



# ECONOMIC REVIEW

4/2023



BULGARIAN NATIONAL BANK



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The BNB quarterly Economic Review presents information and analysis of the 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 Economic Review, issue 4/2023 was presented to the BNB Governing Council at its 15 February 2024 meeting. It employs statistical data and information published up to 26 January 2024. Expectations of economic developments in Bulgaria in the short term (until the second quarter of 2024), as described in this issue, are based on the BNB macroeconomic forecast prepared as of 11 January 2024. The estimates and projections presented in this publication should not be regarded as advice or recommendations. The user of the information is solely liable for any consequences thereof.

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## ABBREVIATIONS

ABSP	Asset-Backed Securities Purchase Programme
APP	Asset Purchase Programme
APRC	Annual percentage rate of charge
BNB	Bulgarian National Bank
CBPP	Covered Bond Purchase Programme
cif	cost, insurance, freight
CEE	Central and Eastern European countries
CFP	Consolidated Fiscal Programme
CNY	Chinese Yuan
COMEX	Commodity Exchange
CPI	Consumer Price Index
CSPP	Corporate Sector Purchase Programme
EC	European Commission
ECB	European Central Bank
EIB	European Investment Bank
EONIA	Euro OverNight Index Average
EU	European Union
EURIBOR	Euro Interbank Offered Rate
EWRC	Energy and Water Regulatory Commission
FDI	Foreign Direct Investment
FOB	Free on Board
FOMC	Federal Open Market Committee
GDP	Gross Domestic Product
HICP	Harmonized Index of Consumer Prices
HPI	House Price Index
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
LNG	Liquefied natural gas
LTRO	Longer-term refinancing operation
M3	broad money
MF	Ministry of Finance
MFIs	Monetary Financial Institutions
mt	metric tons
MMBtu	Metric Million British Thermal Unit
NPISHs	Non-profit institutions serving households
NRRP	National Recovery and Resilience Plan
NSI	National Statistical Institute
OECD	Organisation for Economic Co-operation and Development
OPEC	Organization of Petroleum Exporting Countries
PBoC	People's Bank of China
PCE	Personal Consumption Expenditures
PELTRO	Pandemic Emergency Longer-Term Refinancing Operations
PEPP	Pandemic Emergency Purchase Programme
PMI	Purchasing Managers' Index
PPI	Producer Price Index
PSPP	Public Sector Purchase Programme
SITC	Standard International Trade Classification
SNA	System of National Accounts
TLTRO	Targeted Longer-Term Refinancing Operations
TPI	Transmission Protection Instrument
VAT	Value Added Tax
€STR	Euro Short-term Rate



# SUMMARY

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In the third quarter of 2023, global GDP growth continued to slow down on a quarterly basis and reached 0.5 per cent, with economic indicators data suggesting a retention of the growth at this level in the fourth quarter as well. The growth rate of economic activity in the services sector accelerated in the last quarter of 2023, while the industrial sector showed signs of a reversal in its descending trend. In the United States and China, economic growth slowed somewhat in the fourth quarter, while euro area economic indicators signalled a slight decline in GDP on a quarterly basis.

Global inflation continued to decelerate on an annual basis in the fourth quarter, owing to declines in crude oil and food prices. In view of the continued downward trend in annual US and euro area inflation towards the target values of the Federal Reserve System and the ECB, both central banks made no changes in their monetary policy, though signalling a possible cut in policy rates over the course of 2024. In December 2023, the ECB announced that the process of reducing the Eurosystem balance sheet would continue in the second half of 2024, and reinvestments of proceeds from maturing securities purchased under the Pandemic Emergency Purchase Programme (PEPP) would be discontinued at the end of 2024.

Bulgaria's current and capital account surplus for the last 12 months as of November 2023 was 3.1 per cent of GDP compared with a deficit of 0.5 per cent of GDP as of December 2022. This was largely due to the current account shift from a deficit to a surplus and, to a smaller extent, to a rise in the capital account surplus. The financial account balance for the last 12 months as of November 2023 was positive, reflecting a higher accumulation of Bulgarian residents' foreign assets compared to liabilities to non-residents. As a result of the flows in the current, capital and financial accounts of the balance of payments, Bulgaria's gross international reserves for the last 12 months as of November 2023 increased by EUR 2.3 billion against EUR 4.0 billion as of December 2022.

In 2023, annual growth of non-financial corporations' deposits in the banking system slowed down significantly as a result of a lower contribution of overnight deposits, with the moderation being only partly offset by the increase in corporate deposits with an agreed maturity. Growth in household deposits accelerated throughout the year, supported by rising labour income and households' maintained preferences to keep their free funds in the form of deposits in the banking system. In the context of interest rates on new time deposits of households, which most major banks maintain at levels close to zero, growth in household deposits continued to be almost entirely driven by overnight deposits.

The decrease in inventories in the economy from the high levels in 2021–2022 had an impact on lower demand for financial resources used for working capital and for ensuring inventories by firms in 2023, which contributed to a significant slowdown in the corporate overdraft and credit to firms as a whole. Annual growth of credit to households remained very high in 2023, especially in the housing lending segment. On the demand side, the main factors behind the growth of housing lending continued to be rising labour income, still very low nominal interest rates on housing loans, which are negative in real terms, and households' maintained preferences to purchase real estate as an alternative form of investment or saving. On the supply side, growth in housing loans was influenced by the ample liquidity in the banking sector, the sound capital position of banks and the competition between them for a market share in this segment. The effects of increases in euro area policy rates and of the rise in banks' minimum required reserve rate to 12 per cent by the BNB from mid-2023 on domestic lending and deposit rates currently remain very limited in the household sector.

In the third quarter of 2023, Bulgaria's real GDP increased by 0.4 per cent on the previous quarter. Economic activity growth on an annual basis continued to slow down to reach 1.5 per cent. The slowdown in year-on-year growth was driven by a decline in the positive contribution of net exports, which was partly offset by an acceleration in domestic demand growth, notably in investment activity in Bulgaria. In the third quarter, gross value added increased year on year in all major economic sectors with the exception of agriculture. Between July and September 2023, the decline in the working-age population led to a reduction in both labour force and the number of inactive persons. In the third quarter, employment fell by 0.6 per cent year on year, driven by agriculture and manufacturing, while the unemployment rate rose by 0.4 percentage points to 4.0 per cent. However, labour shortages continued to exert an upward pressure on wages, with the annual growth rate of compensation *per* employee in nominal terms further outpacing the growth in consumer prices and real labour productivity in the third quarter.

According to the composite indicator of economic activity constructed by the BNB, in the fourth quarter of 2023, Bulgaria's real GDP is expected to rise on a quarter-on-quarter basis at an accelerating pace. This is a prerequisite for a reversal of the downward trend in the annual growth rate of economic activity. In the first half of 2024, real GDP is expected to grow on both a quarterly and annual basis, supported mainly by domestic demand and an assumed improvement in the outlook for external demand for Bulgarian goods and services.

Annual inflation, measured by the HICP, continued to follow a downward trend in 2023 and reached 5.0 per cent in December 2023. The emerging base effect from the rapid rates of consumer price increases in 2022, mainly in the food and core components groups, as well as the decline in energy product prices contributed to this dynamics. Strong growth rates in private consumption and unit labour costs were factors stemming from the domestic environment, which continued to exert an inflationary pressure. As a result, services and food had the largest positive contribution to headline inflation at the end of 2023. Annual inflation is projected to moderate further in the first half of 2024, in line with the external assumptions on international commodity price developments. Stronger consumer demand and rising unit labour costs amid labour shortages are expected to continue to create conditions for a limited pass-through by firms of falling international agricultural commodity prices to final consumer prices.

# 1. EXTERNAL ENVIRONMENT

## 1.1. Current Business Situation

### Global Environment

In the third quarter of 2023, global GDP growth continued to slow down on a quarterly basis to 0.5 per cent (from 0.7 per cent in the second quarter of 2023), with data on economic indicators (global PMIs in services and manufacturing sectors) signalling growth stabilisation in the fourth quarter of the year. The growth rate of economic activity in the services sector accelerated in the last quarter of 2023, while the industrial sector showed signs of a reversal in its descending trend. The expansion of economic activity in services was largely due to the higher activity of firms in this sector both in China and the United States, while demand in industry continued to fall as a result of an increased cost of financial resources in major developed economies. In the second half of 2023, the downward trend of new export orders that started in March 2022 was retained, as reflected in the decline of global goods trade volumes over this period.

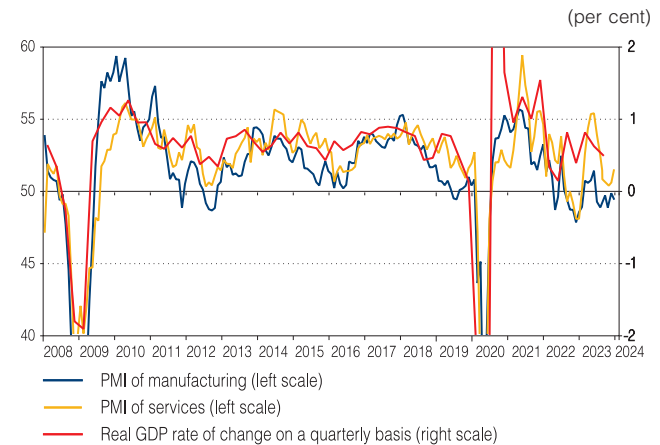
Global inflation was 3.9 per cent year on year at the end of 2023, from 4.6 per cent in September. Slowdown in inflation was due to the annual decline in energy commodity and food prices.

### International Commodity Prices

In the fourth quarter of 2023, the Brent oil price fell on a quarterly basis (by 3.1 per cent in dollars<sup>1</sup> and by 2.0 per cent in euro) to USD 84.0 *per barrel* (EUR 78.2 *per barrel*). On an annual basis, downward dynamics slowed down, but the price continued to decrease both in dollars (by 4.9 per cent) and in euro (by 9.9 per cent). At the same time, natural gas prices in the European market continued to fall year on year (by 65.3 per cent in euro) over the review period, though picking up on

<sup>1</sup> Hereinafter referred to as the US dollar.

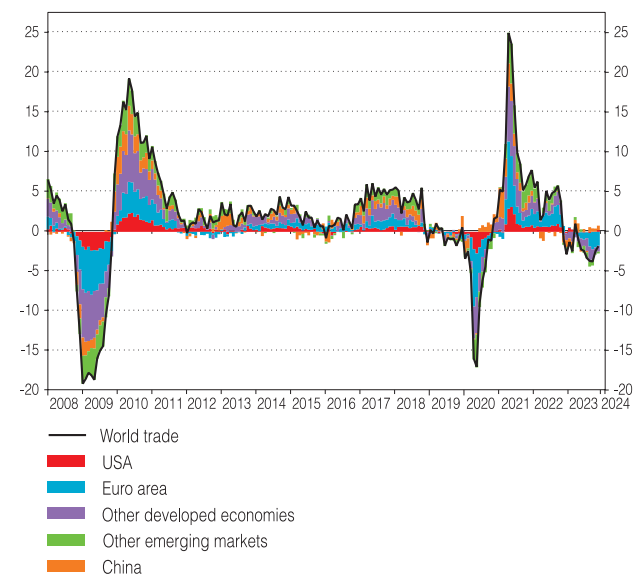
Manufacturing and Services PMIs and Changes in World Real GDP



Sources: JP Morgan, World Bank.

### World Trade in Goods

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



Source: CPB Netherlands Bureau for Economic Policy Analysis.

a quarterly basis (by 27.1 per cent in euro) under the influence of geopolitical tensions in the Middle East.

Market participants' concerns about a slowdown of global economic activity and, accordingly, of crude oil demand due to the tightened monetary policies of leading central banks were the main factor behind the oil price decline. Escalation of geopolitical tensions in the Middle East in early October 2023, together with concerns about a regional expansion of the Israel– Hamas military conflict, were the major factor impeding a possible larger fall in oil prices. OPEC+ measures intended to curb oil production<sup>2</sup> were another important factor supporting the crude oil price.

A driving factor behind the increased natural gas price in Europe in the fourth quarter of 2023 was the military conflict in the Middle East. The impact of the conflict on prices was more significant for natural gas than for crude oil due to the important role of Israel in the extraction and exports of natural gas in this region. At the same time, the high levels of gas stocks in most gas storages in Europe, favourable weather conditions and weaker industrial demand acted as constraints on natural gas prices.

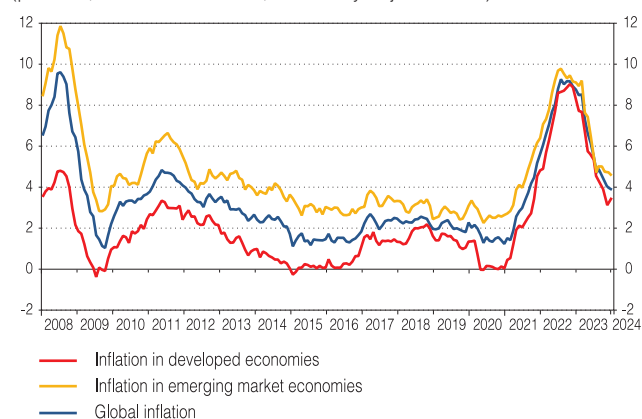
In October–December 2023, the average metal and mineral price index decreased by 0.9 per cent on an annual basis in dollars (by 5.9 per cent in euro). This decline reflected a slowdown in global economic activity and worsened prospects to the manufacturing sector. Nickel, aluminium and zinc contributed most negatively to the annual change in the metal index, with their contribution being partially offset by the increased iron ore price. The price of copper, which is essential for Bulgarian exports, rose slightly year on year owing to improved market participants' assessments of the economic outlook in China in late 2023 and growing concerns about a decline in copper supply.

In October–December 2023, the total food price index recorded an annual decrease of 6.9 per cent in dollars (11.8 per cent in euro). On an annual

<sup>2</sup> On 30 November, OPEC+ announced that oil supply quotas would be extended until the end of March 2024. Intentions of a further increase in agreed voluntary restraints over the first quarter of 2024 were stated: from 1.3 million to a total of 2.2 million barrels *per day*.

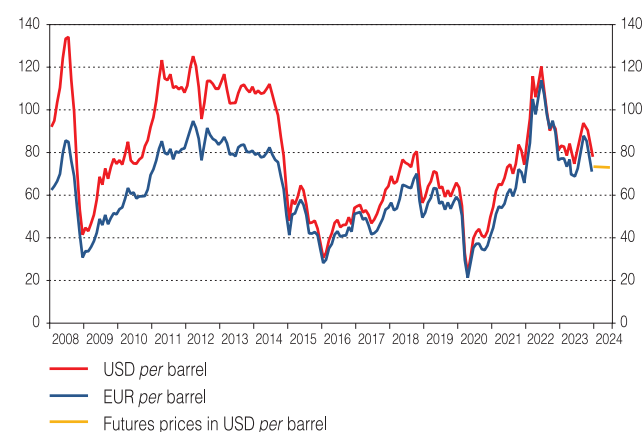
## Inflation Measured through CPI

(per cent, on an annual basis; seasonally adjusted data)



Source: World Bank.

## Prices and Futures of Brent Crude Oil

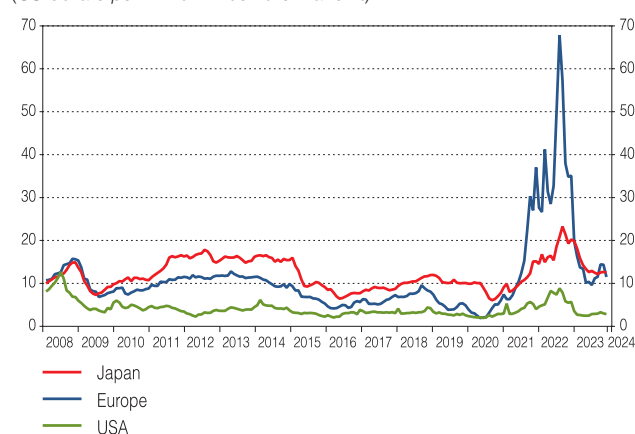


Note: Future prices are average contracts prices for 1–26 January 2024, USD *per barrel*.

Sources: World Bank, ECB, JP Morgan and BNB calculations.

## Natural Gas Prices

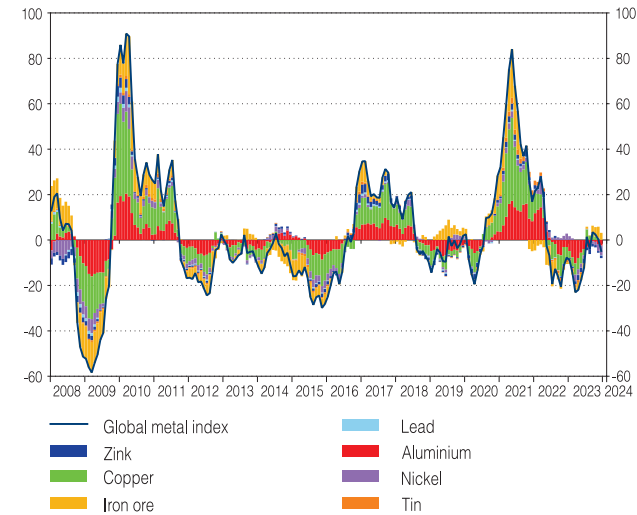
(US dollars *per million British thermal unit*)



Source: World Bank.

## Metals Price Indices

(per cent; percentage points)

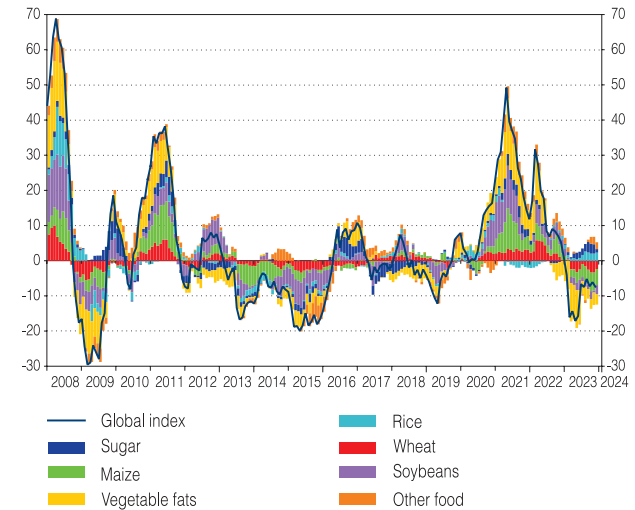


Note: Annual rate of change (per cent) and contribution (percentage points) by sub-component of relevant price indices measured in US dollars.

Sources: World Bank and BNB calculations.

## Food Price Indices

(per cent; percentage points)



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

Sources: World Bank and BNB calculations.

basis, prices of most food commodities declined, excluding oranges, rice and sugar. Lower prices of vegetable fats, corn and wheat contributed most significantly to the decline in the food price index. The price of wheat, which is essential for Bulgaria's food exports, recorded an annual fall during the quarter due to the 2022 base effect and higher stocks of seasonal crops in several leading exporting countries in the southern hemisphere (Argentina and Australia).

### The United States

US real GDP recorded quarterly growth of 0.8 per cent in the fourth quarter of 2023, compared with 1.2 per cent in the third quarter. The slowdown of quarterly real GDP growth in the fourth quarter reflects a lower positive contribution of inventories and moderating growth of public sector consumption and housing investments. Private consumption remained comparatively high for a second consecutive quarter, contributing 0.5 percentage points to the quarterly GDP growth in real terms. In 2023, US GDP rose by 2.5 per cent in real terms (compared with 1.9 per cent in 2022), with private consumption (1.5 percentage points), public consumption and investments (0.8 percentage points) and net exports (0.6 percentage points) contributing mainly to the growth.

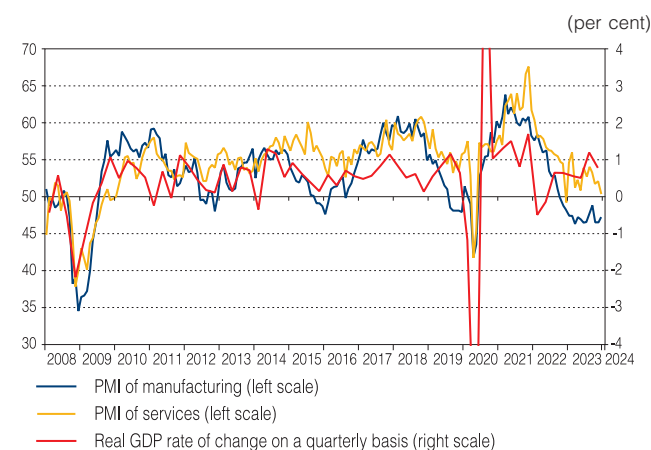
US labour market conditions did not change significantly in the fourth quarter of 2023. The number of employees in the non-agricultural sector increased by 494 thousand (compared to a rise of 663 thousand in the third quarter of 2023), and the ratio of offered new jobs to the number of unemployed decreased to 1.4 against an average of 1.5 in the third quarter. In December and the fourth quarter on average, the US unemployment rate remained unchanged from the third quarter at 3.7 per cent. Over the fourth quarter, US economically active population rate also remained unchanged from the previous quarter at 62.7 per cent.

In the fourth quarter of 2023, annual consumer price inflation declined, remaining, however, above the 2 per cent target set by the Federal Reserve System. In December, the price index of personal consumption expenditure (PCE) retained its annual rate of change at 2.6 per cent for a second consecutive month, from 2.9 per cent in October and 3.3 per cent on average in the third quarter. The moderation in inflation compared to the third quarter was mainly due to lower inflation of vehicle fuels. The annual growth rate of the core PCE price index (excluding food and energy products) decelerated in December to 2.9 per cent, from 3.8 per cent on average in the third quarter. Moderation of core inflation in the fourth quarter compared with the previous one resulted from lower prices of accommodation services and declines in household expenditure and in some financial services.

The sustainable decline in inflation to the Federal Reserve target and the robust labour market gave grounds for the Federal Open Market Committee (FOMC) to maintain its restrictive monetary policy in the fourth quarter of 2023. FOMC signalled a possible end of the current rate-rising cycle and forthcoming start of discussions about monetary policy easing in 2024.

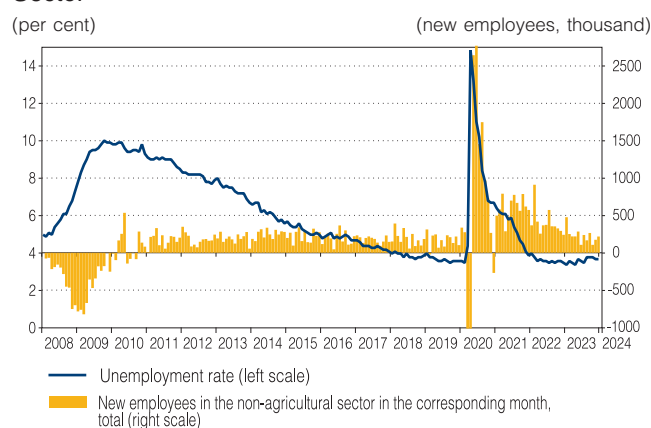
In December 2023, the median of FOMC members' forecasts about the federal funds rate for the end of 2024 was revised downwards to 4.6 per cent, corresponding to a federal funds rate corridor of 4.50–4.75 per cent, or a 75 basis point decrease from the end of 2023. In 2025, FOMC members expect a reduction of 100 basis points to a level corresponding to a 3.50–3.75 per cent target corridor.

## Manufacturing and Services PMIs and Changes in US Real GDP



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

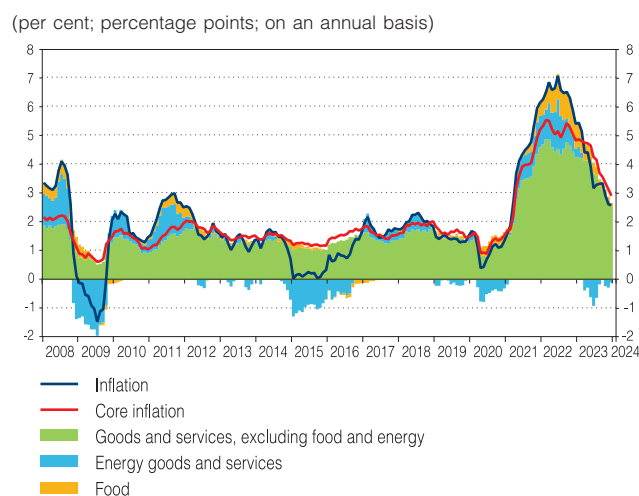
## US Unemployment Rate and a Monthly Change in the Number of New Employees in the US Non-agricultural Sector



Note: The number of new employees in the non-agricultural sector for April and June 2020 is not evident in the chart, coming to -20,514 and 4565 thousand.

Source: Bureau of Labour Statistics.

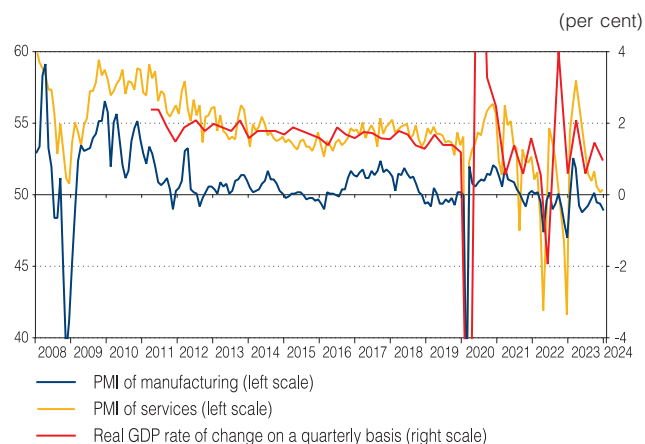
## US Inflation Rate



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.

