



ECONOMIC REVIEW
3/2023



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 3/2023 was presented to the BNB Governing Council at its 18 October 2023 meeting. It employs statistical data and information published up to 28 September 2023. Expectations of economic developments in Bulgaria in the short term (until the first quarter of 2024), as described in this issue, are based on the BNB macroeconomic forecast prepared as of 3 July 2023. 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 security purchase programme
APP	Asset Purchase Programme
APRC	Annual percentage rate of charge
b.p.	basis points
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
p.p.	percentage points
PSPP	Public sector purchase programme
SITC	Standard International Trade Classification
SNA	System of National Accounts
TLTRO	Targeted longer-term refinancing operation
TPI	Transmission Protection Instrument
VAT	Value Added Tax
€STR	Euro Short-term Rate

SUMMARY

In the second quarter of 2023, global GDP growth slowed down to 0.7 per cent on a quarterly basis, with global economic indicators pointing to a further deceleration in growth in the third quarter as well. In the July–August period, the growth rate of economic activity in the services sector moderated in comparison with previous months but continued to be the main positive contributor to global growth. In the United States, third-quarter economic indicators show a slight acceleration in economic activity growth. At the same time, available data for the third quarter signal a continued slowdown in economic activity in China and a decline in the euro area.

The downward trend in global inflation was volatile in August 2023, due to a lower negative contribution of transportation fuel prices as a result of crude oil price rises in July and August relative to the second quarter. In the United States, the downward trend in annual inflation was interrupted in August by the rise in transportation fuel prices, while annual inflation in the euro area continued to decline. Inflation in both regions remained significantly above the central bank target, so the Federal Reserve System and the ECB continued the process of tightening monetary policy. In the third quarter of 2023, the Federal Reserve raised the federal funds rate corridor by 25 basis points to 5.25–5.50 per cent, while the ECB raised its interest rates in two steps by a total of 50 basis points, with the interest rates on the main refinancing operations, the marginal lending facility and the deposit facility reaching 4.50, 4.75 and 4.00 per cent, respectively.

These external environment developments imply favourable price conditions for trade in Bulgaria in the third quarter of 2023 and a deterioration in financing conditions in the fourth quarter of 2023. Bulgarian goods exports are likely to remain weaker than suggested by global trade and external demand for Bulgarian goods in the third quarter of 2023 owing to country-specific factors.

The current and capital account balance for the last 12 months as of July 2023 turned into a surplus of 2.3 per cent of GDP compared to a deficit of 0.5 per cent of GDP as of December 2022, mainly due to the increase in the capital account surplus and the contraction of the country's trade deficit in view of a stronger decline in imports of goods relative to exports. The financial account balance for the last 12 months as of July 2023 was negative as a result of a stronger accumulation of foreign liabilities to non-residents than that in foreign assets of Bulgarian residents. As a result of the flows in the current, capital and financial account of the balance of payments, Bulgaria's gross international reserves for the last 12 months as of July 2023 increased by EUR 4.3 billion against EUR 3.9 billion as of December 2022.

In the first eight months of 2023, the annual growth of non-government sector's deposits in the banking system followed a downward trend which was entirely determined by the lower growth of corporate deposits. At the same time, the continued increase of labour income and preserved household saving preferences contributed to keeping the annual growth of household deposits relatively high.

Annual growth of loans to non-financial corporations moderated further due to lower demand for financial resources for working capital and accumulation of inventories, gradually increasing interest rates on new loans to corporations and tightening of bank credit standards for firms. In the household sector, annual growth in both loans for house purchase and consumer loans remained high. Ample liquidity and intense competition for a market share in the banking sector continued to limit the transmission of the ECB's monetary policy tightening to household lending rates, appearing to be a prerequisite for comparatively limited effects of the BNB measure to increase the minimum reserve requirement to 12 per cent in the period from its introduction up to August 2023 inclusive.

In the second quarter of 2023, real GDP increased by 0.4 per cent on the previous quarter. On an annual basis, economic activity growth continued to slow down to reach 1.8 per cent. This was due to a significant increase in the negative contribution of changes in inventories, which was only partly offset by a decline in imports of goods. As regards domestic demand, the review quarter saw an acceleration in the annual growth of private consumption, while government consumption contributed negatively to the GDP change. A year-on-year increase in gross value added was recorded in the sectors of agriculture and services, while industry reported a decrease. Employment increased by 0.1 per cent year on year in the second quarter of 2023, entirely driven by the services sector. At the same time, growth in compensation *per* employee in nominal terms slowed down to 7.2 per cent on an annual basis and remained lower than inflation reported over that quarter, despite the rise in productivity growth and the increasing labour shortages in Bulgaria, which reached some of their historical peaks.

According to the composite indicator of economic activity constructed by the BNB, in the third quarter of 2023, Bulgaria's real GDP is expected to rise on a quarter-on-quarter basis at a similar rate to that of the previous quarter. This is a prerequisite for a continued gradual slowdown in economic activity on an annual basis. In the fourth quarter of 2023 and the first quarter of 2024, real GDP is expected to record low quarter-on-quarter growth, mostly supported by domestic demand. There is considerable uncertainty about the profile of annual rates of change in economic activity arising from the forthcoming revision of the GDP time series by the NSI on 19 October 2023.

In the first eight months of 2023, the annual HICP inflation rate followed a downward trend and stood at 7.5 per cent in August 2023. This development was driven by the annual fall in the prices of energy products, as well as by a build-up of a base effect against the high growth rates of consumer prices in 2022, mainly in the food group. At the same time, the monthly HICP growth rates recorded since the beginning of the year remained at higher than historical levels, with strong consumer demand and unit labour cost growth continuing to exert inflationary pressure on consumer prices. The food group continued to have the largest positive contribution to overall inflation, followed by services and industrial goods. Annual inflation is expected to continue to slow down gradually over the last quarter of 2023 in line with the assumptions regarding international commodity price dynamics, but to remain at a high level in the first quarter of 2024. The projected strong private consumption and higher unit labour costs are the main factors expected to continue to constrain the speed and extent to which firms pass on declines in international agricultural commodity prices to final consumer prices.

1. EXTERNAL ENVIRONMENT

1.1. Current Business Situation

Global Environment

In the second quarter of 2023, global GDP growth slowed down to 0.7 per cent on a quarterly basis (from 0.8 per cent in the first quarter of 2023), but data on economic indicators (global PMIs for services and manufacturing sectors) signal further growth slowdown in the third quarter of the year. In July and August, the growth rate of economic activity in the services sector decelerated from previous months but continued to contribute most strongly to global growth. The slowdown in global demand and tightened financing conditions continued to push down economic activity in the manufacturing sector. This downward trend resulted in a decline in the volumes of global industrial production and in world trade in goods in the second quarter and in the beginning of the third quarter of 2023.

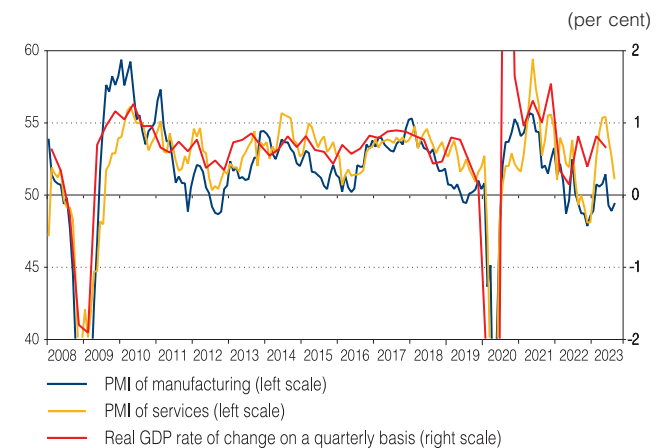
In August, global inflation stood at 5.2 per cent on an annual basis compared with 4.7 per cent in July and 6.1 per cent on average in the second quarter of 2023. Accelerated inflation in August reflected the lower negative contribution of transportation fuel prices as a result of crude oil price rises in July and August compared with the second quarter.

International Commodity Prices

The Brent crude oil price increased on a quarterly basis in the first two months of the third quarter of 2023 (by 6.3 per cent in dollars¹ and 5.4 per cent in euro) and reached USD 83.1 *per barrel* (EUR 75.7 *per barrel*), but continued to decline on an annual basis both in US dollars (-19.9 per cent) and in euro (-25.9 per cent). Natural gas prices also posted a significant annual decline in the European market (-82.9 per cent in US dollars and -84.2 per cent in euro), as well as in the US market (-68.0 per cent in US dollars) and in the Japa-

¹ Hereinafter referred to as the US dollar.

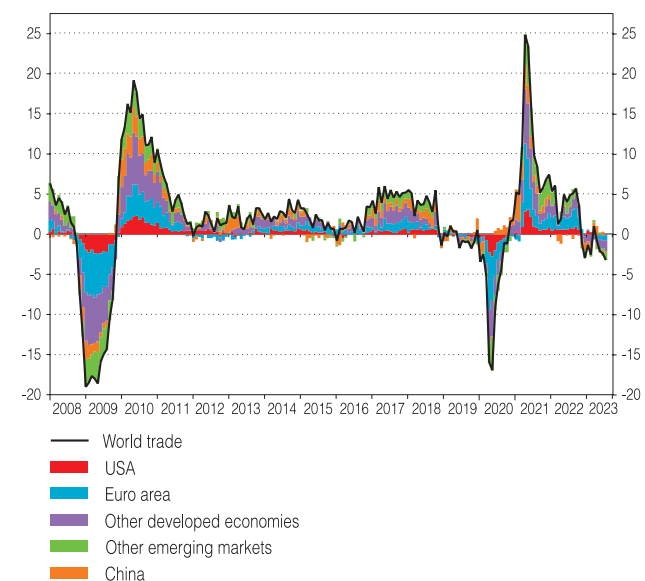
Manufacturing and Services PMIs and Change in World Real GDP



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.

nese market (-35.5 per cent in dollars). The main reason behind higher oil prices compared with the second quarter was the decisions taken by Saudi Arabia and Russia² to extend supplementary unilateral measures³ to cut oil production until the end of 2023 to already existing restrictions on production quotas adopted by OPEC+. Another factor behind the price rise was the sustainable growth in economic activity in the United States and the associated strong oil demand. At the same time, the slowdown in the Chinese economy and weak economic growth in the euro area, as well as the indications by major central banks of a possible need for further tightening of monetary policy contained the upward pressure on oil prices.

The main factors behind the gas price decline in Europe in the first two months of the third quarter were mostly the high levels of natural gas stocks in most gas storage facilities in the region, weaker industrial demand amid slowing growth in some larger EU Member States, and increased production of renewable electricity in the summer months.

In July and August 2023, the average metal and mineral price index decreased by 1.3 per cent on an annual basis in dollars (-8.8 per cent in euro). This decline reflected a slowdown in global economic activity and worsened prospects for the manufacturing sector. Aluminium and zinc made the largest negative contribution to the annual change in the metal index. The price of copper, which is essential for Bulgarian exports, rose year on year due to a low base in 2022 and market participants' expectations that the Chinese authorities will announce new measures to stimulate economic growth.

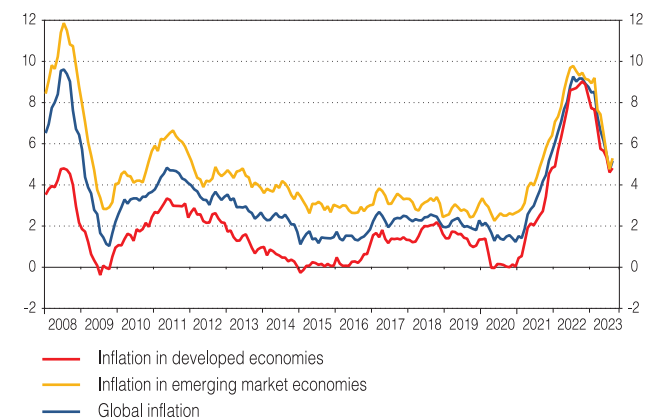
In July and August 2023, the total food price index recorded an annual decrease of 6.8 per cent in US dollars (-13.9 per cent in euro). Prices of most food commodities declined on an annual basis, excluding orange, rice and sugar prices. Lower prices of vegetable fats, corn and wheat contributed most to the decline in the overall food

² Saudi Arabia and Russia are the leading global oil exporters and a major part of the OPEC+ group.

