	1.3	1.1	0.4	2.5	-0.2	1.9	-0.9	-0.2	1.8	-0.7	1.8	5.8	-0.7	2.2	0.9	0.1	1.5
Gross fixed capital formation	-3.0	-2.3	-1.1	-0.8	1.1	2.3	1.1	1.5	2.0	0.6	0.5	0.8	1.9	1.0	-1.3	-0.2	-0.5	1.7	0.9	-2.3	-3.2	-1.5	-2.9
Exports of goods and non-factor services	2.7	4.8	0.4	1.1	1.3	2.3	2.2	-2.6	-0.2	1.6	0.5	3.6	-1.1	-1.2	6.6	-1.9	-2.5	-20.3	7.8	5.3	7.7	-1.0	-2.2
Imports of goods and non-factor services	1.4	1.7	0.6	2.0	3.4	0.5	0.5	3.5	1.8	1.3	-1.4	2.3	1.9	0.6	2.5	1.0	-2.8	-15.9	11.8	9.8	1.1	-1.7	3.3
GDP	0.7	0.7	0.6	0.8	0.7	0.7	0.7	0.7	0.7	0.6	0.5	0.4	4.0	-0.5	-0.4	0.0	-0.1	-7.2	2.9	1.8	1.4	0.8	0.6

Source: the NSI.

## Real GDP Growth by Final Use Component

(per cent, on an annual basis)

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Consumption incl.	2.7	-3.7	1.8	1.7	2.1	-2.4	0.9	2.1	1.7	2.2	3.1	3.9	1.2
Household consumption	2.4	-2.7	1.4	1.3	2.3	-2.5	0.8	1.6	1.3	1.5	2.2	3.5	-0.2
Government final consumption expenditure	1.0	-0.8	-0.2	0.3	-0.3	0.0	0.1	0.0	0.1	0.2	0.5	0.2	0.8
Collective consumption	-0.7	-0.2	0.6	0.1	0.0	0.1	-0.1	0.3	0.2	0.4	0.4	0.1	0.6
Gross fixed capital formation	6.2	-5.8	-4.9	-1.0	0.4	0.1	0.7	0.6	-1.4	0.6	1.0	0.8	0.1
Exports of goods and non-factor services	1.3	-6.2	4.7	6.3	1.2	5.8	2.0	4.2	5.5	3.7	1.2	2.6	-7.7
Imports of goods and non-factor services	-3.5	15.5	0.1	-5.1	-3.1	-2.8	-3.3	-3.1	-3.2	-4.3	-3.6	-3.3	3.3
GDP	6.1	-3.3	1.5	2.1	0.8	-0.6	1.0	3.4	3.0	2.8	2.7	4.0	-4.4

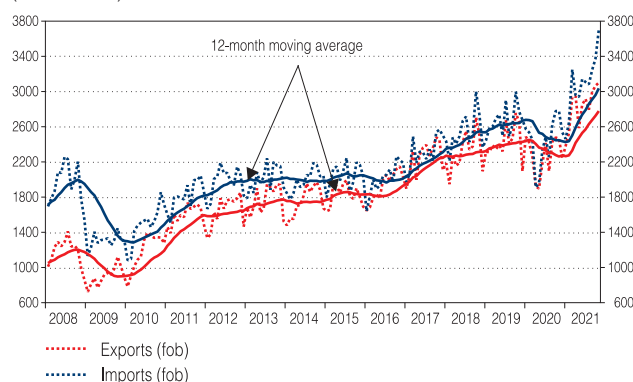
Source: the NSI.

## Exports and Imports of Goods and Services

In line with 2021 high volumes of world trade, increased prices of traded goods and services and adaptation of economic agents to the anti-epidemic measures, Bulgarian foreign trade flows reported significant year-on-year growth in the first eleven months of the year.<sup>47</sup> Foreign trade data for January–October 2021 show that Bulgarian exports and imports of goods rose considerably year on year in nominal terms: by 22.9 and 25.6 per cent, respectively. According to non-seasonally adjusted national account GDP data, in the first nine months of 2021 real exports of goods increased on an

<sup>47</sup> According to NSI seasonally adjusted data on GDP, in the third quarter of 2021 real exports of goods and services remained 8 per cent lower than their volume in the fourth quarter of 2019, while real imports of goods and services were 3 per cent higher than the level of the fourth quarter of 2019.

## Dynamics of Nominal Exports and Imports of Goods (EUR million)



Source: the BNB.

## Exports by Commodity Group, January – October 2021

	Value (EUR million)	Change* (EUR million)	Growth** (per cent)	Contribution** (percentage points)
Wood products, paper, ceramics and glass	1,378.1	162.4	13.4	0.7
Machines, vehicles, appliances, instruments and weapons	7,802.4	1,381.8	21.5	6.0
Mineral products and fuels	2,674.8	695.1	35.1	3.0
Base metals and related products	4,946.5	1,230.4	33.1	5.3
Animal and vegetable products, food, drinks and tobacco	4,983.6	1,007.2	25.3	4.3
Textiles, leather, clothing, footwear and other consumer goods	2,862.2	211.5	8.0	0.9
Chemical products, plastics and rubber	3,880.5	635.4	19.6	2.7
<b>Total exports</b>	<b>28,528.2</b>	<b>5,323.9</b>	<b>22.9</b>	<b>-</b>

\* 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.

annual basis by 5.7 per cent, while real import volumes posted annual growth of 12.4 per cent. Price rises of major raw materials in international markets had a significant positive contribution to the nominal growth of trade flows.

In the January to October 2021 period foreign trade data recorded a positive contribution of all commodity groups to the annual nominal growth of total exports of goods. The groups of machines,<sup>48</sup> base metals<sup>49</sup> and food<sup>50</sup> had the largest contributions. Nominal growth in the group of machines was mainly attributable to the significant increase in real volumes and, to a lesser extent, to the rise in the price component.<sup>51</sup> Over the first nine months nominal annual growth of exports of base metals was driven almost entirely by price rises,<sup>52</sup> while real volumes reported a decline, most pronounced in the third quarter of 2021 due to the

<sup>48</sup> In this chapter, it should read the machines, vehicles, appliances, instruments and weapons groups under the Combined Nomenclature.

<sup>49</sup> In this chapter, it should read the base metals and their products group under the Combined Nomenclature.

<sup>50</sup> In this chapter, it should read the animal and vegetable products, food, drinks and tobacco groups under the Combined Nomenclature.

<sup>51</sup> Real volumes of exports of the machines group have been constructed under the Standard International Trade Classification (SITC) by using NSI data on export prices of the commodity group under the SITC and Eurostat data on nominal values of exports of the commodity group under the SITC available by September 2021.

<sup>52</sup> Real volumes of exports of the base metals group have been constructed, this group including inedible (crude) materials (excluding fuels) under the SITC with a sub-group 28 and manufactured goods classified chiefly by materials with sub-groups 67–69, by using NSI data on export prices of the commodity group under the SITC and Eurostat data on the nominal values of exports of the commodity group under the SITC available by September 2021.

effect of one-off supply-side factors.<sup>53</sup> The price component contributed largely to the nominal growth in food, though real volumes also posted annual growth rates.<sup>54</sup> Concurrently, real export volumes in the groups of chemical products<sup>55</sup> and fuels<sup>56</sup> reported declines on an annual basis, while rises in their nominal values were entirely driven by higher export prices on an annual basis.<sup>57</sup> Declines in exported volumes of fuels were also influenced by unfavourable one-off factors.<sup>58</sup>

In January–October 2021 exports of goods to EU countries<sup>59</sup> rose by 24.1 per cent on an annual basis. This growth was mainly due to the groups of machines and base metals. By country, Romania, Germany and Italy had the strongest positive contributions to this growth. Between January and October 2021 exports to non-EU countries grew by 20.8 per cent year on year, with food, machines and metals having the main positive contributions. Exports to Turkey had the largest positive contribution, followed by those to the US, Serbia and China. As a result, the share of exports to the EU in total Bulgaria's goods exports increased slightly to 66.3 per cent in January–October 2021 against 65.7 per cent in the corresponding period of 2020.

Balance of payments data for November 2021 indicate that the annual growth rate will acceler-

<sup>53</sup> The 60 per cent year-on-year decline in processed copper volumes in one of the largest Bulgarian metal processing plants had a negative contribution due to a scheduled refurbishment in the third quarter of 2021. For further information, see [the interim financial report of the Aurubis Group for the last quarter of the period October 2020–September 2021](#).

<sup>54</sup> Real volumes of exports of the animal and vegetable products, food, drinks and tobacco group have been constructed, including the commodity groups under the SITC of food and live animals, soft and alcohol beverages, and tobacco, and animal and vegetable fats, oils and waxes. The analysis employs NSI data on export prices of the relevant commodity groups and Eurostat data on nominal values of exports of the commodity groups under SITC, available by September 2021.

<sup>55</sup> In this chapter, it should read chemical products, plastics and rubber under the Combined Nomenclature.

<sup>56</sup> In this chapter, it should read mineral products and fuels groups under the Combined Nomenclature.

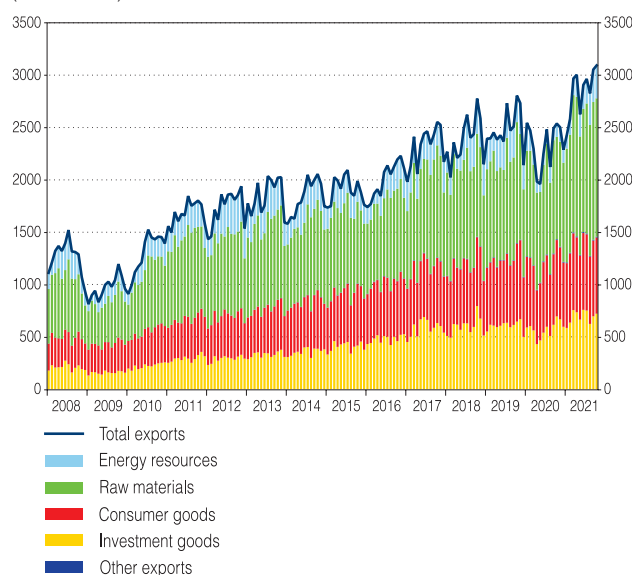
<sup>57</sup> Real volumes of exports of chemical products and fuels groups have been constructed under the SITC by using NSI data on export prices of the commodity groups under the SITC and Eurostat data on nominal values of exports of the relevant commodity groups under the SITC, available by September 2021.

<sup>58</sup> Scheduled maintenance of production facilities in the largest Bulgarian refinery during the second quarter of 2021 reduced the capacity of crude oil refining over the period. For more information, see detailed presentation of [LUKOIL results for the third quarter of the year](#).

<sup>59</sup> In this chapter the EU group should read the 27 states of the European Union. In January 2021 the United Kingdom ended its membership in the EU.

## Exports of Commodity Groups by Use

(EUR million)



Source: the BNB.



ate slightly compared to the value in the first ten months of the year. In line with the assumptions about external demand for Bulgarian goods and services,<sup>60</sup> real exports of goods is projected to continue growing on an annual basis in the first and second quarters of 2022, with growth rates decelerating from the fourth quarter of 2021. A significant year-on-year increase in the price component of exports is anticipated in the first and second quarters of 2022 in line with assumptions about price developments in international commodity markets.

Nominal imports of goods in January–October 2021 posted significant growth on an annual basis, with the positive contributions of all commodity groups by use.<sup>61</sup> Raw materials, investment goods and energy resources had the strongest contribution. Nominal growth in these three groups was ascribable to a combination of higher real volumes and prices.<sup>62</sup> In the group of raw materials which had the largest positive contribution to the nominal imports growth in January–October 2021, a significant year-on-year decline was reported in imported real volumes over the third quarter of 2021. As in goods exports, one-off factors related to metallurgical production in Bulgaria had an influence on this.<sup>63</sup> At the same time, price hikes in crude oil and natural gas contributed to the higher nominal growth of energy product imports.

The share of goods imports from EU Member States in January–October 2021 declined slightly to 49.8 per cent, from 50.4 per cent a year earlier. Imports from EU Member States rose by 23.9 per cent year on year, reflecting mainly the group of machines and, to a lesser degree, chemical products. By country, imports from Germany had the strongest contribution. Imports from non-EU countries grew by 27.3 per cent

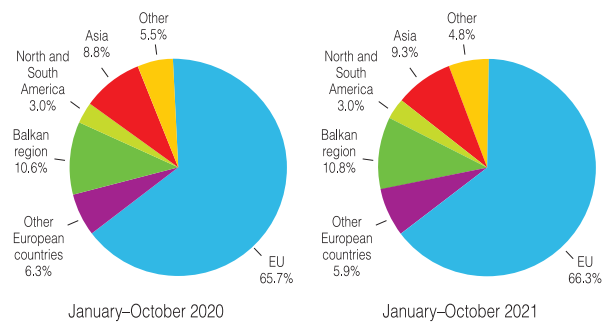
<sup>60</sup> The assumption of the growth in external demand for Bulgarian goods and services is based on the [ECB macroeconomic projections](#) of December 2021.

<sup>61</sup> Foreign trade data published by the BNB.

<sup>62</sup> Real volumes of imports of the raw materials group have been constructed, which includes the commodity groups under the SITC of manufactured goods classified chiefly by materials, inedible (crude) materials (excluding fuels), chemicals and chemical products, imports of the group of investment goods, which includes the group of machines, equipment and vehicles under the SITC and imports of mineral fuels, oils and related products under the SITC. The analysis employs NSI data on import prices of the relevant commodity groups and Eurostat data on nominal values of imports of the commodity groups under the SITC, available by September 2021.

<sup>63</sup> For further information, see note 53.

## Exports of Goods: Geographical Breakdown



Source: the BNB.

## Imports of Commodity Groups by Use, January – October 2021

	Value (EUR million)	Change* (EUR million)	Growth** (per cent)	Contribution** (percentage points)
Consumer goods	7,177.7	1,002.0	16.2	4.0
Raw materials	12,044.9	2,428.7	25.3	9.7
Investment goods	8,315.8	1,521.0	22.4	6.0
Energy resources	3,859.8	1,454.3	60.5	5.8
Other imports	202.0	31.9	18.8	0.1
<b>Total imports (cif)</b>	<b>31,600.2</b>	<b>6,437.9</b>	<b>25.6</b>	<b>--</b>

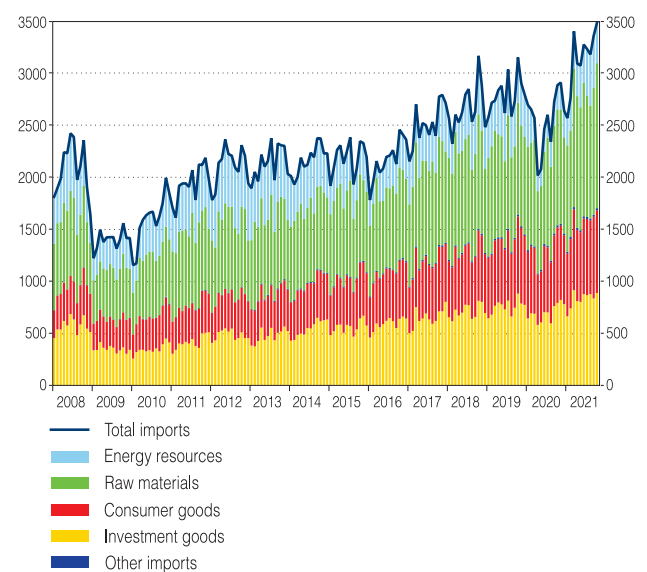
\* Change on the corresponding period of previous year.