## Manufacturing and Services PMIs and Changes in China's Real GDP



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

## China

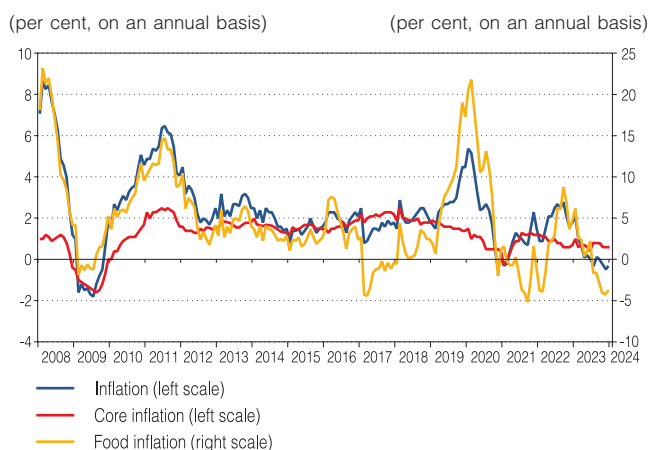
In China, quarterly real GDP growth slowed down to 1.0 per cent in the fourth quarter of 2023, compared to 1.5 per cent in the third quarter, mainly driven by the slowing economic activity in the services sector and lower investment activity in the real estate sector. Overall for 2023, real GDP of China increased by 5.2 per cent.

Structural problems in the Chinese residential construction sector continued to act as a constraint on domestic economic activity. In December 2023, the physical volume of residential property sales fell by 8.5 per cent on an annual basis, compared to a 7.0 per cent decline in the third quarter of the year. The volume of loans for house purchase fell by 9.1 per cent year on year in December, compared with a 4.1 per cent decline on average for the third quarter.

In the fourth quarter of 2023, the deflationary trend in consumer prices continued, with the CPI falling by 0.3 per cent on an annual basis in December, compared with a 0.1 per cent decline on average in the third quarter. Declines in food, consumer goods and energy prices were the main contributor to deflation during the period. Core inflation slowed from 0.8 per cent in the third quarter to 0.6 per cent in December.

In January 2024, the People's Bank of China announced that, effective from 5 February, it would cut by 50 basis points the bank reserve requirements

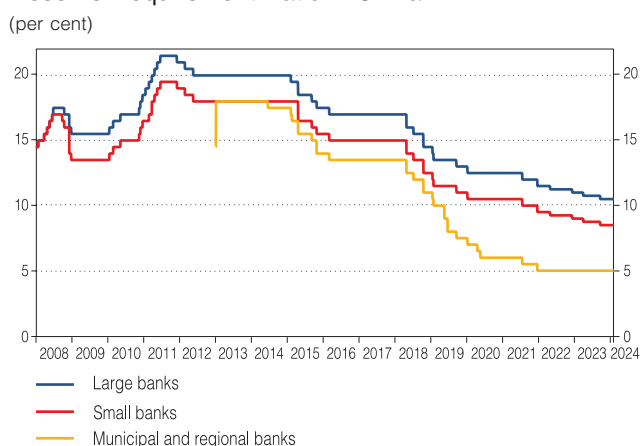
## China's Inflation Rate



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.

## Reserve Requirement Ratio in China



Source: People's Bank of China.

rate, which is above 5 per cent. The reduced rate is expected to free up liquidity for banks in the amount of RMB 1 trillion (USD 139 billion).

### Euro Area

In the third quarter of 2023, euro area real GDP decreased by 0.1 per cent on a quarterly basis. Of the components of final consumption expenditure, changes in inventories, which were partially offset by the positive contribution of private and government consumption had the main negative contribution to the change in GDP. Germany, Bulgaria's largest trading partner, recorded a 0.1 per cent decline in real GDP from the previous quarter, while quarter-on-quarter economic activity in Italy, Bulgaria's other major trading partner, picked up by 0.1 per cent.

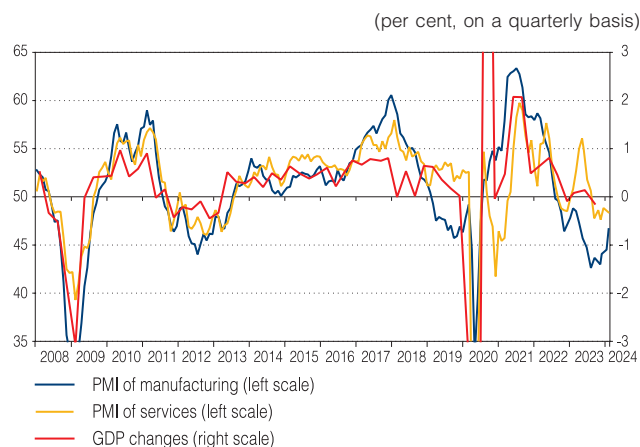
Data available as of end-January 2024 on economic indicators in the euro area, including PMIs, signalled a slight quarterly decline in euro area real GDP over the fourth quarter of 2023.

The decline in euro area economic activity in the second half of 2023 does not yet lead to a significant deterioration in labour market conditions. The unemployment rate remains at historically very low levels, falling to 6.4 per cent in November, from 6.5 per cent in the previous four months. Concurrently, employment tended to slow down further, growing by 1.3 per cent on an annual basis in the third quarter compared to the 1.4 per cent rise in the previous quarter.

Annual inflation of consumer prices in the euro area continued to moderate in the fourth quarter of 2023, reaching in December 2.9 per cent, from 4.3 per cent in September 2023. The slowdown in year-on-year inflation was mainly due to lower food inflation and lower electricity prices due to the high base effect of 2022. Core inflation, excluding food and energy, also slowed: to 3.4 per cent on an annual basis in December compared to 4.5 per cent in September. The decline in core inflation was due to the slowdown of inflation in accommodation services, transport fuels, package holidays and motor vehicles.

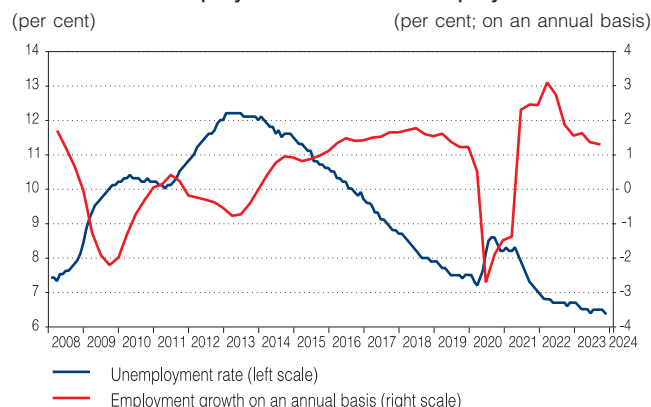
In view of the continued downward trend in annual inflation in the euro area towards the European Central Bank's target value, during the period from

### Manufacturing and Services PMIs and Change in Euro Area Real GDP



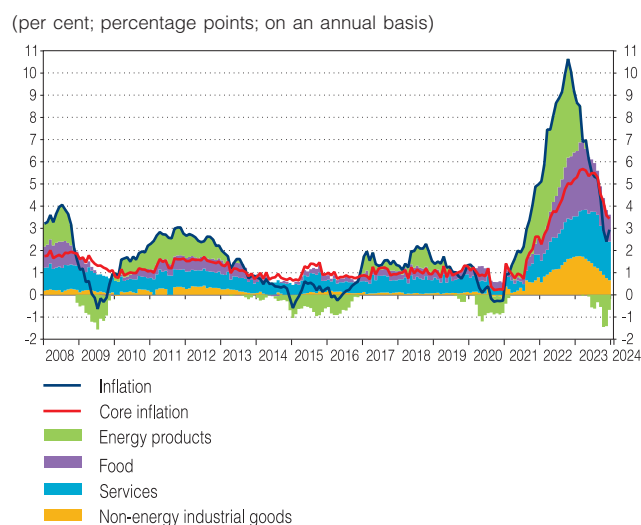
Source: Eurostat.

### Euro Area Unemployment Rate and Employment Growth



Source: Eurostat.

### Euro Area Inflation Rate



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

Source: Eurostat.



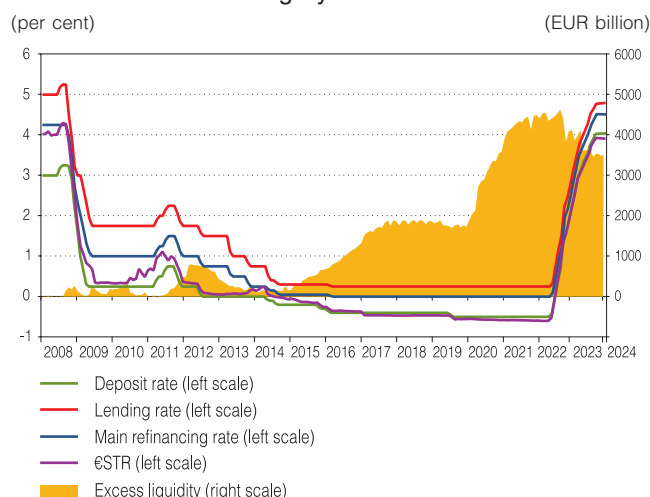
October 2023 to January 2024, the ECB Governing Council kept the policy rates unchanged (4.5 per cent, 4.75 per cent and 4.0 per cent, respectively, on the main refinancing operations, marginal lending facility and deposit facility). At the three meetings held in October and December 2023 and January 2024, the ECB stated that the main interest rates had reached a level which, if maintained for a sufficiently long period, would contribute to the timely return of inflation to its target level. At the December 2023 meeting, the ECB Governing Council also announced that it intends to start reducing from mid-2024 reinvestments of the proceeds from maturing securities under the PEPP by EUR 7.5 billion *per* month on average and to discontinue them at the end of 2024.

In the fourth quarter of 2023, the average value of €STR, the overnight euro area's money market rate, increased to 3.90 per cent, from 3.60 per cent in the third quarter of 2023. Over the review quarter, €STR fluctuated in a narrow range between 3.88 and 3.91 per cent, as the ECB left the deposit facility rate unchanged. The sustainable decline in euro area inflation has led to a decline in inflation expectations among market participants and increased expectations that the ECB would start cutting policy rates in 2024. These expectations were reflected in a decrease of EURIBOR unsecured deposit rates and of German government bond yields in the fourth quarter of 2023. Over the period, two-year yields of German government bonds fell by 80 basis points to 2.40 per cent, and ten-year yields – by 82 basis points to 2.02 per cent.

## 1.2. Impact on the Bulgarian Economy

Given the exhaustion of a large part of the negative effects on Bulgarian exports from repair activities in the industrial sector and strong grain exports, in the third quarter of 2023, goods exports rose on a quarterly basis, despite the weakening economic activity in Bulgaria's major trading partners in the euro area. Although risks to global economic activity and world trade are significant, currently available information indicates an acceleration in the growth of external demand for Bulgarian goods and services in late 2023 and early 2024 on both an annual and quarterly basis.

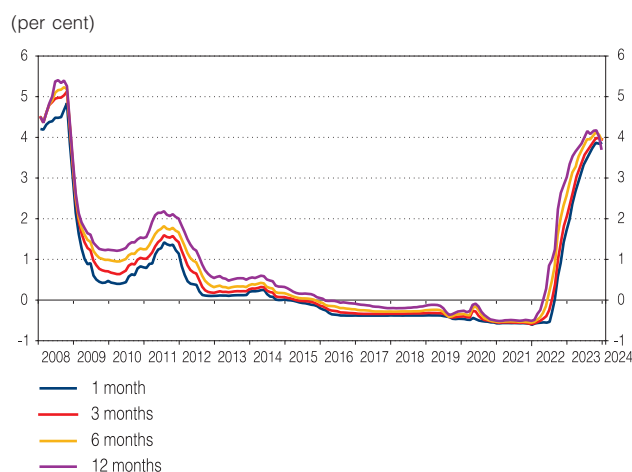
### ECB Interest Rates, EONIA, €STR and Excess Liquidity in the Euro Area Banking System



Note: The EONIA/€STR series is composed of: EONIA between 2008 and 14 March 2017; pre-€STR between 15 March 2017 and 30 September 2019; €STR in the period after 30 September 2019.

Source: ECB.

### EURIBOR



Source: ECB.

Commodity price developments in international markets over the fourth quarter of 2023, mainly expressed in falling prices on an annual basis, combined with the structure of the Bulgarian economy and foreign trade, gave indications about unfavourable terms of trade for Bulgaria in this period.<sup>3</sup> Maintaining this dynamics will likely limit some of the positive effects on Bulgaria's trade balance from the expected strengthening of economic activity in our main trading partners in the first half of 2024.

A possible change in the main interest rates of the Federal Reserve and the ECB in the first half of 2024 is likely to have a different effect on financing conditions for individual economic sectors in Bulgaria. According to the currency board principles, changes in euro area money market rates may be expected to continue to be transmitted rapidly into interest rates in the interbank money market in Bulgaria. As of the fourth quarter of 2023, however, the achieved increase in lending and deposit rates for households in Bulgaria remained significantly weaker than the rise in interbank money market rates. Key driving factors continued to be specific to Bulgaria, mostly related to the high inflows of attracted funds, still significant liquidity and persistent strong competition in the banking sector. As a result, heterogeneous dynamics can be expected in funding costs for the government and firms, on the one hand, and for households, on the other, in the event of a possible cut in ECB policy rates during 2024.

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<sup>3</sup> Unfavourable terms of trade refer here to a more significant annual decline in the deflator of exports of goods than that of imports of goods.

## 2. EXTERNAL FINANCIAL FLOWS

### 2.1. Balance of Payments and Foreign Trade

In the January–November 2023 period, Bulgaria's current and capital account balance was positive, which implied no need for external financing of the economy. This, combined with a stronger increase in foreign assets of Bulgarian residents compared to their liabilities, was the reason for maintaining a positive financial account balance, whereby Bulgaria continued to be a net creditor to the rest of the world.<sup>4</sup> As a result of these developments, Bulgaria's gross international reserves declined by EUR 525 million in the January–November 2023 period (compared to an increase of EUR 1.2 billion in the January–November 2022 period), rising, however, in the last 12 months as of November 2023. In November 2023, the amount of gross international reserves remained high according to the indicators commonly used in practice, equaling the amount of nominal imports of goods and services<sup>5</sup> for a period of 8.4 months (7.8 months in December 2022), while the ratio of international reserves<sup>6</sup> to Bulgaria's short-term external debt stood at 5.1 times in October 2023 (compared to 4.3 times in December 2022).

#### Current Account and Capital Account

Bulgaria's current and capital account surplus for the last 12 months as of November 2023 was 3.1 per cent of GDP compared with a deficit of 0.5 per cent of GDP as of December 2022. This was largely due to the current account shift from a deficit to a surplus and, to a smaller extent, to a rise in the capital account surplus. The positive balance on the capital account in the last 12 months as of November 2023 stood at 2.5 per cent of GDP. Its increase compared with December 2022 (0.9 per cent of GDP) was driven mainly by the greenhouse gas emission allowances trading.

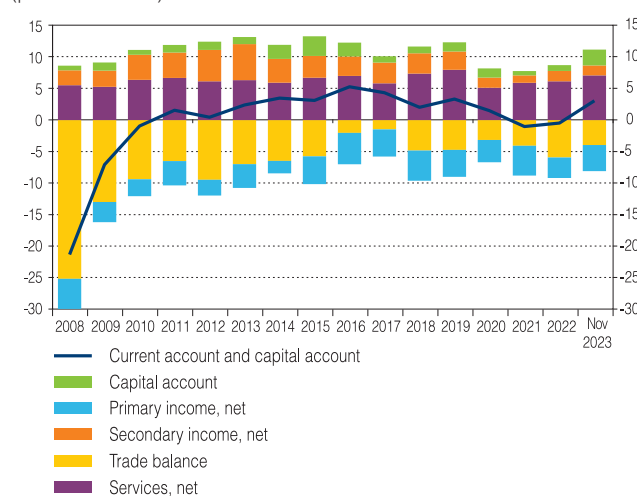
<sup>4</sup> The analysis is based on the analytical reporting of the balance of payments.

<sup>5</sup> Calculated for the last 12 months as of November 2023.

<sup>6</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 revaluations.

#### Current and Capital Account Flow Dynamics and Contribution by Components

(per cent of GDP)



Notes: November 2023 data on the current and capital account flows are accumulated for the last 12 months.

Nominal GDP data for the last four quarters, up to the third quarter of 2023 inclusive, are used in calculating the GDP ratio for November 2023.

Sources: BNB, NSI, BNB calculations.

## Trade Balance and Foreign Trade in Goods

The trade balance deficit for the last 12 months as of November 2023 decreased to 3.9 per cent of GDP from 5.9 per cent of GDP in December 2022, owing to a stronger annual decline in nominal imports of goods (-10.3 per cent) than in exports (-8.0 per cent) between January and November 2023. On the basis of more detailed data available only up to September 2023<sup>7</sup>, it can be assumed that the lower deficit was largely driven by a stronger year-on-year fall in imports of goods in real terms (-7.8 per cent) than that in exports of goods (-3.9 per cent), while the unfavourable trade conditions<sup>8</sup> for Bulgaria partly limited the contraction of the trade deficit. Foreign demand for Bulgarian goods and services grew by 0.9 per cent in real terms on an annual basis in the first three quarters of 2023<sup>9</sup>, implying that the decline in Bulgarian exports of goods in real terms is entirely due to country-specific factors. According to detailed data by commodity group in foreign trade statistics, the year-on-year decline in exports of goods in real terms<sup>10</sup> was almost entirely due to the negative contribution of the energy product groups (oil products, natural gas and electricity) and non-ferrous metals. The decline in exports of these groups in real terms can be attributed to the entry into force on 5 February 2023 of the ban on exports to countries other than Ukraine of refined petroleum products from crude oil originating in Russia<sup>11</sup> and repairs in leading manufacturing companies<sup>12</sup>. Real imports of goods by product group exhibited a broad-based decline year on year, with imports of fuels, raw materials and chemicals falling most significantly. This can be explained by lower need for imports due to the above mentioned country-specific factors, limiting

<sup>7</sup> Non-seasonally adjusted national account GDP data.

<sup>8</sup> The unfavourable terms of trade in the first nine months of 2023 resulted in a stronger year-on-year price fall in exports of goods than in imports of goods, according to non-seasonally adjusted GDP data.

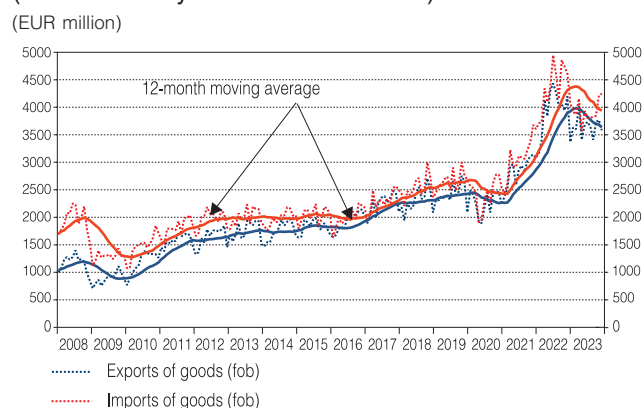
<sup>9</sup> ECB calculations of December 2023.

<sup>10</sup> Real volumes of exports and imports of commodity groups have been constructed under the Standard International Trade Classification (SITC) by using NSI data on export and import prices of the relevant commodity groups under the SITC and Eurostat data on nominal values of exports of the same commodity groups under the SITC.

<sup>11</sup> For further details, see [Official Journal of the European Union, L 322, 16 December 2022](#).

<sup>12</sup> In the second quarter of 2023, the volume of processed copper declined in one of the largest metallurgical plants in Bulgaria [due to repairs](#). This prompted a year-on-year drop in production, as in 2022 the plant operated at full capacity without outage. In addition, in April and May 2023 the Kozloduy nuclear power plant worked at reduced capacity due to [planned repairs](#). This led to a decrease in the production on an annual basis in the second quarter of 2023, as the plant operated at its full capacity over these two months of 2022.

## Nominal Exports and Imports of Goods Dynamics (Balance of Payments Statistics Data)

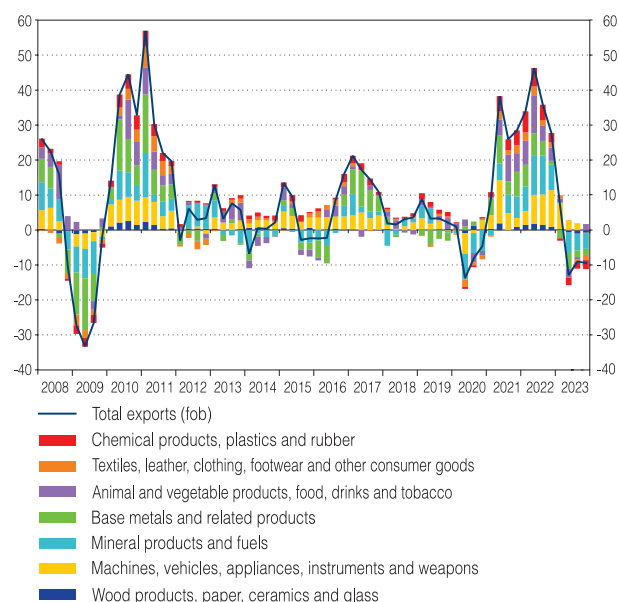


Note: Monthly data are used. The last observation is for November 2023.

Source: BNB.

## Exports by Commodity Group under the Combined Nomenclature, Contribution to the Overall Rate of Change by Sub-components

(per cent, percentage points)



Notes: Quarterly data are used.

Data for the fourth quarter of 2023 cover October 2023 and they have been compared with October 2022 data.

Source: BNB.

production and exports, the significant decline in commodities and raw materials stocks accumulated in the economy in the first nine months of the year and the high degree of filling of the Chiren gas storage facility<sup>13</sup>.

### Balance on Trade in Services

The surplus in services trade over the last 12 months as of November 2023 increased to 7.1 per cent of GDP compared with 6.1 per cent of GDP as of December 2022. This reflected stronger year-on-year growth in nominal exports of services (15.0 per cent) compared to imports of services (6.1 per cent) over the January–November 2023 period. Export growth was mainly driven by higher revenue from travel-related computer and information services and professional and consultancy services. According to NSI data, the number of visits of foreign nationals to Bulgaria increased by 16.9 per cent in January–November 2023, with visits from Turkey and Romania contributing most significantly to this effect. Thus, the number of visits of foreigners to Bulgaria over the first eleven months of 2023 matched the level of the relevant period of 2019, before the COVID-19 pandemic hit the tourist sector. The year-on-year increase in nominal imports of services between January and November 2023 was mostly a result of higher expenditure of Bulgarian residents on travel abroad, which increased by 16.5 per cent on an annual basis. Concurrently, expenditure on importing transport services in Bulgaria, falling by 8.8 per cent, contributed negatively to nominal imports of services.

### Net Primary Income Account and Net Secondary Income Account

Net primary income deficit for the last 12 months as of November 2023 increased from December 2022 and stood at -4.1 per cent of GDP<sup>14</sup>. In the January–November 2023 period, outflows under the equity income sub-item related to reinvested earnings on direct investment increased.

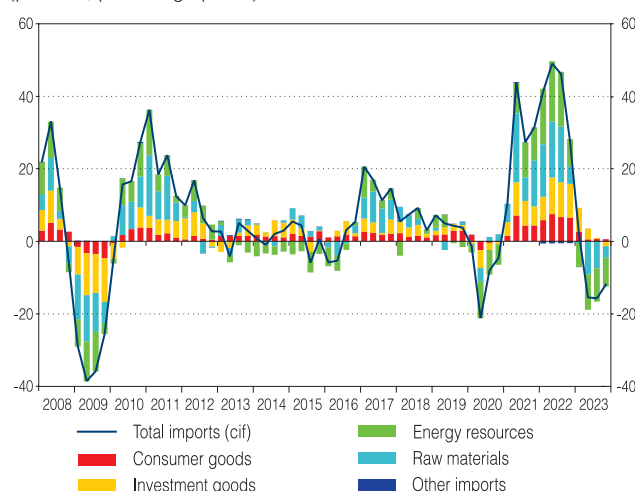
Net secondary income surplus for the last 12 months as of November 2023 did not change substantially from December 2022 and stood

<sup>13</sup> As of 30 September 2023, the Chiren gas storage facility was filled at 96 per cent (against 82 per cent as of 31 December 2022), whereas as of 30 September 2022, it was filled at 75 per cent.

<sup>14</sup> Preliminary data subject to revision.

### Imports of Commodity Groups by Use, Contribution to the Overall Rate of Change by Sub-components

(per cent, percentage points)

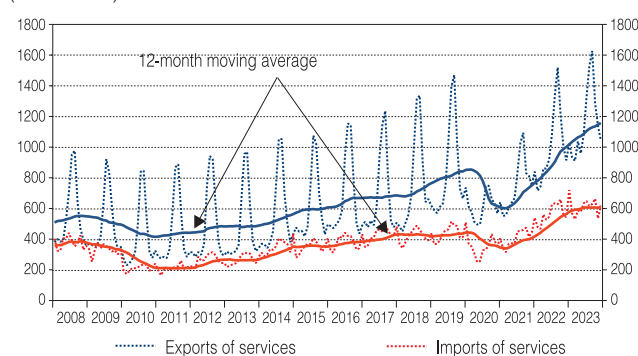


Notes: Quarterly data are used. Data for the fourth quarter of 2023 cover October 2023 and they have been compared with October 2022 data.

Source: BNB.

### Nominal Exports and Imports of Services Dynamics (Balance of Payments Statistics Data)

(EUR million)

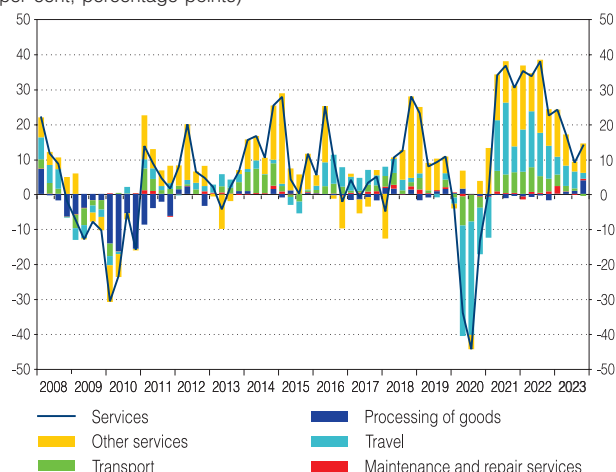


Notes: Monthly data are used. The last observation is for November 2023.