³ On 5 September Saudi Arabia announced that they were extending until the end of 2023 the measures announced earlier in the year to voluntarily limit daily production by an additional 1 million barrels. In addition, on 5 September Russia announced that it would extend until the end of the year voluntary oil production cuts by 0.3 million barrels daily following the country's monthly production cuts in August and September by 0.5 and 0.3 million barrels daily.

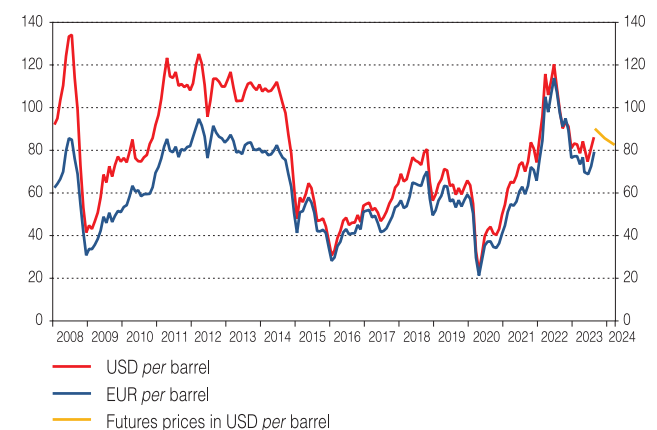
Inflation Measured through CPI

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



Source: World Bank.

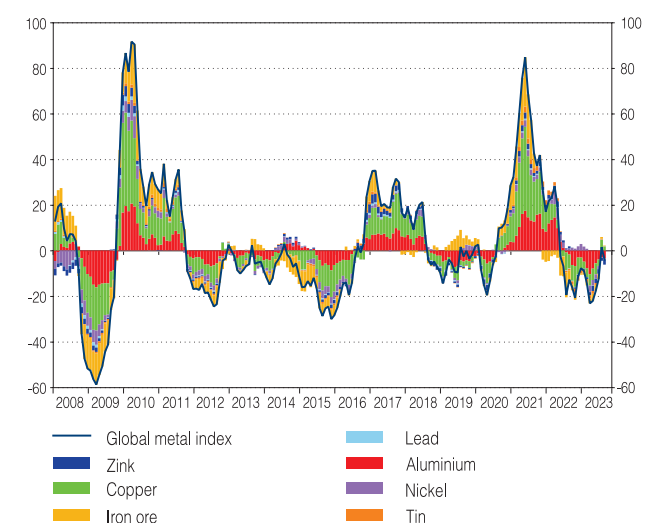
Prices and Futures of Brent Crude Oil



Note: Futures prices are average prices of the September 2023 contracts. Sources: World Bank, ECB, JP Morgan and BNB calculations.

Metals Price Indices

(per cent; percentage points)



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

price index. The price of wheat, which is essential for Bulgaria's food exports, recorded an annual decline during the quarter due to the base effect in 2022 and the higher volumes of current seasonal crops in several leading exporting countries in the northern hemisphere.

The United States

US real GDP⁴ posted quarter-on-quarter growth of 0.5 per cent in the second quarter of 2023 compared with 0.6 per cent growth in the first quarter, with available data as of end-September 2023 on leading economic indicators signalling a slight acceleration of economic activity growth in the third quarter of the year. Over this period, economic activity posted an increase in the services sector, a slower rate of decline in manufacturing and some improvement in consumer confidence.

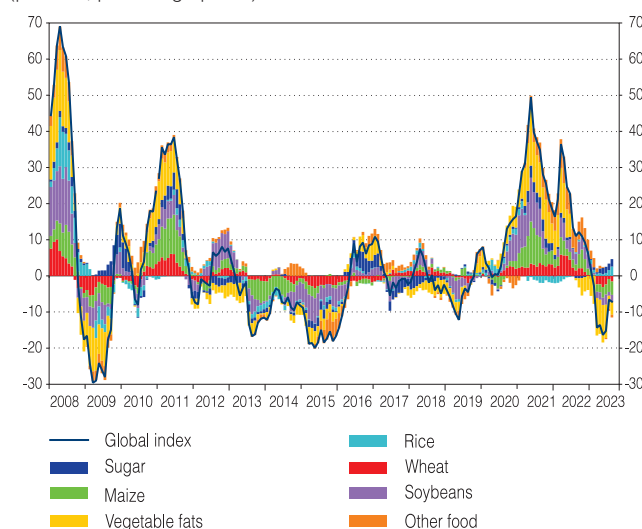
US labour market conditions worsened somewhat in the third quarter of 2023. In July and August, the number of employees in the non-agricultural sector increased by 344 thousand (compared to an increase of 603 thousand in the second quarter of 2023). The ratio of offered new jobs to the number of unemployed remained historically high, remaining unchanged at 1.5 in July for the second month in a row against an average of 1.6 in the second quarter of 2023. In August, the unemployment rate rose to 3.8 per cent, from 3.5 per cent in July and an average value of 3.6 per cent in the second quarter of the year.

In the first two months of the third quarter of 2023, annual consumer price inflation declined, remaining, however, above the 2 per cent target set by the US Federal Reserve. In August, the annual rate of change of the price index of personal consumption expenditure (PCE) increased to 3.5 per cent, from 3.4 per cent in July and 3.9 per cent on average in the second quarter. The moderation in inflation compared to the second quarter was due to lower annual food price inflation. The increase in inflation

⁴ At the end of September 2023, the annual update of the US National Income and Production Accounts was announced, whereby the growth in the first quarter was revised upwards by 0.1 percentage points to 0.6 per cent. The update also led to downward revisions in the change of the US real GDP in previous years, with GDP growth in 2021 and 2022 revised downwards by 0.1 and 0.2 percentage points to 5.8 per cent and 1.9 per cent, respectively. The GDP decrease in 2020 was revised from 2.8 per cent to 2.2 per cent and is lower than the 2.6 per cent decline in 2009, which after the revision appeared to be the largest annual decline since 1946.

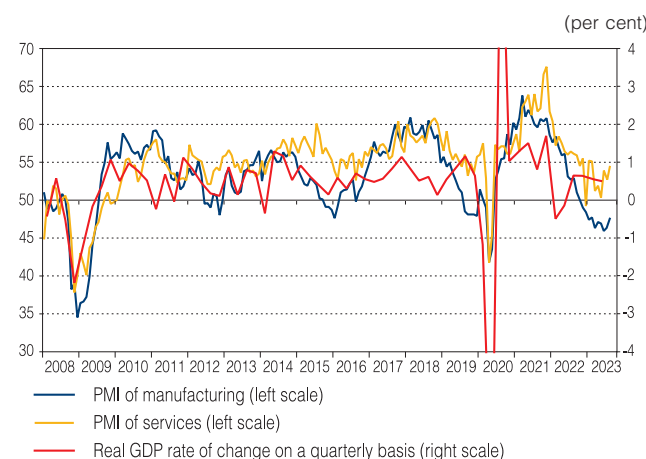
Food Price Indices

(per cent; percentage points)



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

Manufacturing and Services PMIs and Change in US Real GDP



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

in August compared with July reflected mainly a rise in transportation fuel prices. The annual growth rate of the core PCE price index (excluding food and energy products) slowed to 3.9 per cent in August, from 4.3 per cent in July and 4.6 per cent on average in the second quarter. The moderation in the annual growth rate of the core price index reflected mainly declines in the prices of some durable goods, as well as in housing and healthcare costs.

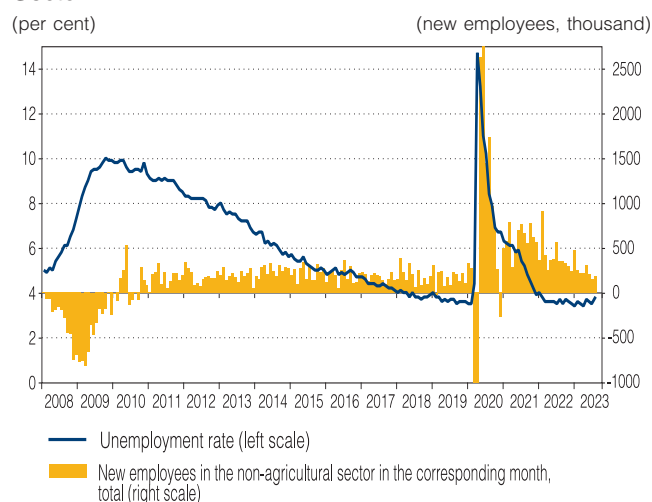
These developments in the core PCE price index suggest that the effect of the US Federal Reserve monetary policy measures strengthened but has not yet been sufficient to achieve a steady easing of inflationary pressures in the United States. Therefore, the Federal Open Market Committee (FOMC) continued its measures to tighten the monetary policy in the United States in the third quarter of 2023, albeit at a slower pace compared with the period since the start of this process. In July, the FOMC decided to raise the federal funds rate corridor by 25 basis points to a range of 5.25–5.50 per cent. In September, the FOMC decided to leave the target range unchanged as additional economic information was required to assess more precisely the need for further monetary policy tightening. Over the third quarter, the US Federal Reserve continued to reduce the size of its balance sheet, limiting the reinvestment of proceeds from maturing treasury securities in its portfolio.

In September 2023, the median of FOMC members' individual forecasts about the federal funds rate for the end of 2023 was kept at 5.6 per cent, which corresponds to a federal funds rate corridor of 5.50 to 5.75 per cent or a further increase of 25 basis points until the end of 2023. The FOMC members' projections for the target rate in 2024 and 2025 were also increased, by 70 basis points and 50 basis points to 5.1 per cent and 3.9 per cent, respectively.

China

Following a quarter-on-quarter slowdown to 0.8 per cent in China's real GDP recorded in the second quarter, the economic situation continued to worsen in the third quarter. Many housing market indicators posted a decline. In August, real estate sales fell by 7.1 per cent year on year compared with a decline of 6.6 per cent in June, residential investment contracted by 7.5 per cent in August compared with a 6.7 per cent decrease in June,

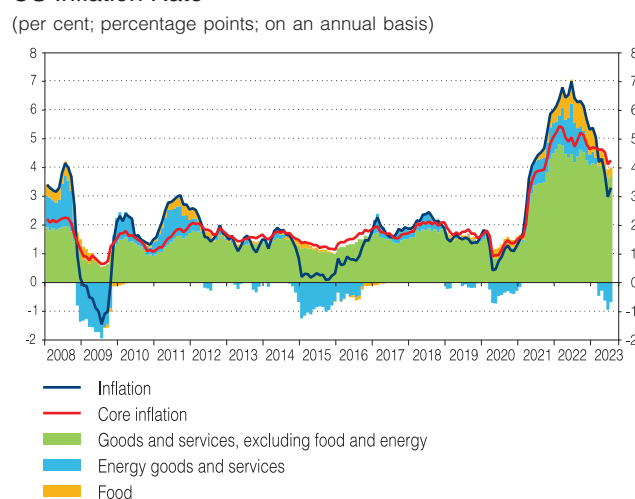
US Unemployment Rate and a Monthly Change in Number of New Employees in the US Non-agricultural Sector



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.