\*\* 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.

on an annual basis, mainly due to the groups of energy products and machines. China, Turkey and Russia contributed most significantly to the higher imports of goods from non-EU countries.

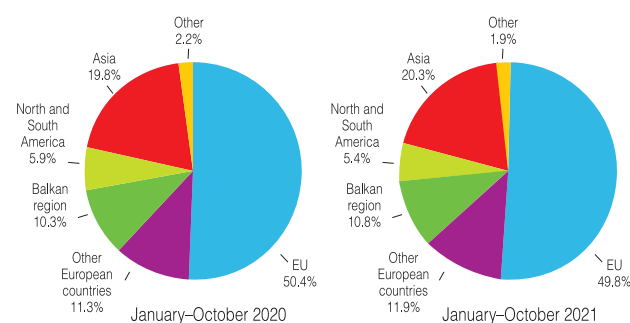
Balance of payments data for November 2021 indicate a slight acceleration in the annual growth rate of goods imports compared to the annual growth observed in the first ten months of the year. In line with projected developments in domestic demand and exports, in the first half of 2022 real imports of goods are expected to continue increasing on an annual basis, albeit gradually decelerating the growth rates. The price component is projected to increase substantially on an annual basis in the first and second quarters of 2022 in line with the assumptions about price movements in international commodity markets.

According to balance of payments data for January–November 2021, exports and imports of services increased significantly in nominal terms on an annual basis. Non-seasonally adjusted national account data for the first nine months of 2021 show that the real component had a major positive contribution to the nominal growth in both exports and imports of services. At the same time, increased prices of services exports contributed more essentially to the nominal growth of this item *vis-à-vis* that in services imports.

Services exports rose by 24.8 per cent nominally in January–November 2021 compared to the same period of 2020. The other services sub-item<sup>64</sup> had the strongest contribution to the annual growth, with their exports picking up 24.5 per cent on an annual basis, thanks mainly to telecommunications, computer and information services. Following the phase-out of the containment measures in Bulgaria and many of our trading partners, revenue from travel also had a significant positive contribution to the overall exports, rising by 45.4 per cent on an annual basis between January and November 2021. According to NSI data for the same period, the number of foreign nationals' visits to Bulgaria increased by 42.0 per cent on an annual basis, with a stronger recovery toward 2019 levels

<sup>64</sup> The group of other services includes the sub-groups of construction; insurance and pension services; financial services; telecommunications, computer and information services; other business services; personal services, cultural recreational and entertainment services; goods and services of the general government not included elsewhere.

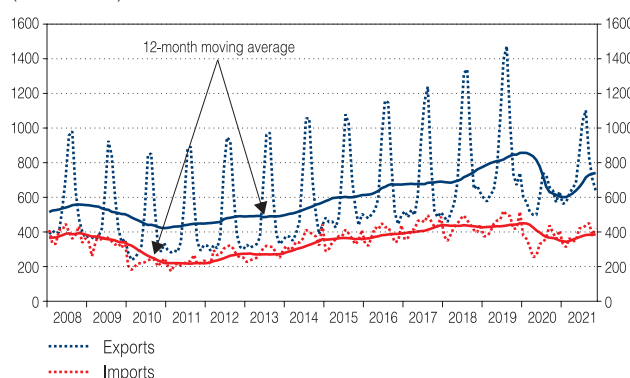
## Imports of Goods: Geographical Breakdown



Source: the BNB.

## Dynamics of Exports and Imports of Services

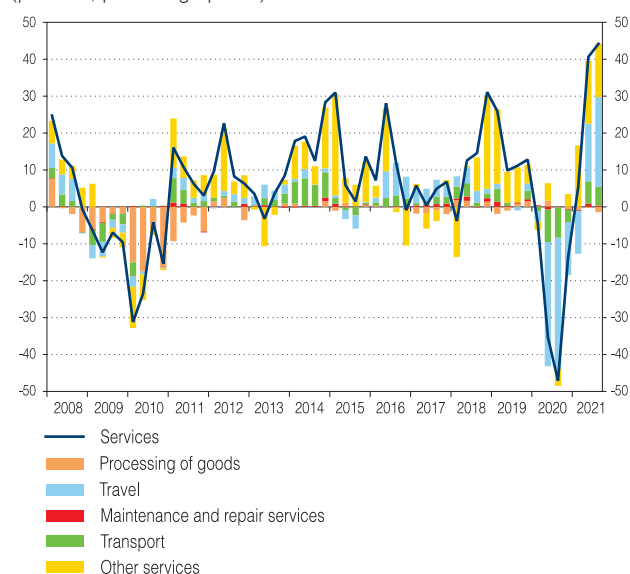
(EUR million)



Source: the BNB.

## Annual Change of Services Exports and Contribution by Sub-component

(per cent, percentage points)



Source: the BNB.

observed in visits whose purpose is other than holidays or excursions.<sup>65</sup> December 2021 data show retention of this trend.

Between January and November 2021 nominal services imports rose by 11.7 per cent on an annual basis. Transport services had the largest contribution to the growth, with an increase of 21.3 per cent on an annual basis. Expenses of Bulgarian residents' travel abroad rose by 16.1 per cent, with a lower positive contribution. According to NSI data, the total number of Bulgarians' foreign travel for January–November 2021 grew by 25.0 per cent from the corresponding period of 2020,<sup>66</sup> with data on December 2021 visits indicating acceleration of the growth rate.

In real terms, exports and imports of services are projected to increase significantly on an annual basis. This dynamics reflected mainly the low base of the first quarter of 2021 when containment measures against COVID-19 were in force in Bulgaria and our other major trading partners, as well as our expectations about external and domestic demand developments.

## Behaviour of Firms and Competitiveness

In the third quarter of 2021 Bulgaria's gross value added in the total economy continued to increase, with a quarterly growth rate reaching 0.4 per cent. Improvements in economic activity were observed in agriculture and industry,<sup>67</sup> while services recorded a decline.

Value added in agriculture rose on a quarterly basis by 2.6 per cent, posting growth for a third consecutive quarter. This dynamics corresponded to the NSI first estimates of the final production in the Bulgarian agriculture for 2021, which show growth in physical volumes of produced agricultural goods and in gross value added in this sector at constant prices *vis-à-vis* the previous year.

In the third quarter of 2021 Bulgaria's gross value added in industry also increased on a quar-

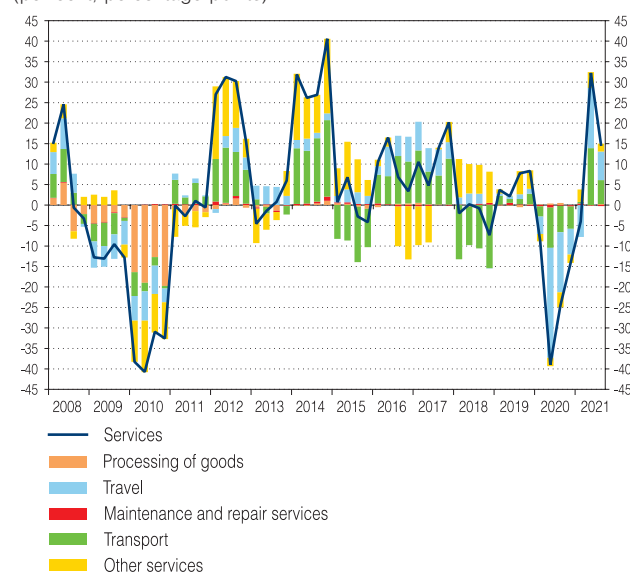
<sup>65</sup> For January–November 2021 the total number of visits recovered to 56.5 per cent of the levels for the corresponding period of 2019. At the same time, holidays and excursions visits reached 38.9 per cent of their level in January–November 2019.

<sup>66</sup> For January–November 2021 the total number of Bulgarians' visits abroad recovered to 71.5 per cent of the levels in the same period of 2019.

<sup>67</sup> This includes the sub-sectors of mining and quarrying; manufacturing; electricity, gas, steam and air conditioning supply; water supply; sewerage, waste management and remediation activities and construction.

## Annual Change of Services Imports and Contribution by Sub-component

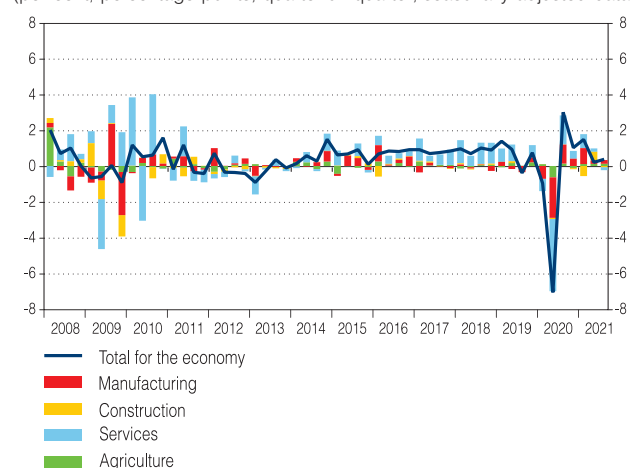
(per cent, percentage points)



Source: the BNB.

## Rate of Change in Real Value Added and Contribution by Sub-sector

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

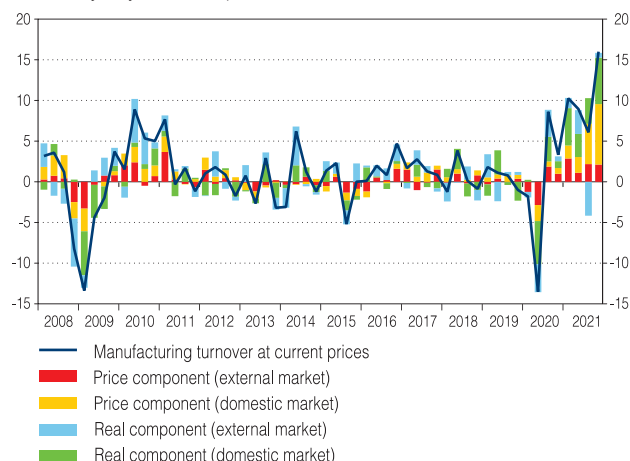


Note: Non-additive data on contributions due to direct seasonal adjustment of value added and its components.

Sources: the NSI, BNB calculations.

## Manufacturing Turnover Dynamics

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



Note: Data on the chart for the fourth quarter are up to November 2021.  
Sources: the NSI, BNB calculations.

terly basis, its rate of change reaching 0.5 per cent. This was entirely due to the sub-sector of manufacturing, while value added in construction decreased. The upward dynamics of gross value added in industry was in line with the quarterly growth in the industrial production index over the reviewed quarter. Lower economic activity in construction reflected the quarterly fall in the construction production index obtained from the NSI's short-term business statistics, which in turn was due to a drop in civil/engineering construction.<sup>68</sup> According to the NSI business survey, in the third quarter a strong increase was observed in the negative effect of rising prices of materials on business activities in this sector.

In the third quarter of 2021 gross value added in the services sector decreased by -0.2 per cent from the second quarter, with financial and insurance activities sub-sector having the largest negative contribution. A decline in value added for the fourth consecutive quarter was also reported in the sub-sector of trade, transport, accommodation and food service activities which continued to report the lowest degree of economic activity recovery *vis-à-vis* the pre-pandemic level (89 per cent of the level in the fourth quarter of 2019).

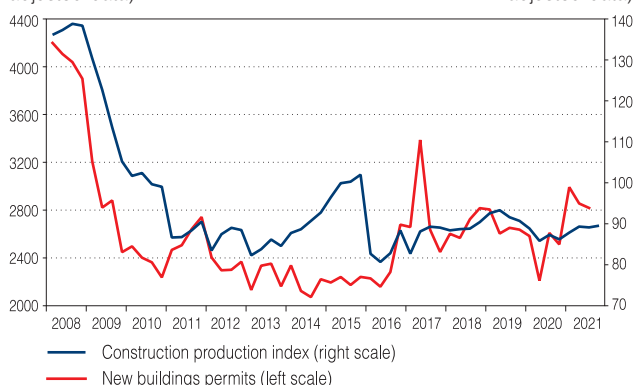
NSI data on short-term business statistics on output and turnover in manufacturing, trade and construction production for October–November 2021 give grounds to expect a quarterly rise in

<sup>68</sup> Civil and engineering construction covers infrastructure construction of roads, bridges, pipes, power lines, telecommunications and other construction works.

## Construction Production Dynamics and New Buildings Permits Issued

(number of buildings; seasonally adjusted data)

(2015 = 100; seasonally adjusted data)

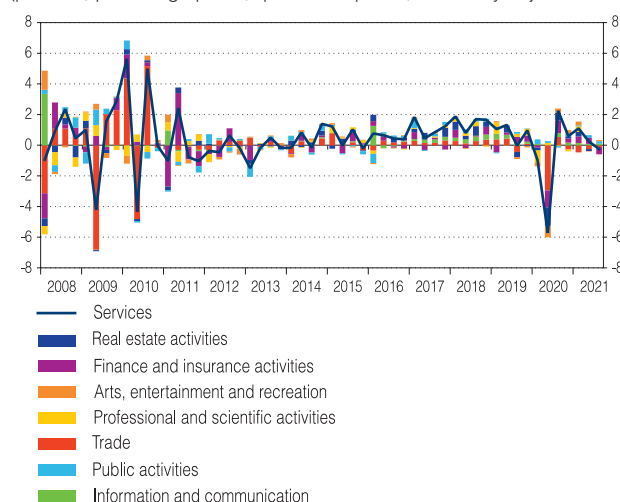


Note: Data on the construction production index for the fourth quarter of 2021 refer to the October–November period.

Sources: the NSI, BNB calculations.

## Services Value Added Change and Contribution by Sub-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.

gross value added in the respective sectors over the fourth quarter of the year. Nominal industrial turnover in October–November increased from the third quarter, its growth rate accelerating significantly. An increase was observed in terms of both the price component and the volume of sales in the internal and external markets. Growth of seasonally adjusted industrial production index on average for October–November 2021 also accelerated from the third quarter of 2021, driven largely by the sub-sector of production and distribution of electricity, heating and gas, probably under the stimulating effect of rising market prices. The construction production index seized to decline in October–November 2021. In October–November 2021 retail trade volumes at constant prices also increased compared to the third quarter of the year.