Source: BNB.

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

(per cent, percentage points)



Notes: Quarterly data are used.

Data on foreign trade flows for the fourth quarter of 2023 cover October and November 2023 and they have been compared with the corresponding period of 2022.

Source: BNB.

at 1.6 per cent of GDP. Between January and November 2023, remittances received from Bulgarian citizens working abroad posted an increase, which was, however, partly offset by outgoing transfers of other sectors for non-life insurance premiums and claims.

## Financial Account and International Investment Position

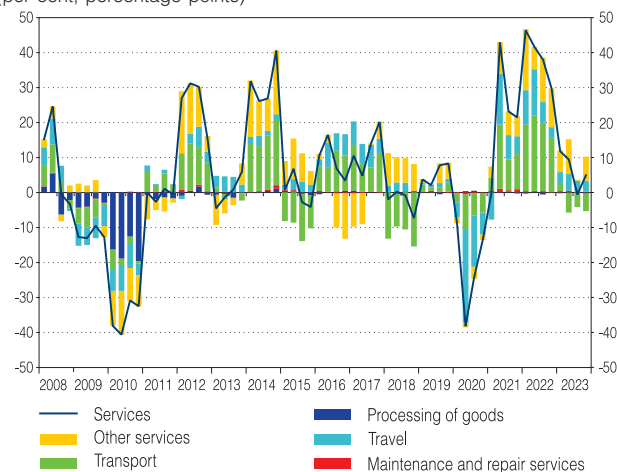
The financial account balance was positive at EUR 137.7 million over the last 12 months as of November 2023 (against EUR -431.1 million as of December 2022). Between January and November 2023 Bulgarian residents' foreign assets exhibited higher accumulation compared to liabilities to non-residents. The financial account surplus was mainly driven by the banking sector and, to a lesser extent, by the non-bank private sector, which posted a significant increase in foreign assets in the form portfolio investment. Financial account liabilities to non-residents increased between January and November 2023, owing mainly to an increase in direct investment in the form of reinvested earnings in the other sectors item and government portfolio investment.

Foreign direct investment in Bulgaria<sup>15</sup> amounted to 64.5 per cent of GDP at the end of the third quarter of 2023 (against 68.4 per cent at end-2022). The inflow of attracted direct investment (liabilities) in Bulgaria increased by 32.3 per cent year on year

<sup>15</sup> International investment position data are used.

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

(per cent, percentage points)



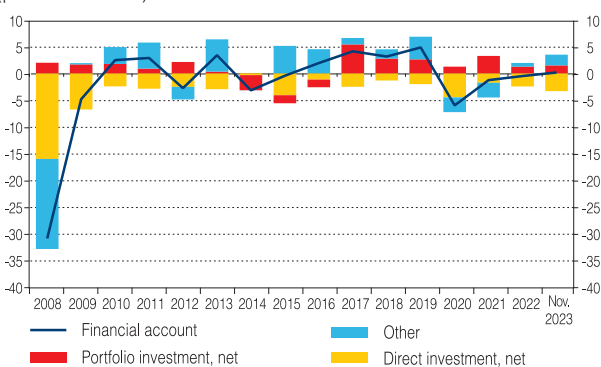
Notes: Quarterly data are used.

Data on foreign trade flows for the fourth quarter of 2023 cover October and November 2023 and they have been compared with the corresponding period of 2022.

Source: BNB.

## Financial Account Flow Dynamics and Contribution by Components

(per cent of GDP)

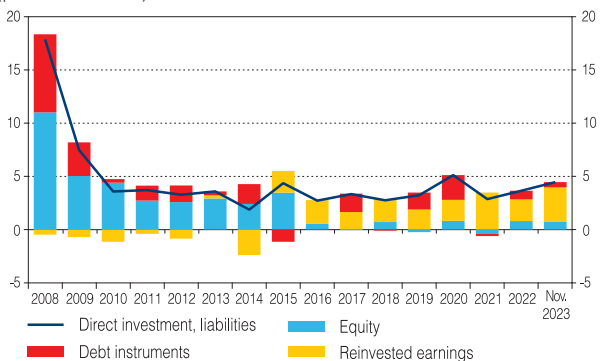


Notes: The Other item includes Other Investments, Net, and Financial Derivatives (Other than Reserves) and Employee Stock Options, Net. November 2023 data on financial account flows are accumulated for the last 12 months. Nominal GDP data for the last four quarters, up to the third quarter of 2023 inclusive, are used in calculating the GDP ratio for November 2023.

Sources: BNB, NSI, BNB calculations.

## Direct Investment – Liabilities by Type of Investment

(per cent of GDP)



Notes: Data on direct investment flows — liabilities as of November 2023 have been accumulated for the last 12 months.

Nominal GDP data for the last four quarters, up to the third quarter of 2023 inclusive, are used in calculating the GDP ratio for November 2023.

Sources: BNB, NSI, BNB calculations.

between January and November 2023, totalling EUR 4.1 billion<sup>16</sup>. The flow was mostly in the form of equity capital for non-financial corporations in Bulgaria and reinvested earnings in the banking sector.

As a result of balance of payments movements and changes due to valuation adjustments and price revaluations, the amount of Bulgaria's international investment position fell strongly to -7 per cent of GDP at the end of the third quarter of 2023 compared with -12.9 per cent of GDP at the end of 2022. These developments are mainly attributable to the growth in assets of Bulgarian residents in the form of debt securities and foreign currency and deposits, and the retained amount of liabilities to non-residents at levels close to those at end-2022. Increased economic activity in nominal terms contributed less to the decrease in the international investment position to GDP ratio.

## 2.2. BNB International Reserves

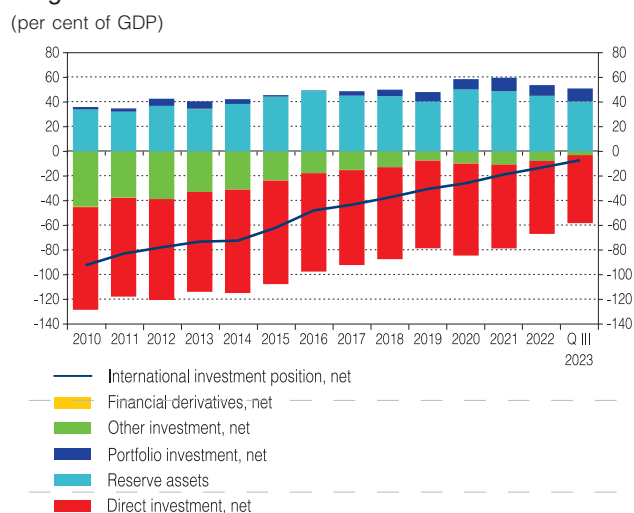
By the end of December 2023, the market value of Bulgaria's international reserves (including valuation adjustments and price revaluations) was EUR 41.9 billion (BGN 82.0 billion), increasing by EUR 3.5 billion (BGN 6.8 billion) from December 2022. The amount of gross international reserves reflects the dynamics of financial flows generated in the interaction of external and internal economic factors and corresponds to the BNB Issue Department balance sheet liabilities according to the currency board principles<sup>17</sup>. Liabilities to banks contributed most strongly to increased liabilities of the Issue Department at the end of 2023 compared with the end of 2022, reflecting mainly the increase in banks' minimum required reserves attributable to the higher MRR rate<sup>18</sup>. The increase in currency in circulation and the higher deposit of the BNB Banking Department due to stronger profitability from the international reserve management contributed less to the growth in the BNB Issue Department liabilities. As of September 2023, the BNB international reserves amounted to 40.2 per cent of GDP (45.6 per cent of GDP at end-September 2022).

<sup>16</sup> Preliminary data subject to revision.

<sup>17</sup> BNB Issue Department liabilities include banknotes and coins in circulation, liabilities to banks and liabilities to the government and budget organisations, liabilities to other depositors and Banking Department deposit.

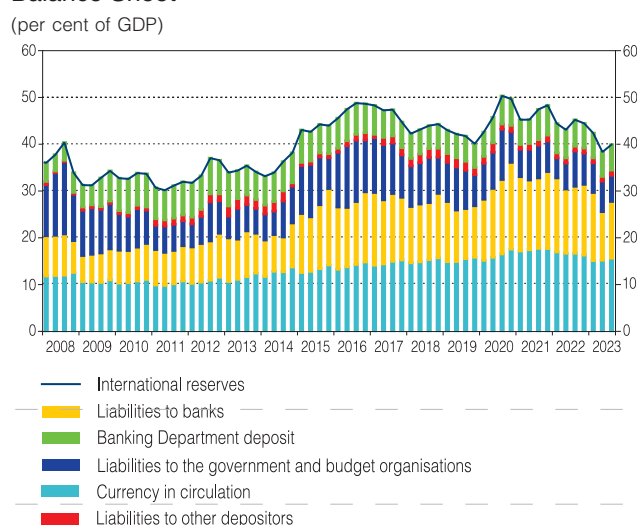
<sup>18</sup> For more information on the increased minimum required reserve rate for banks, see Money and Credit in Chapter 3.

## Bulgaria's International Investment Position



Sources: BNB, NSI, BNB calculations.

## Liabilities Structure of the BNB Issue Department Balance Sheet



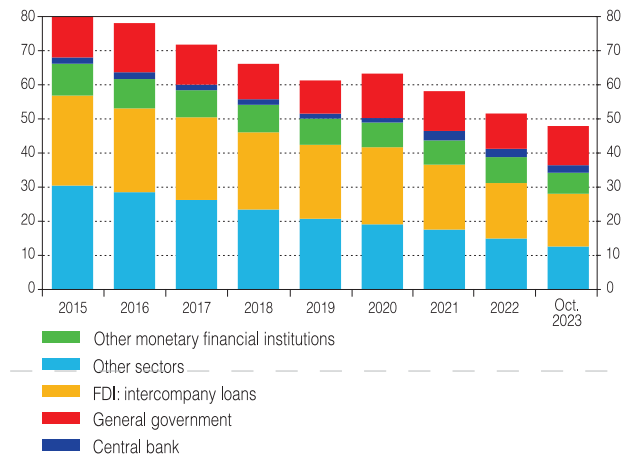
Sources: BNB, NSI, BNB calculations.

## 2.3. External Debt

As of October 2023, Bulgaria's gross external debt was EUR 42.4 billion (45.8 per cent of GDP). This was a decrease of EUR 1.8 billion compared with December 2022 (51.6 per cent of GDP), mainly due to a decline in liabilities of non-financial corporations and the banking sector. External debt of the general government sector almost matched that of end-2022, with the impact of the government securities issue in international markets in January 2023 (EUR 1.5 billion) being offset by the maturity of the government bond issue in March, changes in market prices of debt instruments and secondary market government securities trade. Intercompany lending also recorded a higher debt. As of October 2023, the share of long-term debt in Bulgaria's total gross external debt rose to 83.1 per cent (80.0 per cent in December 2022).

### Gross External Debt

(per cent of GDP)



Note: Nominal GDP data for the last four quarters, up to the third quarter of 2023 inclusive, are used in calculating gross external debt to GDP ratio for October 2023.

Sources: BNB, NSI, BNB calculations.



# 3. MONEY AND CREDIT

## 3.1. Monetary and Credit Aggregates

### Deposits of the Non-government Sector

In 2023, annual growth of non-government sector's deposits<sup>19</sup> in the banking system followed a downward trend, reaching 9.5 per cent at year-end (14.3 per cent at end-2022). The declining dynamics was driven by the significant slowdown in growth of non-financial corporations' deposits, standing at 9.0 per cent in December 2023 (26.6 per cent in December 2022). Deposit growth in the household sector tended to accelerate.

The decline in nominal turnover growth in the retail sector<sup>20</sup> coupled with the reported fall in nominal turnover in the industrial sector<sup>21</sup> contributed to the slowdown in annual growth of corporate deposits in 2023. Data on deposits of non-financial corporations by sector of economic activity at the end of the third quarter of 2023 show that the sectors of repair of motor vehicles and motorcycles along with production and distribution of electricity, heating, and gaseous fuels were the main contributors to the growth slowdown compared to end-2022.

The trend towards a gradual increase in the amount of corporate deposits with an agreed maturity, recorded since the end of 2022, continued throughout 2023. At the end of December 2023, deposits with an agreed maturity had the major contribution to the annual growth rate of non-financial corporations' deposits, while the contribution of overnight deposits contracted significantly. A key factor stimulating the likely trans-

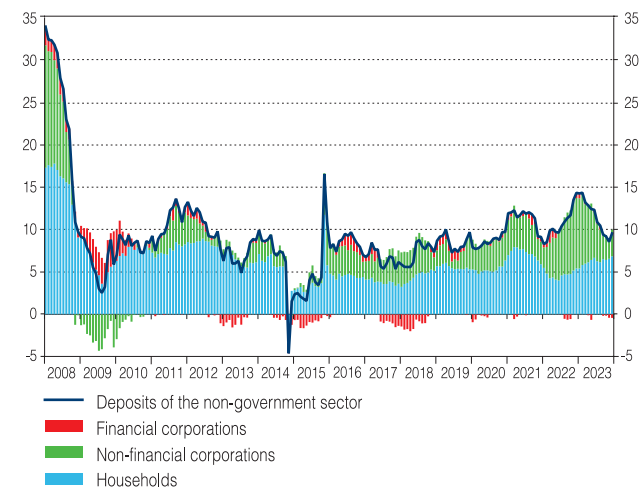
<sup>19</sup> Non-government sector's deposits include deposits of households, non-financial corporations and financial corporations. Deposits of households and non-financial corporations occupied the largest share in deposits of the non-government sector (96,8 per cent on average for 2023) and therefore the analysis is focused on these two sectors.

<sup>20</sup> In November 2023, the growth rate of nominal turnover in retail trade was 5.7 per cent on an annual basis (compared to 21.4 per cent in December 2022).

<sup>21</sup> In November 2023, the decline in nominal turnover for the total industry amounted to 18.1 per cent on an annual basis (against an annual growth of 22.9 per cent in December 2022).

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

(per cent, percentage points)

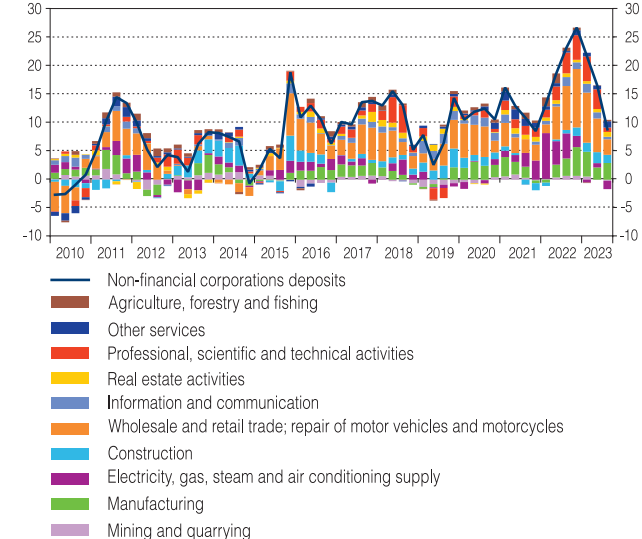


Note: The annual growth rate of non-government sector deposits in November 2015 reflects the exhausted base effect of KTB removal as a reporting unit from the monetary statistics in November 2014.

Source: BNB.

### Annual Growth of Non-financial Corporations' Deposits and Contribution by Economic Activity

(per cent, percentage points)

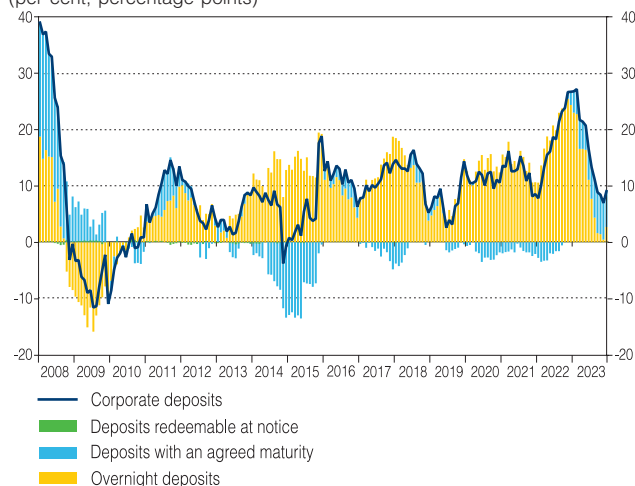


Notes: Data on deposits of non-financial corporations by economic activity start from 2009. The economic activities 'water supply, sewerage, waste management and remediation activities', 'education', 'human health and social work activities', 'arts, entertainment and recreation' and 'other service activities' are included in the category 'other services'.

Source: BNB.

## Annual Growth of Non-financial Corporations' Deposits and Contribution by Deposit Type

(per cent, percentage points)



Source: BNB.

formation of part of corporate overnight deposits into deposits with an agreed maturity was the rise in interest rates on time deposits.

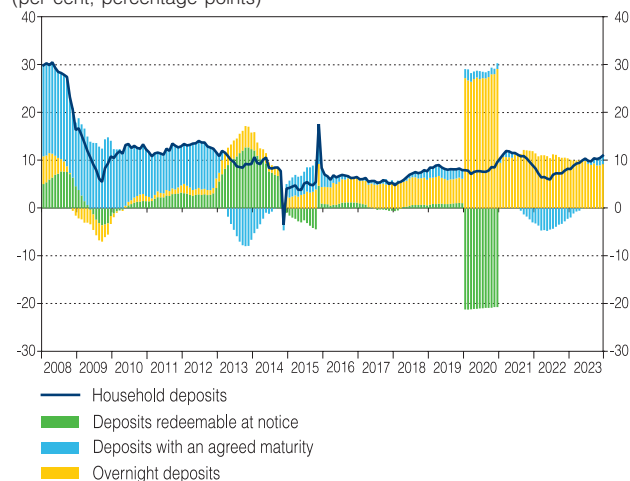
In 2023, growth of household deposits followed a gradual accelerating trend, standing at 11.0 per cent in December (8.3 per cent at the end of 2022). Upward dynamics of household deposits continued to be driven mainly by rising labour income and households' preferences to keep their free funds in the form of deposits in the banking system. The gradual increase in interest rates on new time deposits offered by some banks was relatively less important, which encouraged households to channel part of their savings towards time deposits.

At the end of 2023, overnight deposits continued to contribute most to the annual growth rate of household deposits. The contribution of deposits with an agreed maturity followed a gradual upward trend throughout the year. As of December, household deposits with an agreed maturity increased by 5.7 per cent year on year (compared to a decline of -5.9 per cent on an annual basis in December 2022).

In 2023, the annual growth rate of broad money aggregate M3 decelerated, but remained relatively high, reaching 8.7 per cent in December, from 13.2 per cent at the end of 2022. The contribution of overnight deposits to M3 growth decreased gradually, but remained the strongest at the end of the year, which can be explained mainly by

## Annual Growth of Household Deposits and Contribution by Deposit Type

(per cent, percentage points)

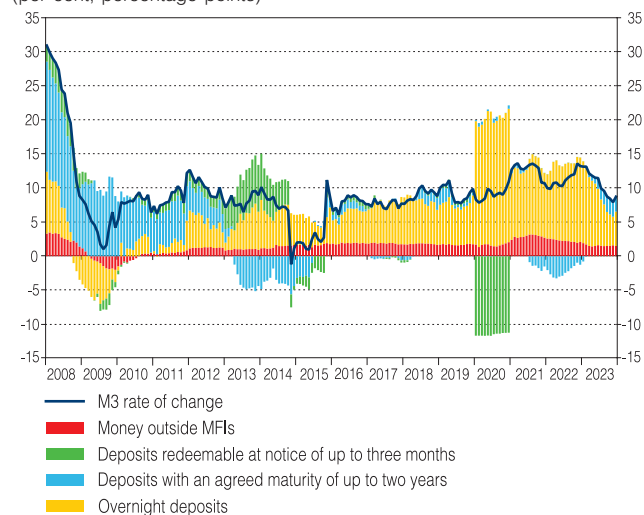


Note: In view of the analysis of the banking products and in line with the methodological requirements, transferable savings deposits have been reclassified from the Deposits redeemable at notice of up to three months indicator to the Overnight deposits of the household sector indicator with the January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

Source: BNB.

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

(per cent, percentage points)



Note: In view of the analysis of the banking products and in line with the methodological requirements, 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 with the January 2020 data.

Source: BNB.

increases in household overnight deposits. The contribution of deposits with an agreed maturity of up to two years was 2.2 percentage points in December, from slightly negative at the beginning of the year. Within the currency composition, in 2023 both corporations and households maintained their preferences to save predominantly in local currency.

### Reserve Money

At the end of December 2023, reserve money grew by 11.3 per cent on an annual basis (11.1 per cent in December 2022). Bank reserves contributed to a larger extent to this growth, while the contribution of currency in circulation was relatively smaller.

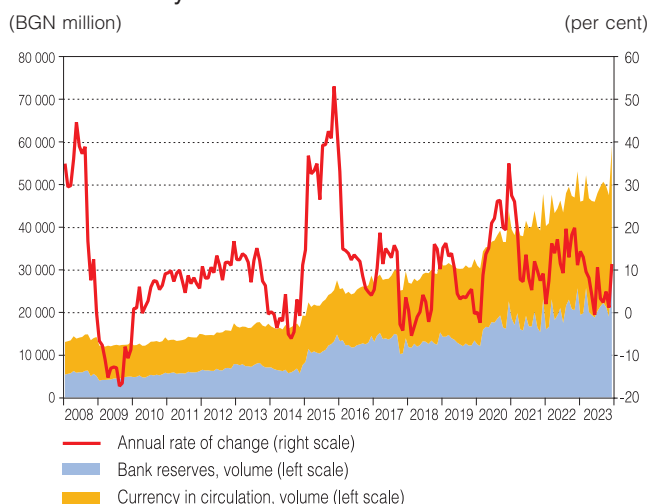
The main factor influencing bank reserves developments in 2023 was the increase in the MRR rate initiated by the BNB in two steps, *i.e.* from 5 per cent to 10 per cent for attracted funds from non-residents, effective from 1 June 2023, and from 10 per cent to 12 per cent for attracted funds from residents and non-residents, effective from 1 July 2023. In the period prior to the increase in the MRR rate, an upward trend was observed as a result of the increasing deposit base. At the same time, the excess reserves and funds of banks in the TARGET-BNB system showed a decline, mainly driven by the widening of the negative spread between the interest rate on banks' excess reserves held at the BNB (0 per cent) and the ECB's deposit facility rate<sup>22</sup>, which continued to create an incentive for commercial banks to seek higher yields on their assets.

The rise in the minimum reserves rate was reflected in an increase in banks' minimum required reserves by about BGN 3.2 billion<sup>23</sup> at the expense mainly of a reduction in their foreign assets and the transformation of excess reserves into required reserves. Banks' excess reserves declined by about BGN 890 million on an average daily basis after the increase

<sup>22</sup> The ECB increases in the deposit facility rate in January–December 2023 were as follows: from 2.00 to 2.50 per cent with effect from 8 February 2023, to 3.00 per cent from 22 March 2023, to 3.25 per cent from 10 May 2023, to 3.50 per cent from 21 June 2023, to 3.75 per cent from 2 August 2023, and to 4.00 per cent from 20 September 2023.

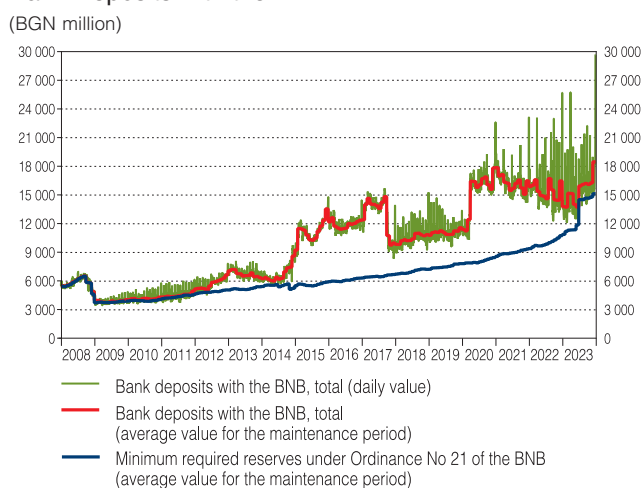
<sup>23</sup> A more substantial increase in the amount of minimum required reserves was observed after the second increase in the minimum required reserves rate due to the fact that attracted funds from residents account for the predominant share of total attracted funds in the banking system (88.5 per cent by end-June 2023).

### Reserve Money



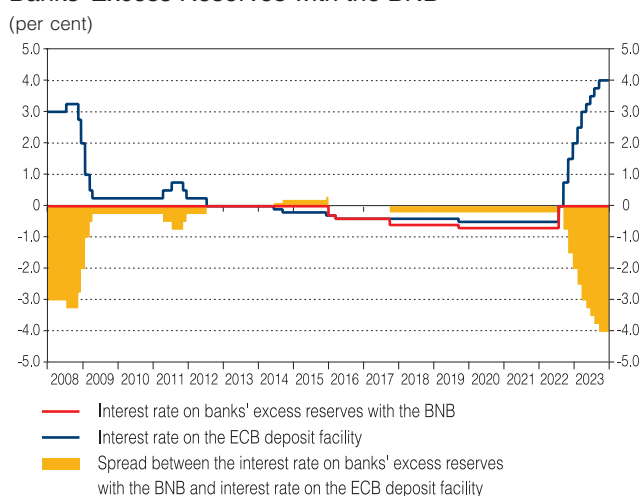
Source: BNB.