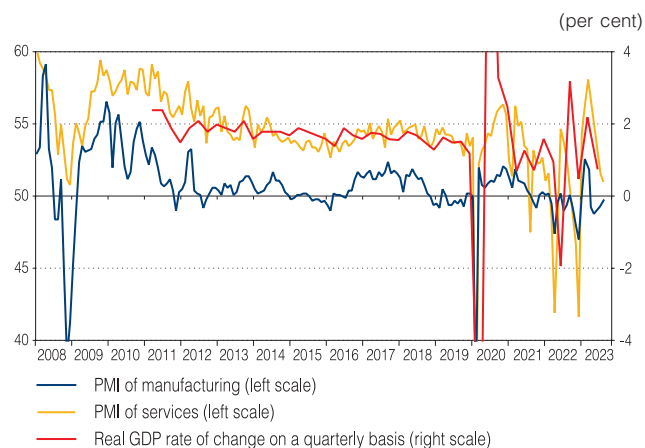
US Inflation Rate



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 Change in China's Real GDP



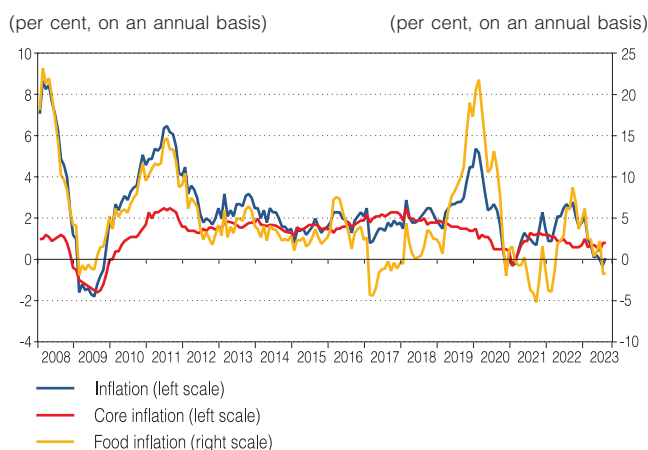
Sources: National Bureau of Statistics of China and China Federation of Logistics and Purchasing.

while loans for house purchase fell by 4.3 per cent compared to an increase of 2.7 per cent in June. Household consumption growth also slowed down, reflecting a decline in average annual nominal growth of retail sales to 3.6 per cent in July and August compared with 11.4 per cent growth in the second quarter.

In the first two months of the third quarter of 2023, annual inflation in China remained low and stood at 0.1 per cent in August (against 0.0 per cent in June). Lower food and consumer goods prices were offset by higher services inflation. In July and August, core inflation accelerated to 0.8 per cent on an annual basis, from 0.4 per cent in June.

In the third quarter, the People's Bank of China continued to ease its monetary policy to provide liquidity and credit to the economy. In August 2023, the People's Bank of China cut interest rates on one-year medium-term loans (medium-term lending facility, MLF) for financial institutions and seven-day repurchase transactions by 15 basis points to 2.50 per cent and by 10 basis points, respectively, to 1.80 per cent. The one-year loan prime rate (LPR) was cut by 10 basis points to 3.45 per cent, while that on five-year loans (the reference rate on mortgage loans) was left unchanged at 4.20 per cent. In September, the rate on banks' required reserves in foreign currency was cut by 200 basis points to 4.0 per cent. The rate on required reserves was further decreased by 25 basis points for all banks, excluding those for which the rate was set at 5.0 per cent.

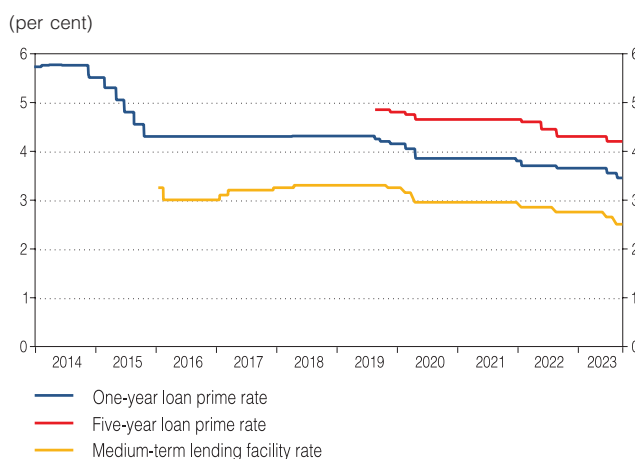
China's Inflation Rate



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

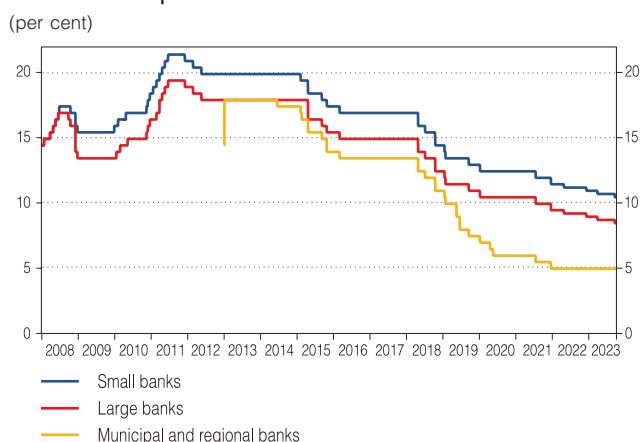
Source: National Bureau of Statistics of China.

Reference Rates in China



Source: People's Bank of China.

Minimum Required Reserve Rates in China



Source: People's Bank of China.

Euro Area

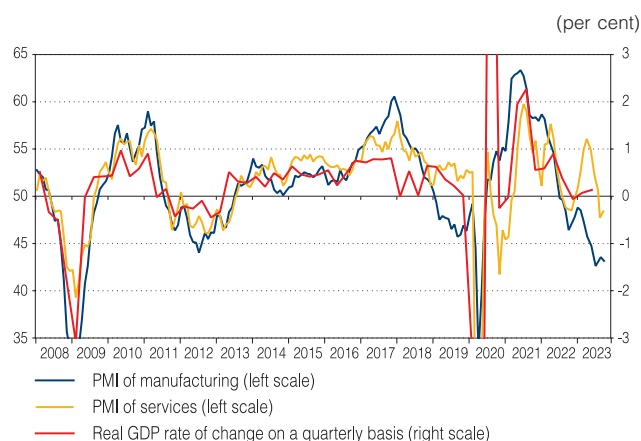
In the second quarter of 2023, euro area real GDP increased by 0.1 per cent on a quarterly basis. By final consumption expenditure component, inventories and, to a lesser extent, government consumption and investment contributed most to growth. Private consumption had a zero contribution to the quarter-on-quarter change in real GDP for a second consecutive quarter. Net exports made a substantial negative contribution to quarterly growth due to a strong decline in exports combined with weak imports growth. Germany, Bulgaria's largest trading partner, recorded a zero real GDP change from the previous quarter, while quarter-on-quarter economic activity growth slowed down to 0.4 per cent in Italy, Bulgaria's other main trading partner.

Data available by the end of September 2023 on economic indicators in the euro area, including PMI indices, signalled a quarter-on-quarter decline in real euro area GDP in the third quarter of 2023.

The euro area labour market remained resilient, with conditions being still favourable at the beginning of the third quarter of 2023. The unemployment rate remained at very low historical levels, declining to 6.4 per cent in July 2023, from 6.5 per cent in the second quarter. Concurrently, there was a slowdown in employment, which grew by 1.4 per cent year on year in the second quarter compared to the 1.6 per cent growth in the previous two quarters.

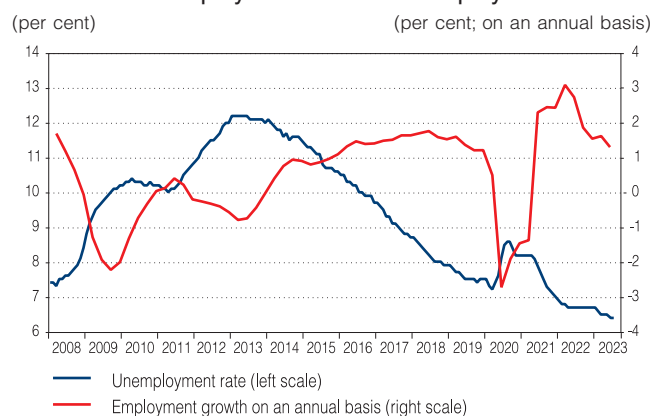
In the first two months of the third quarter of 2023, annual consumer price inflation in the euro area moderated further to 5.2 per cent in August, from 5.5 per cent in June 2023. Slower annual inflation reflected the lower inflation in food, natural gas and electricity owing to the high 2022 base. Concurrently, the contribution of transport fuels and package holidays to annual inflation increased. Core inflation, excluding food and energy product prices, also slowed down to 5.3 per cent on an annual basis in August, from 5.5 per cent on average in June. The decline in core inflation resulted from the slowdown in clothing inflation and declines in the prices of some durable goods attributable to improved supply chains and weaker global demand.

Manufacturing and Services PMIs and Change in Euro Area Real GDP



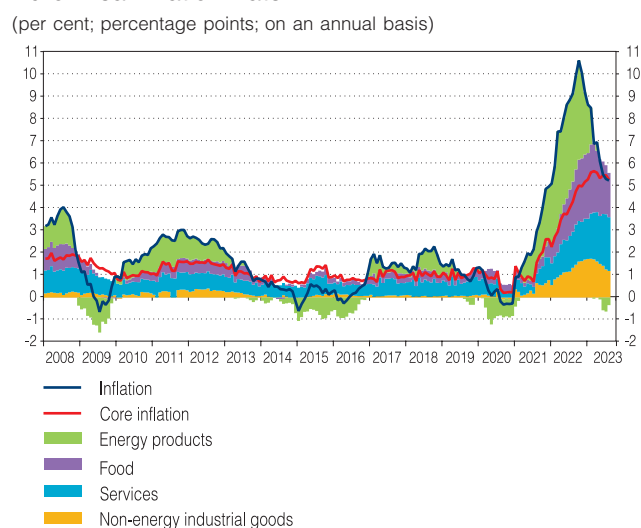
Source: Eurostat.

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 HICP, excluding energy products, food, alcohol and tobacco products.

Source: Eurostat.

In view of the still high inflation, deviating substantially from the ECB's 2 per cent target, the ECB Governing Council continued to raise the reference rates and to initiate measures to reduce the size of its balance sheet. Over the third quarter, the interest rates increased by a total of 50 basis points⁵, with the interest rates on the main refinancing operations, the marginal lending facility and the deposit facility standing at 4.50, 4.75 and 4.00 per cent, respectively. In July, the ECB discontinued reinvestments under the asset purchase programme (APP). The ECB announced that from the beginning of the maintenance period, starting on 20 September 2023, the remuneration of banks' minimum reserves would be at 0 per cent instead of the previously used deposit facility rate. At its September meeting, the Governing Council of the ECB indicated that the key ECB interest rates had reached a level which, if maintained for a sufficiently long period, would contribute significantly to the timely return of inflation to the target level.

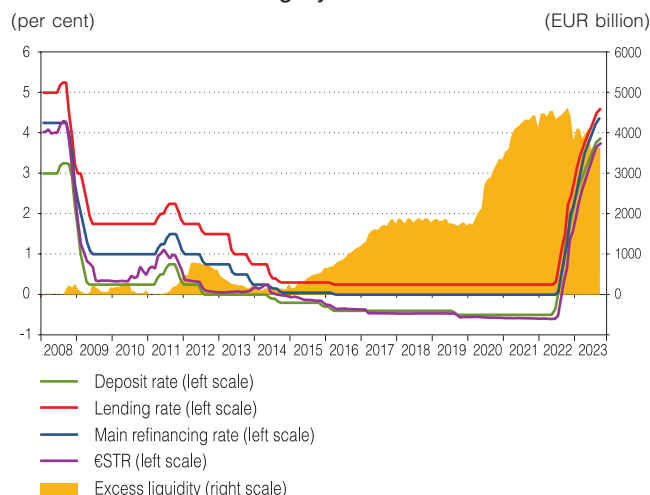
In the third quarter of 2023, the ECB's interest rate increase and market participants' expectations of their further rises continued to exert upward pressure on interest rates in the unsecured euro area money market and German government bond yields. The average daily value of the €STR, the overnight euro area's money market rate, increased to an average of 3.60 per cent in the third quarter of 2023, from 3.08 per cent in the second quarter. The German government bond yields in the two-year maturity sector increased by 1 basis point in the third quarter to 3.20 per cent, and in the ten-year maturity sector, yields rose by 45 basis points to 2.84 per cent. The larger increase in yields of long-term maturities reflected the ECB's guidance on the need to maintain a restrictive monetary policy for a longer period in order to meet the inflation target.