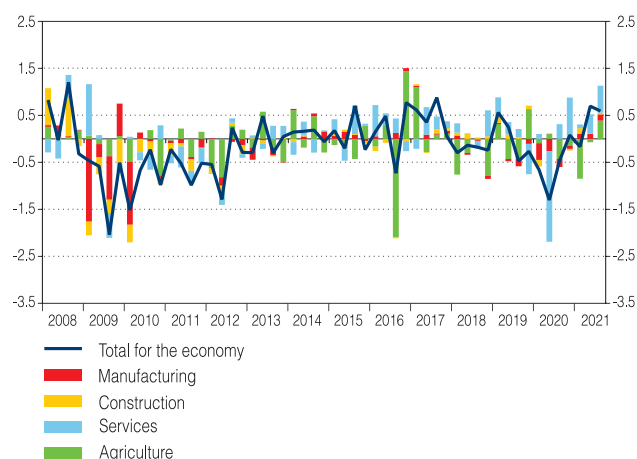
According to seasonally adjusted NSI national account data, employment for the total economy rose by 0.6 per cent quarter on quarter in line with increased economic activity in the third quarter of 2021. Employment growth was reported in all main sectors, with services and especially trade, transport, accommodation and food service activities having the strongest positive contribution.<sup>69</sup> Both manufacturing and construction contributed to the growth in industry's employment. Following four consecutive quarters of declines, employment in agriculture increased on a quarterly basis in July–September 2021.

In the third quarter of the year the total number of worked hours *per person* in the economy rose by 4.5 per cent on a quarterly basis, reflecting the improvement in employment and growth of worked man-hours *per employee*. All major sectors of the economy contributed to these developments. Employment Agency data seasonally adjusted by the BNB show that the downward trend in registered unemployed observed since the second half of 2020 was maintained in the fourth quarter of 2021. This was due both to the lower number of newly registered unemployed persons during the review quarter and to persons employed during the quarter. These developments are a prerequisite for an increase in employment on a quarterly basis over the fourth quarter of 2021, with this trend expected to continue in the first half of 2022.

<sup>69</sup> It refers to wholesale and retail trade; repair of motor vehicles and motorcycles; transportation and storage; accommodation and food service activities.

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

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

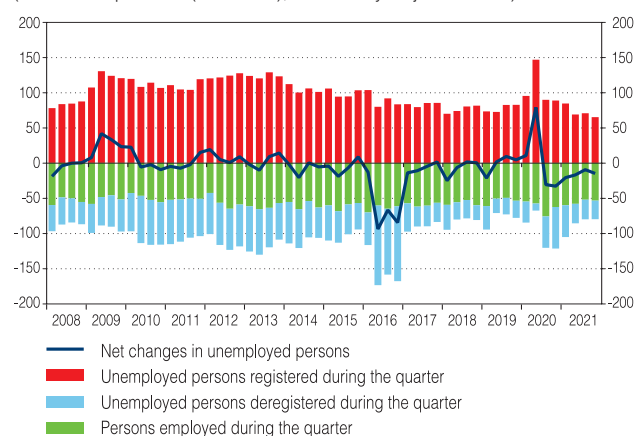


Note: Non-additive data on contributions due to direct seasonal adjustment of the total amount and its components.

Sources: the NSI, BNB calculations.

### Change in the Number of Employed

(number of persons (thousand); seasonally adjusted data)



Sources: The Employment Agency, BNB calculations.



In the third quarter of 2021 labour productivity<sup>70</sup> declined on a quarterly basis, resulting from a stronger rise in employment compared to value added for the total economy. Quarterly growth of nominal compensation *per* employee accelerated to 2.4 per cent (growth of 2.0 per cent in the previous quarter). Potential factors behind this acceleration were the higher economic activity during the quarter and retention of the upward trend in the number of employers reporting difficulties in recruiting staff.<sup>71</sup> By economic sector, remunerations in the third quarter of 2021 increased in agriculture and services, while wages in the industrial sector decreased on a quarterly basis due to the construction sector. In January 2022 corporations' positive expectations of hiring new employees in the following three months and projected growth of economic activity in the first half of 2022 are a precondition for a continuous increase in compensation *per* employee on a quarterly basis over the projection horizon. Other potential factors include initiated wage indexation measures taken by some employers in response to inflation acceleration, as well as the increase in public sector wages and in minimum wage since April 2022 (from BGN 650 to BGN 710) under the draft 2022 State Budget Law.

Following the reported growth in compensation *per* employee and lower labour productivity, the quarterly growth of unit labour costs<sup>72</sup> accelerated in the third quarter of 2021. The increase in unit labour costs was broad-based across economic sectors, with a drop reported only in services related to real estate operations and construction.

Seasonally adjusted data show that gross operating surplus increased by 2.2 per cent in the third quarter *vis-à-vis* the second quarter. This reflected improvements in financial results of industrial firms and agriculture, while services recorded a decline in gross operating surplus.

Between July and September 2021 sources used by firms for financing other than gross operating surplus posted an increase. By economic sec-

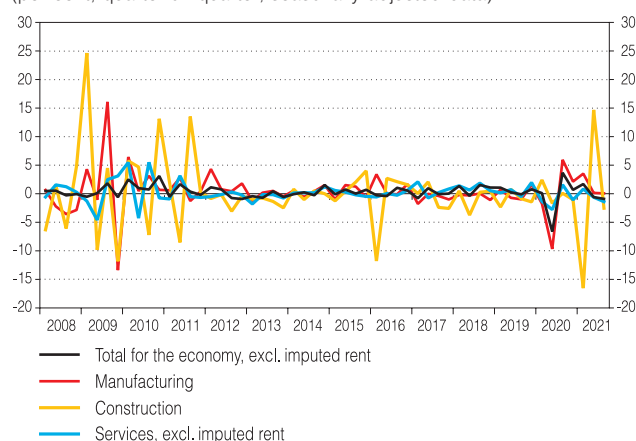
<sup>70</sup> Labour productivity is calculated after adjusting gross value added (total of economy) for imputed rent.

<sup>71</sup> Based on the NSI business situation survey reporting labour shortages. The time series is seasonally adjusted by the BNB.

<sup>72</sup> Unit labour costs are calculated after adjusting gross value added for imputed rent.

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

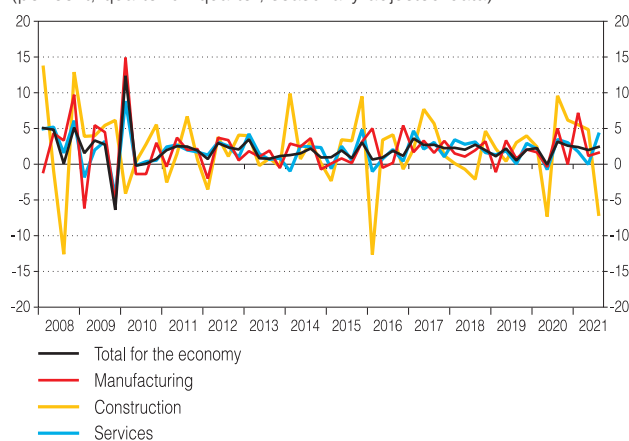
(per cent, quarter-on-quarter; seasonally adjusted data)



Source: the NSI.

## Compensation per Employee at Current Prices

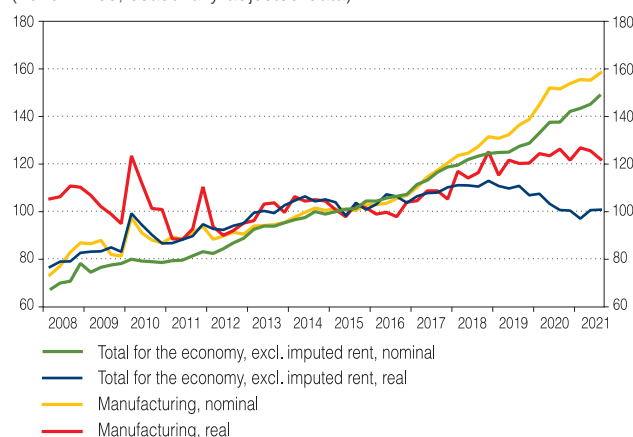
(per cent, quarter-on-quarter; seasonally adjusted data)



Sources: the NSI, BNB calculations.

## Unit Labour Costs

(2015 = 100; seasonally adjusted data)

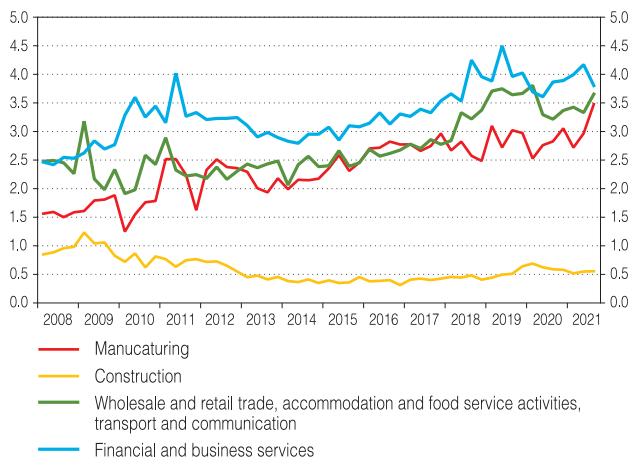


Sources: the NSI, BNB calculations.



## Gross Operating Surplus at Current Prices

(BGN billion; seasonally adjusted data)



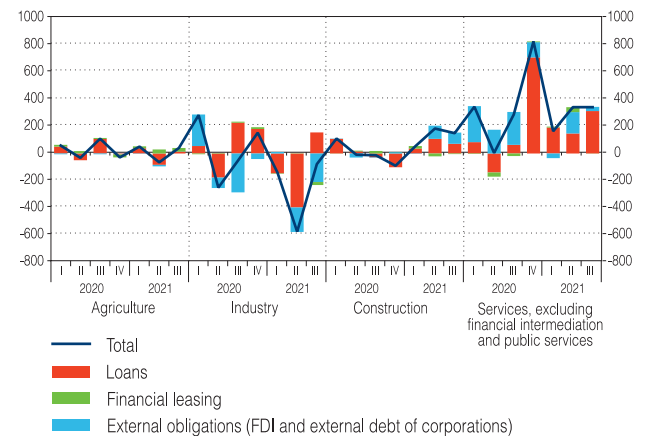
Sources: the NSI, BNB calculations.

tor, a higher net amount of attracted funds was concentrated in services and, to a lesser extent, in manufacturing and agriculture. Concurrently, corporations in the construction sector reduced the amount of their external financing. From the perspective of the type of sources, used bank loans in the total economy posted an increase, while other sources (foreign liabilities and financial leasing) registered a decline.

GDP growth decomposition by production factor suggests that the labour factor had the main positive contribution to economic activity dynamics over the third quarter, which reflected rising employment and worked man-hours *per* employee. Capital also had a weak positive contribution in line with higher capacity utilisation rates. At the same time, total factor productivity had a negative contribution to the quarterly rate of change in real GDP.

## Financing Sources\*

(BGN million, volume change)

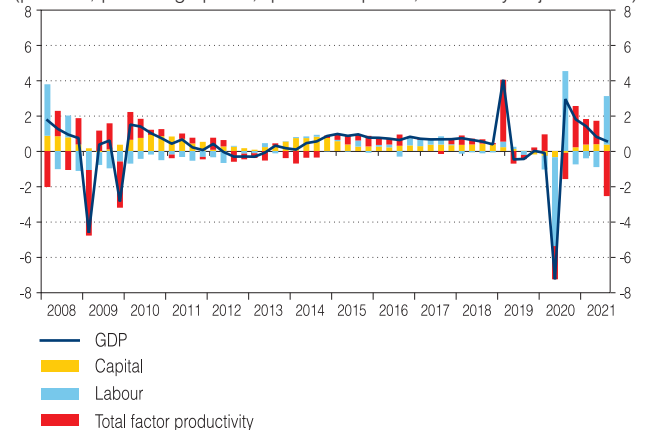


\* Sources of financing other than gross operating surplus.

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 Change

(per cent, on a quarterly basis; real rate, seasonally adjusted data)

	2017				2018				2019				2020				2021		
	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III
Agriculture, forestry and fishing	5.2	0.6	1.2	1.1	-2.9	-1.4	1.0	1.3	-1.5	3.4	0.3	4.2	2.0	-12.3	2.7	-2.5	2.2	2.5	2.6
Mining and quarrying; manufacturing; electricity, gas, steam and air conditioning supply; water supply; sewerage, waste management and remediation activities	-1.5	0.6	-0.1	-0.5	0.3	-0.3	0.1	-1.2	1.0	-0.8	-1.6	1.2	-3.3	-10.7	5.2	2.0	4.2	0.8	0.9
Construction	0.9	1.8	-0.6	-1.3	1.9	-1.6	1.0	1.7	0.1	2.7	-0.2	0.0	0.1	-1.7	0.3	-1.5	-14.5	14.9	-1.7
Wholesale and retail trade; repair of motor vehicles and motorcycles; transportation and storage; accommodation and food service activities	0.9	0.5	0.5	1.0	0.9	0.4	0.9	1.2	1.3	1.4	-1.4	0.4	0.0	-9.6	1.9	-0.9	-1.6	-0.9	-0.4
Information and communication	1.4	2.5	2.6	2.6	2.5	2.9	3.2	3.5	3.7	2.6	1.8	1.3	0.9	-0.2	2.3	1.6	1.4	0.9	1.0
Financial and insurance activities	4.5	-2.8	1.0	-2.6	5.2	-1.7	0.5	5.1	-4.5	1.6	4.0	4.0	-1.4	-10.8	8.5	2.7	4.1	3.6	-4.2
Real estate activities	1.4	2.9	0.1	3.8	3.4	1.4	3.9	2.1	0.0	2.7	-2.1	-0.3	-1.1	-7.6	3.2	0.9	1.9	-0.9	0.0
Professional, scientific and technical activities; administrative and support service activities	0.6	0.0	1.0	2.2	2.5	2.0	3.4	-0.6	8.3	-0.2	2.1	4.5	-7.8	1.7	-0.4	-1.3	3.7	-0.1	-0.1
Public administration, education, human health and social work activities	3.2	-0.3	0.9	0.9	0.3	1.2	0.6	1.0	-0.3	0.2	0.6	0.1	1.6	0.6	-0.5	0.8	0.3	0.9	0.8
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	2.0	0.3	2.4	-0.1	1.4	-1.6	0.9	-0.7	2.2	0.5	-3.4	-2.7	-8.3	-26.6	12.8	9.6	9.6	-0.6	2.6
<b>Gross value added, total for the economy</b>	<b>0.9</b>	<b>0.7</b>	<b>0.7</b>	<b>0.8</b>	<b>1.0</b>	<b>0.7</b>	<b>1.0</b>	<b>0.9</b>	<b>1.4</b>	<b>0.9</b>	<b>-0.4</b>	<b>0.7</b>	<b>-1.0</b>	<b>-7.0</b>	<b>3.0</b>	<b>1.0</b>	<b>1.5</b>	<b>0.2</b>	<b>0.4</b>

Source: the NSI.