### Bank Deposits with the BNB



Source: BNB.

### Deposit Facility Rate of the ECB and Interest Rate on Banks' Excess Reserves with the BNB



Sources: BNB, ECB.

in the minimum reserves rate to 12 per cent, and remained at relatively lower levels during the second half of 2023 compared with the January–May 2023 period, showing an increase that is usual and stronger at the end of the year in December. As of December, the effective implicit MRR rate<sup>24</sup> rose to 11.73 per cent (9.36 per cent in December 2022 and 9.33 per cent in May 2023) as commercial banks' deposits with the BNB comprised 10.75 percentage points of MRR, and the remaining 0.98 percentage points were in the form of recognised cash balances. At the end of 2023, the excess of banks' funds maintained at the BNB over the required minimum of reserve assets under Ordinance No 21 amounted to 12.7 per cent of MRR on an average daily basis (against 32.0 per cent of MRR in December 2022 and 12.2 per cent of MRR in May 2023).

In the first eight months of 2023, the annual growth of currency in circulation continued to follow a downward trend. In October–December 2023, growth remained at levels similar to those in September and stood at 7.4 per cent at the end of 2023 (11.0 per cent in December 2022). Factors potentially affecting the dynamics of currency in circulation include the increase in interest rates on new time deposits by some banks, the slowdown in inflation and declining demand for cash in order to maintain savings.

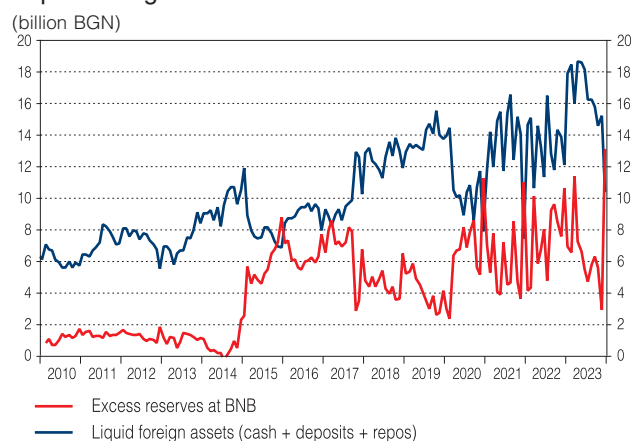
Reserve currency (euro) trading with the BNB is the main liquidity management instrument of banks under the currency board arrangement. In 2023, BNB sales (net) to banks were EUR 1.1 billion.

### Credit to the Non-government Sector

In 2023, annual growth of credit to non-financial corporations slowed down, reaching 6.9 per cent by end-year (10.4 per cent in December 2022). This dynamics was driven by corporate overdrafts, which slowed to 6.2 per cent at the end of 2023

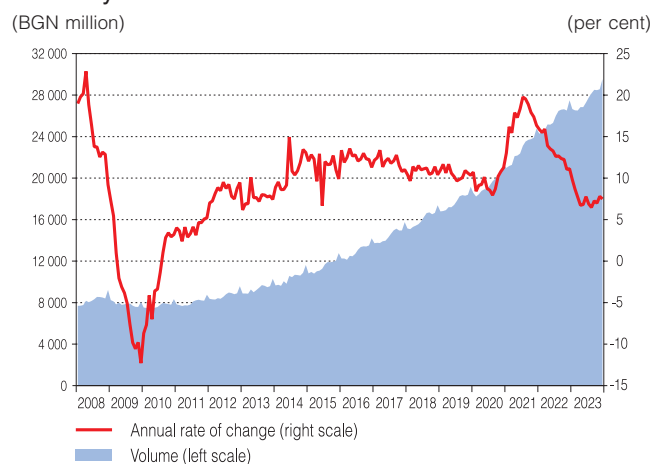
<sup>24</sup> Under Article 3 of BNB Ordinance No 21 on the Minimum Required Reserves Maintained with the Bulgarian National Bank by Banks, effective as of 1 July 2023, the rate of minimum required reserves is 12 per cent of the reserve base, and banks do not maintain MRR on attracted funds from government and local budgets. The MRR rate on funds attracted from residents and non-residents is 10 per cent of the reserve base, and from government and local budgets 0 per cent in the 1–30 June 2023 period. Until 1 June 2023, the MRR rate on funds attracted from residents is 10 per cent of the reserve base, from non-residents 5 per cent and from government and local budgets 0 per cent.

### Liquid Foreign Assets and Excess Reserves of Banks



Notes: Liquid funds as part of banks' foreign assets are calculated on the basis of data on the amount of funds in the following categories: cash in foreign currency, deposits and repurchase agreements (repos). The presented data on foreign assets and excess reserves of banks are values at the end of each month and the last available data are for December 2023. It should be noted that, for achieving different accounting and/or supervisory goals, some of the commercial banks tend to considerably increase the amount of their excess reserves at the end of each month and especially at the end of each quarter, which is reflected in considerable decrease of their liquid foreign assets. This dynamics is most strongly pronounced at the end of the year. Source: BNB.

### Currency in Circulation



Source: BNB.

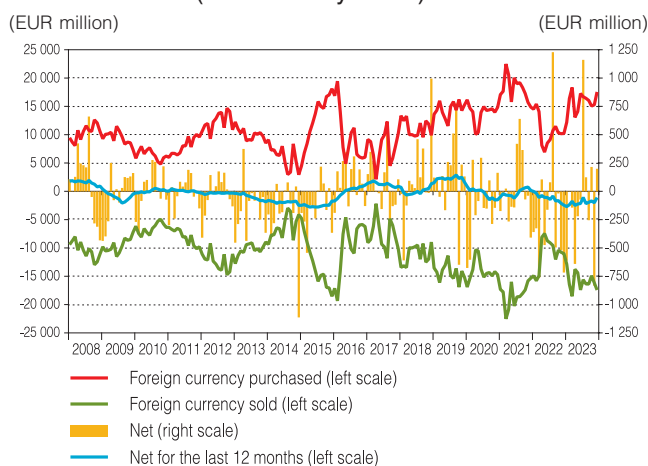
(17.5 per cent at the end of 2022). Lower demand for financial resources used for working capital and ensuring inventories by firms, as a result of the reduction in inventories in the economy from the high levels in 2021–2022, contributed to the significant moderation in the annual growth rate of corporate overdrafts. In the case of loans excluding overdraft, growth remained at a level similar to that of the end of 2022, supported by the active supply of lending by banks and with real interest rates on new loans remaining negative for most of the year (excluding overdraft). Volumes of new corporate loans tended to increase throughout the year<sup>25</sup>.

Annual growth of credit to households remained very high in 2023, especially in the housing lending segment. Growth in housing loans accelerated from the third quarter, reaching 20.5 per cent at year-end (17.9 per cent at the end of 2022). On the demand side, the main factors behind the strong growth of housing lending continued to be rising labour income, still very low nominal interest rates on housing loans, which are negative in real terms, and households' maintained preferences to purchase real estate as an alternative form of investment or saving. On the supply side, the persistent high growth of housing loans was affected by the ample liquidity in the banking system, banks' sound capital position and the competition between them, which continued to contribute to keeping lending rates on housing loans at historically very low levels. In addition, growth in residential property prices constitutes a precondition for an increase in volumes of new housing loans, which supports housing lending growth, despite the reported year-on-year fall in the number of concluded sale and purchase transactions.<sup>26</sup> Bank lending survey data of the BNB indicated an easing of housing credit standards in terms of the maximum loan amount in the second and third quarters of 2023. Consumer credit growth slowed somewhat in the period up to the third quarter, but accelerated again in the last quarter to reach 12.3 per cent, remaining unchanged from growth in December 2022.

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

<sup>26</sup> According to data presented in the BNB quarterly *Banks in Bulgaria* (July–September 2023), the average amount of new loans collateralised by residential real estate, under the impact of residential property price growth, recorded a steady increase, i.e. from BGN 156 thousand on average in 2022 to BGN 180 thousand in the third quarter of 2023.

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

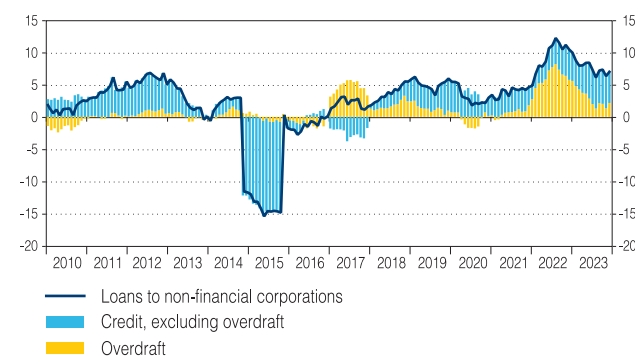


Notes: Net means currency purchased minus currency sold by the BNB. Data refer to all bank transactions in foreign currency including liquidity management operations related to the transfer of own funds from lev accounts with the BNB to own accounts with the BNB in euro and vice versa.

Source: BNB.

### Annual Growth of Credit to Non-financial Corporations and Contribution by Loan Type

(per cent, percentage points)

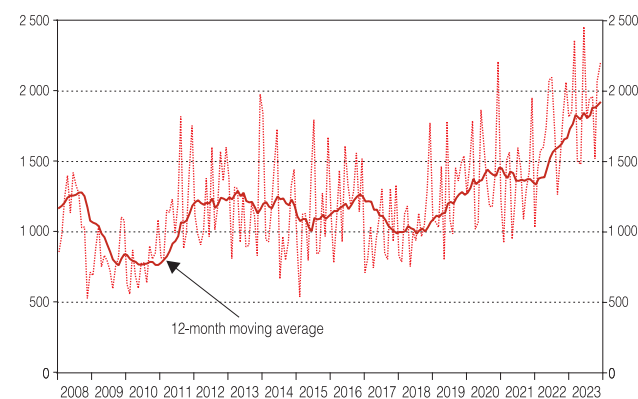


Note: The annual growth rate of loans to non-financial corporations in November 2015 reflects the exhausted base effect of KTB removal as a reporting unit from the monetary statistics in November 2014.

Source: BNB.

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

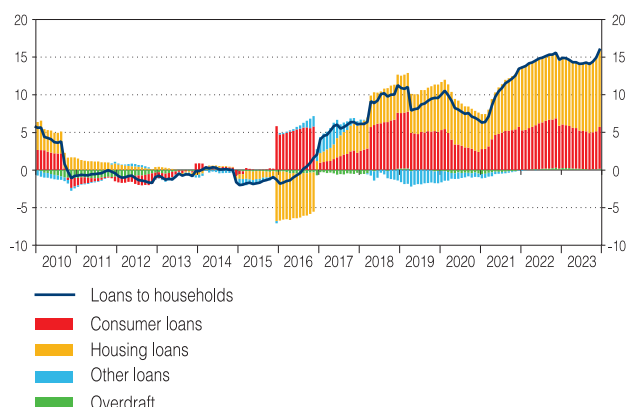
(BGN million)



Source: BNB.

## Annual Growth of Household Credit and Contribution by Loan Type

(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 in the December 2015–August 2019 period.

Source: BNB.

New consumer and housing loans continued to show a clear upward trend in lending volumes<sup>27</sup> in 2023.

### Bank Lending Survey

The weighted results of the Bank Lending Survey<sup>28</sup> for the third quarter of 2023 point to tightening of lending standards<sup>29</sup> to corporations and retention of broadly unchanged lending standards to households. Banks reported the most significant tightening of credit standards for both corporate and consumer and housing loans with respect to interest rates. In addition, as regards corporate loans, more significant tightening was reported in terms of premia on riskier loans and as regards the household sector in terms of fees and commissions and collateral requirements as well. At the same time, as regards housing loans, banks continued to ease conditions for the maximum loan amount. The main factors behind the tightening of banks' lending policy (credit standards and condi-

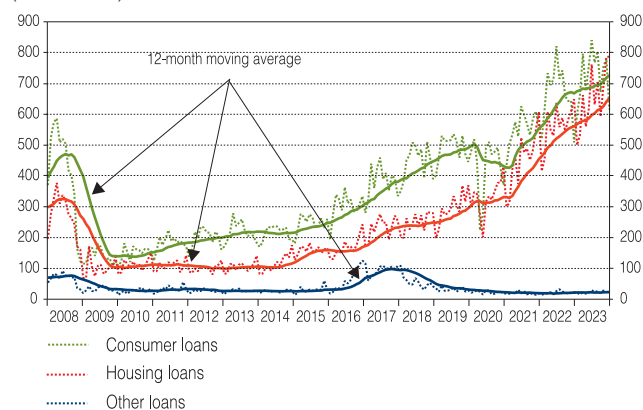
<sup>27</sup> Based on 12-month moving average.

<sup>28</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>29</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 Households (Monthly Volumes)

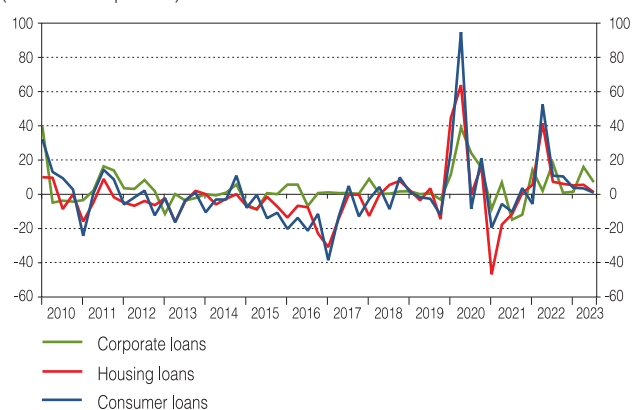
(BGN million)



Source: BNB.

## Changes in Credit Standards

(balance of opinions)



Source: BNB.

tions<sup>30</sup>) in the third quarter of 2023 were lower risk appetite, higher risk assessment and, in the case of corporate loans, higher costs of borrowed funds, as well. Concurrently, competition, banks' liquidity position and the cost of borrowed funds continued to affect the easing of lending standards and conditions for households.

In the third quarter of 2023, banks reported a decline in demand for loans by small and medium-sized enterprises and a slight decrease in demand for consumer loans compared with the previous quarter. At the same time, banks reported a more significant increase in demand in the large corporate segment and a small increase in demand for housing loans. A key factor behind lower demand for corporate loans was the reduced need for financial resources for investment purposes, while rising interest rates were relatively less important. At the same time, the need for financial resources to provide working capital and accumulate inventories contributed to boost corporate loan demand compared with the previous quarter. In the household sector, the state of the macroeconomic environment has a bearing on declining demand for consumer financing, while households' needs for funds to purchase first and additional residence, as well as the still low interest rates are factors supporting demand for housing loans.

## 3.2. Interest Rates

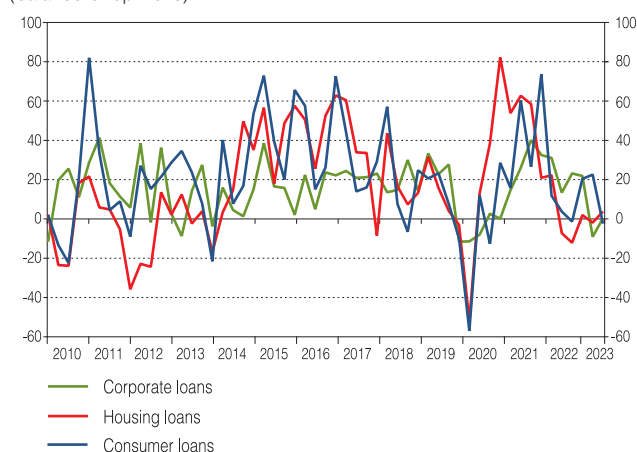
### Interbank Money Market Interest Rates

The trend towards growth in traded volumes in the interbank money market, which started since the second half of 2022 continued throughout the first eight months of 2023. Overnight unsecured lending transactions in levs concluded between January and August 2023 amounted to BGN 67,524 million. The widening negative spread between the interest rate on banks' excess reserves held at the BNB (0 per cent) and the ECB deposit facility rate, as a result of the increase in key ECB interest rates, created an incentive for commercial banks to lower their excess reserves in the BNB in search of higher yields and to raise the liquidity they need from the interbank money market. The trading volumes

<sup>30</sup> Credit conditions typically involve the reference interest rate surcharge, the loan amount, conditions for its utilisation and other conditions, fees and commissions, collateral or guarantees to be provided by a borrower.

## Changes in Credit Demand

(balance of opinions)



Notes: As regards credit standards, charts present banks' balance of opinions defined as a difference in percentage points between the percentage of banks responding 'tightened' ('considerably' and 'somewhat'), and the percentage of banks responding 'eased' ('considerably' and 'somewhat').

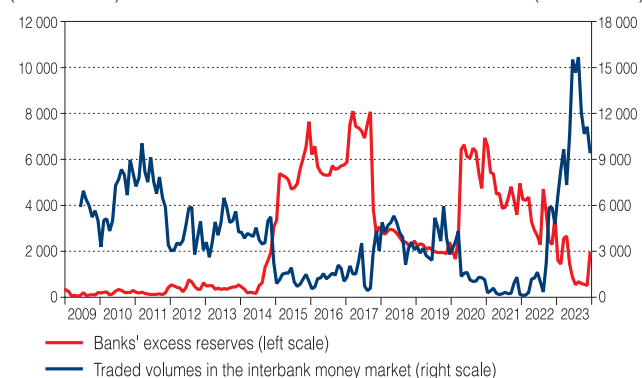
As regards credit demand, the balance of opinions is defined in percentage points as a difference between the percentage of banks responding 'increased' ('considerably' and 'somewhat') and the percentage of banks responding 'reduced' ('considerably' and 'somewhat'). All opinions are weighted by the banks'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

Source: BNB.

## Banks' Excess Reserves and Traded Volumes in the Interbank Money Market

(BGN million)

(BGN million)



Sources: BNB, ECB.

in the interbank money market have declined since the end of the third quarter of 2023, but remained at relatively high levels.

In the context of the functioning currency board in Bulgaria, the continued increase in key euro area interest rates in 2023 transmitted relatively rapidly into interest rates on transactions concluded in the interbank money market. As of December 2023, the monthly value of the LEONIA Plus index was 3.79 per cent (1.42 per cent in December 2022), while the spread between LEONIA Plus and €STR came to -11 basis points (-15 basis points in December 2022).

### Interest Rates on Deposits

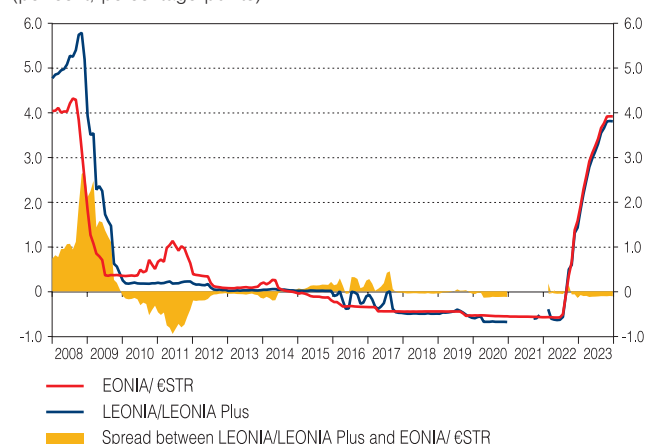
As a result of the continued ample liquidity and significant inflow of attracted funds into the banking system, the pass-through of the effects of the tightened ECB monetary policy to the interest rates on household deposits in Bulgaria remained very limited in 2023. Currently, these factors also limit the influence of the BNB's increase in the MRR rate as of mid-2023 in order to absorb part of the excess liquidity in the banking system and tighten monetary conditions in the country.

As of December 2023, the weighted average interest rate on new time deposits in the household sector stood at 1.50 per cent, up 56 basis points on end-2022 (0.94 per cent in December 2022). Specific factors contributed to the reported increase in the interest rate on new time deposits of households at the end of the year. At the same time, most of the large commercial banks continued to offer interest rates on these types of deposits, which were close to zero. In terms of currencies, a more substantial increase was observed in the interest rates on new time deposits of households in dollars, while the increase in the interest rates on deposits in levs and in euro was relatively lower.

In the non-financial sector, the weighted average interest rate on new time deposits increased more strongly in 2023, rising by 164 basis points, and stood at 2.69 per cent as of December 2023 (1.05 per cent at end-2022). Deposits in euro and levs exhibited higher growth, while the increase in interest rates was relatively lower compared to the higher levels reached in December 2022.

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

(per cent, percentage points)

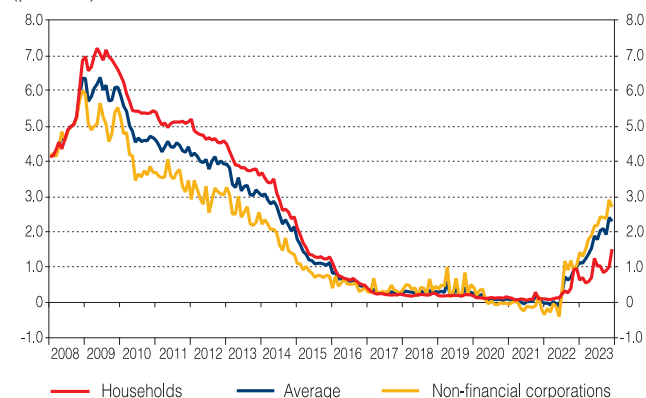


Notes: The EONIA/€STR series is composed of: EONIA between 2008 and 14 March 2017; pre-€STR between 15 March 2017 and 30 September 2019; €STR in the period after 30 September 2019. LEONIA Plus replaced LEONIA on 1 July 2017. LEONIA Plus monthly values are calculated as an arithmetic average for days when overnight unsecured lending transactions are concluded in the interbank market in levs.

Sources: BNB, ECB.

### Interest Rates on New Time Deposits by Sector

(per cent)



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.

Source: BNB.



Weighted average interest rates on outstanding amounts of time deposits in 2023 rose more substantially in the non-financial corporate sector to 1.7 per cent, while in the household sector the interest rate increased marginally to stand at 0.3 per cent at the end of the year. The interest rates on outstanding amounts of overnight deposits of households remained at 0 per cent and were slightly higher in the non-financial corporate sector.

### Interest Rates on Loans

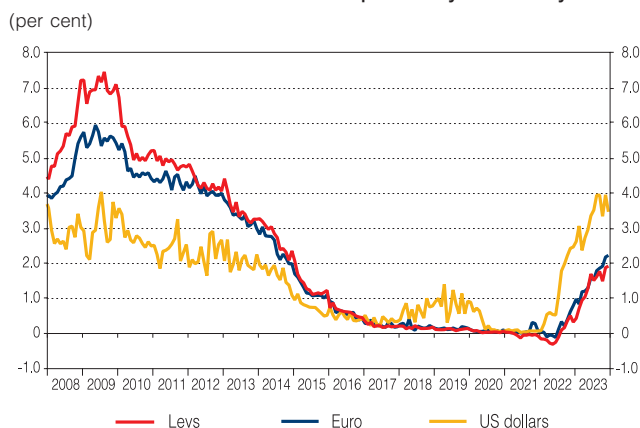
The effects of increases in euro area policy rates and of the rise in the MRR rate on lending rates remained very limited in the household sector and were stronger in the non-financial corporate sector. Key factors behind this included continued ample liquidity in the banking system and strong competition between banks for a market share in housing and consumer loans segments.

The interest rate and the annual percentage rate of charge (APRC) on new extended consumer loans remained at similar levels compared to the end of 2022, and as of December 2023 they stood at 9.56 per cent and 10.10 per cent, respectively (9.67 per cent and 10.18 per cent at end-2022)<sup>31</sup>. The interest rate and the APRC on new extended housing loans stood at 2.59 per cent and 2.86 per cent, respectively, at the end of the year (2.65 per cent and 2.89 per cent as of December 2022).

The weighted average interest rate on newly extended loans in the non-financial corporate sector continued to follow an upward trend in 2023 and reached 5.12 per cent in December (3.56 per cent at the end of 2022). The faster increase in lending rates on corporate loans compared with that in the household sector is driven by a markedly higher share of corporate loans in euro, where interest rates are often linked to euro area inter-bank market reference indices. Concurrently, newly extended loans to households are almost entirely denominated in levs, and interest rates on them are formed by some of the larger banks based on a selected interest rate on outstanding balances of deposits only for the household sector or total

<sup>31</sup> The interest rate levels and APRC on new loans to households and non-financial corporations in this paragraph are on a monthly basis.

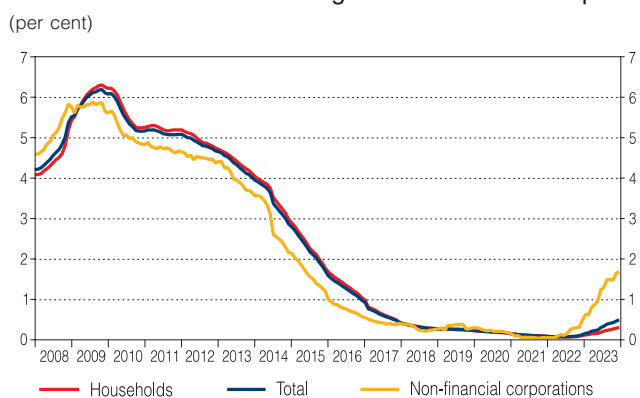
### Interest Rates on New Time Deposits by Currency



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

Source: BNB.

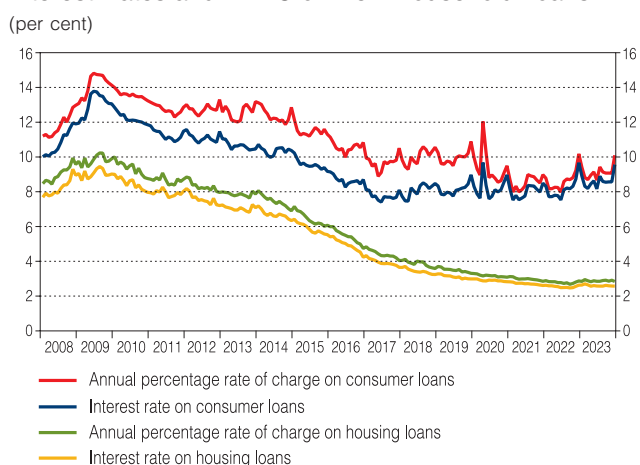
### Interest Rates on Outstanding Amounts of Time Deposits



Note: The average interest rates on outstanding amounts of time deposits are calculated on the basis of interest rates for all currencies and maturities (current accounts and overnight deposits are not included) weighted by the relevant volumes of new deposits for the relevant sector.