1.2. Impact on the Bulgarian Economy

Bulgarian exports of goods declined more significantly compared to the world trade in goods and to that signalled by the change in external demand for Bulgarian goods in the second quarter of 2023. This development can be explained by country-specific factors that limited the opportunities for Bulgarian enterprises to export over that

⁵ By 25 basis at each of the July and September 2023 meetings.

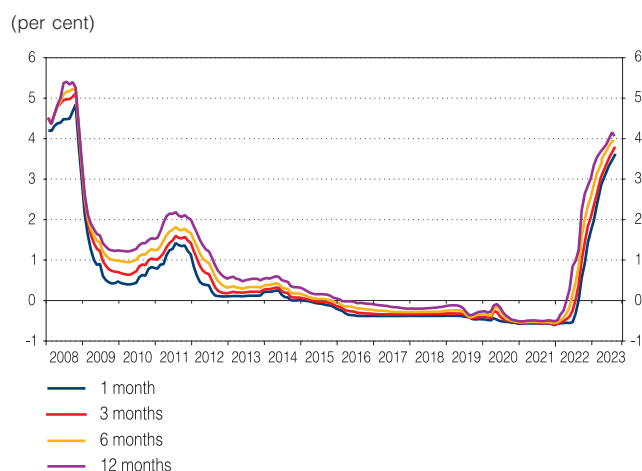
ECB Interest Rates, EONIA, €STR and Excess Liquidity in the Euro Area Banking System



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.

period and were related to the entry into force on 5 February 2023 of the ban on exports to countries other than Ukraine of oil and oil products produced from Russian oil, as well as to repairs in large manufacturing enterprises planned for the second quarter of 2023⁶. The effect of some of these country-specific factors (mostly related to repairs) is expected to be exhausted in the third quarter of the year, but exports of goods would probably continue to be weaker than that signalled by the data on world trade and external demand for Bulgarian goods.

The developments in commodity prices in international markets in the third quarter of 2023, mainly resulting in falling prices on an annual basis, combined with the structure of the Bulgarian economy and foreign trade, point to the existence of favourable terms of trade⁷ for Bulgaria in the third quarter of 2023.

The continuous increases in interest rates by the Federal Reserve and the ECB and the rise in the minimum required reserve (MRR) rate⁸ by the BNB may result in deterioration in the country's financing conditions in the fourth quarter of 2023. According to the currency board principles, the upward trend in euro area money market rates may be expected to continue to be passed through relatively quickly to interest rates on the interbank money market in Bulgaria. In the third quarter of 2023, its pass-through remained significantly lower in lending and deposit rates in Bulgaria, especially in the household sector, as continued high inflows of attracted funds, still ample liquidity and persistent strong competition in the banking sector remained the main factors behind this. These factors allowed the effects of the measure taken by the BNB to raise the MRR rate to be also relatively limited in the third quarter of 2023, especially in the household sector.

⁶ For further details, see the BNB [Macroeconomic Forecast, June 2023](#).

⁷ Favourable terms of trade refer to a larger annual decline in the deflator of imports of goods compared to that of exports of goods.

⁸ For details, see Monetary and Credit Aggregates Section in Money and Credit Chapter 3.

2. EXTERNAL FINANCIAL FLOWS

2.1. Balance of Payments and Foreign Trade

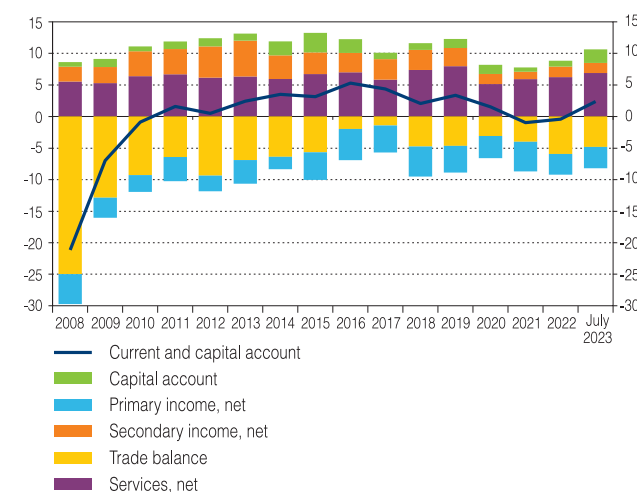
In the January–July 2023 period, Bulgaria’s current and capital account balance was positive, which did not imply the need for external financing of the economy. This, combined with a stronger increase in foreign assets of Bulgarian residents compared to their liabilities, was the reason for maintaining a positive financial account balance, whereby Bulgaria continued to be the net creditor to the rest of the world.⁹ As a result of these developments, the country’s gross international reserves declined by EUR 2.0 billion in the January–July 2023 period (compared to a decrease of EUR 2.3 billion in the period January–July 2022), rising, however, in the last 12 months as of July 2023 due to a growth in the second half of 2022. In July 2023, the amount of gross international reserves continued to be high according to indicators generally accepted in practice, equalling the amount of nominal imports of goods and services¹⁰ for a period of 7.7 months (7.8 months in December 2022), while the ratio of international reserves¹¹ to Bulgaria’s short-term external debt stood at 4.4 times in June 2023 (no change compared to December 2022).

Current Account and Capital Account

The balance on the current and capital account for the last 12 months as of July 2023 turned into a surplus of 2.3 per cent of GDP compared with a deficit of 0.5 per cent of GDP as of December 2022. This largely reflected a shift from a current account deficit to a surplus and, to a lesser extent, a rise in the capital account surplus. The positive balance on the capital account in the last 12 months as of July 2023 stood at 2.2 per cent of GDP. Its increase compared with December 2022

Current and Capital Account Flow Dynamics and Contribution by Components

(per cent of GDP)



Notes: July 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 second quarter of 2023 inclusive are used in calculating the GDP ratio for July 2023. Sources: BNB, NSI, BNB calculations.

⁹ The analysis is based on the analytical reporting of the balance of payments.

¹⁰ Calculated for the last 12 months as of July 2023.

¹¹ The analysis is based on gross international reserves on the BNB Issue Department balance sheet. The market value of international reserves includes changes stemming from transactions, valuation adjustments and price revaluation.

(0.9 per cent of GDP) was driven mainly by the greenhouse gas emission allowances trading.

Trade Balance and Foreign Trade in Goods

The trade balance deficit for the last 12 months as of July 2023 narrowed to 4.9 per cent of GDP from 6.0 per cent of GDP in December 2022, owing to a stronger annual decline in nominal imports of goods (-8.9 per cent) than in exports (-7.0 per cent) between January and July 2023. On the basis of more detailed data available up to June 2023¹², it can be assumed that the deficit decline was largely driven by a stronger year-on-year fall in imports of goods in real terms (-4.4 per cent) compared to that in exports of goods (-0.2 per cent), while the unfavourable trade conditions¹³ for the country partly limited the contraction of the trade deficit. Foreign demand for Bulgarian goods and services grew by 1.5 per cent in real terms on an annual basis in the first half of 2023¹⁴, implying that the decline observed in Bulgarian exports of goods in real terms is mainly due to country-specific factors. According to detailed data by commodity group of external trade statistics, the year-on-year decline in real exports of goods¹⁵ is broad-based across commodity groups. However, the groups of energy products (mainly processed oil products and, to a lesser extent, electricity) and non-ferrous metals had the largest contribution. 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 Russia¹⁶ and repairs in leading manufacturing companies¹⁷. A similar

¹² Non-seasonally adjusted national account GDP data.

¹³ Unfavourable terms of trade in the first half of the year resulted in a year-on-year fall in the export prices of goods, while maintaining import prices of goods according to non-seasonally adjusted GDP data.

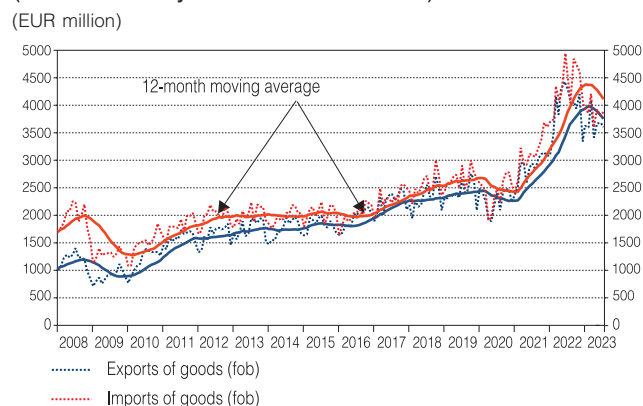
¹⁴ ECB calculations of September 2023.

¹⁵ 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.

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

¹⁷ In the second quarter of 2023, processed copper volumes fell in one of the largest metallurgical plants in Bulgaria *due to repairs*. This resulted in a decrease in the production on an annual basis, as in 2022 the plant operated at full capacity without outage. In addition, in April and May 2023 the Kozloduy NPP worked at reduced capacity due to *planned repairs* and a decrease in the production was also recorded 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)

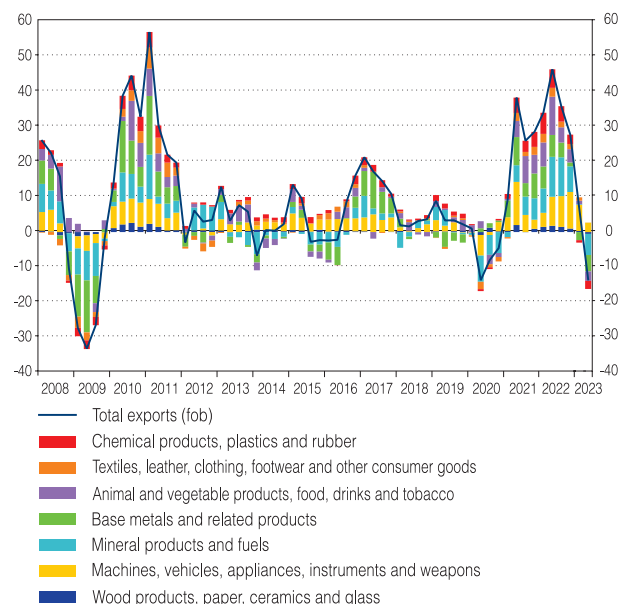


Note: Monthly data are used. The last observation is for July 2023.

Source: BNB.

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

(per cent, percentage points)

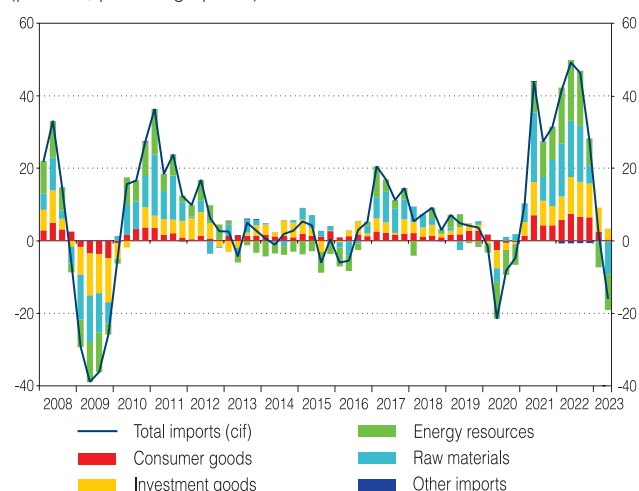


Notes: Quarterly data are used. The last observation is up to and including the second quarter of 2023.

Source: BNB.

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. The last observation is up to and including the second quarter of 2023.