## Gross Value Added Change

(per cent; on an annual basis)

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Agriculture, forestry and fisheries	31.8	-8.9	-10.9	5.7	-11.0	3.6	7.0	-7.9	7.5	8.5	-2.0	4.1	-3.3
Mining and quarrying; manufacturing; electricity, gas, steam and air conditioning supply; water supply; sewerage, waste management and remediation activities	2.2	-6.9	-1.9	4.3	6.3	-2.0	1.1	4.6	6.1	0.5	-0.2	-0.7	-9.5
Construction	15.1	6.8	-18.7	-4.0	-4.5	-6.3	-2.0	3.5	-7.9	4.0	1.1	3.7	-1.0
Wholesale and retail trade; repair of motor vehicles and motorcycles; transportation and storage; accommodation and food service activities	-2.9	-4.3	15.3	2.9	-0.5	3.2	-1.2	5.1	-0.5	2.6	3.1	3.7	-6.4
Information and communication	74.2	-2.5	0.3	12.4	-3.2	0.5	0.8	1.9	16.7	5.5	10.5	13.8	4.1
Financial and insurance activities	10.5	13.2	24.7	-3.3	-4.7	-7.5	0.0	-1.0	6.9	1.4	2.2	3.0	-0.2
Real estate activities	-5.0	1.2	3.6	0.0	2.9	-2.3	2.1	2.3	5.7	7.2	11.4	5.0	-6.4
Professional, scientific and technical activities; administrative and support service activities	-7.8	7.7	-7.1	2.6	-3.8	-1.9	0.1	8.7	0.5	1.1	8.7	13.1	-4.8
Public administration, education, human health and social work activities	1.0	0.9	2.8	-2.6	3.0	-5.5	2.9	1.2	-4.3	5.5	2.7	0.9	3.0
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	33.9	7.1	-15.2	15.6	-6.1	-1.5	1.1	6.3	-2.8	4.8	1.8	2.7	-24.2
<b>Gross value added, total for the economy</b>	<b>6.2</b>	<b>-0.9</b>	<b>1.8</b>	<b>1.9</b>	<b>0.3</b>	<b>-1.7</b>	<b>1.0</b>	<b>3.0</b>	<b>2.6</b>	<b>3.3</b>	<b>3.5</b>	<b>3.7</b>	<b>-4.5</b>

Source: the NSI.

## Household Behaviour

In the third quarter of 2021 household consumption rose on a quarterly basis, underpinned primarily by the increased labour income, while labour supply continued to decrease.

Based on NSI data,<sup>73</sup> working-age population went down on an annual basis in the third quarter of 2021, with declines reported in both employed and unemployed persons (forming together labour force) and in the persons not in the labour force. This dynamics based on Labour Force Survey (LFS) data contrasts with NSI national account data which show that annual growth of the number of employed in the economy accelerated in the third quarter of 2021. In addition to differences in the scope of employed<sup>74</sup> in individual statistics, the opposite dynamics could be explained by changes in the Labour Force Survey methodology,<sup>75</sup> which have not been reflected in previous years. The fall in labour force resulted in a decrease in the labour force participation rate<sup>76</sup> on an annual basis. Although labour force also decreased on a quarterly basis as a result of a decline in the number of unemployed persons, the economic activity rate rose slightly from the previous quarter as the decreased number of working-age persons was more pronounced than the fall of labour force.

According to the LFS data, seasonally adjusted unemployment rate<sup>77</sup> fell to 5.1 per cent in the third quarter of 2021, from 5.6 per cent in the second quarter in line with the increased economic activity in Bulgaria. Long-term unemployed (over one year) also fell from the previous quarter, for the first time since the beginning of the pandemic. Administrative statistics data of the Employment Agency, which are published more frequently, also reported a lower level of unem-

<sup>73</sup> NSI Labour Force Survey data are used.

<sup>74</sup> For details, see the [methodology](#) of employees based on NSI national accounts.

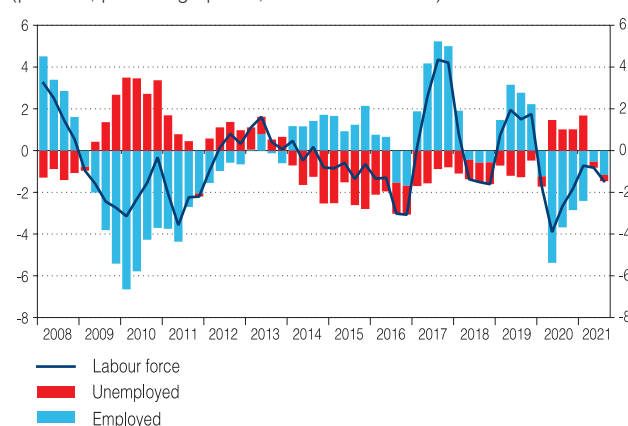
<sup>75</sup> For further information, see the methodological notes in the [NSI's press release](#).

<sup>76</sup> The labour force participation rate is the proportion between economically active persons (labour force) and population of the respective age.

<sup>77</sup> The unemployment rate is the proportion between the number of unemployed and the labour force based on Labour Force Survey data. The time series is seasonally adjusted by the BNB.

## Contribution to the Change in Labour Force by Component

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

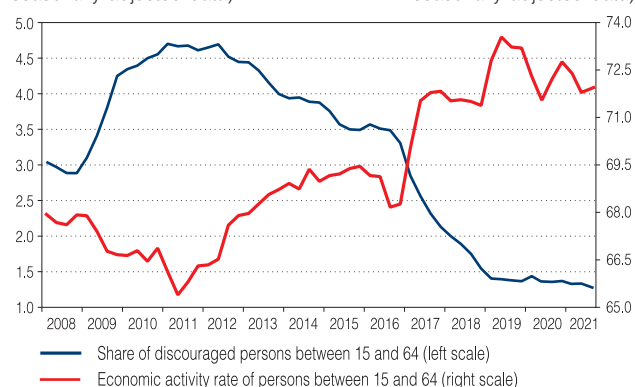


Sources: the NSI, BNB calculations.

## Economic Activity and Share of Discouraged Persons

(per cent, seasonally adjusted data)

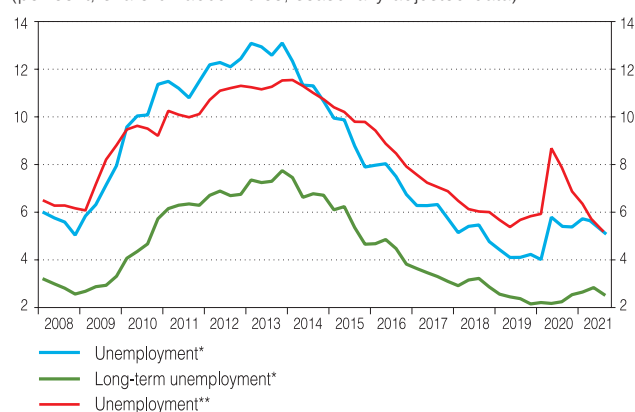
(per cent, seasonally adjusted data)



Sources: NSI Labour Force Survey, BNB calculations.

## Unemployment Rate

(per cent, share of labour force; seasonally adjusted data)



\* NSI data.

\*\* Employment Agency data.

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

ployment<sup>78</sup> in the third and fourth quarters of 2021, reflecting in a drop of the average annual unemployment rate to 5.5 per cent in 2021 against 7.4 per cent in 2020.

The NSI national account wage bill data<sup>79</sup> suggest that growth of labour income of employed in the third quarter increased annually in nominal and real terms compared to the second quarter of 2021. Accelerated growth was reported also in the wage<sup>80</sup> *per* employee, reflecting higher economic activity and the increased number of employers experiencing difficulties in recruiting staff.<sup>81</sup>

In the third quarter of 2021 private consumption rose on a quarterly basis at a rate close to the previous quarter (1.6 per cent in the third quarter against 1.5 per cent in the second quarter), underpinned by the enhanced employment and income, improved consumer sentiment and stronger lending activity. At the same time, the growth of retail trade turnover at current prices decelerated on a quarterly basis in the third quarter, while in real terms a slight decline was reported, mainly driven by the decrease in retail trade in textile, clothing, footwear and leather articles. Divergent dynamics in retail trade turnover in real terms and in private consumption is likely to reflect the different scope and methodology in compiling the two statistics.

The NSI Household Budget Survey shows that the propensity of households to save<sup>82</sup> part of their received income<sup>83</sup> (seasonally adjusted data) increased slightly in the third quarter of 2021. At the same time, growth of household deposits began to slow down. The weaker

<sup>78</sup> The definition of the unemployment rate according to the Employment Agency corresponds to that referred to in note 75; however, the analysis employs a constant rate of labour force comprising the number of persons in the respective age group since the last census of population. Employment Agency data on the unemployment rate are not directly comparable to NSI Labour Force Survey data on the unemployment rate. The time series is seasonally adjusted by the BNB.

<sup>79</sup> Wage bill data are calculated by deducting social security contributions from compensation of employees.

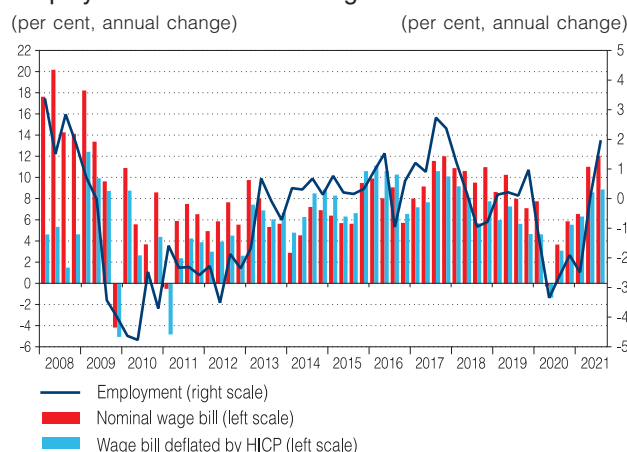
<sup>80</sup> According to the NSI national account wage bill data.

<sup>81</sup> Based on the NSI business situation survey's data about enterprises that report labour shortages. The time series is seasonally adjusted by the BNB.

<sup>82</sup> Household savings are measured by the difference between the total income and the total expenditure in the relevant quarter. The propensity to save is calculated as a ratio between savings and gross income in the relevant quarter.

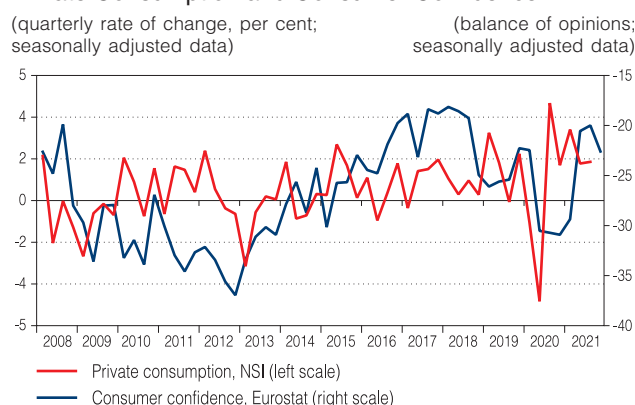
<sup>83</sup> Income is gross income in the relevant quarter reduced by taxes and social security contributions.

## Employment and Nominal Wage Bill



Sources: the NSI – SNA, BNB calculations.

## Private Consumption and Consumer Confidence

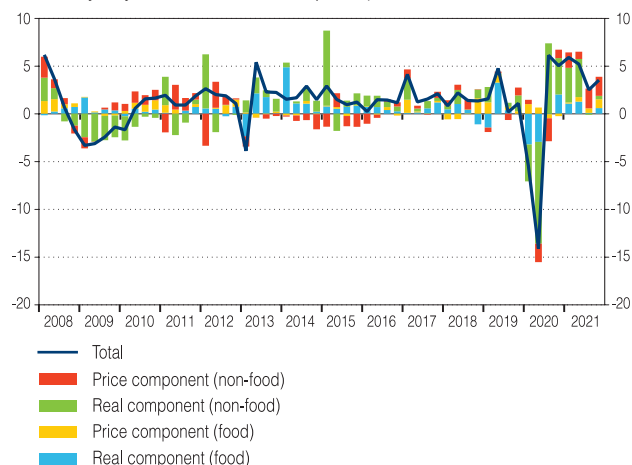


Note: Quarterly data on consumer confidence represent the average monthly values of the Eurostat consumer confidence indicator.

Sources: the NSI, Eurostat, BNB calculations.

## Retail Trade Turnover

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



Notes: Non-additive data on contributions due to direct seasonal adjustment of the total amount and its components. Data on the fourth quarter of 2021 represent the quarterly change of the average value of the indicator for October and November compared to the third quarter of 2021.

Sources: the NSI, BNB calculations.

increase in deposits coupled with a simultaneous acceleration of credit growth reflected in a drop in accumulated net assets of households in the banking system.

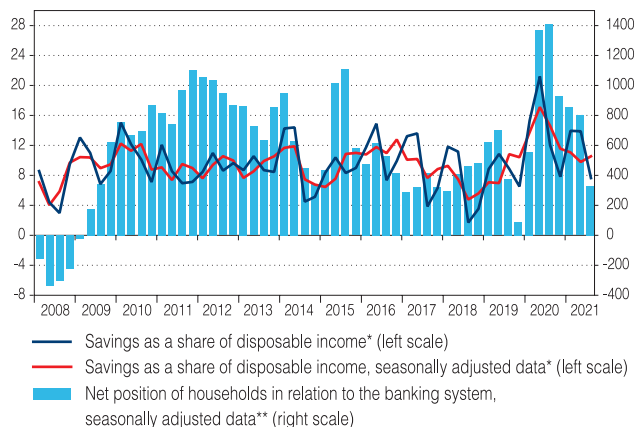
Despite the increase in retail trade turnover in October and November 2021 and a lower level of unemployment in the fourth quarter of 2021,<sup>84</sup> deteriorating consumer sentiment and inflation acceleration in this period indicate a slowdown in the quarterly growth of private consumption by end-2021. This trend is expected to continue in the first half of 2022 as a result of a projected increase in inflation which will exert a negative effect on real disposable income of households. At the same time, labour demand will continue rising due to the growing problems of firms regarding labour shortages.

<sup>84</sup> Administrative statistics data of the Employment Agency.

## Household Propensity to Save (on a Quarterly Basis)

(per cent)

(BGN million)



\* BNB data.

\*\* NSI data.

Sources: NSI Household Budget Survey, the BNB.