Source: BNB.

### Interest Rates and APRC on New Household Loans



Note: 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: BNB.

for the banking system, which remain at very low levels.

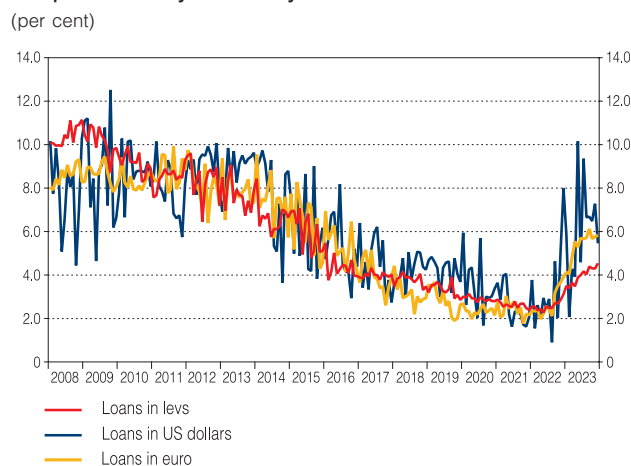
### Government Securities Yields

As of end-December 2023, the benchmark yield curve of Bulgarian Eurobonds issued and traded in international capital markets declined from the end of September 2023 in all maturity sectors. Similar dynamics was observed in German and other euro area countries' government bond yields as a result of an inflation decline and market expectations of more recent cuts in key ECB interest rates. At the end of 2023, the spread between Bulgarian and German government bond yields narrowed compared with the end of September 2023 with the exception of those maturing in 2027 and 2028. Narrowing spreads reflected a stronger decline in Bulgarian government bond yields, particularly pronounced for longer-term maturity sectors, compared with the decrease in German government bond yields. The stabilisation of the political situation in Bulgaria after the formation of a regular government in June 2023 was a factor potentially influencing the narrowing of spreads between Bulgarian and German government bond yields.

In December 2023, the long-term interest rate for assessing Bulgaria's degree of convergence was 4.01 per cent, declining by 2 basis points from September<sup>32</sup>, and the spread *vis-à-vis* Germany's long-term interest rate was 191 basis points.

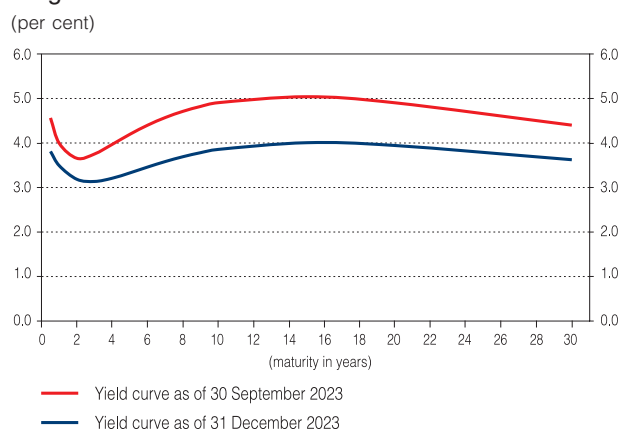
<sup>32</sup> Daily data indicate that the long-term interest rate remained unchanged from 20 March 2023 to 12 December 2023 at 4.03 per cent, most likely due to the lack of transactions in Bulgarian benchmark bonds in the secondary government securities market over this period. For calculating the long-term interest rate for assessing the degree of convergence, see [methodological notes](#) on the BNB website.

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



Source: BNB.

### Bulgarian Government Bond Yield Curve

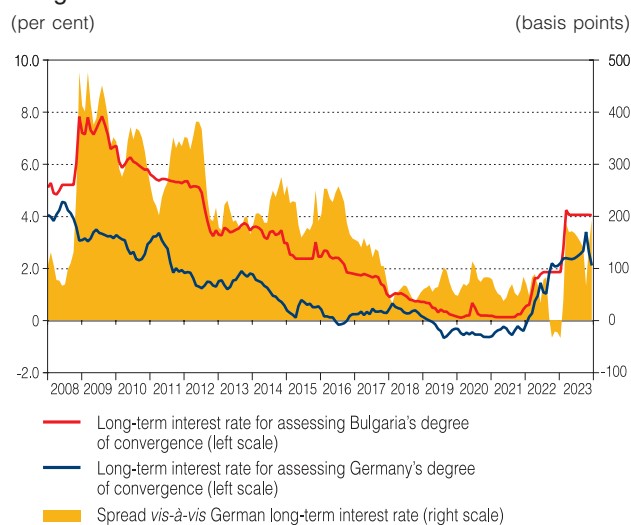


Notes: The reference yield curve of Bulgarian government bonds is constructed on the basis of an extended version of the Nelson-Siegel-Svensson model (1994).

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: MF, BNB calculations.

### Long-term Interest Rate for Assessing Bulgaria's Degree of Convergence and Spread *vis-à-vis* German Long-term Interest Rate



Sources: BNB, ECB.

# 4. ECONOMIC ACTIVITY

## 4.1. Current Economic Environment

### Gross Domestic Product

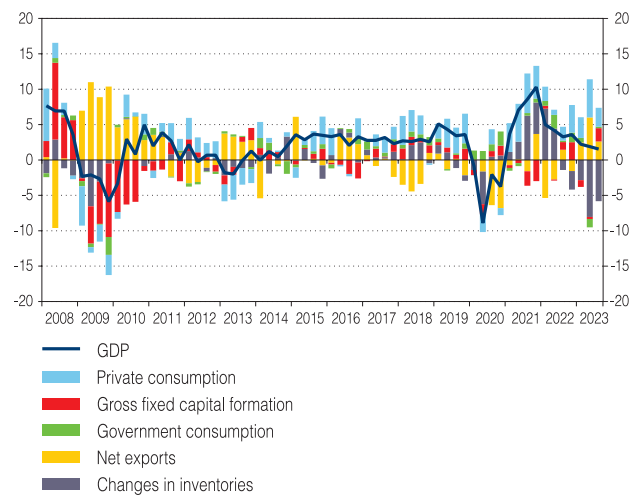
Based on NSI seasonally adjusted data, in the third quarter of 2023 real GDP increased by 0.4 per cent compared to the previous quarter. According to non-seasonally adjusted data, economic activity growth continued to slow down on an annual basis, reaching 1.5 per cent (compared to 1.9 per cent in the previous quarter). By final consumption expenditure component, the slowdown in economic activity was driven by a deceleration in the positive contribution of net exports, which was partly offset by an acceleration in domestic demand growth. Changes in inventories continued to contribute negatively to real GDP dynamics, which can be explained by firms' decision to reduce significantly the stock of raw materials and finished products accumulated between mid-2021 and end-2022. These developments are likely to reflect the improved functioning of global supply chains, falling commodity prices in international markets, and rising financing costs for firms<sup>33</sup>.

Private consumption rose by 4.8 per cent year on year in real terms in the third quarter of 2023 (compared to 9.5 per cent in the previous quarter), supported by growth in labour income and a rise in social payments by the government. Other factors with a positive impact on final consumer expenditure were year-on-year growth in consumer credit, negative, albeit to a lesser extent, interest rates on household deposits in real terms, which increased the household consumption propensity and improved the consumer confidence indicator. In the third quarter of 2023, government consumption at constant prices rose by 0.3 per cent on an annual basis (against a fall of -5.8 per cent in the previous quarter). According

<sup>33</sup> This refers to interest rates on overdraft corporate loans. For details, see Interest Rates Section in Money and Credit Chapter.

### Contribution to GDP Growth by Final Use Component in Real Terms (Quarterly Data)

(per cent, percentage points; on an annual basis, non-seasonally adjusted data)



Sources: NSI, BNB calculations.

to data from non-financial accounts of the general government sector, social transfers in kind had the largest contribution to government consumption growth, where healthcare expenditure<sup>34</sup> is reported.

In the third quarter of 2023, fixed capital investment rose by 12.6 per cent year on year (compared with -1.7 per cent in the previous quarter). According to BNB estimates<sup>35</sup>, the public and private sectors both contributed to this growth in real terms. Data on implementation of the Consolidated Fiscal Programme indicate that government investment in the third quarter of 2023 was supported primarily by the implementation of projects financed by national funds and, to a lesser extent, by EU funds. Increased final consumption expenditure, improved managers' perceptions about the future economic situation in Bulgaria and the active supply of lending by banks amid persistent, albeit to a considerably lesser extent, negative real interest rates on new loans (excluding overdraft) to non-financial corporations were the main drivers behind private sector investment growth. Factors that have potentially dampened private investment growth include the deterioration of the external environment, the available spare capacity in certain industrial sub-sectors and the reported annual drop in new home sales.

Net exports had a positive contribution to the annual growth of real GDP in the third quarter of 2023, driven by a stronger decline in imports than exports of goods and services<sup>36</sup>. The reported drop of -2.8 per cent in exports was due to the goods component, while services contributed positively. Changes in imports on an annual basis came to -6.9 per cent in real terms, with declines recorded in both goods and services. The downward dynamics of goods imports can be partly explained by the decline in stocks of commodi-

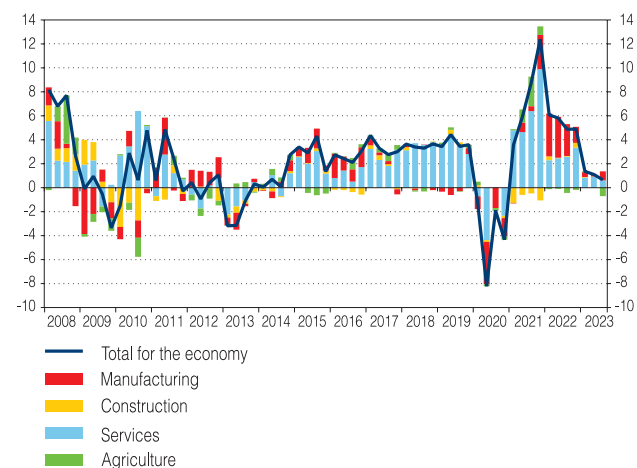
<sup>34</sup> For details, see Fiscal Policy Effects on the Economy Section in this Chapter.

<sup>35</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. Public investment estimates are based on information from quarterly non-financial accounts of the general government sector, published by the NSI.

<sup>36</sup> For details, see the Balance of Payments and External Trade Section in Chapter 2: External Financial Flows.

### Gross Value Added Rate of Change in Real Terms and Contribution by Sector

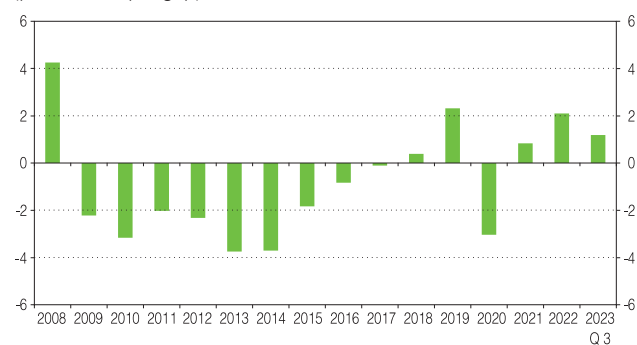
(per cent, percentage points; on an annual basis, non-seasonally adjusted data)



Sources: NSI, BNB calculations.

### Deviations of Economic Activity from Potential Output

(per cent, output gap)



Notes: Results are obtained through the application of a multivariate model with unobserved components presented in the Methods for Estimating the Cyclical Position of the Economy box in the [Economic Review](#), 1/2019.

The output gap is the deviation of the current level of economic activity from potential output measured as a percentage of potential output. The deviation for the third quarter of 2023 is calculated on the basis of actual GDP and estimated potential output for the last four quarters as of September 2023.

Sources: NSI, BNB calculations.

ties, raw materials and finished products maintained by firms observed since the end of 2022.

In the third quarter of 2023, gross value added in Bulgaria increased by 0.3 per cent in real terms quarter on quarter, according to seasonally adjusted data, and by 0.7 per cent year on year, according to non-seasonally adjusted data. In industry, gross value added increased by 2.5 per cent year on year, mainly driven by the manufacturing sub-sector<sup>37</sup>. Annual value added in the services sector grew by 0.7 per cent in the third quarter of 2023, with the general government, education, human health and social work activities sub-sector having the most significant positive contribution. Value added in agriculture decreased year on year by -7.4 per cent in the third quarter, which was in line with the NSI first estimates on final output in agriculture in Bulgaria for 2023, showing a decrease in physical volumes of agricultural goods produced compared to 2022.

### Cyclical Position of the Bulgarian Economy

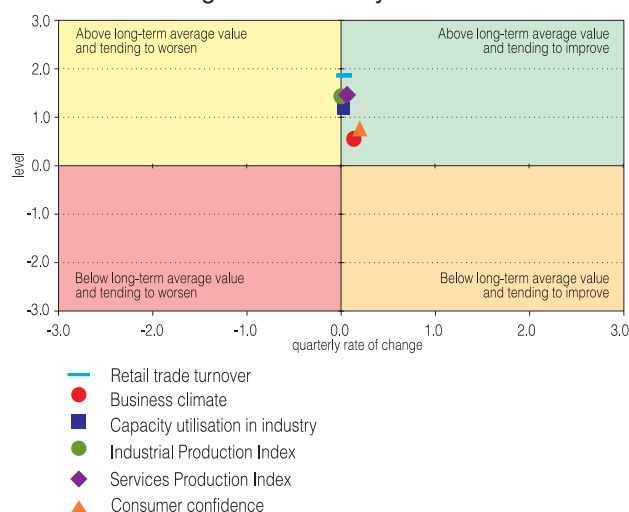
According to BNB estimates, the cyclical position of the economy in the third quarter of 2023 continued to be characterised by a positive output gap. This suggests that part of the production factors in the economy have been overloaded beyond their optimal level, which is in line with the historically low rate of unemployment, the significant labour shortages and the persistent upward pressure on wages at a rate above that of labour productivity.

Short-term economic activity indicators mainly signalled the continued quarter-on-quarter growth in the fourth quarter of 2023.<sup>38</sup> Indicators tracking capacity utilisation in industry, the production index in services and retail trade volumes continued to rise on a quarter-on-quarter basis, with only the industrial production index showing a decline. In addition, all listed indicators continued to exceed their long-term average, which was in line with the positive output gap. Indicators

<sup>37</sup> For details, see the Behaviour of Firms Section in this Chapter.

<sup>38</sup> Data on the services production index are available as of October 2023, while industrial production and retail turnover indices are as of November 2023. Data on business climate, consumer confidence and capacity utilisation are available as of December 2023.

Cyclical Position of the Economy in the Fourth Quarter of 2023 According to Selected Cyclical Indicators



Notes: The chart compares the level (the vertical axis) and the quarterly change (the horizontal axis) of selected economic indicators. Data are averaged for the available months in the fourth quarter of 2023. Data on the services production index, which are published with a considerable delay, refer to the second quarter of 2023. Data on the industrial production index and retail trade refer to the October–November 2023 period. Each series has been transformed using the HP filter (with a parameter  $\lambda = 100$ ) in order to eliminate short-term fluctuations, after which it has been standardised. Standardisation of statistical series in order to improve their comparability is a reason for constructed indicators to change within the range of -1 to 1, and they are characterised by a historical average value of 0 and a standard deviation of 1. The four chart grids allow to distinguish the positions of the relevant economic indicators in individual phases of the business cycle. For example, if a given indicator is in the top right-hand grid, this means that it is characterised by a positive deviation from its long-term average value and continues to increase on a quarterly basis.

Sources: NSI, BNB calculations.

reflecting economic agents' sentiment (business climate<sup>39</sup> and consumer confidence) continued to improve on a quarterly basis, while surpassing their long-term average value. The improvement in managers' assessment of future production activity, as well as the formation of more optimistic household expectations about their financial situation and the decline in inflation perceptions contributed to this dynamics. Reduced differences in firms' and households' assessments of their current economic situation and short-term economic prospects were reflected in a decline in the uncertainty indicator calculated by the BNB in the fourth quarter.

### Economic Activity Expectations

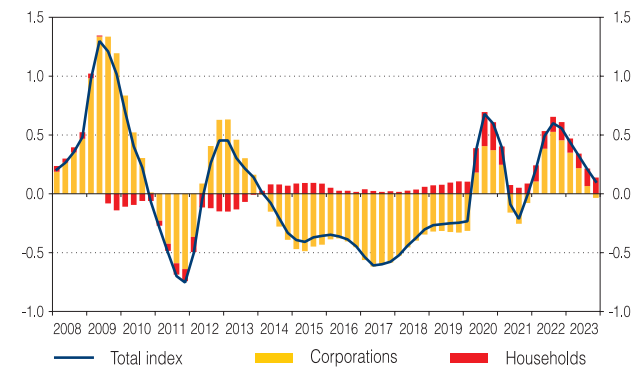
According to the composite indicator of economic activity<sup>40</sup> constructed by the BNB, in the fourth quarter of 2023, Bulgaria's real GDP is expected to rise on a quarter-on-quarter basis at an accelerating pace. This is a prerequisite for a reversal of the downward trend in the annual growth rate of economic activity. The quarter-on-quarter increase in the composite indicator in the fourth quarter was mainly driven by data on improved consumer confidence, more optimistic manager sentiment in the services and construction sectors, as well as growth in retail turnover and loans to households and corporations. In the first half of 2024, real GDP is expected to grow on both a quarterly and annual basis, supported mainly by domestic demand and the assumptions of an improvement in the outlook for external demand for Bulgarian goods and services.

<sup>39</sup> The fourth quarter of 2023 saw a deterioration in the business climate compared to the previous quarter. However, after the application of the HP filter (with a parameter  $\lambda = 100$ ) to eliminate short-term data fluctuations, the transformed series shows a continued improvement in this indicator.

<sup>40</sup> The services production index is available as of April 2023, while production indices for industry, construction, retail turnover, producer prices in manufacturing, global PMI and data on new loans to corporations and households are available as of November 2023. The registered unemployment rate and the business climate and consumer confidence indicators are available as of December 2023.

### Indicator of Differences in Economic Agents' Assessments about the Expectations of Economic Development in the Short Term

(deviation from long-term average)

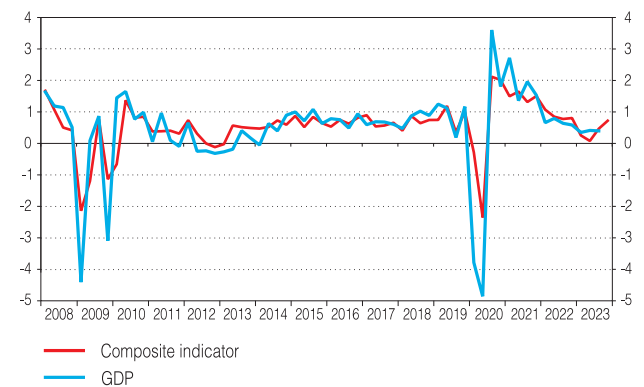


Notes: Higher values of this indicator should be interpreted as an increase in differences of economic agents' assessments. Positive/negative values of the total index show that differences in assessments are above/below their long-term level. This indicator is constructed under a methodology presented 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: EC, BNB calculations.

### Composite Economic Activity Indicator

(per cent, on a quarterly basis)



Notes: This indicator is constructed on the basis of a dynamic factor model whose purpose is to derive the total component in dynamics of various indicators with a monthly frequency. Dynamics of the composite indicator may be used as a guidance for the change in real GDP of Bulgaria. Selected indicators of the model include: production indices in industry, construction and services; retail trade turnover indices; unemployment rate; business climate and consumer confidence indicators; producer price index in industry; new loans to corporations and households; global PMI.

Sources: NSI, Employment Agency, BNB calculations.

## 4.2. Labour Market

### Labour Supply

In the third quarter of 2023, the decline in the working-age population led to a reduction in both the labour force<sup>41</sup> and the inactive population. Labour supply, as measured by the labour force, fell by 0.7 per cent year on year, as the weaker demand for labour in the economy, in industry in particular, was reflected in a fall in the number of employed and in an increase in the number of unemployed persons. The labour force participation rate<sup>42</sup> also declined on an annual basis due to lower activity in the age groups up to 44 years. Labour Force Survey data since the beginning of 2022 take into account the results of the 2021 census, which are not reflected in previous years and lead to a break in the time series.<sup>43</sup>

In the third quarter of 2023, the unemployment rate<sup>44</sup> increased by 0.4 percentage points year on year to 4.0 per cent, according to non-seasonally adjusted LFS data. Employment Agency data, which are published with greater frequency, also reported an increase in the unemployment rate both on a quarter-on-quarter basis (seasonally adjusted) and on an annual basis (non-seasonally adjusted) in the third quarter of 2023, and this trend continued in the fourth quarter of the year. The reported increase mainly reflected the weaker demand for labour in Bulgaria due to the worsened domestic environment which contributed to the increase in the number of newly registered unemployed in the industrial sector in the second half of 2023.

<sup>41</sup> Labour force includes employed and unemployed persons in the age group 15 and over.

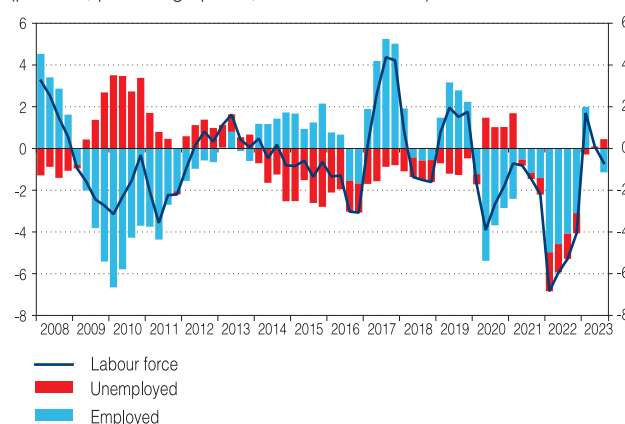
<sup>42</sup> The economic activity rate is the proportion between economically active persons (labour force) and the population of the same age.

<sup>43</sup> In the beginning of 2021, the NSI made changes to the methodology of the Labour Force Survey which have not been reflected in previous years. Seasonally adjusted LFS data were affected by the break in the time series in early 2021 and 2022. Therefore, non-seasonally adjusted data are analysed here.

<sup>44</sup> The unemployment rate is the proportion between the number of unemployed and the labour force for the age group 15 and older, based on Labour Force Survey data.

### Contribution to the Change in Labour Force by Component

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



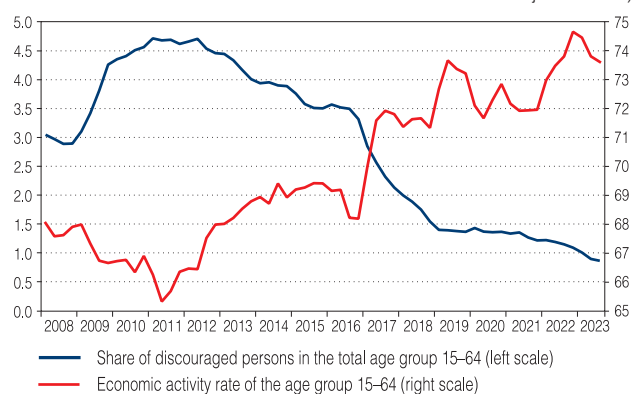
Notes: Data refer to the age group 15 and older. From the beginning of 2022, there is a break in the time series due to the use of 2021 population census data. Data prior to 2022 have not been revised, which was reflected in a year-on-year decline in the labour force in 2022.

Sources: NSI Labour Force Survey, BNB calculations.

### Economic Activity and Share of Discouraged Persons

(per cent, seasonally adjusted data)

(per cent, seasonally adjusted data)

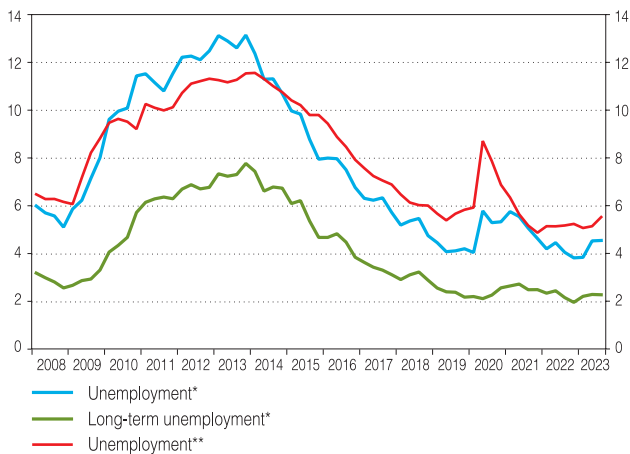


Notes: From the beginning of 2022, there is a break in series due to the use of 2021 population census data. Provided seasonally adjusted data are affected by the break in time series.

Sources: NSI Labour Force Survey, BNB calculations.

## Unemployment Rate

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



\* Based on NSI data.  
\*\* Employment Agency data.

Notes: From the beginning of 2022, there is a break in time series due to the use of 2021 population census data in the estimation of Labour Force Survey results. Seasonally adjusted data presented here are affected by the break in time series.