Source: BNB.

broad-based decrease was observed across commodity groups in imports of goods in real terms, with significant declines being recorded for crude oil, natural gas, chemical products and metal ores imports. This can be explained by the lower need for imports in view of the above mentioned country-specific factors, limiting production and exports, the significant decline in the first half of the year in commodities and raw materials stocks accumulated in the economy over the last two years and the maintenance of a high filling capacity of the Chiren gas storage facility¹⁸.

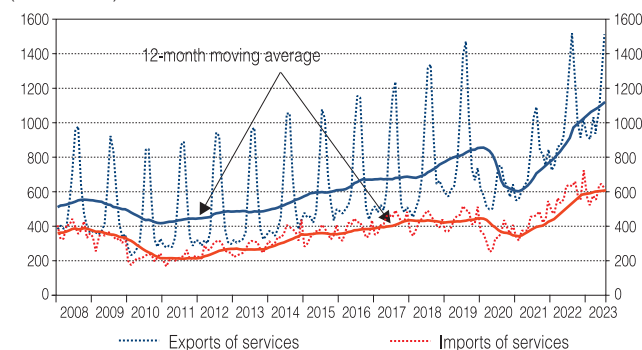
Balance on Trade in Services

The surplus on trade in services over the last 12 months as of July 2023 increased to 6.9 per cent of GDP from 6.2 per cent of GDP as of December 2022. This was due to stronger year-on-year growth in nominal exports (17.2 per cent) in services compared to their imports (6.5 per cent) in the January–July 2023 period. Export growth mainly reflected higher revenue from travel-related and telecommunications, computer and information services. According to NSI data, the number of visits of foreign nationals to Bulgaria increased by 24.4 per cent in January–July 2023, with visits from Turkey, Greece and Romania contributing most significantly.

¹⁸ As of 30 June 2023 Chiren gas storage facility was at 88 per cent full (against 82 per cent as of 31 December 2022). By comparison, the storage facility was 35 per cent full as of 30 June 2022.

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

(EUR million)

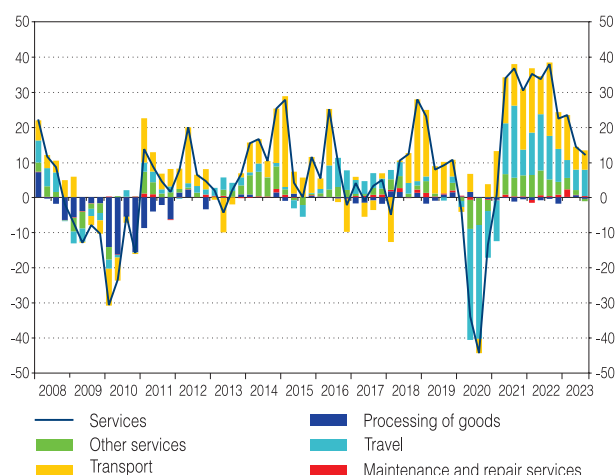


Notes: Monthly data are used. The last observation is for July 2023.

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 third quarter of 2023 are for July 2023 and have been compared with the respective data for July 2022.

Source: BNB.

Thus, the number of visits of foreigners to Bulgaria over the first seven months of 2023 exceeded the level of the relevant period of 2019, before the COVID-19 pandemic hit the tourism sector. The year-on-year increase in nominal imports of services during the period from January to July 2023 was mainly driven by higher expenditure of Bulgarian residents on travel abroad, which increased by 17.2 per cent on an annual basis.

Net Primary Income Account and Net Secondary Income Account

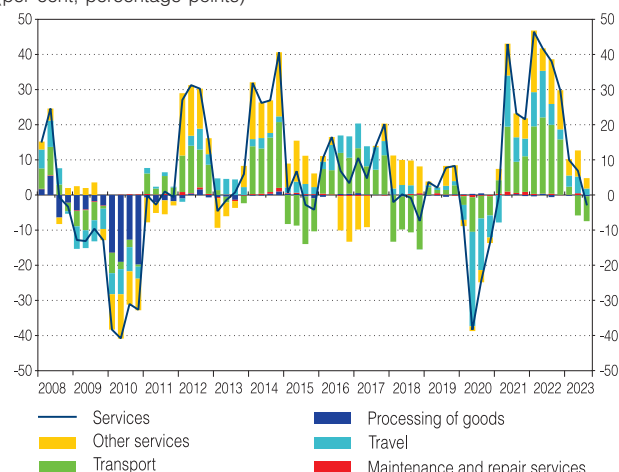
Net primary income deficit for the last 12 months as of July 2023 remained almost unchanged compared with December 2022, standing at -3.4 per cent of GDP.¹⁹ In the January–July 2023 period, outflows were higher under equity income sub-item related to reinvested earnings on direct investment.

Net secondary income surplus for the last 12 months as of July 2023 did not change substantially from December 2022 and stood at 1.6 per cent of GDP. Between January and July 2023, there was a significant rise in remittances received from workers abroad, which was, however, partly offset by increases in outgoing payments from general government for ‘current international cooperation’ transfers.

¹⁹ Preliminary data subject to revision.

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 third quarter of 2023 are for July 2023 and have been compared with the respective data for July 2022.

Source: BNB.

Financial Account and International Investment Position

For the last 12 months as of July 2023, the financial account balance widened to EUR -1.4 billion (EUR -0.4 billion as of December 2022). This reflected the lower positive balance in the first seven months of 2023 compared with that in January–July 2022, mainly as a result of banks' policy regarding the foreign assets and liabilities acquired in the form of currency and short-term deposits during the period under review. In the period January–July 2023, a higher accumulation of Bulgarian residents' foreign assets compared to liabilities to non-residents was observed. The increase in foreign assets was mainly attributable to the rise in banks' assets (in the form of currency and deposits) and in portfolio investment of other sectors. Liabilities to non-residents in the January–July 2023 period increased due mainly to the rise in direct investment of other sectors.

Foreign direct investment in Bulgaria amounted to 64.5 per cent of GDP at the end of the first quarter of 2023 (compared to 63.6 per cent at end-2022). The inflow of attracted direct investment (liabilities) in Bulgaria increased by 22.2 per cent year on year between January and July 2023, totalling EUR 2.4 billion²⁰, mostly in the form of equity capital for non-financial corporations in Bulgaria.

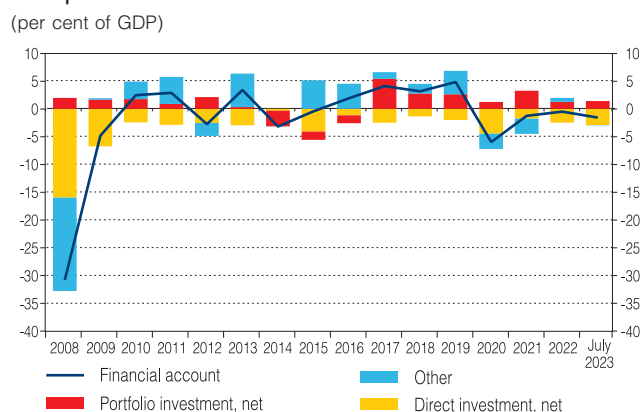
As a result of balance of payments developments and changes due to valuation adjustments and price revaluations, the negative value of the international investment position widened slightly to -12.7 per cent of GDP by the end of the first quarter of 2023 from -12.5 per cent of GDP at the end of 2022. This dynamics reflected mainly the stronger rise in liabilities to non-residents (mostly in the form of direct investment) compared to the increase in Bulgarian residents' foreign assets (mostly banking sector foreign currency and deposits).

2.2. BNB International Reserves

At the end of August 2023, the market value of Bulgaria's international reserves (including valuation adjustments and price revaluations) was EUR 37.2 billion (BGN 72.7 billion), falling by EUR 1.2 billion

²⁰ Preliminary data subject to revision.

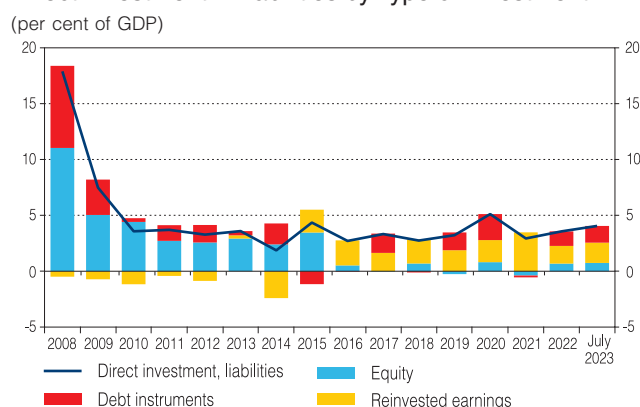
Financial Account Flow Dynamics and Contribution by Components



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

Sources: BNB, NSI, BNB calculations.

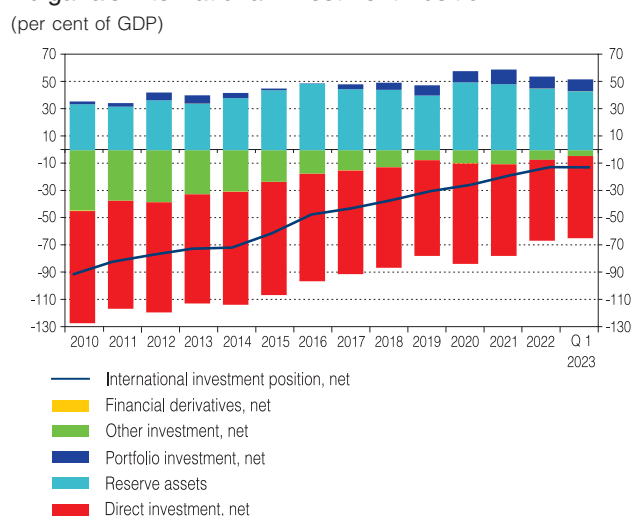
Direct Investment – Liabilities by Type of Investment



Notes: July 2023 data on direct investment liabilities flows are accumulated for the last 12 months. Nominal GDP data for the last four quarters up to the second quarter of 2023 inclusive are used in calculating the ratio to GDP for July 2023.

Sources: BNB, NSI, BNB calculations.

Bulgaria's International Investment Position



Sources: BNB, NSI, BNB calculations.

(BGN 2.4 billion) from December 2022. The amount of gross international reserves reflects the dynamics of financial flows generated in the process of external and internal economic factors interaction and corresponds to the BNB Issue Department balance sheet liabilities, according to the currency board principles²¹. The decrease in the Issue Department liabilities at end-August 2023 *vis-à-vis* the end of 2022 was largely driven by a decline in liabilities to banks mainly as a result of the fall in banks' excess reserves at the BNB, while the increase in minimum required reserves (MRR), reflecting mainly the rise in the minimum reserve rate²², partly limited the reduction of bank reserves. International reserves increased by EUR 3.1 billion on an annual basis compared with August 2022, mainly reflecting the rise in liabilities to government and budget organisations. Over the same period, liabilities to banks remained broadly unchanged, since the larger amount of MRR due to the higher rate and the growing deposit base fully offset the decline in banks' excess reserves and bank funds in the BNB's TARGET-2 system. As of June 2023, the BNB international reserves amounted to 39.5 per cent of GDP (43.3 per cent of GDP at end-June 2022).

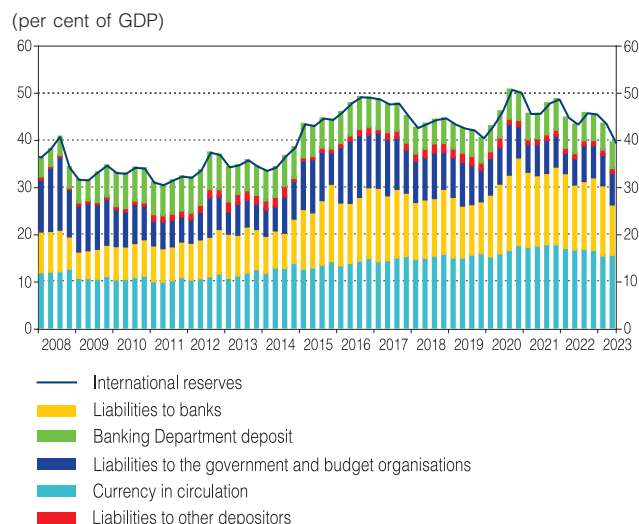
2.3. External Debt

As of June 2023, Bulgaria's gross external debt was EUR 44.1 billion (49.3 per cent of GDP), down by EUR 375.6 million on December 2022 (52.5 per cent of GDP). An external debt increase was observed only in the general government and the banking sectors. The increase in the general government debt reflected government bonds issued in international markets in January 2023 to the amount of EUR 1.5 billion, with the effect on the amount of gross external debt being partly offset by a maturing government debt issue in March. As of June 2023, the share of long-term debt in Bulgaria's total gross external debt rose to 81.8 per cent (80.3 per cent in December 2022).