## Employment and Income Dynamics

	2017				2018				2019				2020				2021			
	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
(per cent, quarter-on-quarter; seasonally adjusted data)																				
Employed persons	0.6	0.4	0.9	0.0	-0.3	-0.1	-0.2	-0.2	0.6	0.3	-0.5	-0.3	-0.7	-1.3	-0.5	0.1	-0.2	0.7	0.6	
Nominal wage <i>per</i> employee*	3.1	2.8	2.5	2.4	2.2	2.1	2.8	1.8	1.2	2.0	0.7	1.9	2.2	0.3	2.8	2.5	2.2	1.9	2.3	
Real wage <i>per</i> employee**	2.8	2.4	2.7	1.2	1.7	1.3	1.7	1.5	0.3	2.5	-0.9	0.8	1.3	3.4	1.7	1.2	1.4	2.1	1.7	
Wage bill, nominal terms	2.9	2.7	3.1	2.4	2.7	2.1	2.5	2.6	1.7	2.5	1.2	1.5	2.0	-3.8	3.7	3.4	2.8	2.2	2.7	
Wage bill, real terms**	2.5	2.2	3.3	1.2	2.2	1.3	1.4	2.2	0.7	3.1	-0.5	0.4	1.1	-0.8	2.5	2.0	1.9	2.3	2.2	
(per cent, on corresponding quarter of previous year, non-seasonally adjusted data)																				
Employed persons	1.2	0.9	2.7	2.4	1.2	0.2	-0.9	-0.8	0.1	0.2	0.1	1.0	-1.3	-3.3	-2.6	-1.9	-2.5	0.1	1.9	
Nominal wage <i>per</i> employee*	6.9	9.3	11.3	11.7	9.4	9.0	9.5	10.3	8.0	8.5	5.1	5.7	7.7	4.5	7.8	8.6	8.5	8.6	9.6	
Real wage <i>per</i> employee**	6.1	7.8	10.4	9.8	7.7	6.5	5.6	7.1	5.4	5.6	2.8	3.3	4.6	3.4	7.2	8.2	8.3	6.2	6.5	
Wage bill, nominal terms	8.0	9.1	11.5	12.0	10.9	10.6	9.5	10.9	8.6	10.2	8.0	7.1	7.7	-0.3	3.7	5.8	6.5	11.0	12.0	
Wage bill, real terms**	7.2	7.6	10.6	10.1	9.1	8.0	5.7	7.7	6.0	7.3	5.6	4.7	4.6	-1.3	3.1	5.5	6.3	8.6	8.8	

## Employment and Income Dynamics

(per cent, on an annual basis)

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Employed persons	2.4	-1.7	-3.9	-2.2	-2.5	-0.4	0.4	0.4	0.5	1.8	-0.1	0.3	-2.3
Nominal wage <i>per</i> employee*	13.5	10.6	12.0	6.5	8.0	8.3	5.6	5.8	6.2	9.9	9.6	6.8	7.2
Real wage <i>per</i> employee**	1.6	8.1	8.7	3.0	5.4	8.0	7.4	6.9	7.6	8.6	6.7	4.2	5.9
Wage bill, nominal terms	16.3	8.3	7.1	4.9	6.0	7.1	5.4	6.8	8.1	10.2	10.5	8.4	4.2
Wage bill, real terms**	4.0	5.8	4.0	1.4	3.5	6.7	7.2	8.0	9.5	8.9	7.6	5.8	3.0

\* 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.

## Retail Trade Turnover

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

	2017				2018				2019				2020				2021			
	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
Retail trade, excluding motor vehicles and motorcycles	2.4	0.5	1.4	1.1	0.1	1.5	0.2	1.0	2.1	1.5	0.4	2.1	-6.6	-11.6	4.5	4.8	5.6	4.6	-0.5	0.9
incl.																				
Food, drinks and tobacco products	0.2	0.4	1.5	3.2	1.2	2.7	1.0	-3.0	-4.0	8.8	1.0	0.0	-8.8	-8.0	-0.2	5.4	2.9	3.4	0.2	1.6
Textile, clothing, footwear and leather	12.6	-2.7	-5.3	0.5	3.9	6.4	1.8	4.9	-1.2	-4.2	3.1	4.1	-18.5	-43.0	62.6	-6.6	25.9	-2.4	-12.0	-5.5
Household appliances, furniture and other household goods	1.0	2.9	1.5	1.2	1.3	3.2	1.5	0.9	4.1	2.4	2.7	4.2	-8.5	-6.7	14.8	5.2	0.7	0.2	3.3	-4.9
Computer and communication equipment, etc.	-1.8	0.5	0.5	2.1	6.6	1.9	-1.9	-4.0	4.9	0.9	2.1	0.2	-13.6	-14.0	18.3	9.4	6.2	0.8	-1.3	7.3
Pharmaceutical and medical goods, cosmetics and toiletries	0.9	2.4	1.3	1.3	-1.6	2.0	1.6	2.3	-17.3	0.7	1.5	1.9	5.5	-19.4	9.0	7.9	3.0	14.7	8.7	4.2
Unspecialised shops with different kinds of goods	4.2	2.0	2.1	0.3	4.2	2.9	0.3	0.1	9.6	2.4	0.0	-0.4	-2.7	-4.1	-1.0	11.4	-2.4	11.7	-3.9	-2.1
Automobile fuels and lubricants	6.8	-2.3	1.2	-1.1	-7.6	3.5	-0.9	6.0	7.0	-1.8	-0.9	0.2	-10.5	-24.0	18.3	-0.7	3.7	5.1	-0.8	2.0

Note: Data for the fourth quarter of 2021 are for October and November.

Source: the NSI: short-term business statistics.



## Fiscal Policy Effects on the Economy

In 2021 fiscal policy had a stimulating effect on economic activity mainly through increased transfers to households and strong growth in public sector staff costs, contributing to the accelerated increase in household real disposable income and having a potential impact on higher private consumption. Expenditure incurred under the subsidised employment programmes and healthcare payments intended to smooth the implications of the crisis caused by the spread of COVID-19 also had a supportive effect on economic activity. In addition, in the fourth quarter of 2021 a programme was announced for compensation of end non-domestic electricity customers, which aimed at mitigating the shock of electricity price hikes on companies.

In the first nine months of 2021 government consumption grew by 17.4 per cent in nominal terms on an annual basis (4.5 per cent in real terms). According to the NSI data from quarterly non-financial accounts of the general government sector, the strong growth of government consumption in nominal terms was driven by higher compensation of employees of 28.6 per cent on an annual basis, reflecting the increase in public sector wages projected under the 2021 State Budget Law. Higher growth in intermediate consumption and social transfers in kind (health insurance expenses) by 15.0 and 21.0 per cent, respectively, also contributed to the nominal growth in government consumption.<sup>85</sup> Government consumption posted nominal growth on a quarterly basis<sup>86</sup> over the third quarter of 2021, these developments reflecting the increase in compensation of employees in the government sector. Concurrently, general government sector's investment in the third quarter of 2021 rose on a quarterly basis, though falling for the first three quarters of the year in both nominal and real terms.

In 2021 the budget balance on the consolidated fiscal programme (CFP) was negative at

<sup>85</sup> Higher expenditure on intermediate consumption reflected costs on purchasing medicines and vaccines against COVID-19. Government expenses incurred to address the COVID-19 pandemic contributed to the increase in health insurance expenditure.

<sup>86</sup> BNB seasonal adjustment is used for the quarterly rate of change in government consumption and government investment.

BGN -3910.4 million (-3.0 per cent of GDP)<sup>87</sup>. The realised deficit on a cash basis was driven by the funds reported as expenditure, but unpaid in 2021 in the amount of BGN 1.2 billion, including BGN 750 million for supplements to pensions envisaged for the first six months of 2022 and BGN 450 million for compensating end non-domestic customers of high electricity and natural gas prices in the first quarter of 2022.

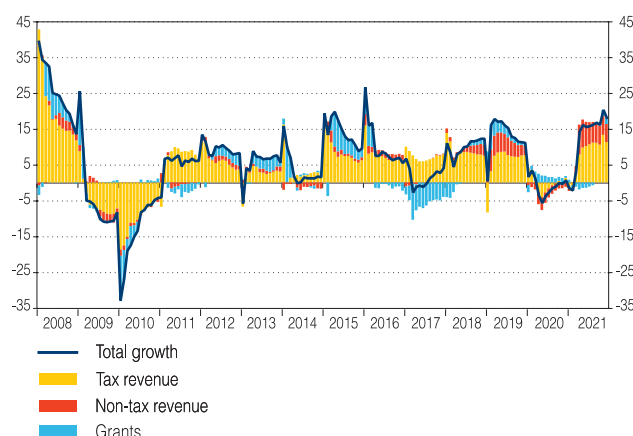
At the end of December 2021 total CFP budget revenue posted 18.1 per cent growth on an annual basis, indicating an acceleration compared to the third quarter of the year (16.7 per cent by September). The upward dynamics of total revenue over that period was largely driven by accelerated annual growth in revenue from grants to 28.5 per cent (0.7 per cent by September). The major factor behind this dynamics was the reporting of the grants (BGN 450 million) provided by Kozloduy nuclear power plant under the state budget with a one-off effect for the year under the Programme for compensation of end non-domestic electricity customers approved in October 2021 in line with the significant rise in electricity prices in Bulgaria.

At the end of December 2021 growth in tax revenue was high (14.0 per cent on an annual basis), remaining close to that reported in September. VAT revenue and social and health contributions led tax revenue growth. The rising prices of oil, natural gas and electricity, which significantly raised producer prices and accelerated consumer price inflation, contributed to the annual growth of VAT revenue (17.8 per cent at the end of 2021). Increased minimum wage and remunerations in the public sector since the beginning of 2021, along with higher net fiscal transfers to households over the year potentially stimulated private consumption, contributing to inflation acceleration. This also favoured the increase in VAT revenue.

The growth rate of non-tax revenue moderated to 38.8 per cent on an annual basis by the end of the fourth quarter of 2021 (41.8 per cent by September). The continued downward trend in non-tax revenue growth since May 2021 was driven mainly by the gradually exhausting one-off effect related to a concession payment of

### 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.

<sup>87</sup> Nominal GDP for 2021 is based on the GDP for 2021 expected by the Ministry of Finance and published in the Updated Medium-Term Budget Forecast (UMBF) for the 2022–2024 period of 21 January 2022. According to data presented in the UMBF of 21 January 2022, the budget balance expected by the Ministry of Finance on an accrual basis for 2021 is negative at -4.0 per cent of projected GDP.

BGN 660 million (including VAT) on Sofia airport received in April. Revenue from auctioning of greenhouse gas emission allowances contributed to the increase in non-tax revenue, which rose by 85.6 per cent on an annual basis by December 2021, according to Ministry of Finance data, entirely due to higher allowances prices.

At the end of 2021 total CFP budget expenditure rose by 17.6 per cent on an annual basis, with their growth indicating an acceleration compared to the third quarter of 2021 (16.6 per cent by September).

Subsidy payments and to a lesser extent social expenditure had a decisive influence on the enhanced growth of total budget expenditure. By end-December the growth rate of subsidy expenditure accelerated to 56.7 per cent (45.9 per cent by September). Based on Ministry of Finance data by the end of 2021, the funds ensured for the compensation of end non-domestic electricity customers were more than BGN 1.3 billion, including BGN 450 million for the payment of compensation in the first quarter of 2022. Concurrently, according to Ministry of Finance information, annual growth of subsidy expenditure as of December 2021 was also driven by subsidies paid under the subsidised employment programmes, including the payments under the so called 60/40 measure<sup>88</sup>.

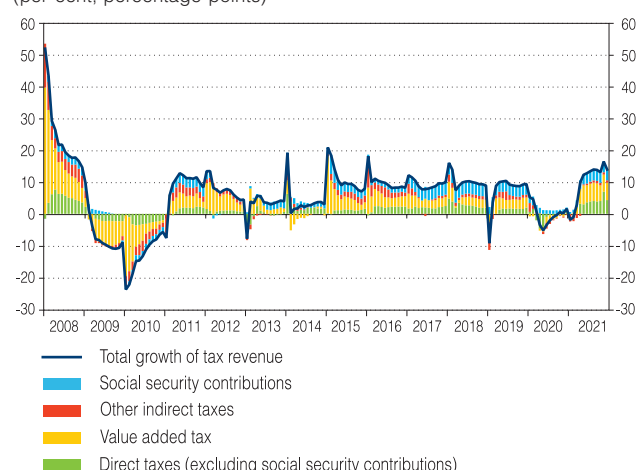
Annual growth of social expenditure also accelerated reaching 21.4 per cent by the end of 2021 (17.0 per cent by September). Higher supplements of BGN 120 to the pensions of all pensioners over the last three months of 2021 and BGN 750 million ensured for monthly supplements of BGN 60 to the pensions of all pensioners for the first six months of 2022 contributed to the reported social expenditure dynamics. Health insurance expenditure associated with the COVID-19 pandemic such as funds for support of staff working at the front line and for administration of vaccines against COVID-19 also contributed to the growth of social expenditure.

The growth rate of current operating expenditure slowed down at the end of 2021 to 7.1 per cent (21.5 per cent by September), reflecting the high base of December 2020. The growth rate of

<sup>88</sup> Based on the National Insurance Institute 'Report on Expenses Made on the Containment Measures on COVID-19 and its Treatment, Business-Support Measures and Social Measures for 2021', compensations paid under the 60/40 measure totalled BGN 823.5 million between 1 January 2021 and 31 December 2021.

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

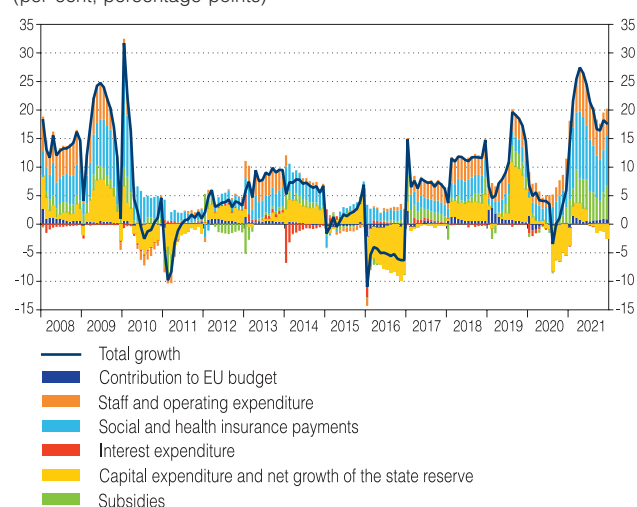
(per cent; percentage points)



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 Consolidated Fiscal Programme reports of January 2016, payroll costs include wage, contributions and other remunerations, while in the reports for past periods, the latter were included in 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 2020 and 2021'.

Sources: the MF, BNB calculations.

staff costs moderated slightly to 16.8 per cent, remaining close to that reported by September. However, the reported annual growth in staff costs suggested retention of their positive contribution to government consumption dynamics in the last quarter of 2021.

The fall in capital expenditure at the end of 2021 deepened to -23.7 per cent on an annual basis (-19.1 per cent by September). Capital expenditure financed by EU funds had the main contribution to the reported dynamics compared to the third quarter of 2021. At the same time, the annual decline in capital expenditure financed by national funds contracted to -35.2 per cent by December (-42.6 per cent by September). Based on CFP capital expenditure dynamics by the end of the year, an assumption about a relatively limited impact of government investment on the economic activity in the fourth quarter of 2021 could be made.

In the first quarter of 2022 we expect that the funds ensured for the compensation of end non-domestic electricity and natural gas customers will further contribute to mitigate the negative shock of electricity price hikes on companies. Fiscal transfers related to funds provided for the payment of supplements to pensions will continue to support household disposable income in the first half of 2022.