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

## Labour Demand

In the third quarter of 2023, employment<sup>45</sup> fell by 0.6 per cent year on year as a result of a fall in employment in agriculture and industry. A slight decrease was also recorded in construction, while the number of persons employed in services continued to rise, with the largest increases reported in the general government; education; human health and social work activities sub-sectors. Weaker labour demand was also indicated by data on job vacancies in the economy<sup>46</sup>, which fell by 1.1 per cent year on year, mainly due to a reduction in vacancies in the manufacturing sector. At the same time, the share of firms identifying labour shortages as a factor hampering their activity<sup>47</sup> continued to increase in the third and fourth quarters of 2023, reaching some of the highest historical values. Although the share of firms reporting labour shortages in the industrial sector started to decrease somewhat since July, it remained at a historically high level. As a result, labour shortages in Bulgaria continued to exert upward pressure on wages despite the weaker labour demand in the country.

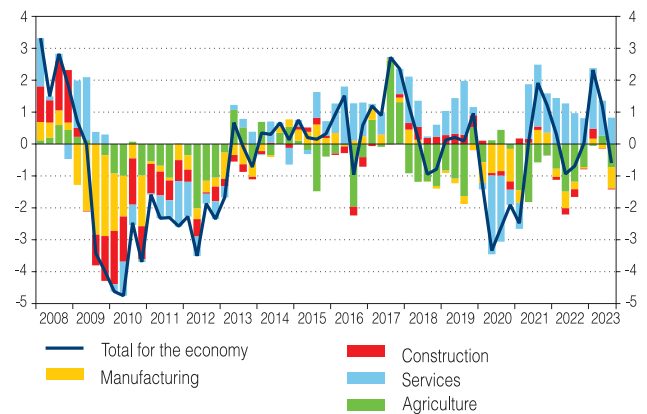
<sup>45</sup> NSI System of National Accounts data are used.

<sup>46</sup> Based on NSI short-term statistics on employment and labour costs.

<sup>47</sup> According to NSI business situation survey data.

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

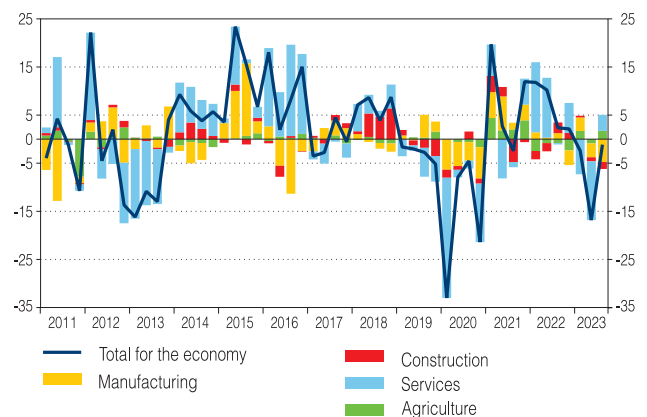
(per cent; percentage points; on an annual basis)



Sources: NSI – System of National Accounts (SNA), BNB calculations.

## Contribution to the Change in the Number of Job Vacancies by Economic Sector

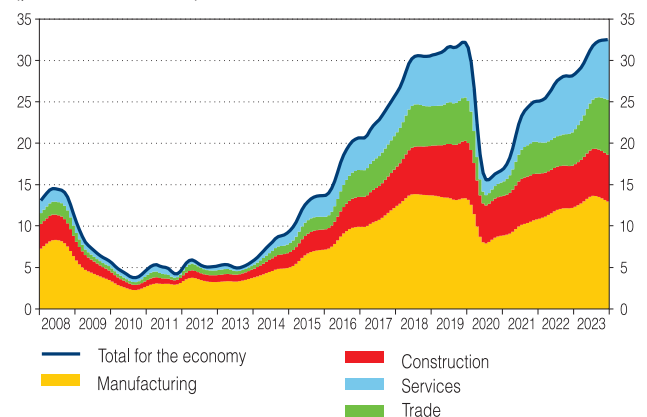
(per cent; percentage points; on an annual basis)



Sources: NSI, BNB calculations.

## Labour Shortages (Seasonally Adjusted and Sector-Weighted Monthly Data)

(per cent of the firms)



Notes: Data up to and including December 2023 are used.

Sources: NSI, BNB calculations.



## Productivity and Compensation per Employee

Labour productivity<sup>48</sup> increased by 2.0 per cent on an annual basis in the third quarter of 2023. Industry had the largest contribution to the reported growth, which was due to the increase in value added as a result of a decrease in the number of employed. The higher overall productivity in manufacturing most likely reflected divergent developments across sub-sectors, as the two most labour-intensive sub-sectors – food, beverages and tobacco products and textiles, clothing, leather, footwear and related products, which together account for almost 40 per cent of the employment in the manufacturing<sup>49</sup> – recorded declines in industrial production in the third quarter of 2023. Labour productivity in construction and services (without imputed rent) also increased slightly, while that in agriculture reported a decline.

Stronger labour productivity growth and high labour shortages in Bulgaria translated into an increase in nominal compensation *per* employee by 13.5 per cent on an annual basis in the third quarter of 2023. In real terms<sup>50</sup>, compensation *per* employee rose by 5.9 per cent year on year. All major sectors contributed to this, with industry reporting the largest increase.

Data on average gross monthly wage<sup>51</sup> also show an acceleration in the nominal annual growth to 14.7 per cent in the third quarter of 2023 (13.1 per cent in the previous quarter), with stronger wage increases observed in both private and public sectors.

### 4.3. Behaviour of Firms

Data for the third quarter of 2023 signal that firms' nominal unit labour costs for the economy as a whole are kept unchanged compared with

<sup>48</sup> Labour productivity is calculated after adjusting gross value added (total for the economy) for imputed rent.

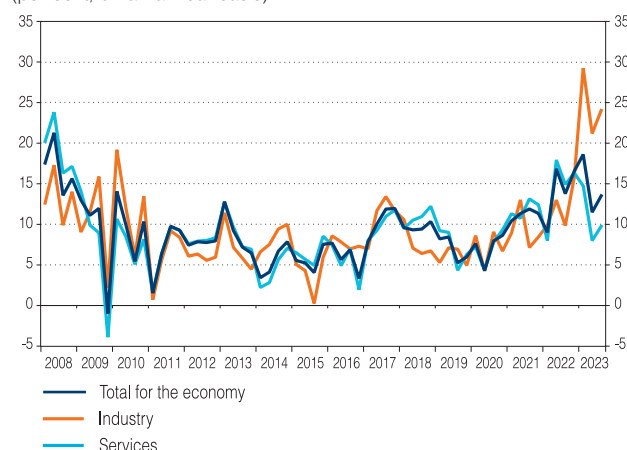
<sup>49</sup> Data on the A64 breakdown up to 2022 from the NSI System of National Accounts (SNA) are used.

<sup>50</sup> Nominal compensation *per* employee was deflated by the HICP to calculate the indicator in real terms.

<sup>51</sup> According to NSI short-term statistics on employment and labour costs.

## Compensation per Employee at Current Prices

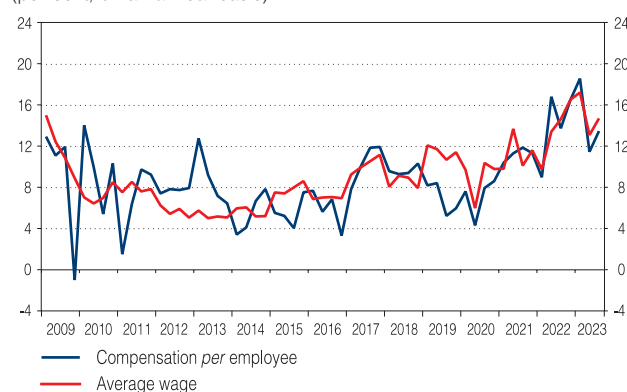
(per cent; on an annual basis)



Source: NSI – SNA.

## Compensation per Employee and Average Wage at Current Prices

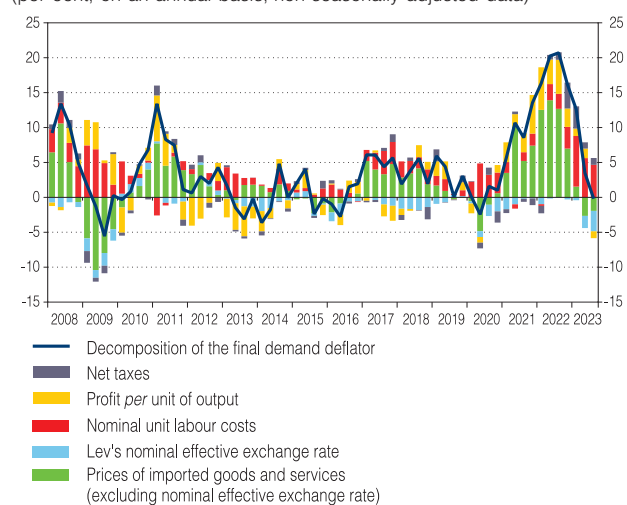
(per cent; on an annual basis)



Source: NSI – System of National Accounts (SNA), short-term statistics of employment and labour costs.

## Decomposition of the Final Demand Deflator

(per cent, on an annual basis; non-seasonally adjusted data)



Sources: NSI, BNB calculations.

the corresponding period of the previous year.<sup>52</sup> According to the breakdown of the final demand deflator, higher compensation *per* employee was the main factor behind the year-on-year increase in the cost of production. At the same time, the fall in import prices of raw materials and the appreciation of the nominal effective exchange rate of the lev against the currencies of Bulgaria's main trading partners offset to a large extent higher labour costs. The deflationary impact of the external environment led to a year-on-year decline in producer prices in both agriculture and manufacturing over the review quarter, while the effects on final consumer prices were considerably less pronounced and mainly limited to the decline in transport fuel prices. Data on the final demand deflator indicate that firms' pricing policies have been geared towards some reduction in the profit margin on an annual basis. Firms' operating costs were financed mainly by attracted funds.

### Labour Costs of Corporations

Firms' unit labour costs recorded an annual growth rate of 11.3 per cent in the third quarter of 2023. The reduction of compensation *per* employee in real terms, which continued to be driven mainly by labour shortages in Bulgaria, contributed most to this increase. Across economic sectors, an acceleration in the annual growth of unit labour costs compared to the previous quarter was observed in the agricultural, construction and services sectors, while in manufacturing, there was a deceleration in growth due to the rise in real labour productivity<sup>53</sup>.

### Investment Costs of Corporations

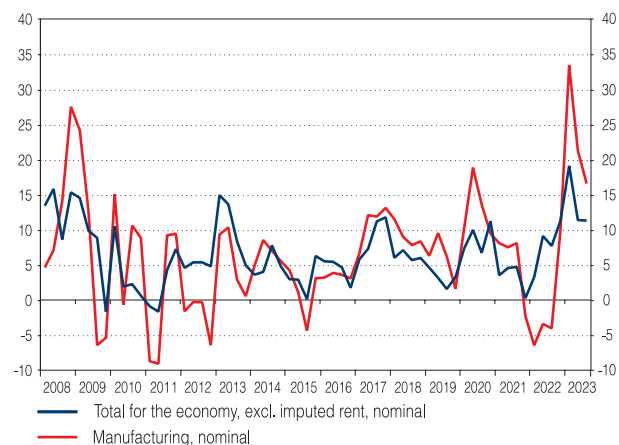
According to BNB estimates, in the third quarter of 2023 private sector investment spending in real terms increased on an annual basis in line with the increase in final consumption expenditure, the persisting environment of negative interest rates on new loans in real terms and the improved managers' sentiment about the future economic

<sup>52</sup> This section presents in detail firms' spending on labour and investment, while their expenditure on raw materials (the so-called intermediate consumption) is not analysed separately due to the lack of quarterly public data. However, data on industrial producer prices for intermediate goods presented in the section provide an indication of these costs' dynamics.

<sup>53</sup> For details, see the Labour Market Section in this Chapter.

### Unit Labour Costs

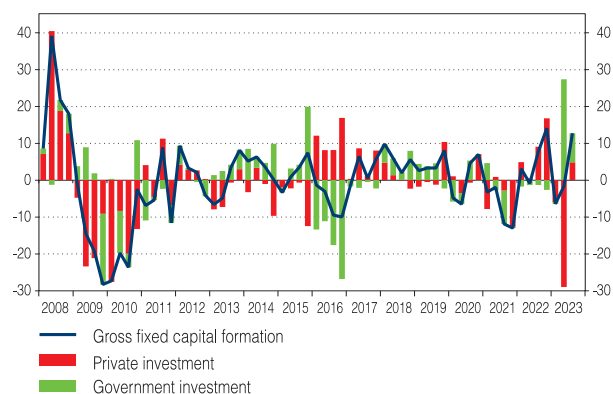
(per cent, on an annual basis; non-seasonally adjusted data)



Sources: NSI, BNB calculations.

### Contribution of Private and Public Sectors to the Annual Rate of Change in Investment in Real Terms

(per cent, percentage points; on an annual basis, non-seasonally adjusted data)



Notes: The NSI does not provide official data on the breakdown of total investment 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.

Sources: NSI, BNB calculations.

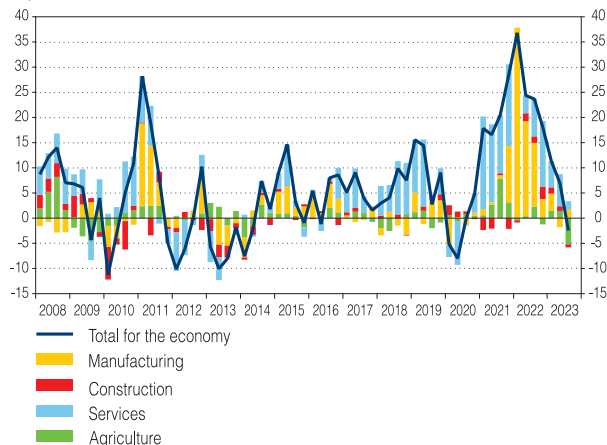
situation in Bulgaria. By asset type, investment in machinery, equipment and weapon systems was the main contributor to growth, followed by investment in non-residential buildings and other structures.

### Financing Sources of Corporations

In the third quarter of 2023, firms mostly used external sources of funding to finance their activities. Based on non-seasonally adjusted data for the total economy, the nominal gross operating surplus which can be used by firms to finance their activities decreased by -2.4 per cent on an annual basis in the third quarter of 2023, which was due to both agriculture (-5.4 percentage points) and services (-0.6 percentage points), while manufacturing (0.7 percentage points) and construction (0.7 percentage points) made a positive contribution. Firms' financing by means other than gross operating surplus increased and posted a year-on-year increase in nominal terms and was entirely due to borrowings.

### Annual Rate of Change of Nominal Gross Operating Surplus and Contribution by Sector

(per cent, percentage points; on an annual basis, non-seasonally adjusted data)



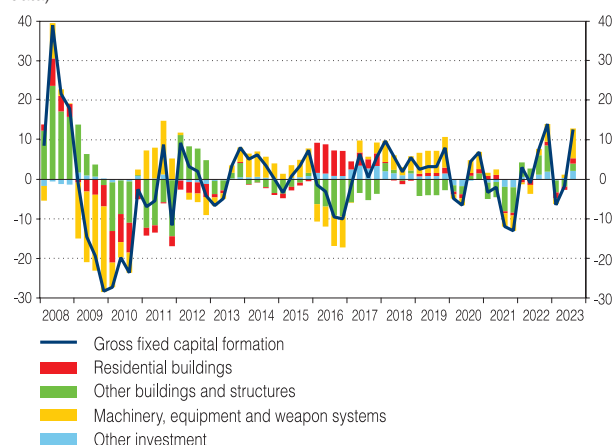
Sources: NSI, BNB calculations.

### Price Policy of Corporations

In the third quarter of 2023, firms' selling prices in industry, as measured by the Producer Price Index (PPI) in industry, posted a decline of -19.8 per cent on an annual basis. Price declines were recorded in both domestic and international producer prices. This was mainly due to the lower prices of energy products and, to a lesser extent,

### Contribution by Asset Type to the Annual Rate of Change in Investment in Fixed Capital

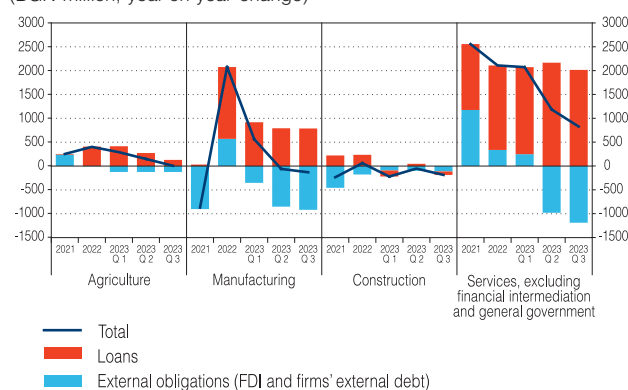
(per cent, percentage points; on an annual basis, non-seasonally adjusted data)



Sources: Eurostat, BNB calculations.

### Financing Sources\*

(BGN million, year-on-year change)



\* Sources of financing other than the gross operating surplus.

Source: BNB.

intermediate goods. Although these products account for a significant part of the production costs of firms in Bulgaria, producer prices of consumer and investment products reported a year-on-year increase, which may be related to an increase in the profit margins in the sector<sup>54</sup> or to the continued rise in unit labour costs in the industry amid high labour shortages.<sup>55</sup> The annual rate of decline in the PPI slowed down in the fourth quarter of 2023 reaching -11.2 per cent in November 2023, mainly driven by the developments in energy commodity prices in international markets.

Producer price indices in services in the third quarter of 2023 reported annual growth in all sub-sectors, except for postal and courier services. Selling prices in the retail sub-sector, which is the closest to the customers in the supply chain, went up by 4.0 per cent in the third quarter of 2023 (compared to 5.7 per cent in the previous quarter). Annual growth in the NSI retail price index (excluding trade in motor vehicles and motorcycles) slowed down to 2.5 per cent in November 2023. The increase in prices in the services sector can be explained with the higher producer prices of consumer goods and the increase in unit labour costs.

### Economic Indicators

NSI data on short-term business statistics provide mixed signals about firms' behaviour across individual sectors of economic activity in the fourth quarter of 2023.<sup>56</sup>

According to BNB seasonally adjusted data, the overall business climate indicator worsened between October and December 2023 compared with the previous quarter. A deterioration in sentiment was recorded in industry and trade, while an improvement in the business climate was observed for firms in construction and services. The uncertain economic environment remained the factor hampering most seriously corporations' activity, and the impact of this factor increased

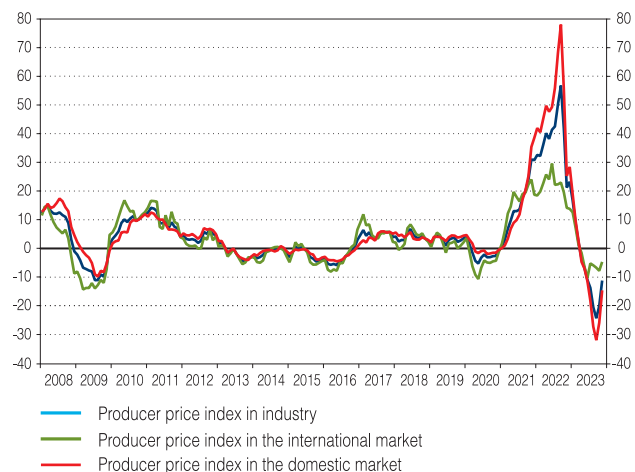
<sup>54</sup> In the third quarter of 2023, a decline in unit profit margins was observed in the economy as a whole, while the industrial sector recorded an increase.

<sup>55</sup> For details, see the Labour Market Section in this Chapter.

<sup>56</sup> For more details on the composite economic indicator, see the Current Economic Environment Section in this Chapter.

### Rate of Change of Producer Price Index in Industry

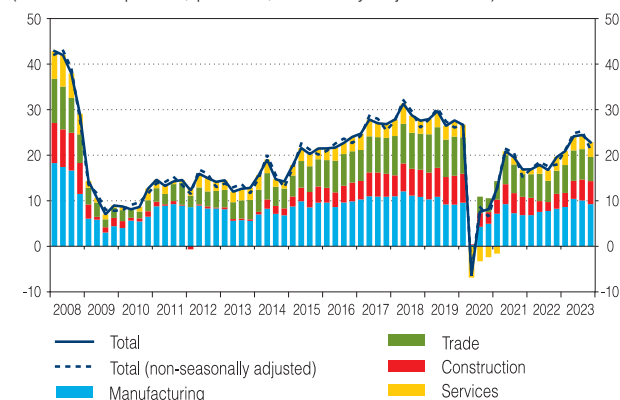
(per cent; on an annual basis)



Source: NSI.

### Business Climate

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

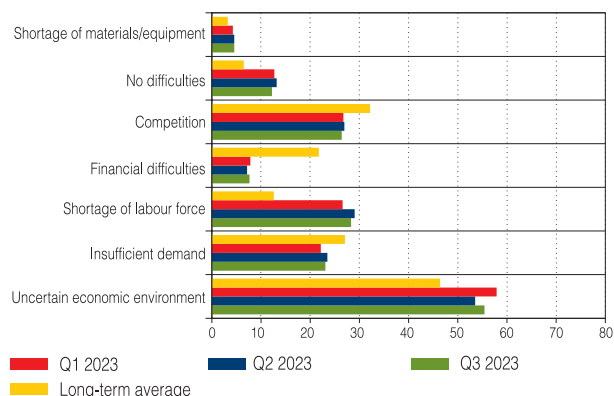


Notes: The answers to the NSI survey questions are presented in a three-tier category scale: 'increase', 'unchanged', 'decrease'. Balances of opinions are calculated as a difference between relative shares of extreme options of replies: 'increase' minus 'decrease'. The business climate indicator is a geometric average of the balances of opinions about the current and expected business situation in corporations in the next six months.

Sources: NSI, BNB calculations.

### Factors Hampering Economic Activity of Corporations

(relative share of corporations)



Note: Data are averaged for the relevant period and weighted by the share of corporations by sector (manufacturing, construction, trade and services).

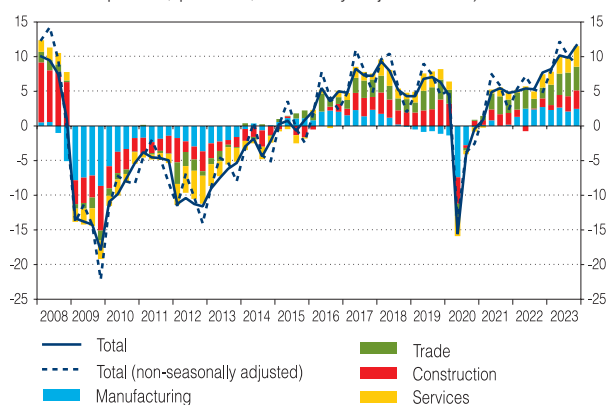
Sources: NSI, BNB calculations.

compared to the previous quarter. At the same time, the share of corporations that identify labour shortages as a limiting factor for their activity remained close to one of its highest values in historical terms and remained the second most serious hindrance to the activity of companies after the uncertain economic environment. In the fourth quarter of 2023, managers' estimates of firms' expected production activity for the next three months increased compared with the previous quarter.

Data from the NSI's short-term business statistics for production indexes in industry and construction at constant prices reported a decline in the October–November 2023 period compared to the third quarter, while retail turnover recorded an increase.

### Corporations' Expectations about Staff Recruitment in the Following Three Months

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



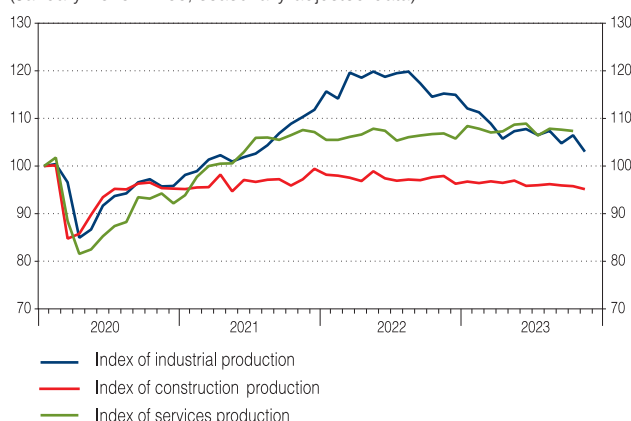
Notes: The answers to the NSI survey questions are presented in a three-tier category scale: 'increase', 'unchanged', 'decrease'. Balances of opinions are calculated as a difference between relative shares of extreme options of replies: 'increase' minus 'decrease'.

Sources: NSI, BNB calculations.

The quarter-on-quarter decline in construction production in the October–November 2023 period was the result of weaker activity in both building and civil engineering construction. At the same time, the construction production index increased on an annual basis. The NSI business climate surveys carried out in the fourth quarter of 2023 suggest that the main factors hampering the activity of construction companies continue to be the uncertain economic environment, commodity prices and labour shortages, with the negative impact of these factors tending to decline.

### Dynamics of the Production Index in Manufacturing, Construction and Services

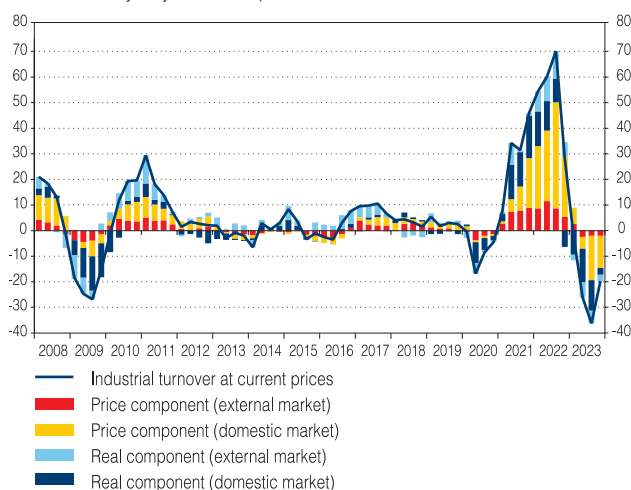
(January 2020 = 100; seasonally adjusted data)



Sources: NSI, Eurostat, BNB calculations.

### Industrial Turnover Dynamics

(per cent; percentage points; on an annual basis; non-seasonally adjusted data)



Note: Data for the fourth quarter of 2023 refer to the October–November period.