²¹ 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.

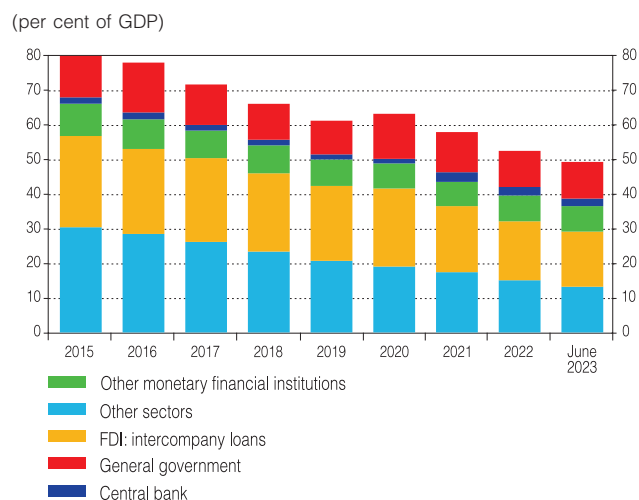
²² For more information on the increased minimum required reserve rate of banks, see Money and Credit Chapter 3.

Liabilities Structure of the BNB Issue Department Balance Sheet



Sources: BNB, NSI, BNB calculations.

Gross External Debt



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

Sources: BNB, NSI, BNB calculations.

3. MONEY AND CREDIT

3.1. Monetary and Credit Aggregates

Deposits of the Non-government Sector

In the first eight months of 2023, the annual growth of non-government sector's deposits²³ in the banking system followed a downward trend, reaching in August 10.4 per cent (14.3 per cent at end-2022). This dynamics was entirely driven by the lower growth of corporate deposits. In the household sector, annual growth in deposits tended to accelerate in the first half of the year, remaining at relatively high growth rates in July and August.

The reported decline in the annual growth rate of non-financial corporations' deposits, which started in March 2023, continued in the second and third quarters of the year and stood at 11.2 per cent at the end of August (26.6 per cent at end-2022). Part of this slowdown can be partly explained by a base effect from strong growth in deposits of production and distribution of electricity, heating, and gaseous fuels at the end of the first quarter of 2022 and by falling nominal turnovers of firms in this sector since early 2023.²⁴ The slowdown in the annual growth of retail trade volumes²⁵ since the beginning of the year is also likely to have had a significant impact on the slower growth of corporate deposits. Data on deposits by economic sector show that as of June 2023 *vis-à-vis* end-2022, deposits of wholesale and retail trade; repair of motor vehicles and motorcycles and production and distribution of electricity, heating, and gaseous fuels recorded the strongest contraction of their contributions to the annual growth of non-financial corporate deposits.

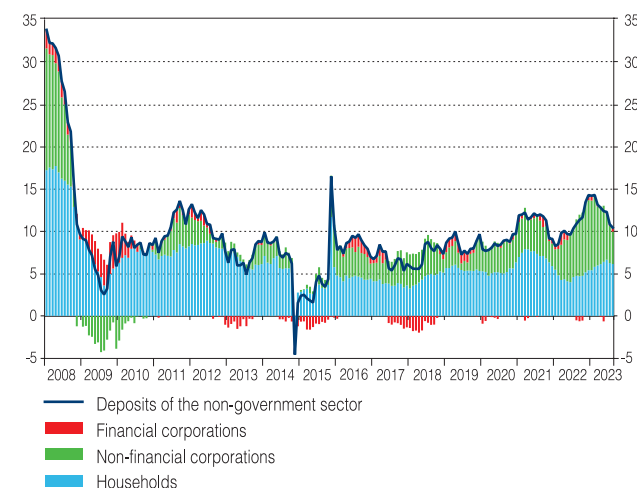
²³ Non-government sector's deposits include deposits of households, non-financial corporations and financial corporations. Deposits of households and non-financial corporations (96.7 per cent on average for the last 12 months as of August 2023) comprised the major share of all non-government sector's deposits, and the analysis therefore is focused on these two sectors.

²⁴ In July 2023, the decline in nominal turnover for the total industry was 26.9 per cent year on year, with the largest drop being recorded in production and distribution of electricity, heat and gas (-60.9 per cent).

²⁵ In July 2023, the annual growth rate of nominal turnover in retail trade was 4.9 per cent (growth of 21.4 per cent in December 2022).

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

(per cent, percentage points)

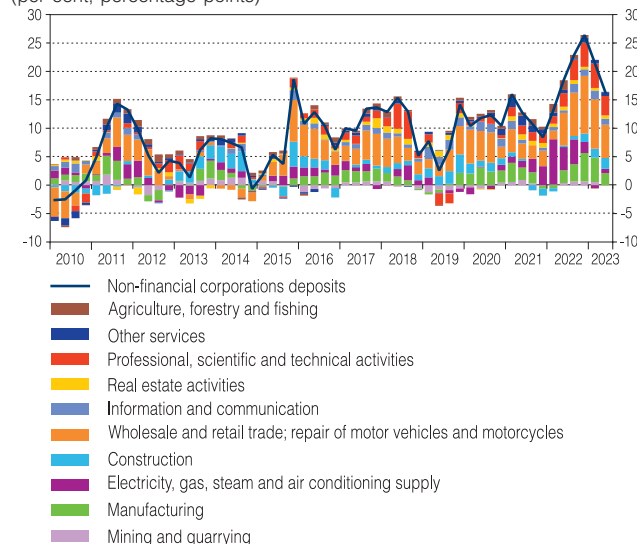


Note: The annual growth rate of non-government sector deposits in November 2015 reflects the exhausted base effect of KTB removal as a reporting unit from the monetary statistics in November 2014.

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.

The accelerating trend in the annual growth of household deposits, which started in the third quarter of 2022, continued in the first half of 2023, and in July and August, the growth rates remained close to those recorded in the middle of the year. As of August, annual growth stood at 9.8 per cent (8.3 per cent in December 2022). The continued growth in the labour income and the persistence of the households' preference for saving in the banking system were the main factors supporting the high growth rate of household deposits. At the same time, increases in the interest rates on new time deposits undertaken by some banks may have had a further impact on the growth of household deposits.

The annual growth rate of the broad monetary aggregate M3 followed a downward trend in the first eight months of 2023, but remained relatively high, standing at 9.6 per cent at the end of August (13.2 per cent at the end of 2022). Overnight deposits continued to have a major but gradually declining contribution to M3 growth, while the low negative contribution of deposits with an agreed maturity of up to two years in the first two months of the year turned positive, with a gradual upward trend. The already-started increase in interest rates on new time deposits has created an incentive for economic agents to move towards depositing some of their available funds in this type of product because of the higher remuneration offered²⁶. As regards the currency composition, both corporations and households again preferred to save mostly in national currency.

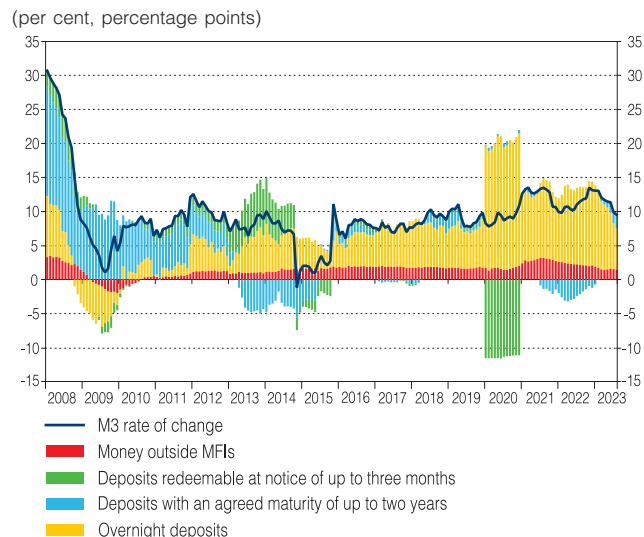
Reserve Money

At the end of August 2023, reserve money grew by 3.2 per cent on an annual basis (11.1 per cent in December 2022). Currency in circulation contributed entirely to the reported growth, while the contribution of bank reserves was low into negative territory.

In January–May 2023, dynamics of bank reserves was mainly driven by the decrease in banks' excess reserves and funds in the TARGET2-BNB system, affected by the widening negative spread between the BNB's excess reserves rate (0 per

²⁶ By end-August 2023, deposits of non-financial corporations of up to two years increased by 106.8 per cent year on year (compared to a 27.4 per cent growth in December 2022), while household deposits of up to two years rose by 1.2 per cent year on year (compared to a decline of -6.1 per cent in December 2022).

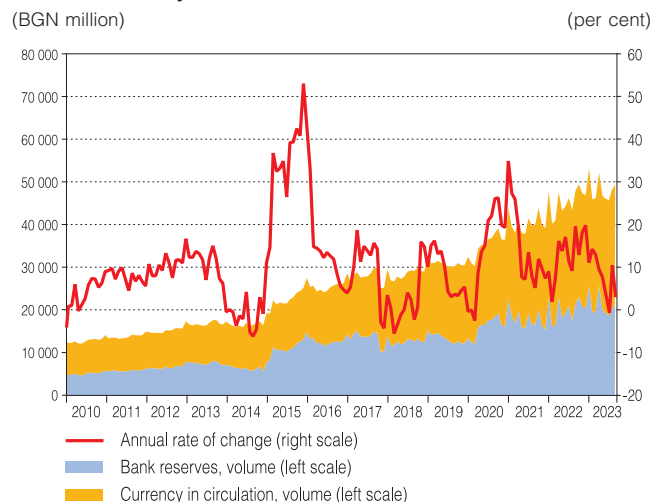
Annual Rate of Change in M3 and Contribution by Components



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.

Reserve Money



Source: BNB.

cent) and the ECB deposit facility rate²⁷, as well as by the general trend of rising interest rates globally and in the euro area in particular. These two factors have created incentives for commercial banks to invest their available liquidity in alternative to excess reserves and more profitable assets. Over the January to May 2023 period, minimum required reserves (MRR) continued to increase in line with the rising deposit base.

The two increases in the MRR rate initiated by the BNB from 5 to 10 per cent for attracted funds from non-residents, effective from 1 June 2023, and from 10 to 12 per cent for attracted funds from residents and non-residents, effective from 1 July 2023, led to a significant rise in banks' funds held as required reserves²⁸, at the expense of a further reduction in their excess reserves (due to the transformation of part of them into minimum required reserves) and a decrease in their foreign assets. As of August 2023, the effective implicit MRR rate²⁹ rose to 11.70 per cent (9.33 per cent in May 2023), with commercial banks' deposits with the BNB comprising 10.70 percentage points of MRR, and the remaining 1.00 percentage point being in the form of recognised cash balances. At the same time, the excess of banks' funds maintained at the BNB over the required minimum of reserve assets under Ordinance No 21 declined further to 4.4 per cent of MRR on an average daily basis (against 12.2 per cent of MRR in May 2023 and 32 per cent of MRR in December 2022). A decrease compared to May was also registered for banks' funds in TARGET2.³⁰

²⁷ The ECB increases in the deposit facility rate in the January–September 2023 period 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.