Over the first six months of 2022 government investment financed by national and EU funds is expected to gradually recover, and that financed by EU funds to grow faster in the last phase of the 2014–2020 programme period.<sup>89</sup>

Given the lack of a budgetary framework for 2022 at the time of finalising the BNB forecast, the forecast of government consumption dynamics in the first two quarters of 2022 is based on BNB staff assumptions, according to which most of the temporary fiscal measures in force during 2021 will be suspended in 2022. These assumptions suggest a quarterly drop in real terms of government consumption in the first quarter of 2022 along with slight quarterly growth in the second quarter of 2022.

The draft State Budget Law for 2022 approved by the Council of Ministers at the end of

<sup>89</sup> In the context of an expected approval of the National Recovery and Resilience Plan (NRRP) of Bulgaria by the European Commission, the profile of absorption of NRRP funds in the BNB macroeconomic forecast is based on BNB staff assumptions on the start of their absorption in the second half of 2022.

January and the Updated Medium-Term Budget Forecast (UMBF) for the 2022–2024 period (the motives to the draft law) suggest a significantly greater impact of fiscal policy on economic activity in the second quarter of the year compared to the assumptions set in the latest BNB macroeconomic forecast. The estimates in the UMBF include a substantial increase in capital expenditure in 2022 in terms of implementation of infrastructure projects financed by national funds and in terms of the implementation of the National Recovery and Resilience Plan (NRRP), as well as a significant rise in operating expenditure. The UMBF also envisages strong increases in social payments along with growth in health care and wage costs, reflecting the minimum wage and education sector wage rises.

### Key Budget Indicators Performance for 2020 and 2021

Consolidated Fiscal Programme	2020 January – December <sup>1</sup>		2021 January – December <sup>1</sup>	
	BGN million	per cent <sup>2</sup>	BGN million	per cent <sup>2</sup>
<b>Total revenue and grants</b>	<b>44,309</b>	<b>0.6</b>	<b>52,340</b>	<b>18.1</b>
Tax revenue	35,848	1.6	40,876	14.0
incl. social security and health insurance contributions	11,008	4.4	12,230	11.1
Non-tax revenue	5,764	-8.6	8,000	38.8
Grants	2,696	9.4	3,463	28.5
<b>Total expenditure (incl. the contribution to EU budget)</b>	<b>47,840</b>	<b>5.8</b>	<b>56,250</b>	<b>17.6</b>
Staff	11,375	13.3	13,291	16.8
Operating expenditure	5,104	12.3	5,468	7.1
Interest	624	-3.9	628	0.7
Social expenditure, scholarships	19,269	11.1	23,384	21.4
Subsidies	5,034	31.9	7,886	56.7
Provided current and capital transfers abroad	59	36.1	46	-22.8
Capital expenditure and government reserve growth	5,081	-32.9	3,866	-23.9
incl. capital expenditure	5,027	-33.1	3,835	-23.7
Contribution to general budget of the European Union	1,295	8.6	1,681	29.8
	BGN million	difference <sup>3</sup> (BGN million)	BGN million	difference <sup>3</sup> (BGN million)
<b>Budget balance, on a cash basis</b>	<b>-3 532</b>	<b>-2 383</b>	<b>-3 910</b>	<b>-379</b>
Tax revenue under the state budget	2020 January – December <sup>4</sup>		2021 January – December <sup>4</sup>	
	BGN million	per cent <sup>2</sup>	BGN million	per cent <sup>2</sup>
<b>Tax revenue</b>	<b>23,770</b>	<b>0.3</b>	<b>27,337</b>	<b>15.0</b>
Corporate tax	2,715	0.7	3,406	25.5
Personal income tax	4,184	4.6	4,839	15.7
Value added tax	11,021	-0.6	12,979	17.8
Excise duties	5,445	-0.8	5,660	4.0
Customs duties and taxes	210	-9.1	290	38.0
Insurance premia tax	47	5.0	48	2.8
Other taxes	149	-1.3	114	-23.1

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

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

<sup>2</sup> Annual rate of change from the same period of previous year.

<sup>3</sup> The change in the budget balance from the same period of previous year.

<sup>4</sup> Based on monthly reports on cash-based implementation of the state budget.

Source: the MF.

## 4. INFLATION

In the fourth quarter of 2021 the upward inflation trend since the beginning of the year strengthened, with year-on-year HICP growth reaching in December 6.6 per cent. Price rises were broad-based across HICP components, reflecting largely direct and indirect effects of increased prices in primary energy commodities (oil, natural gas and electricity) and food in international markets. Core inflation also accelerated in the context of increased consumption expenditure of households, higher consumer goods prices in Bulgaria's major trading partners and indirect effects of more expensive energy resources and food. Inflation in the group of administratively controlled prices accelerated slightly from the end of 2020, reflecting mainly higher prices of electricity and heating, as approved by the Energy and Water Regulatory Commission since 1 July 2021, and increased regulated prices of gaseous fuels in April–December 2021.

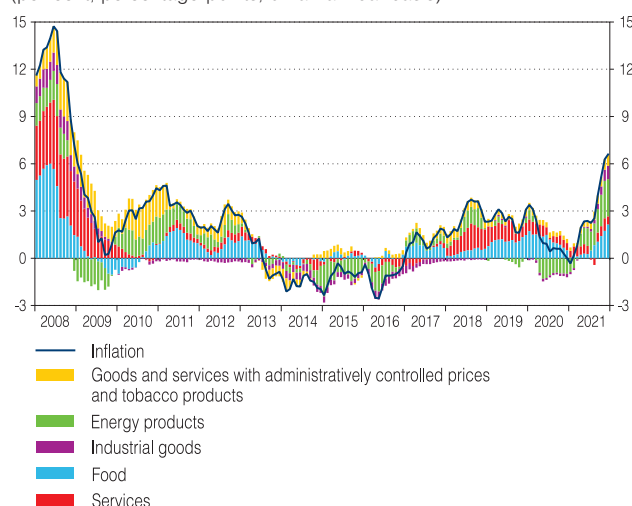
Inflation is anticipated to continue rising over the first half of 2022. There are risks of a stronger increase in prices *vis-à-vis* the baseline scenario, reflecting mainly possible changes in regulated prices of electricity, water and sewerage services and heating after the expiry on 31 March 2022 of the moratorium on these prices introduced by the government in December 2021.

Annual inflation, measured by HICP, continued to accelerate, reaching 6.6 per cent in December 2021 (0.0 per cent at the end of 2020). Acceleration of inflation has been broad-based across HICP components, driven by price rises along the supply chain: from the prices of imported goods and agricultural products in the country, through industrial producer prices in the domestic market, to prices in wholesale and retail trade. The pro-inflationary impact of factors in terms of external and internal macroeconomic environment, resulting from both supply and demand developments, contributed to these processes. These factors can be broken down into four main groups: 1) a surge in international prices of energy products (oil, natural gas and electricity) and food; 2) a significant increase in the cost of international transport of goods and higher prices of certain industrial goods due to bottlenecks in global supply chains; 3) an increase in unit labour costs; and 4) strong growth in private consumption in Bulgaria.

The significant price increase in energy commodities (oil, natural gas and electricity) and food in international markets was the key driver of inflation acceleration in Bulgaria. The fast pass-through of higher global energy prices to firms' production costs and selling prices was attributable to the high energy-intensive Bulgar-

### 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 price 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.



ian economy<sup>90</sup> and its enhanced sensitivity to international energy price developments. The latter reflected the completion in 2021 of Bulgarian electricity market coupling with that in South-East Europe<sup>91</sup> and the change in the pricing formula<sup>92</sup> introduced in 2020 for the supply of natural gas by Gazprom Export.

Demand and supply-side pro-inflationary factors listed above led to a record increase (by 38.6 per cent year-on-year) in producer price index (PPI) on the domestic market as reported by the NSI in December 2021 (compared with a fall of -0.5 per cent in December 2020). By economic sector, production and distribution of electricity, heating, and gaseous fuels, followed by manufacturing had the major positive contribution to the PPI dynamics. The increase of producer prices in manufacturing was driven by higher prices of refined petroleum products, metals, chemical industry products and food products. Based on the PPI breakdown by end-use classification, a relatively faster pass-through of higher production costs of corporations to intermediate consumption product prices and consumer goods prices (both food and non-food goods) was observed by end-2021.

The upward dynamics of the PPI and the prices of imported consumer goods in Bulgaria at the end of the year contributed to the acceleration of the annual growth rates of the constructed implicit deflators for wholesale trade<sup>93</sup> (to

<sup>90</sup> According to the OECD Input-Output tables for Bulgaria, sectors with the highest share of intermediate consumption of electricity and gaseous fuels costs are related to mining and quarrying, water supply and sewerage, and manufacture of pharmaceuticals and chemicals.

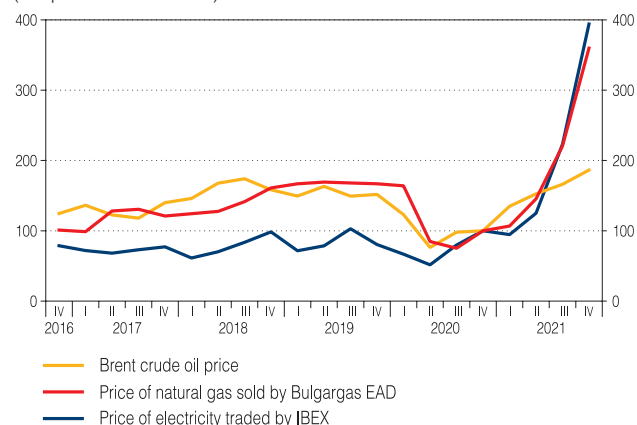
<sup>91</sup> In 2021 the Independent Bulgarian Energy Exchange was fully integrated in the Day Ahead electricity market in South-East Europe, which was implemented in two steps. In May 2021 the integration of the Bulgarian-Greek bidding zone border was completed, while in October 2021 the coupling with Romania was accomplished. For details, see [Independent Bulgarian Energy Exchange \(IBEX\) press release](#).

<sup>92</sup> The new pricing mechanism is based on a hybrid formula that takes into account both oil price dynamics and the price dynamics of gas futures contracts traded on the Netherlands exchange – *Dutch Title Transfer Facility* (hub indexation). This is the reason for recalculating the natural gas price supplied to Bulgaria every month. According to the previous pricing mechanism, the supply price of natural gas was recalculated quarterly and was determined based on the price dynamics of oil and alternative fuels to natural gas in international markets over the last nine months, including movements in the USD/BGN exchange rate.

<sup>93</sup> The deflator is constructed on the basis of working-day-adjusted data for the sector of wholesale trade, excluding the trade of motor vehicles and motorcycles (G46).

## Primary Energy Commodity Prices

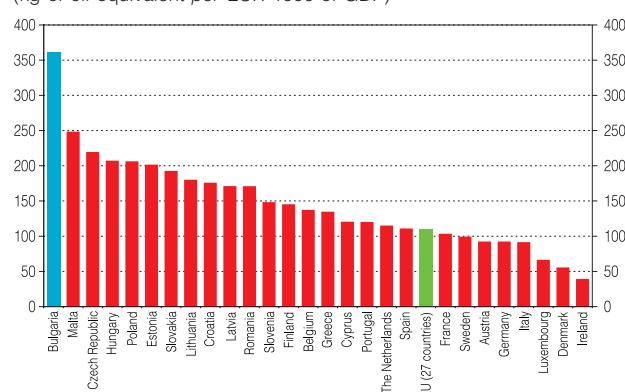
(IV quarter 2020 = 100)



Sources: the ECB, IBEX.

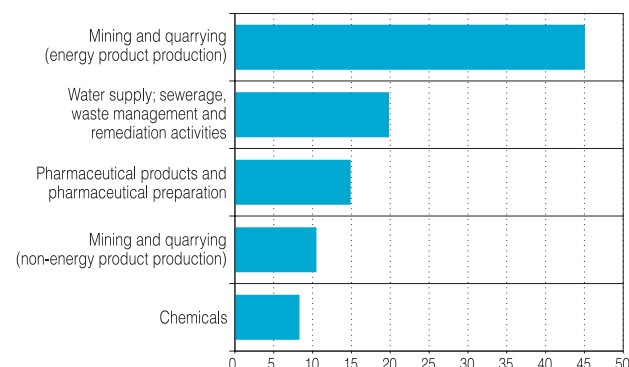
## Energy Intensity of the Economy of Bulgaria and Other EU Member States (2020)

(kg of oil equivalent per EUR 1000 of GDP)



Source: Eurostat.

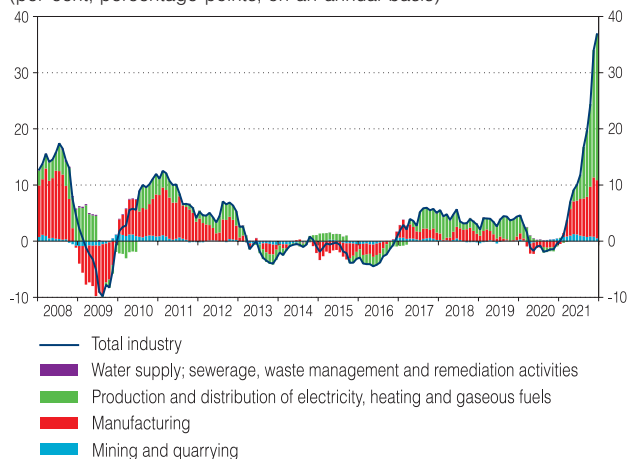
## Sectors of the Bulgarian Economy with the Highest Share in the Intermediate Consumption of Electricity and Gaseous Fuels Costs (the Five Most Energy-Intensive Sectors)



Source: Own calculations according to the 2020 OECD supply and use tables for Bulgaria (with data for 2018).

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

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



Source: the NSI.

15.7 per cent in November 2021, from -0.4 per cent at the end of 2020) and retail trade<sup>94</sup> (to 9.7 per cent in November 2021, from -1.9 per cent at the end of 2020).

As regards consumer prices measured by the HICP, the group of transport fuels had the main positive contribution to the December 2021 inflation, rising 38.2 per cent on an annual basis (against a fall of -17.3 per cent by end-2020).

Food inflation accelerated to 8.1 per cent in December 2021 (2.0 per cent at the end of 2020), with both processed and unprocessed food contributing to this. Unprocessed food prices posted a year-on-year increase of 6.0 per cent (compared to -0.8 per cent in December 2020). The fruit and vegetables sub-group was the main driver for price rises in unprocessed food, with the NSI data on agriculture<sup>95</sup> giving grounds for assuming that this was due to higher prices of electricity, fuels, mineral fertilizers and other products used for intermediate consumption. Additional potential factors exerting a pro-inflationary pressure relate to the seasonal supply and demand of these products and developments in import prices<sup>96</sup>.

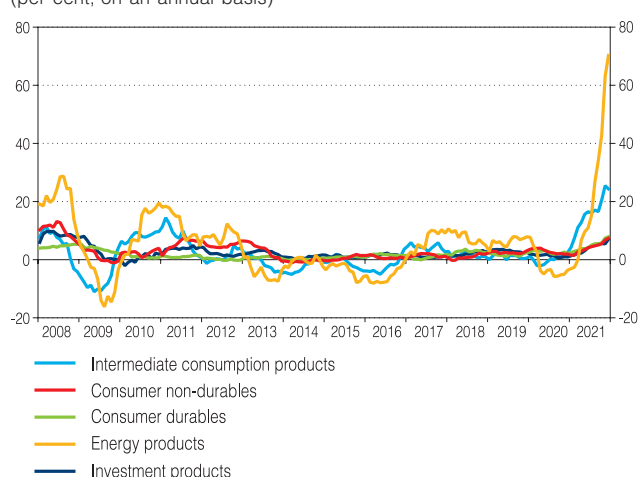
<sup>94</sup> The deflator is constructed on the basis of working-day-adjusted data for the sector of retail trade, excluding the trade of motor vehicles and motorcycles (G47).