Sources: NSI, BNB calculations.

Between October and November 2023, the industrial production index fell both on a quarter-on-quarter and on a year-on-year basis. All major sub-sectors contributed to the decrease in the index compared to the corresponding period of the previous year. Data on nominal turnover in industry show that both the international and domestic markets contributed to the decline in industrial activity. Over the October–November 2023 period, retail turnover at constant prices increased on a quarter-on-quarter and year-on-year basis, with the main contributor to annual growth being retail trade in food, beverages and tobacco.

## 4.4. Household Behaviour

### Household Revenue

According to NSI's household budget survey data, nominal household revenue growth<sup>57</sup> slowed slightly year on year in the third quarter of 2023, owing to a decrease in revenue from withdrawn savings, while the growth rate of total household income continued to rise.

Growth in total household income accelerated in nominal terms to 22.5 per cent year on year in the third quarter of 2023, mainly due to higher pension income. Wage income continued to register a strong increase and to be the largest contributor to the growth of total income, but its growth slowed down slightly compared to the previous quarter, which was not in line with the acceleration of the growth in wages *per employee*<sup>58</sup>, according to the NSI national accounts data and NSI short-term statistics<sup>59</sup> on the average gross monthly wages. Despite the differences, all three statistics suggest a strong increase in wage income in the third quarter of 2023.

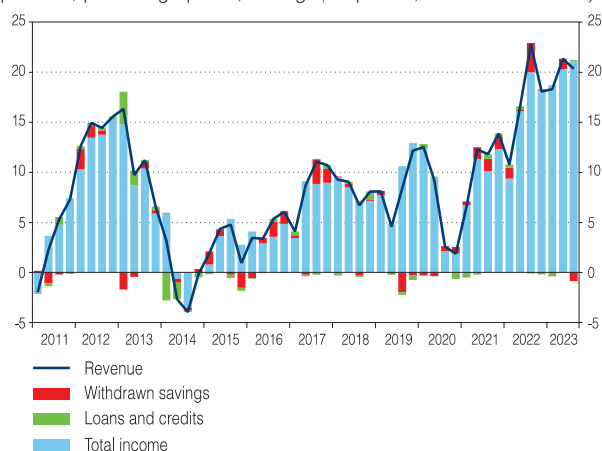
<sup>57</sup> Household income includes all household cash income from sources such as wages, pensions, self-employment, social security benefits, allowances and valued in-kind income (the monetary value of goods and services received in kind by households, such as social transfers in kind) grouped under the 'Total income' category, as well as withdrawals of savings and loans.

<sup>58</sup> The wage is calculated by dividing the wage bill to the number of employed in the economy.

<sup>59</sup> The discrepancy in the dynamics presented by the NSI budget survey data and the national accounts data is likely to stem from the differences in the two statistics in terms of how the data are collected, their scope and the definitions used.

### Contributions to the Change in Household Revenue

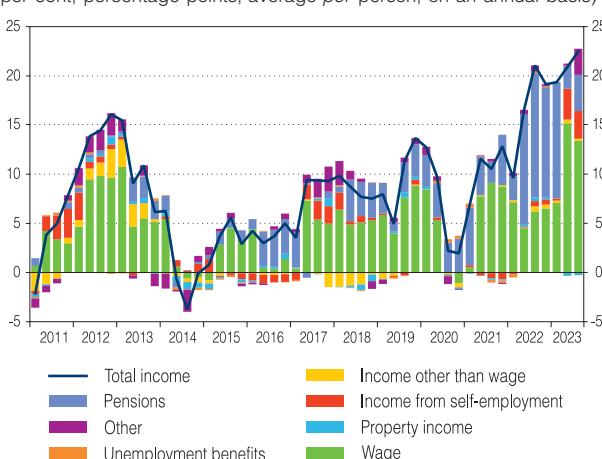
(per cent, percentage points; average *per person*, on an annual basis)



Sources: NSI – Household Budget Survey, BNB calculations.

### Contribution to the Change in Total Monthly Household Income

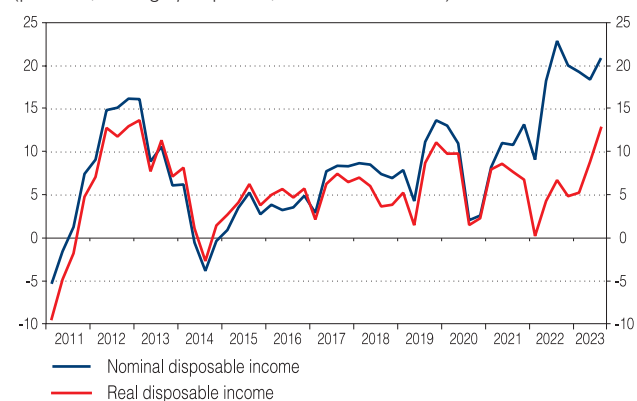
(per cent, percentage points; average *per person*, on an annual basis)



Sources: NSI – Household Budget Survey, BNB calculations.

### Household Disposable Income

(per cent, average *per person*, on an annual basis)



Note: Real disposable income of households represents total income reduced by taxes, social security contributions and regular transfers to other households, HICP deflated.

Sources: NSI – Household Budget Survey, BNB calculations.

In real terms<sup>60</sup>, annual growth in total household income stood at 14.3 per cent in the third quarter of 2023, supported by both easing in inflation and high labour shortages in Bulgaria, which continued to put pressure on employers to increase wages. These developments were reflected in higher annual growth in real disposable income<sup>61</sup> of households, which stood at 12.8 per cent in the third quarter of 2023 and supported household consumption.

### Household Expenditure

In the third quarter of 2023, nominal growth in total household expenditure<sup>62</sup> remained close to that recorded in the previous quarter (21.2 per cent on an annual basis) as a result of continued growth in consumer spending. At the same time, taxes and social contributions continued to increase at a faster pace than consumer spending, and the trend towards a gradual increase in their share of total household expenditure continued for a third consecutive quarter.

Growth in household consumption expenditure remained high in the third quarter of 2023 and came to 19.4 per cent on an annual basis, with food and non-alcoholic beverages contributing most to the reported increase, followed by spending on leisure, cultural recreation and education.

In real terms<sup>63</sup>, household consumption expenditure growth accelerated to 11.4 per cent on an annual basis in the third quarter of 2023 (from 9.8 per cent in the second quarter) in line with higher real disposable income growth. The main contributors to the reported increase were expenditure on leisure, cultural recreation and education, followed by expenditure on transport. At the same time, the NSI national accounts data, which have a broader coverage, showed a deceleration in annual real private consumption growth to 4.8 per cent on an annual basis, from 9.5 per cent in the second quarter of

<sup>60</sup> To obtain total income in real terms, nominal values are deflated by the HICP.

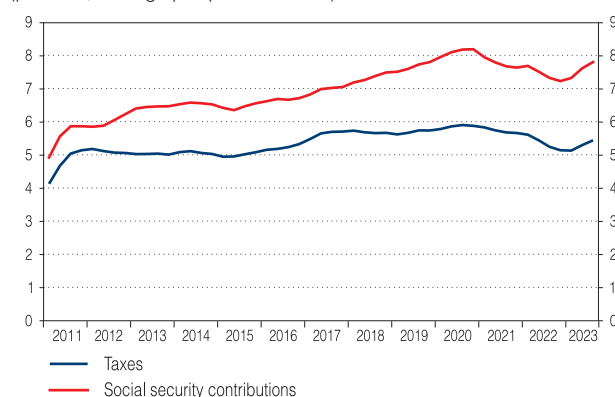
<sup>61</sup> Real disposable income of households is calculated based on the NSI household budget survey data and represents total income less taxes, social security contributions and regular transfers to other households, deflated by the HICP.

<sup>62</sup> Total expenditure include consumer spending, taxes, social contributions, regular transfers to other households and other expenditure. For details, see NSI's methodology on the Household Budget Survey.

<sup>63</sup> Household consumer expenditure are deflated by the overall HICP. Sub-components of consumer expenditure are deflated by the corresponding HICP groups.

### Shares of Taxes and Social Security Contributions in Total Household Expenditure

(per cent, average *per person* – BGN)

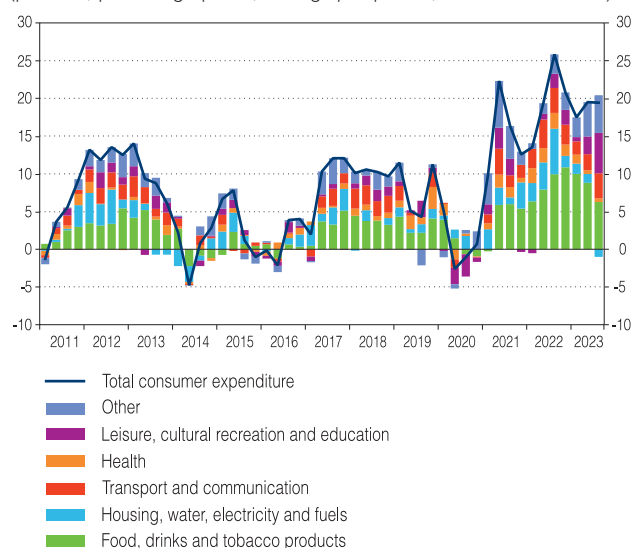


Note: A moving average for the last four quarters is used in order to adjust the data and show the trend in the developments.

Source: NSI – Household Budget Survey.

### Contribution to the Change in Households' Consumer Expenditure

(per cent, percentage points; average *per person*, on an annual basis)



Sources: NSI – Household Budget Survey, BNB calculations.

2023.<sup>64</sup> Despite the divergent dynamics – probably due to the way the data are collected, their scope and the definitions used – both statistics suggest that consumer spending growth remained very high in historical terms in the third quarter of 2023.

### Household Savings

In the third quarter of 2023, the propensity of households to save<sup>65</sup> part of their earned income<sup>66</sup> reported no significant changes from the previous quarter, according to seasonally adjusted data. Despite the continued increase in deposits, which reflected households' limited alternatives for investing their savings, the accumulated amount of household net assets in the banking system remained unchanged from the previous quarter. This was due to continued strong growth in loans to households, for which interest rates remained low.

## 4.5. Fiscal Policy Effects on the Economy

In the third quarter of 2023, fiscal policy had a supportive effect on economic activity in Bulgaria through both government consumption and government investment. In addition, government social payments continued to support households' disposable income, while retention of the exchange price of electricity below the threshold set in the electricity compensation programme for non-household electricity consumers did not require firms to pay these compensations over the period under review.<sup>67</sup>

Data from the non-financial accounts of the general government sector indicate that, following a decline in the second quarter of 2023, government final consumption expenditure recorded an increase on an annual basis of 10.7 per cent in nominal terms in the third quarter (0.3 per cent in

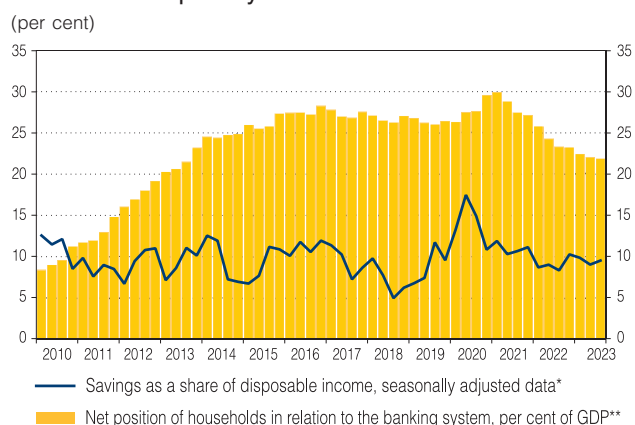
<sup>64</sup> Comparing national accounts data and the NSI's Household Budget Survey, the differences in the two statistics in terms of the way of collecting data, their coverage and the definitions used should be taken into account.

<sup>65</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>66</sup> Income is gross income in the relevant quarter reduced by taxes and social security contributions.

<sup>67</sup> In the third quarter of 2023, additional fiscal measures with an indirect impact on economic activity in Bulgaria continued to be the tax relief for children, the reduced VAT rate of 9 per cent for restaurant, catering and tourist services, as well as for books, baby food and diapers, and the zero VAT rate for the supply of bread.

## Household Propensity to Save



Notes: Savings as a share of disposable income represent the difference between total income and total expenditure of households as a share of total income reduced by taxes, social security contributions and regular transfers to other households.

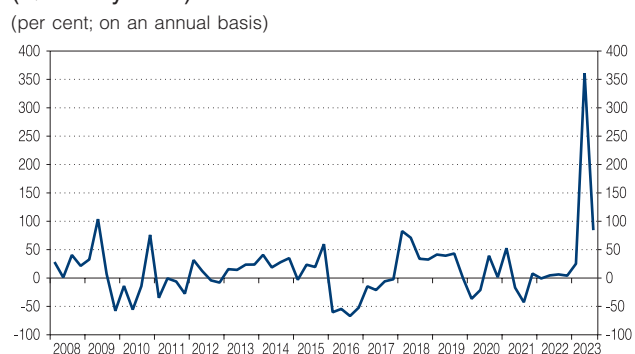
The net position of households *vis-à-vis* the banking system is the difference between deposits and loans of households.

\* Based on NSI data. BNB seasonally adjusted data.

\*\* BNB and NSI data. Nominal GDP data for the last four quarters up to and including the second quarter of 2023 are used to calculate the ratio to GDP.

Sources: NSI – Household Budget Survey, the BNB.

## Rate of Change in Gross Fixed Capital Formation of the General Government Sector in Nominal Terms (Quarterly Data)



Sources: NSI, BNB calculations.



real terms). According to these data, the highest positive contribution to government consumption growth over the review period, both in nominal and real terms<sup>68</sup>, was made by spending on social transfers in kind<sup>69</sup>. Government consumption growth in nominal terms also benefited from an increase in compensation *per* employee due to higher public sector wage costs compared to 2022, as set out in the Law on the State Budget adopted on 28 July 2023. In the third quarter of 2023, the annual growth of fixed capital formation in the general government sector slowed down, but remained very high in both nominal and real terms<sup>70</sup> (84.4 per cent and 82.1 per cent, respectively). Data on the implementation of the Consolidated Fiscal Programme indicate that government investment in the period under review was mainly supported by the implementation of nationally funded projects and, to a lesser extent, by EU-funded ones.<sup>71</sup> Growth in social expenditure, excluding that in kind, accelerated in the third quarter of 2023, reaching 18.1 per cent on an annual basis in nominal terms (compared to 15.6 per cent annual growth in the second quarter of the year). The 12 per cent increase in pensions as of 1 July 2023 contributed to the social expenditure dynamics, given the 10 per cent increase in pensions as of 1 July 2022.

At the end of November 2023, total government expenditure under the CFP stood at 7.4 per cent on an annual basis, with social expenditure contributing most to this. Personnel costs and, to a lesser extent, capital expenditure also contributed to the growth in total budget expenditure. As a result of a base effect related to the recalculation of pensions and the increase in the ceiling from 1 October 2022, social expenditure growth moderated as of November 2023 compared to the one recorded towards the end of the third quarter of 2023, which also affected the slowdown in total expenditure growth. As of November 2023, subsidy expenditure declined by -44.6 per cent on an annual basis, driven by the base effect of payments made to compensate firms for the high cost of electricity in the same period of 2022 and the subsequent significant decrease in the exchange price of electricity in 2023.

<sup>68</sup> The estimate of the real size of the relevant government consumption components is made by deflating them by the total government consumption deflator.

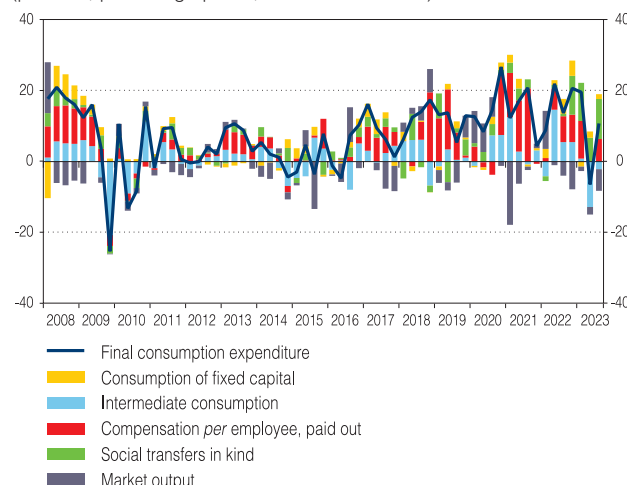
<sup>69</sup> Expenditure on social transfers in kind mainly includes expenditure on health care.

<sup>70</sup> The estimate of the real amount of investment in fixed capital formation of the general government sector is obtained by deflating it with the deflator of the gross fixed capital formation for the total economy.

<sup>71</sup> The largest positive contribution to the annual growth in nationally funded capital expenditure in the third quarter of 2023 came from capital expenditure implemented under municipal budgets.

### Contribution of Major Groups of Expenditure to Government Consumption Growth in Nominal Terms (Quarterly Data)

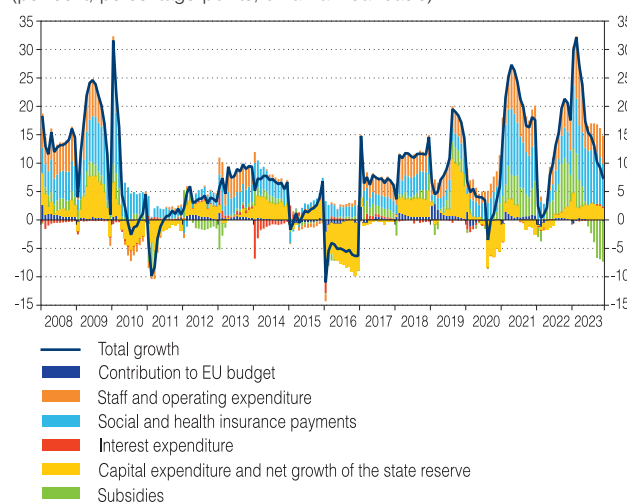
(per cent; percentage points; on an annual basis)



Sources: NSI, BNB calculations.

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

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



Notes: In the Consolidated Fiscal Programme reports for January 2016, personnel costs include wage, insurance and other remuneration expenditure, while in the reports for past periods, the latter were not included in operating expenditure. To prevent inconsistencies of data prior to and after January 2016 resulting from the methodological change, personnel costs and operating expenditure data are presented aggregately in the chart.

Sources: MF, BNB calculations.

Growth in capital expenditure under the CFP remained relatively high as of November 2023 (28.5 per cent), signalling that general government investment is likely to continue to have a supportive impact on the growth of economic activity in Bulgaria in the last three months of 2023. At the same time, available data on the implementation of the CFP as of November 2023 do not provide a sufficiently clear indication of the impact of government consumption on economic activity in the country in the fourth quarter of 2023.

Total budget revenues under the CFP grew by 6.5 per cent on an annual basis by end-November 2023, with growth driven entirely by tax revenue. Tax revenue growth was largely due to revenue from social and health contributions, followed by revenue from other taxes<sup>72</sup>.

By end-November 2023, the CFP budget balance was negative and amounted to BGN -980 million (-0.5 per cent of GDP<sup>73</sup>).

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<sup>72</sup> The receipt of earmarked contributions from energy companies to the Electricity System Security Fund, which are recorded as revenue from other taxes since early 2023, continued to impact the annual growth in revenue from other taxes.

<sup>73</sup> Nominal GDP data for the last four quarters up to the third quarter of 2023 inclusive are used in calculating the ratio.

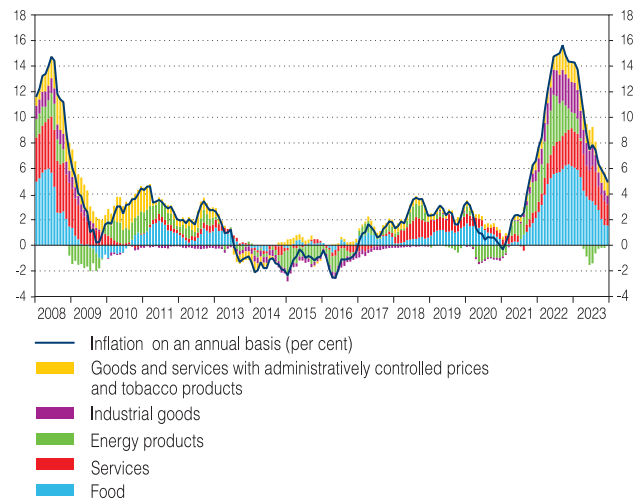
# 5. PRICE DEVELOPMENTS

## 5.1. Consumer Prices

In 2023, annual inflation, measured by the HICP, continued to moderate, reaching 5.0 per cent in December 2023 (14.3 per cent in December 2022). The main factors contributing to this slow-down were the base effect stemming from the high growth rates of consumer prices in 2022, mainly in the food and core component groups, as well as the year-on-year decline in energy product prices owing to the downward dynamics of international energy commodity prices. The fourth quarter saw moderate HICP growth rates on a monthly basis compared to the high month-on-month changes by historical standards over the first nine months of 2023. The most significant inflationary pressures were exerted by the continued strong consumer demand and rising unit labour costs, which in the context of labour shortages limited the degree of pass-through by firms of falling international prices of key energy and agricultural commodities to final consumer prices. As a result of these developments, in December 2023, services and food products had the largest positive contribution to headline inflation. Fiscal policy continued to have a pro-inflationary impact stemming from the growth in social payments and compensation of employees in the public sector in recent years, which supported household disposable income and consumption growth and set preconditions for retention of high inflation in the more demand-sensitive HICP components, such as services. At the same time, maintaining budget deficits also had an additional effect on the continued inflow of attracted funds and the retention of high liquidity in the banking system, contributing to the limited transmission of the ECB monetary policy to the interest rates on deposits and loans in the household sector in Bulgaria, which persisted even after the rise in banks' minimum required reserves rate to 12 per cent by the BNB. The gradual decline in headline consumer price inflation created conditions for real interest rates on new household time deposits to become

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

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



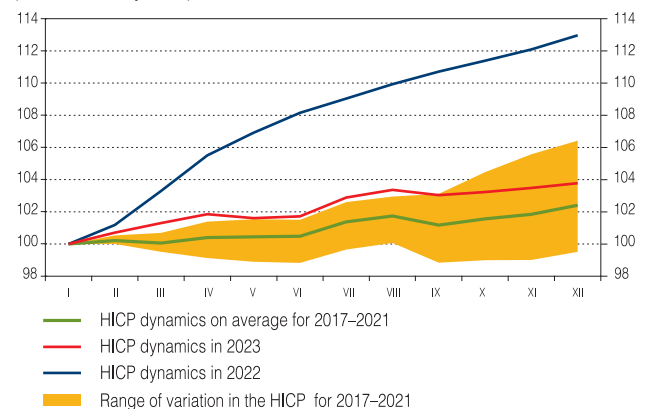
Notes: This structure corresponds to the Eurostat classification; tobacco products and goods and services with administratively controlled prices are presented separately.

The index of goods and services with administratively controlled prices is calculated by weighing the relevant elementary aggregates of the consumer basket.

Sources: NSI, BNB calculations.

### HICP Dynamics by Month for Selected Years

(index, January=100)



Sources: NSI, BNB calculations.

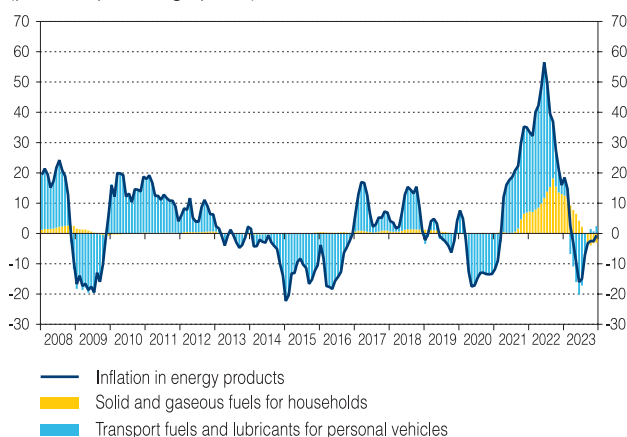
less negative and continued, albeit to a lesser extent, supporting private consumption growth and consumer price increases. Although interest rates on new consumer loans turned positive in real terms since mid-2023, newly extended consumer loans continued to show an upward trend in volumes, which was an additional factor with a pro-inflationary effect over the year.

### Energy Products Prices

The group of energy products recorded a price decline of 0.6 per cent on an annual basis (compared to a 15.9 per cent growth in December 2022) and had a low negative contribution to headline inflation in December 2023. These developments were mainly driven by solid fuels, which reported a significant fall in prices on an annual basis. Concurrently, transportation fuels contributed slightly positively to inflation in the energy product group in December, mainly due to a base effect against the background of their rapid fall at the end of the previous year.

### Contributions of Major Sub-groups to Energy Inflation (Excluding those with Controlled Prices)

(per cent; percentage points)



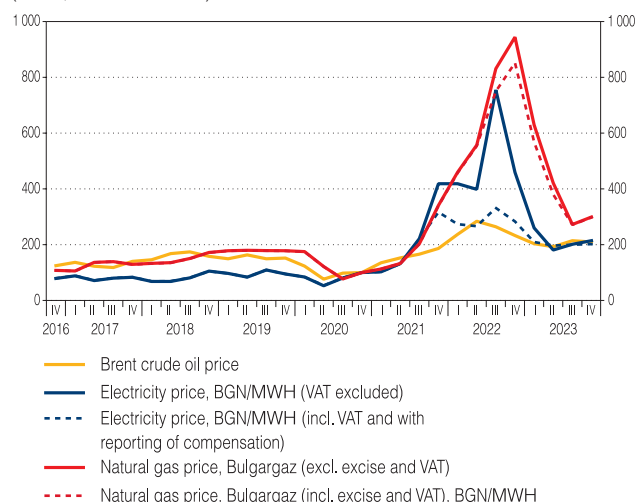
Sources: NSI, BNB calculations.