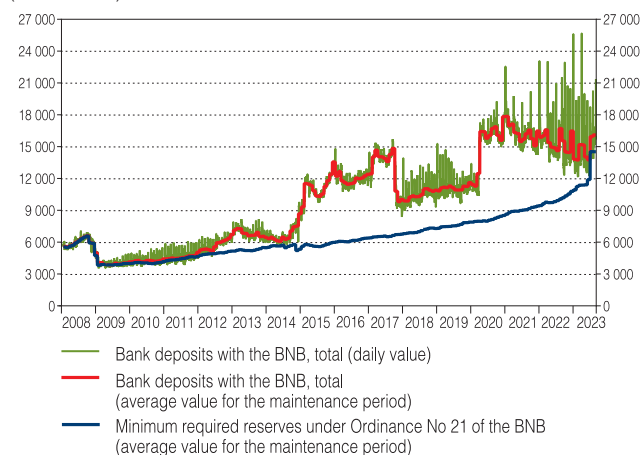
²⁸ A more substantial increase in the stock of MRR was observed after the second increase in the minimum reserve rate due to the fact that attracted funds from residents accounted for the predominant share of total attracted funds in the banking system (88.5 per cent by end-June 2023).

²⁹ 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 rate of minimum required reserves 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.

³⁰ Daily average data are used.

Bank Deposits with the BNB

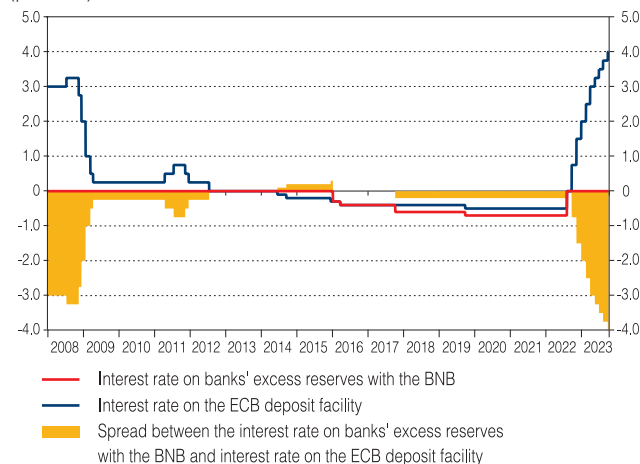
(BGN million)



Source: BNB.

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

(per cent)

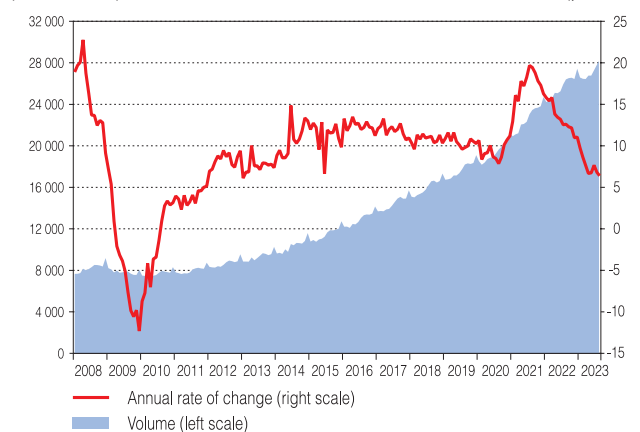


Sources: BNB, ECB.

Currency in Circulation

(BGN million)

(per cent)



Source: BNB.

In the first eight months of 2023, the annual growth of currency in circulation continued to follow a downward trend, coming to 6.4 per cent at end-August (11.0 per cent at the end of 2022). Dynamics of currency in circulation since the beginning of the year can be partly explained by one-off factors and a gradual return to growth rates close to those observed before the COVID-19 pandemic.

Reserve currency (euro) trading with the BNB is the main lev liquidity management instrument of banks under currency board arrangements. In the first eight months of 2023, BNB sales (net) to banks were EUR 400 million.

Credit to the Non-government Sector

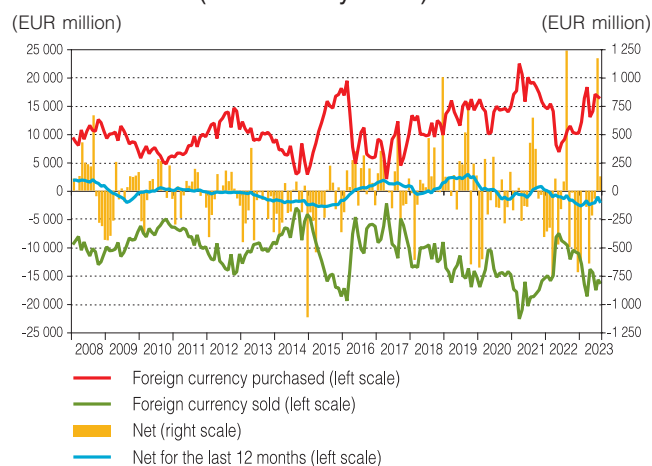
Over the period January–August 2023, the annual growth of credit to non-financial corporations followed a declining trend, reaching 6.1 per cent by end-August (10.4 per cent by end-December 2022). The downward dynamics was fully determined by the slowdown in the growth of corporate overdrafts, which reached 3.7 per cent in August (17.5 per cent at the end of 2022). Factors potentially contributing to the lower growth of credit to non-financial corporations were the ongoing reduction of inventories in the economy, resulting in lower demand for financing for the provision of working capital and accumulation of inventories, the gradual rise in interest rates on new corporate loans after the tightening of monetary policy by the ECB and the measure taken by the BNB to raise the MRR rate, as well as the tightening of bank lending standards for firms. The upward trend³¹ in newly extended corporate loans³² observed in 2022 came to a halt towards the end of the first quarter of 2023, and subsequently new business volumes remained broadly unchanged.

In the household sector, the annual growth rate of both consumer and housing loans remained high in the first eight months of 2023, with a slight acceleration recorded in housing loans since the middle of the second quarter, which continued in the third quarter as well. At the end of August 2023, consumer loans grew by 10.8 per cent year on year and housing loans by 18.7 per cent

³¹ Based on 12-month moving average.

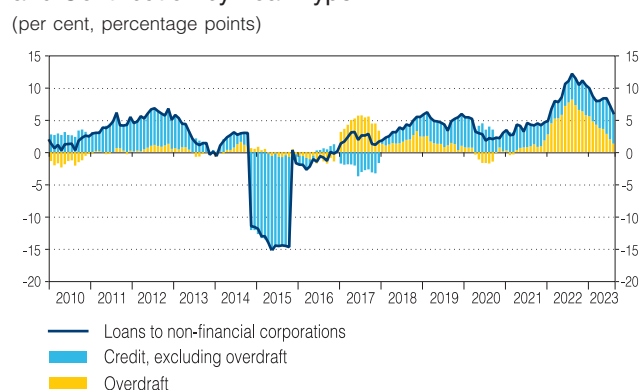
³² The terms 'new' and 'newly extended' hereinafter referred to as the statistical category 'new business'.

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.

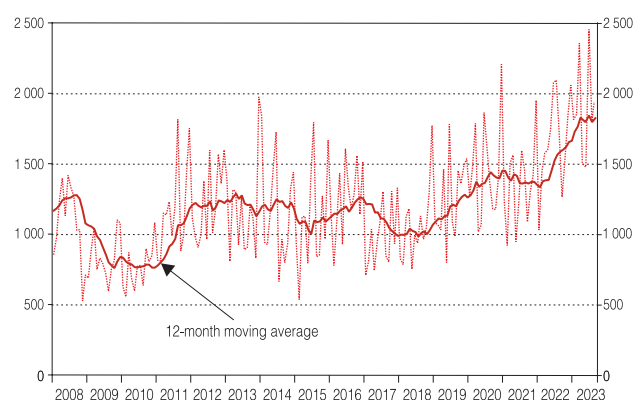
Annual Growth of Credit to Non-financial Corporations and Contribution by Loan Type



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.

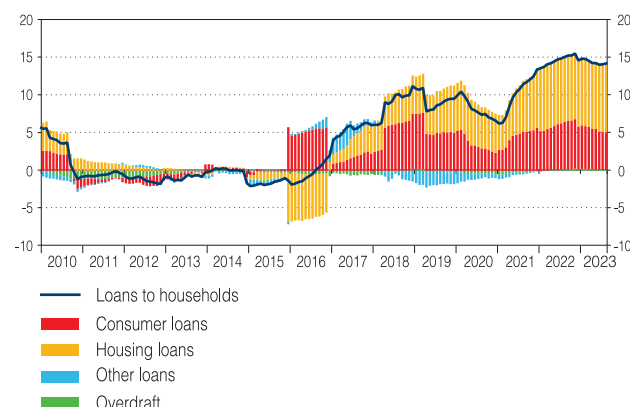
(compared with growth of 12.3 and 17.9 per cent, respectively, as of December 2022). Developments in loans to households reflected mainly the still weak and slow transmission of the ECB's monetary policy tightening to household lending rates in an environment of ample banking system liquidity and strong competition for a market share, particularly in the segment of loans for house purchases and consumer loans. Despite the two increases in the MRR rate by the BNB to absorb part of the excess liquidity in the banking system and the strengthening transmission of the ECB monetary policy to the monetary conditions in Bulgaria, interest rates on loans to households, particularly for house purchase, remained at very low levels. In the context of still relatively high consumer price inflation, interest rates on new housing loans to households remained negative in real terms³³ and continued to support store-of-value real estate purchases, as well as an alternative form of saving or investment. On the supply side, bank lending survey³⁴ results indicated a significant easing of housing credit standards in terms of the maximum loan amount in the second quarter of the year. This is likely to be related to further increases in house prices, despite the reported year-on-year decline in the number of transactions concluded. In terms of volumes of new household loans, both consumer and

³³ Real interest rates are calculated by deflating the relevant nominal interest rate for a given month by the annual HICP inflation for the same month. In the case of consumer credit, real interest rates on new extended loans were negative until April 2023 and slightly positive in May–August 2023.

³⁴ Bank Lending Survey in Bulgaria is carried out by the BNB on a quarterly basis.

Annual Growth of Household Credit and Contribution by Loan Type

(per cent, percentage points)

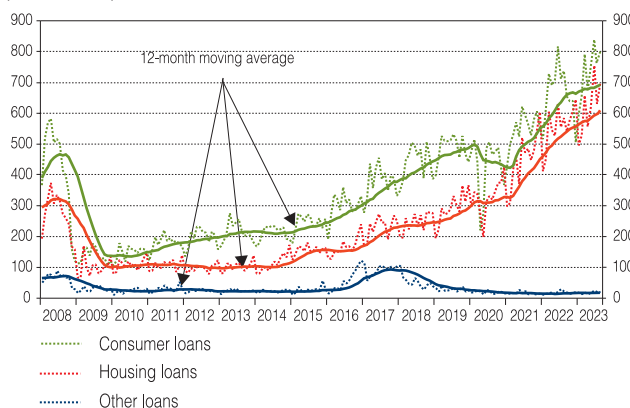


Note: Based on additional information received from reporting units, a revision of household loans was carried out according to their purpose of use in the period December 2015–August 2019.

Source: BNB.

New Loans to Households (Monthly Volumes)

(BGN million)



Source: BNB.

housing loans recorded a gradual upward trend³⁵ during the first eight months of 2023 compared to the elevated levels at the end of 2022.

Bank Lending Survey

The weighted results of the Bank Lending Survey,³⁶ conducted by the BNB, show a slight tightening of credit standards³⁷ for consumer and housing loans to households and a greater tightening of credit standards for corporate loans over the second quarter of 2023. Banks reported the most significant standard tightening for loans to both firms and households in terms of interest rates and interest spreads. At the same time, banks reported a significant easing of credit conditions for housing loans in terms of the maximum amount. The main factors behind the tightening of banks' lending policy (credit standards and conditions³⁸) for corporate loans in the second quarter of 2023 were the cost and volume of borrowed funds, as well as the lower risk appetite.