<sup>95</sup> NSI data on price indices of goods and services currently consumed in agriculture are used.

<sup>96</sup> The analysis employs Commodity Exchange and Wholesale Markets State Commission public data.

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

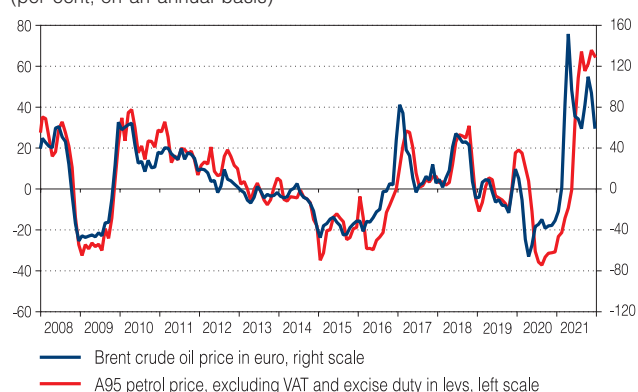
(per cent; on an annual basis)



Source: the NSI.

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

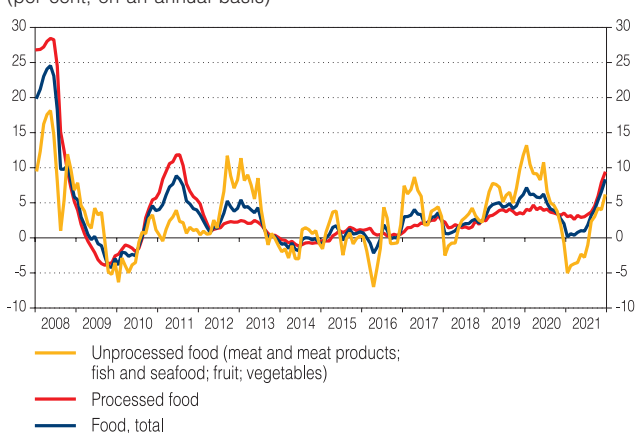
(per cent; on an annual basis)



Sources: the ECB, the NSI, BNB calculations.

## Rate of Change of Food Price Index

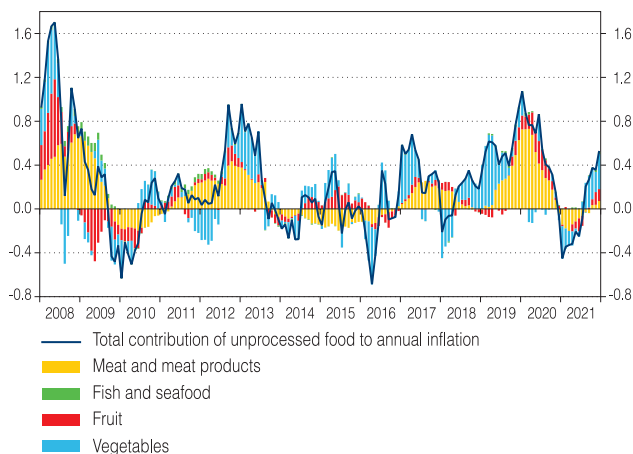
(per cent, on an annual basis)



Sources: the NSI, BNB calculations.

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

(percentage points)



Sources: the NSI, BNB calculations.

Processed food inflation was 9.2 per cent in December 2021, against 3.5 per cent by end-2020. The groups of bread and cereals, milk, dairy products and eggs, and animal and vegetable oil and fats again had the largest positive contributions to the price hike. Inflation in these groups was driven by the upward price dynamics for their production<sup>97</sup> in the context of the annual rise in international wheat, vegetable oil and other commodity prices in euro along with higher price indices of goods and services intended for intermediate consumption in agriculture in Bulgaria.

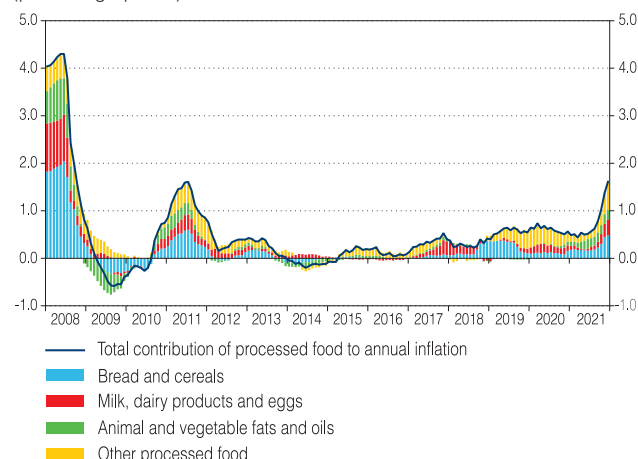
In December 2021 core inflation (including services and non-food prices) accelerated to 3.2 per cent from the end of 2020 (0.5 per cent). Higher inflation in non-food goods was the driving factor for the acceleration, while upward price dynamics in services was less pronounced.

Deflation observed in non-food goods during 2020 was reversed in the the beginning of the second half of 2021, with prices tending to steadily increase on an annual basis at an accelerating pace. Inflation in this group came to 3.9 per cent in December 2021 compared to -1.1 per cent at the end of 2020. This dynamics was driven by both non-durable goods (related mainly to clothing and footwear) and durable goods (furniture and furnishing, materials for

<sup>97</sup> According to the producer price index (PPI), as of December 2021 prices related to the manufacture of oils and fats rose by 33.5 per cent on an annual basis, those related to the production of bakery and farinaceous products increased by 15.3 per cent and to the production of milk and dairy products by 6.7 per cent.

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

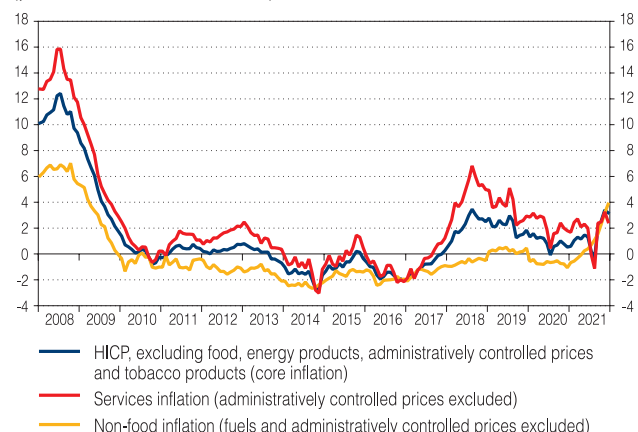
(percentage points)



Sources: the NSI, BNB calculations.

### Core Inflation

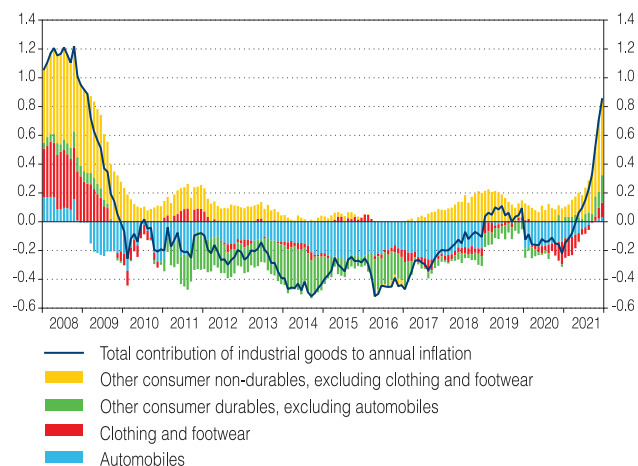
(per cent; on an annual basis)



Sources: the NSI, BNB calculations.

### Contribution of Inflation in Non-food Goods (Excluding Energy Products) and Major Services Sub-groups to Overall Inflation

(percentage points)



Sources: the NSI, BNB calculations.

the maintenance and repair of the dwelling, motor vehicles<sup>98</sup>). These developments reflected the growth in final consumption expenditure of households and a continuing change since the second half of 2020 in the structure of household consumption, involving a larger share of expenditure on home furnishing and maintenance<sup>99</sup>.

Annual inflation in services rose to 2.5 per cent in December 2021, from 1.8 per cent by end-2020. These developments reflected exhausted negative effects of subdued demand for certain services in 2020 (primarily short-stay accommodation services), growth in final consumption expenditure of households, higher unit labour costs and emerging indirect effects of increased food and fuel prices. Concurrently, early 2019 downward trend in telecommunication services prices accelerated, with this group making an essential negative contribution to the overall inflation in December 2021.

Inflation in goods and services with administratively controlled prices and tobacco products increased to 3.0 per cent in December 2021, from 1.2 per cent by end-2020. Electricity and heating prices, reflecting higher prices of electricity (4.4 per cent) and heating<sup>100</sup> (19.0 per cent) since 1 July 2021, as approved by the the Energy and Water Regulatory Commission (EWRC) for a year ahead, had the main positive contribution to the inflation in this group. Natural gas prices in December 2021 approved by the EWRC, which were 269.4 per cent higher than those in December 2020,<sup>101</sup> were the reason for gaseous fuels to have also a high positive contribution to the increase in administratively controlled prices. Other groups of regulated prices with a more substantial positive contribution to the December inflation were educational services, postal services, medicines and pharmaceuticals.

In December 2021 the diffusion index, showing the share of groups of goods and services with rising prices on an annual basis, increased to

<sup>98</sup> Since the beginning of 2021, prices of new cars have tended to increase, likely to reflect limited supply due to disruptions in global supply chains.

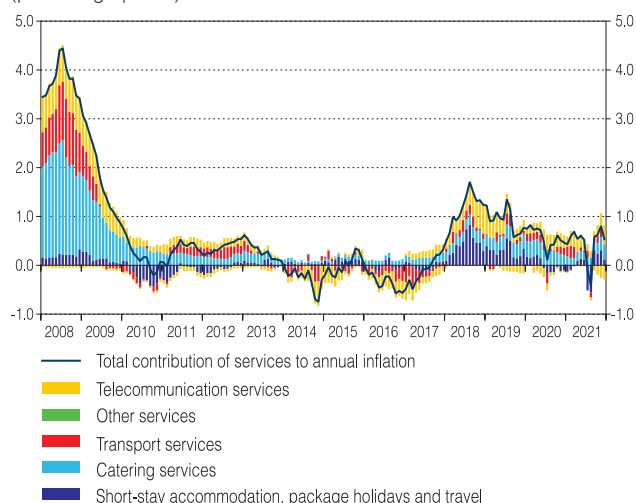
<sup>99</sup> According to NSI household budget survey data.

<sup>100</sup> Based on HICP data.

<sup>101</sup> The increase concerns the price (BGN/MWh, excluding VAT and excise duty) at which the public supplier Bulgargas EAD sells natural gas to final suppliers.

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

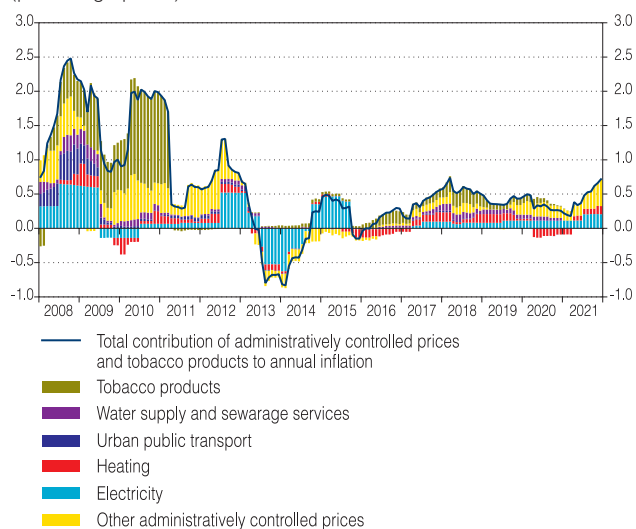
(percentage points)



Sources: the NSI, BNB calculations.

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

(percentage points)

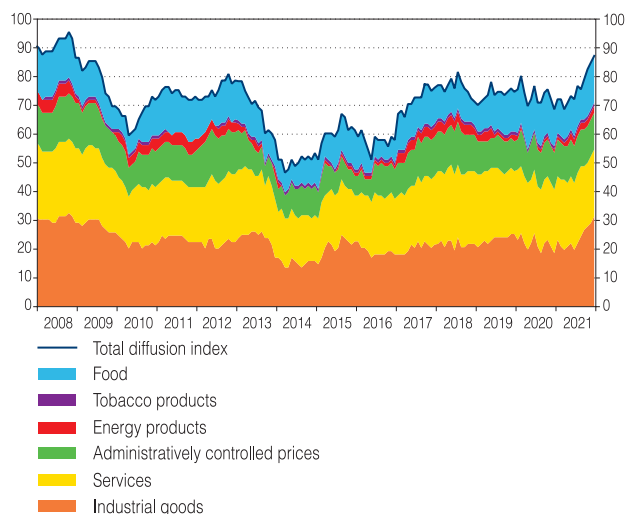


Sources: the NSI, BNB calculations.

## Diffusion index

### a) by major goods and services groups

(per cent, relative shares of increasing HICP sub-indices on an annual basis)



Notes: Data on the HICP 4-digit level sub-indices (sub-classes according to the NSI methodology) have been used. The diffusion index shows the share of sub-indices reporting an increase in value on an annual basis. When calculating the relative shares, the weight of the relevant sub-indices in the consumer basket is taken into account.

Sources: the NSI, BNB calculations.

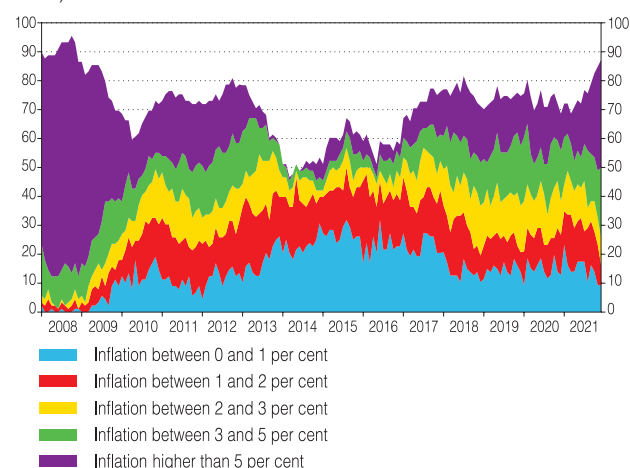
87.2 per cent, from 68.6 per cent at the end of 2020. In terms of the HICP structure, the most significant growth of the share of sub-indices with price rises was reported in the group of non-food goods followed by food. With regard to the amount by which prices increase, the number of HICP goods and services with rising prices of 5 per cent and those rising from 3 per cent to 5 per cent picked up at the end of 2021. This is a prerequisite for further overall inflation growth in the beginning of 2022.