### Food Prices

Food price inflation fell to 6.0 per cent in December 2023 (compared to 25.0 per cent in December 2022), with the price rise in this group occurring despite reported declines in the international prices of key agricultural and energy commodities. This group continued to have a significant positive contribution to the HICP increase on an annual basis

### Primary Energy Commodity Prices

(index, Q4 2020 = 100)



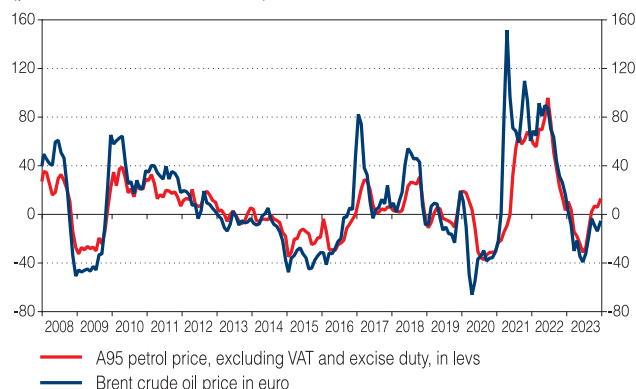
Notes: The electricity price refers to the day ahead segment of the Independent Bulgarian Energy Exchange EAD (IBEX).

The price of natural gas sold by Bulgargaz EAD does not include prices for access and transmission through the gas transmission networks.

Sources: ECB, IBEX, EWRC.

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

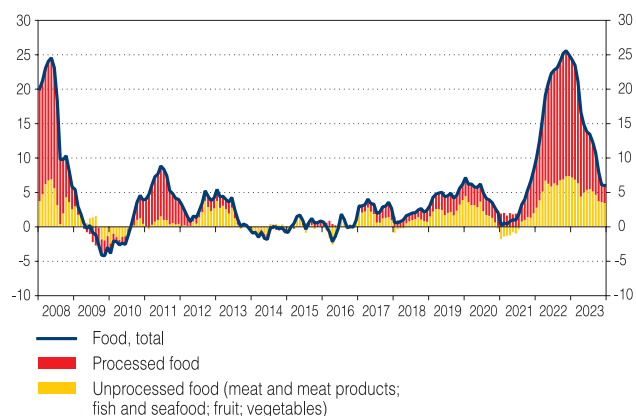
(per cent; on an annual basis)



Sources: ECB, NSI, BNB calculations.

### Rate of Change of Food Price Index and Contribution of Processed and Unprocessed Food

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



Sources: NSI, BNB calculations.

by the end of 2023, with both processed and unprocessed food contributing to this effect.

Annual unprocessed food inflation stood at 10.4 per cent in December 2023 (compared to 22.3 per cent in December 2022). The sub-groups of meat and meat products and fruit and vegetables continued to have a significant positive contribution to the rise in unprocessed food prices which was due to the year-on-year increase in import prices of these products<sup>74</sup>, prices of pork and beef in Bulgaria<sup>75</sup>, as well as to the persistently high production costs<sup>76</sup>.

The growth rate of processed food prices slowed down significantly to 3.8 per cent in December 2023 (from 26.3 per cent in December 2022). Bread and cereals and sugar and chocolate products contributed most positively, which can be explained by upward developments in import prices of these food products. At the same time, animal and vegetable oil and fats and, to a lesser extent, milk and dairy products had a negative contribution to the rise in processed food prices, which was in line with the lower production costs of these products<sup>77</sup>.

### Core Inflation

Core inflation, which includes prices of services and non-energy industrial goods, followed a downward trend and stood at 5.3 per cent in December 2023 (compared with 11.9 per cent in December 2022), remaining elevated. Price increases in services contributed most to these developments.

The annual growth rate of industrial goods prices stood at 3.3 per cent in December 2023, com-

<sup>74</sup> BNB calculations based on NSI data on import prices by commodity group according to the Standard International Trade Classification (SITC) as of the third quarter of 2023 are used.

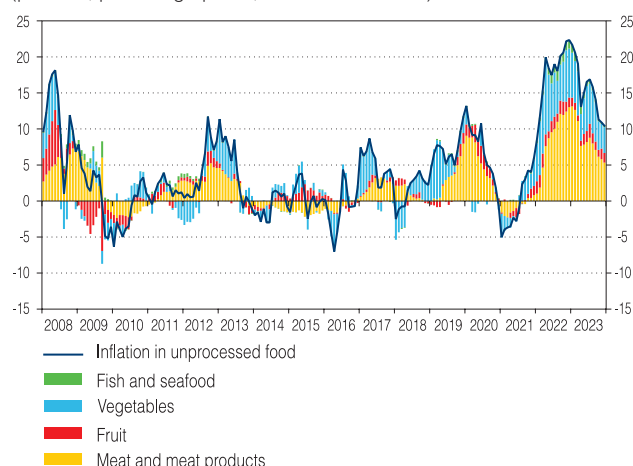
<sup>75</sup> The analysis employs data as of December 2023 from the Ministry of Agriculture and Food on retail prices in Bulgaria and prices in the European Union.

<sup>76</sup> NSI data on price indices of goods and services intended for current consumption in agriculture as of the third quarter of 2023 are used.

<sup>77</sup> On the basis of data from the Commodity Exchange and Wholesale Markets State Commission on the Commodity Price Index (MPI) as of November 2023, prices related to the production of vegetable and animal oils and fats and milk and dairy products decreased by 33.3 per cent and 0.7 per cent on an annual basis, respectively.

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

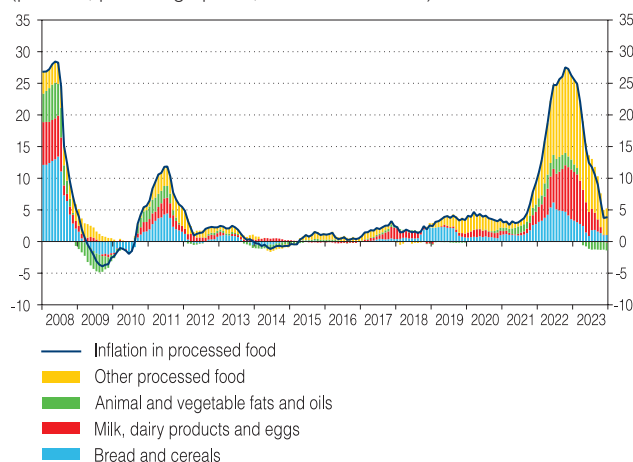
(per cent; percentage points; on an annual basis)



Sources: NSI, BNB calculations.

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

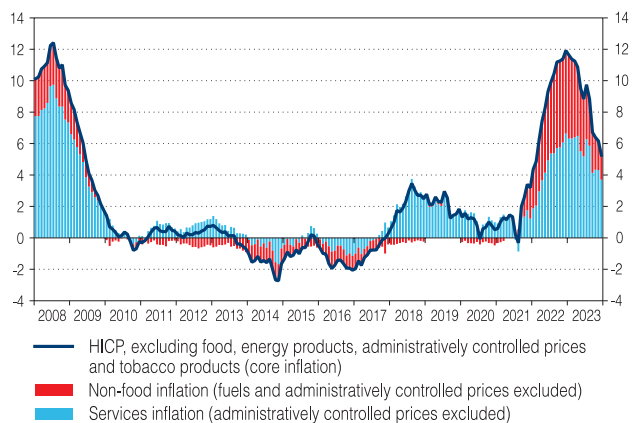
(per cent; percentage points; on an annual basis)



Sources: NSI, BNB calculations.

### Core Inflation and Contribution of Services and Non-energy Industrial Goods to It

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



Sources: NSI, BNB calculations.

pared with 10.1 per cent at the end of 2022. The main contributors to the moderation in industrial goods inflation was the sub-group of non-durable goods, especially clothing and footwear, household goods and pet goods and services. At the same time, furniture and furnishing had the largest positive contribution to the price rises in the durable goods sub-group. Price increases in these sub-groups were driven by the persistent rise in household final consumption expenditure<sup>78</sup> and continued strong consumer demand.

Annual inflation in the group of services remained high, reaching 7.1 per cent in December 2023 (compared to 13.9 per cent in December 2022). Catering, accommodation services and telecommunication services had the highest positive contribution in this respect. The main factors affecting the retention of high inflation in this group was the limited pass-through by firms of falling energy prices into consumer prices due to the strong consumer demand and still rising unit labour costs.

### Goods and Services with Administratively Controlled Prices and Tobacco Products

In December 2023, inflation in goods and services with administratively controlled prices and tobacco products stood at 5.4 per cent, from 6.9 per cent at the end of 2022. Price increases continued to be determined mainly by the medicinal products<sup>79</sup> sub-group. Tobacco products had a strong positive contribution as well, where the trend towards accelerated price growth due to the increase in the excise duty rate on these products<sup>80</sup> was retained. Other regulated services, which experienced more substantial year-on-year

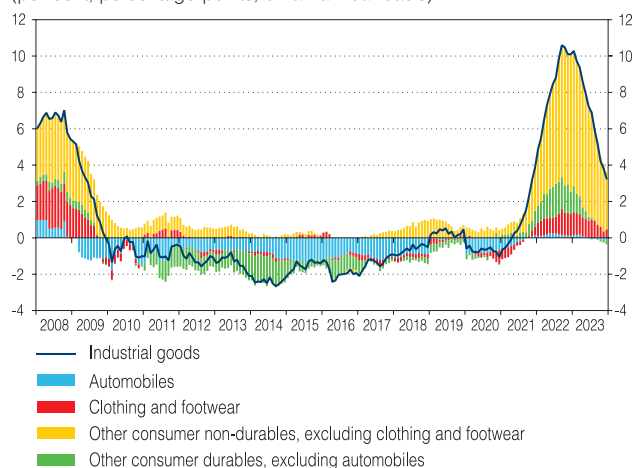
<sup>78</sup> According to NSI data, in November 2023 real volumes of retail trade in non-energy industrial goods (excluding trade in motor fuels and lubricants) increased by 1.6 per cent year on year (5.2 per cent in December 2022).

<sup>79</sup> Medicines included in the so-called positive drug list posted the strongest price rise. These are medicines whose prices are set administratively by the National Council on Prices and Reimbursement of Medicinal Products on the basis of the lowest producer price in the European Union and a percentage surcharge.

<sup>80</sup> The excise duty calendar was adopted by the [Law on Amendment to the Tax and Social Insurance Procedure Code](#), published in the Darjaven Vestnik, issue 100 of 16 December 2022 (available in Bulgarian only).

### Contribution of Major Sub-groups to Inflation in Industrial Goods (Excluding Energy Products)

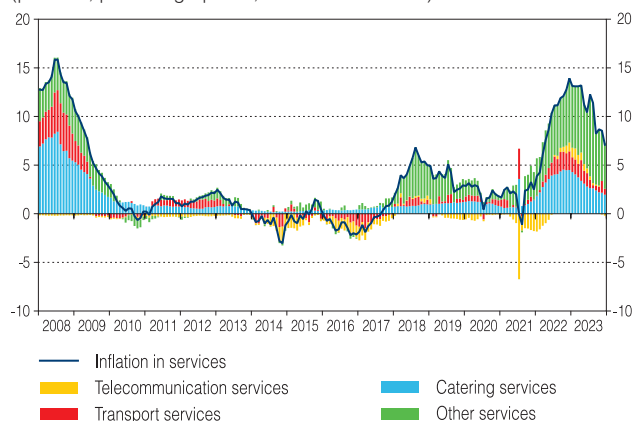
(per cent; percentage points; on an annual basis)



Sources: NSI, BNB calculations.

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

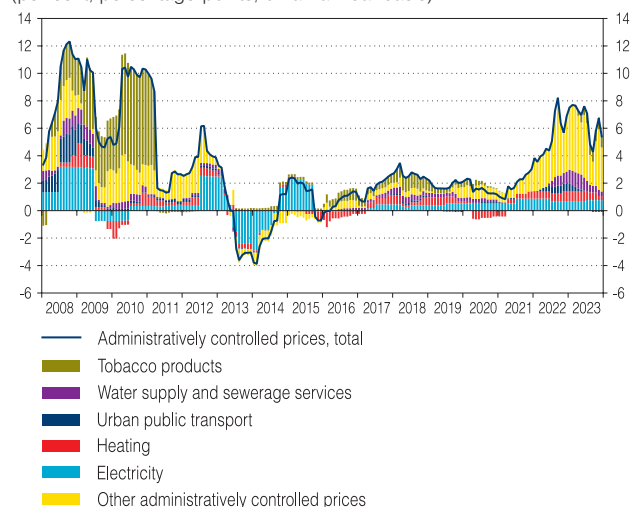
(per cent; percentage points; on an annual basis)



Sources: NSI, BNB calculations.

### Contribution of Major Sub-groups to Inflation in Administratively Controlled Prices (Including Tobacco Products)

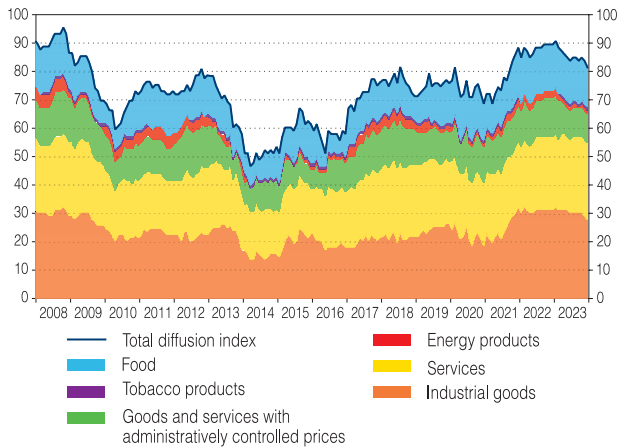
(per cent; percentage points; on an annual basis)



Sources: NSI, BNB calculations.

## Diffusion Index

a) relative shares of increasing HICP sub-indices on an annual basis by major groups of goods and services (per cent)



risers, were electricity<sup>81</sup> and education. At the same time, central gas supply<sup>82</sup> had a slightly negative contribution to inflation in goods and services with administratively controlled prices which was in line with the dynamics in international gas prices.

In December 2023, the diffusion index, which shows the share of goods and services groups with rising prices on an annual basis, dropped to 81.4 per cent (compared with 89.5 per cent at the end of 2022). As regards the rate of increase in prices, the relative share of sub-indices with price growth above 5 per cent on an annual basis declined considerably, standing at 50.0 per cent in August 2023 (compared with 79.1 per cent in December 2022).

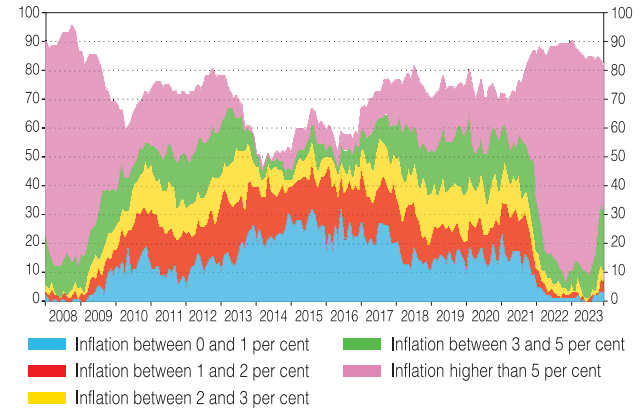
## Inflation Expectations

According to the NSI's regular business surveys, in the fourth quarter compared to the third quarter of 2023, the share of managers expecting sales prices to rise in the next three months increased in all economic sectors, this trend being most pronounced in services. At the same time, in the group of retail trade managers who foresee price increases, it was expected com-

<sup>81</sup> An average electricity price increase for household consumers of 4.37 per cent was adopted for the new regulatory period by a decision of the EWRC of 30 June 2023. The price increase entered into force on 1 July 2023 for a forward period of one year.

<sup>82</sup> The price of central gas supply declined by 26.2 per cent on an annual basis as of December 2023. For more information, see EWRC's press release of 1 December 2023.

b) relative shares of increasing HICP sub-indices on an annual basis by the size of the increase (per cent)

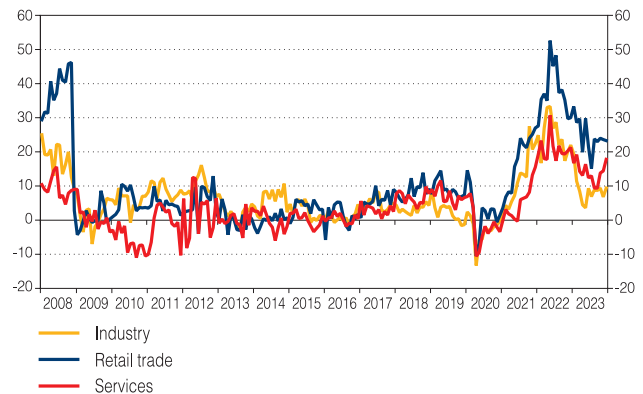


Notes: Data on the HICP 4-digit level sub-indices (sub-classes according to the NSI methodology) have been used. The diffusion index shows the share of sub-indices reporting an increase in value on an annual basis. When calculating the relative shares, the weight of the relevant sub-indices in the consumer basket is not taken into account.

Sources: NSI, BNB calculations.

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

(balance of opinions)

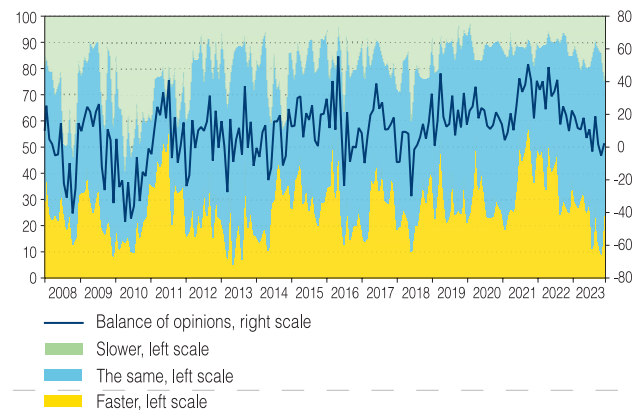


Source: NSI.

## Expectations for the Rate of Growth in Selling Prices in Retail Trade Over the Following Three Months

(share of managers, per cent)

(balance of opinions)



Source: NSI.

modity prices to rise at the same pace or at a faster pace than currently observed. These developments are a prerequisite for inflation in the food and industrial goods groups to remain at its high levels.

Based on current trends, our assumptions about international commodity price developments and labour market dynamics in Bulgaria, we expect annual inflation to continue to decline gradually in the first half of 2024, but to remain relatively high. A factor expected to continue exerting a pro-inflationary impact is the projected increase in unit labour costs and private consumption, which in an environment of significant labour shortages, is expected to further limit the propensity of firms to carry over falling international commodity prices into final consumer prices.

## 5.2. House Prices

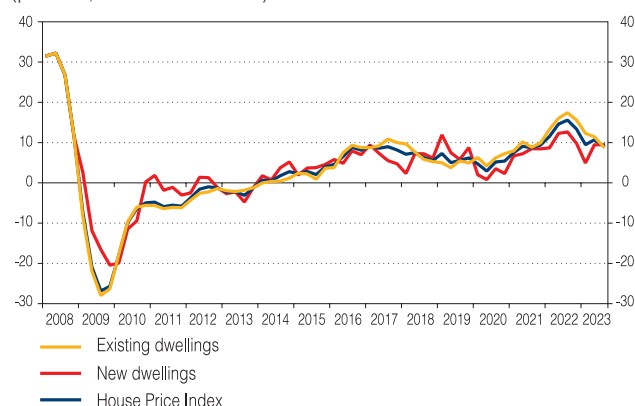
The annual growth rate of the House Price Index (HPI) stood at 9.2 per cent in the third quarter of 2023 (compared to 10.7 per cent in the previous quarter). Price increases reflected the simultaneous price increases of new (9.5 per cent) and existing dwellings (9.0 per cent) and were wide-ranging across regional cities, with a significant acceleration in the growth rate recorded in Ruse. Factors supporting housing demand and thereby contributing to higher prices included the increased labour income, persistently strong credit activity in an environment of historically low annual percentage rate of charge (APRC) on new residential loans, and a lack of sufficient opportunities to invest savings accumulated in the economy in an environment of negative real deposit rates. At the same time, a supply-side factor limiting house price growth was the rapid slowdown in the growth rate of construction costs<sup>83</sup> for new buildings in the third quarter of 2023 (3.4 per cent on an annual basis compared with 18.5 per cent in the previous quarter). Other factors limiting house price increases were the weakening household sentiments for house purchases<sup>84</sup>, as well as the decline in the volume of concluded purchases in the third quarter of 2023 (-8.7 per cent on an annual basis). The price-to-rent ratio, which is a frequently used indicator of

<sup>83</sup> Eurostat data are used.

<sup>84</sup> Data of the regular NSI household budget survey, seasonally adjusted by the BNB.

### Rate of Change of House Price Index

(per cent; on an annual basis)



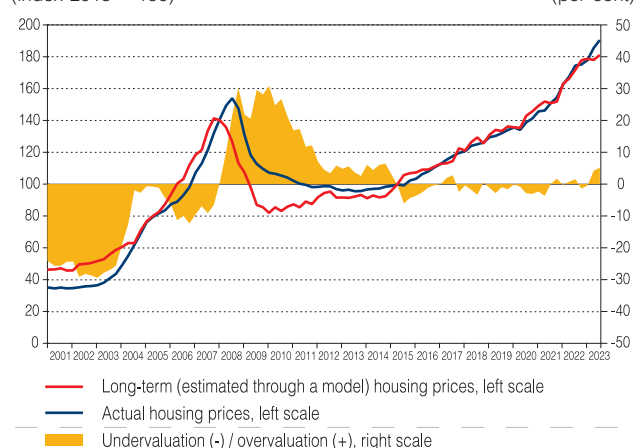
Note: From the beginning of 2022, the HPI is calculated on the basis of data from an administrative source only (the Property Registry), which is the reason why the data are not fully comparable with those of previous years.

Source: NSI.

### Actual and Equilibrium House Prices

(index 2015 = 100)

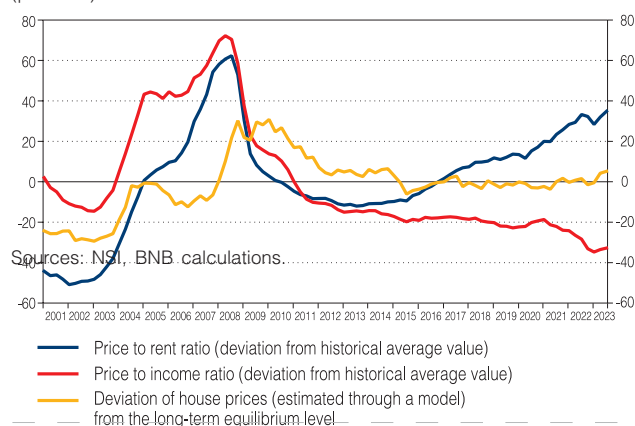
(per cent)



Sources: NSI, BNB calculations.

### Indicators of Undervaluation/Overvaluation of Housing

(per cent)



Sources: NSI, BNB calculations.



undervaluation/overvaluation of houses, continued to exceed significantly (by 34.9 per cent) its long-term (historical) average value in the third quarter of 2023<sup>85</sup>. This signals that household decisions to purchase a home were driven by reasons other than ensuring an immediate financial benefit by letting newly acquired properties. Such reasons could be the 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 asset for preserving value in an environment of low interest rates on deposits and high inflation. At the same time, estimates based on the BNB's macroeconomic model<sup>86</sup> suggest a significantly lower positive deviation of current residential property prices in Bulgaria from their long-term equilibrium level (5.2 per cent). This reflects the fact that rising household income in combination with persistently negative interest rates on housing loans have pushed

up housing affordability, which is reflected in the model as an increase in their equilibrium price.

<sup>85</sup> Calculations for the period from the first quarter of 2000 to the third quarter of 2023.

<sup>86</sup> Additional information on this model is available in the research topic *Dynamics of House Prices in Bulgaria between 2000 and 2016*, *Economic Review*, issue 1 of 2017.

## Key Indicators of the Housing Market Developments in Bulgaria

(per cent; year-on-year change)

Indicators	2019	2020	2021	2022	2022	2023		
					IV	I	II	III
<b>Price developments</b>								
House Price Index, total	6.0	4.6	8.7	13.8	13.4	9.5	10.7	9.2
New dwellings	8.5	2.2	7.7	10.8	9.8	4.9	9.5	9.5
Existing dwellings	4.8	6.0	9.2	15.6	15.6	12.3	11.4	9.0
Inflation (HICP)	2.5	1.2	2.8	13.0	14.5	13.4	8.8	7.2
House rentals, paid by tenants (HICP)	3.3	2.5	1.7	6.3	7.8	9.5	8.5	7.9
<b>Lending</b>								
New housing loans	12.4	18.1	24.0	33.5	23.5	17.8	14.6	13.4
Annual percentage rate of charge on new housing loans (per cent, at the end of the period)	3.5	3.2	3.0	2.8	2.8	2.8	2.8	2.9
Housing loans balances	0.0	-15.5	14.4	17.5	17.9	17.8	18.0	18.8
<b>Construction and Investment</b>								
Permits issued for the construction of new residential buildings (square meters)	-7.9	-9.0	25.1	20.6	-19.9	-16.8	-18.3	-31.3
Value added in construction (at average annual prices for 2015)	3.7	-1.0	-17.1	5.4	18.9	1.1	0.7	0.1
Constriction Production Index, building construction	8.4	-8.4	0.8	1.9	-0.1	1.0	0.4	0.5
Fixed investment; residential buildings	-10.3	102.1	19.2	-2.2	5.6	-9.6	-5.0	8.8
Construction Cost Index for new buildings	5.6	2.3	11.0	53.6	62.3	52.8	18.5	3.4

Notes: 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.

In calculating the annual growth rate of new house purchase loans, cumulative data for the last 12 months were used.

Sources: NSI, BNB, Eurostat.

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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.