According to the regular NSI business surveys, at the end of 2021 and the beginning of 2022 the share of firms which foresee an increase of selling prices in the following three months posted significant growth. This trend was reported in all major sectors: retail trade, services and industry. In addition, the prevailing expectations in the group of retail trade managers forecasting price hikes, are that the increase will be at the same and/or faster pace than that observed previously, which implies continued rising inflation in food and non-food goods over the following months.

In the third quarter of 2021 the annual growth rate of the house price index (HPI) was 8.7 per cent, from 9.1 per cent in the previous quarter, which was also accompanied by an increase in the volume of concluded sale and purchase

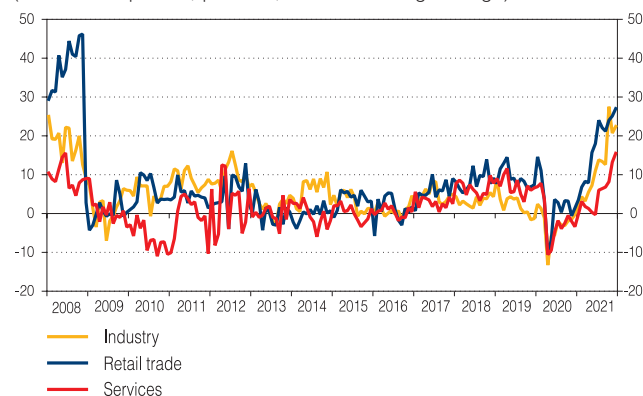
### b) by the size of the increase

(per cent, relative shares of increasing HICP sub-indices on an annual basis)



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

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

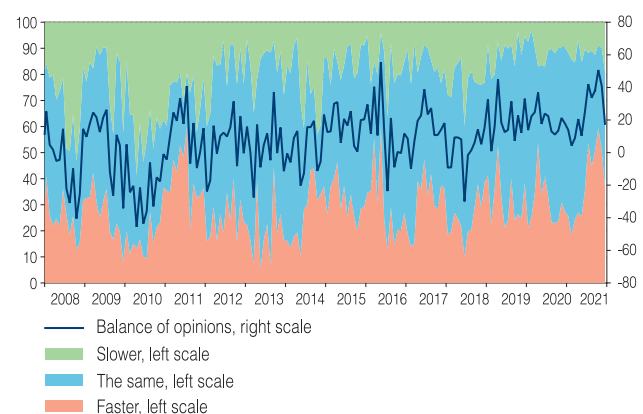


Source: the NSI.

## Expectations of the Rate of Increase in Selling Prices in Retail Trade over the Following Three Months

(share of managers, per cent)

(balance of opinions)



Source: the NSI.



transactions (by 29.5 per cent on an annual basis in the third quarter)<sup>102</sup>. Higher house prices were reported in all six largest cities, with Sofia recording the most significant house price increase (9.9 per cent). By HPI sub-component, prices of existing houses (8.8 per cent) increased simultaneously with new ones (8.5 per cent). Factors supporting housing demand and thereby contributing to higher house prices included the increased labour income, improved household sentiment for home purchase along with enhanced lending activity. Accumulated savings in the economy and the lack of enough alternatives for their investment amid low interest rates continued to be the other factors with a pro-inflationary effect on house prices. In addition, the continuing acceleration of the annual growth in the construction cost index<sup>103</sup> to 16.3 per cent in the third quarter of 2021 (due to higher labour and material costs) was a supply-side pro-inflationary factor. Over the review quarter, house prices remained 2.0 per cent lower than the maximum values recorded in the third quarter of 2008. Over the third quarter of 2021, the price-to-rent ratio, which represents an indicator of undervaluation/overvaluation of houses commonly used in the literature, continued to exceed significantly (27.0 per cent) its long-term (historical) value. This signals that household decisions to purchase a home were driven by reasons other than an immediate financial advantage by renting newly acquired properties. Such reasons could be sustained expectations of a continuing increase in house prices (and realised capital gains after a sale in the future) or perceptions of residential properties as an alternative asset for preserving value in an environment of low interest rates and higher consumer prices. At the same time, estimates based on the BNB macroeconomic model<sup>104</sup> suggest that the output gap of current residential property prices in Bulgaria from their long-term equilibrium value was slightly positive (about 6.5 per cent). This was due to the fact that rising household income in combination with persistently low interest rates on housing loans have pushed up housing affordability which is

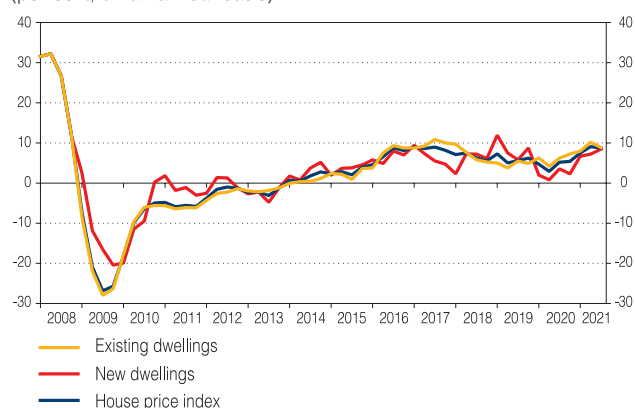
<sup>102</sup> Eurostat data are used.

<sup>103</sup> Eurostat data are used.

<sup>104</sup> For more information on this model, see the research topic on *Dynamics of House Prices in Bulgaria between 2000 and 2016*, Economic Review, 1/2017.

## Rate of Change of House Price Index

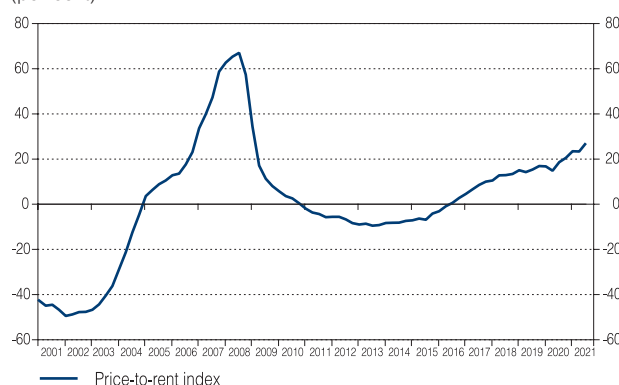
(per cent; on an annual basis)



Source: the NSI.

## Price-to-Rent Ratio (Percentage Deviation from Long-term Average Value)

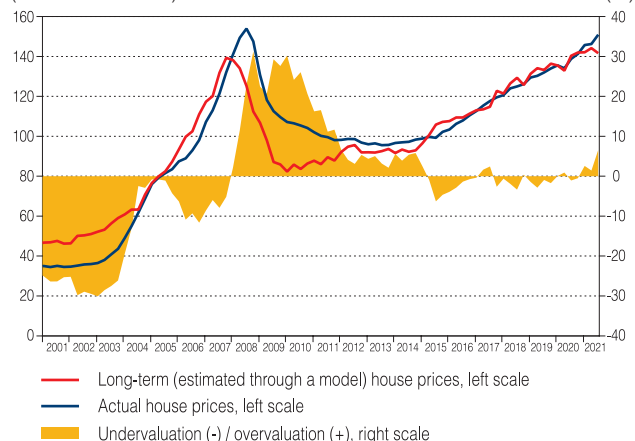
(per cent)



Sources: the NSI, BNB calculations.

## Actual and Equilibrium House Prices

(index 2015 = 100)



Sources: the NSI, BNB calculations.



## Key Indicators of the Housing Market in Bulgaria

(per cent; year-on-year change)

Indicators	2016	2017	2018	2019	2020	2020		2021	
						III	IV	I	II
Price developments									
House Price Index, total	7.0	8.7	6.6	6.0	4.6	5.4	7.5	9.1	8.7
New dwellings	6.4	6.7	5.7	8.5	2.2	2.3	6.7	7.2	8.5
Existing dwellings	7.3	9.7	7.0	4.8	6.0	7.2	8.0	10.2	8.8
Inflation (HICP)	-1.3	1.2	2.6	2.5	1.2	0.3	0.2	2.2	2.9
House rentals, paid by tenants (HICP)	0.6	1.0	1.9	3.3	2.5	2.3	1.7	1.5	1.5
Lending									
New housing loans	7.4	32.7	14.9	12.4	18.1	12.3	6.1	23.1	31.3
Annual percentage rate of charge on new housing loans (per cent, at the end of the period)	5.4	4.4	3.9	3.5	3.2	3.2	3.1	3.1	3.1
Housing loans balances	-16.7	12.7	19.4	0.0	-15.5	11.6	11.9	14.5	16.2
Construction and investment									
Permits issued for the construction of new residential buildings (square meters)	4.8	32.5	39.0	-7.9	-9.0	27.5	26.1	43.5	10.3
Value added in construction (at average annual prices for 2015)	-7.9	4.0	1.1	3.7	-1.0	-3.5	-16.6	-1.3	-6.6
Constriction Production Index, building construction	-16.1	10.9	2.6	8.4	-8.3	-8.1	-3.9	4.7	-0.1
Fixed investment; residential buildings	-10.3	102.1	19.2	-2.2	6.6	7.0	-6.1	-4.8	-14.5
Construction cost index for new buildings	0.8	2.5	2.9	5.1	2.1	2.4	5.2	8.5	16.3

Note: 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.

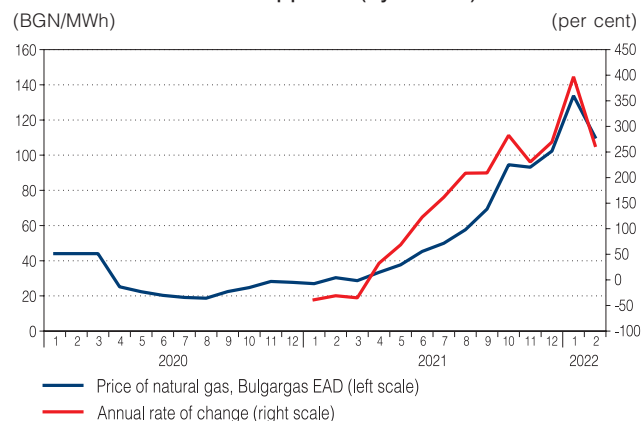
Sources: the NSI, the BNB, Eurostat.

recorded as an increase in their equilibrium price within the macroeconomic model. In the following quarters the HPI is expected to increase further on an annual basis at rates close to the current ones. The NSI Consumer Survey shows that this will be driven by the projected growth of economic activity in Bulgaria and the increased propensity of households to buy homes.

Inflation is anticipated to continue rising over the first half of 2022, reflecting primarily the effects on the supply side related to price hikes in energy resources at the end of 2021 and the assumptions about continued growth in some of their prices on a quarterly basis in the beginning of the year<sup>105</sup>. The surge in international food prices and higher unit labour costs will be other factors with a pro-inflationary effect. The services and food groups are expected to make the largest contribution to inflation in the first half of 2022 across HICP sub-components. The administratively controlled price group is expected to have a slightly positive contribution to inflation,

<sup>105</sup> For further details, see the BNB [Macroeconomic Forecast, December 2021](#).

## The Price at Which the Public Supplier Bulgargas Sells Natural Gas to Final Suppliers (by Month)



Sources: Bulgargas EAD, BNB calculations.

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

	Annual rate of inflation as of December 2020 (December 2019 = 100)		Annual rate of inflation as of December 2021 (December 2020 = 100)	
Inflation (per cent)	0.0		6.6	
	inflation rate by group (per cent)	contribution (percentage points)	inflation rate by group (per cent)	contribution (percentage points)
<b>Food</b>	<b>2.0</b>	<b>0.5</b>	<b>8.1</b>	<b>2.1</b>
Processed food	3.5	0.6	9.2	1.6
Unprocessed food	-0.8	-0.1	6.0	0.5
<b>Services</b>	<b>1.8</b>	<b>0.5</b>	<b>2.5</b>	<b>0.5</b>
Catering	3.8	0.2	6.7	0.3
Transport services	5.0	0.2	0.6	0.0
Telecommunication services	-0.4	0.0	-7.6	-0.4
Other services	1.0	0.1	6.0	0.6
<b>Energy products</b>	<b>-13.4</b>	<b>-1.0</b>	<b>35.0</b>	<b>2.4</b>
Transport fuels	-17.5	-1.0	38.2	1.9
<b>Industrial goods</b>	<b>-1.1</b>	<b>-0.2</b>	<b>3.9</b>	<b>0.9</b>
<b>Goods and services with administratively controlled prices*</b>	<b>1.5</b>	<b>0.2</b>	<b>3.8</b>	<b>0.7</b>
<b>Tobacco products</b>	<b>0.2</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>

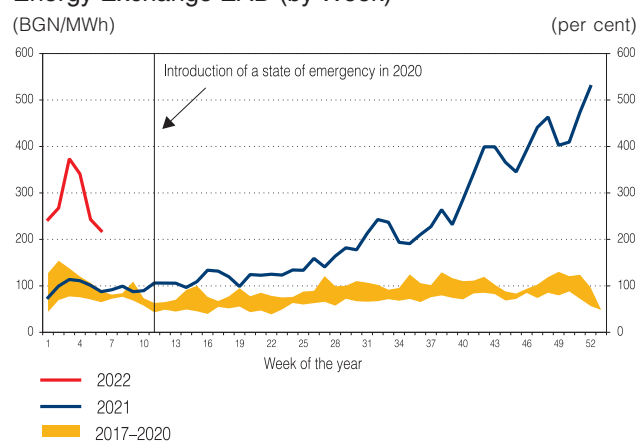
\* The index of goods and services with administratively controlled prices is calculated through weighting the relevant elementary aggregates in the consumer basket.

Sources: the NSI, BNB calculations.

with the forecast baseline scenario including only the officially announced regulatory changes as of 13 January 2022.

There are risks of a stronger increase in prices *vis-à-vis* the baseline scenario, reflecting mainly the dynamics of international commodity prices and possible changes in the prices of electricity, water and sewerage services and heating after the expiry on 31 March 2022 of the moratorium on these prices introduced by the government in December 2021. At the same time, the EWRC approved a decrease of natural gas prices<sup>106</sup> (excluding prices for access, transfer, excise and VAT) by 17.6 per cent in February compared to January 2022 not included in the baseline forecast scenario is a prerequisite for lower inflation.

### The Average Market Price of Electricity in the Day Ahead Market Segment of the Independent Bulgarian Energy Exchange EAD (by Week)



Sources: The European Network of Transmission System Operators for Electricity (ENTSO-E), BNB calculations.

<sup>106</sup> For further information, see the [press release](#) of the EWRC.

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THE SCULPTURAL COMPOSITION BY KIRIL SHIVAROV DEPICTING HERMES AND DEMETER ON THE SOUTHERN FAÇADE OF THE BULGARIAN NATIONAL BANK BUILDING IS USED IN COVER DESIGN