In the second quarter of 2023, banks reported a decline in demand for loans by large enterprises and for loans for house purchase, while demand for consumer loans and for those by small and medium-sized enterprises increased compared with January–March 2023. The main factors considered by banks to have affected the lower credit demand for corporate loans in the second quarter were the possibilities of using alternative sources of financing, rising interest rate levels, as well as reduced needs to ensure financial resources for working capital and inventories. At the same time, the need for bank funds for investment purposes and refinancing, for debt restructuring or renegotiating has contributed to the increase in demand for corporate loans. In the household sector, housing market prospects and the macroeconomic environment were the factors that have contributed to

³⁵ Based on 12-month moving average.

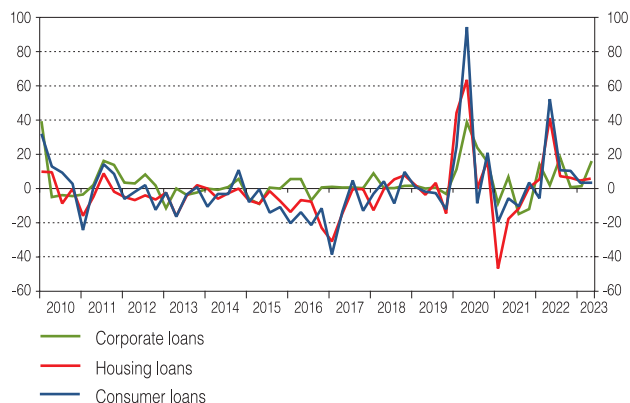
³⁶ Summarised results of the survey are presented through weighted bank responses by their market share in the relevant credit segment.

³⁷ Credit standards are understood as internal bank guidelines or criteria for loan approvals established prior to negotiating the terms of extended loans. Credit standards determine the type of the loan and collateral considered admissible by banks, taking into account specific priorities by sector, etc. Credit standards specify also all relevant conditions to be met by a borrower.

³⁸ Credit conditions typically involve the reference interest rate surcharge, the loan amount, conditions for its utilisation and other conditions such as fees and commissions, collateral or guarantees to be provided by the respective borrower.

Changes in Credit Standards

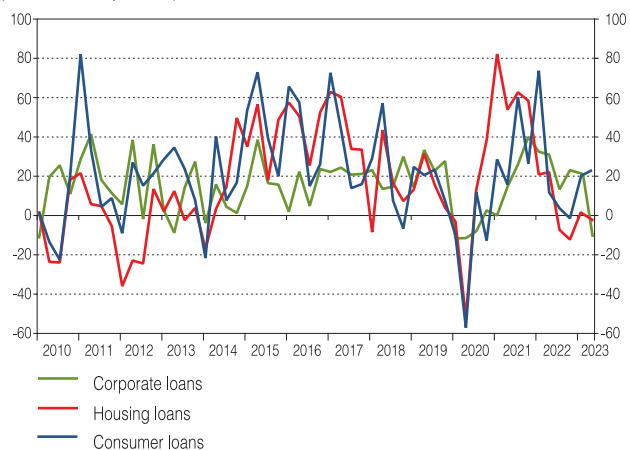
(balance of opinions)



Source: BNB.

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.

lower demand for housing loans, while demand for financing for current consumption goods and loans secured by real estate contributed to the increase in demand for consumer credit.

3.2. Interest Rates

Interbank Money Market Interest Rates

In the context of the functioning currency board in Bulgaria, the increase in key euro area interest rates continued to be transmitted rapidly into interest rates on transactions concluded in the interbank money market. As of August 2023, the monthly value of the LEONIA Plus index was 3.53 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).

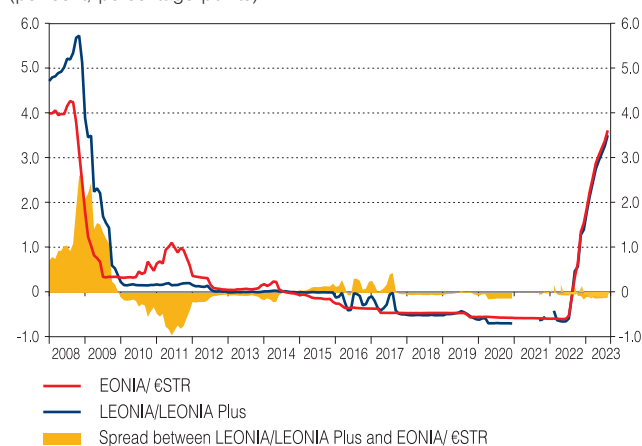
The strong growth trend in interbank money market trading volumes, which started at the end of the third quarter of 2022, continued in the January to August 2023 period. The continued increase in euro area policy rates contributed to the further widening of the negative spread between the interest rate on banks' excess reserves with the BNB and the ECB deposit facility rate. This factor, in combination with the global cycle of interest rate rises, prompted commercial banks to reduce their excess reserves with the BNB with the aim of achieving higher yields, while obtaining greater liquidity from the interbank money market, where necessary. The increases in the MRR rate by the BNB to absorb part of the excess liquidity in the banking system may have been an additional factor behind the higher interbank money market trading between the end of the second quarter and the end of August 2023.

Interest Rates on Deposits

High inflows of attracted funds and continued ample liquidity in the banking system continued to constrain the transmission of the ECB monetary policy tightening to deposit interest rates, especially in the household sector, and were a prerequisite for relatively limited effects of the BNB measure to increase the MRR rate from its launch to August 2023 inclusive. The slower increase in interest rates on household deposits compared with those for corporations could be partly explained by the fact that most of household loans marked by strong

Interbank Money Market Rates (Average Monthly Value) 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.

Banks' Excess Reserves and Traded Volumes on the Interbank Money Market

(BGN million)

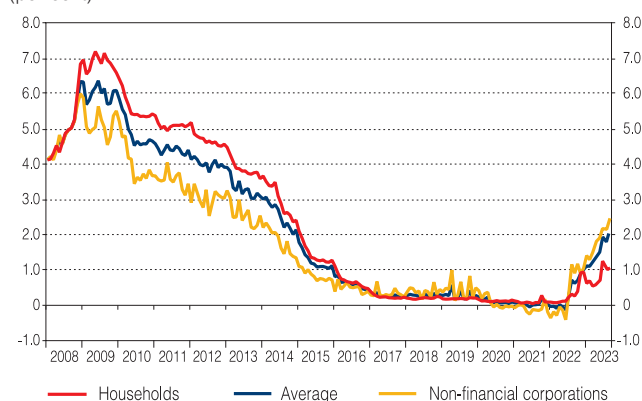
(BGN million)



Source: BNB.

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.

competition in the banking sector are in levs, and their interest rates are formed on the basis of a deposit index and a premium thereto.

In the household sector, the weighted average interest rate on new time deposits remained low at 1.02 per cent in August 2023. During the period from the first ECB interest rate increase in July 2022 to August 2023, the interest rate on new household time deposits rose by 79 basis points, and for the period from the first MRR rate increase by the BNB to August, by 33 basis points, respectively. A more significant increase in deposit interest rates was observed in the sector of non-financial corporations. The overall rise in the weighted average interest rate on new time deposits of non-financial corporations for July 2022–August 2023 was 211 basis points to 2.41 per cent. By comparison, the increase in the three-month EURIBOR over the same period was 374 basis points to 3.78 per cent. Over the June to August 2023 period, the weighted average interest rate on new time deposits of non-financial corporations picked up by 52 basis points.

Interest Rates on Loans

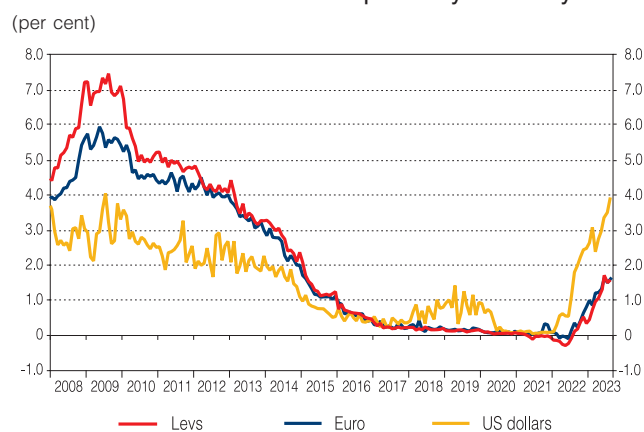
Ample liquidity and strong competition in the banking sector remained the main factors behind the limited transmission of euro area rate increases to the lending rates in Bulgaria, and especially to those on household loans. The effects of the BNB increases in the MRR rate on lending rates in the period from their entry into force to August 2023 inclusive were also comparatively limited, especially with regard to interest rates on housing and consumer loans.

Over the period from the first increase in key ECB interest rates to August 2023, the weighted average interest rate on new loans to non-financial corporations increased by 225 basis points to 4.71 per cent, while its rise for the period from the first MRR rate increase to August was 15 basis points³⁹. A factor underlying a faster increase in lending rates for firms compared to those for households is that part of these loans is denominated in euro and interest rates thereon are linked to EURIBOR. Overall, for July 2022–August 2023, the most significant rise was recorded in US dollar-denominated corporate loans and the smallest rise in lev-denominated corporate loans.

In the household sector, interest rates on new consumer and housing loans in July 2022–August

³⁹ Indicated values of interest rates on new loans to non-financial corporations and of the APRC on new loans to households, as stated hereinafter, are on a monthly basis.

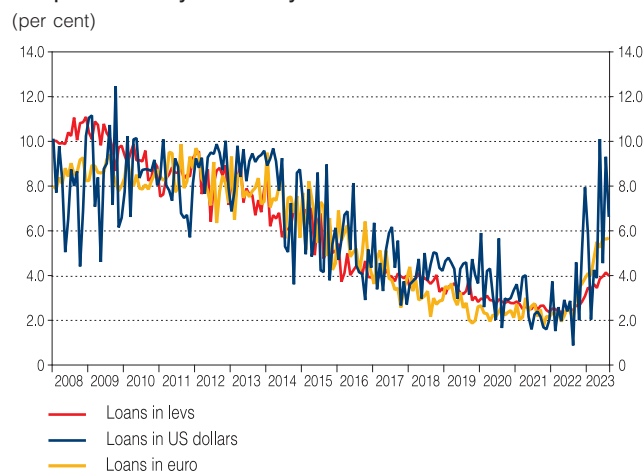
Interest Rates on New Time Deposits by Currency



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

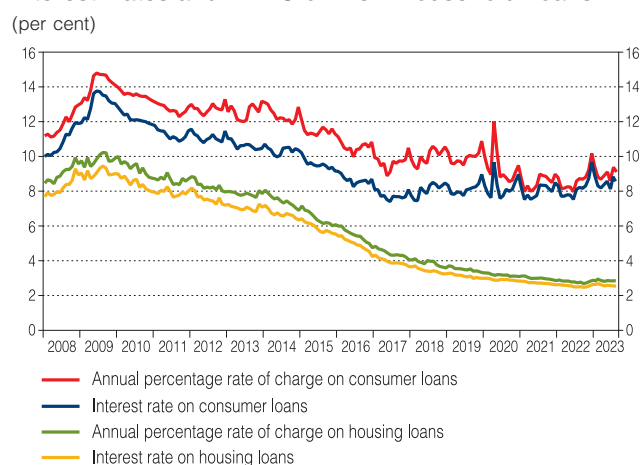
Source: BNB.

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



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.

2023 increased by 47 and 8 basis points, respectively, remaining broadly unchanged in June–August 2023. As of August 2023, the annual percentage rate of charge (APRC) on new housing loans stood at 2.91 per cent and the APRC on newly granted consumer loans was 9.14 per cent.

The relatively short period since the entry into force of the BNB measure to increase the MRR rate should be taken into account when analysing the effects of this measure on deposit and lending rates in Bulgaria as of the third quarter of 2023. In particular, with regard to the effects of the measure on interest rates on housing loans, account should also be taken of the relatively rare updating of interest rates by commercial banks (usually twice a year).

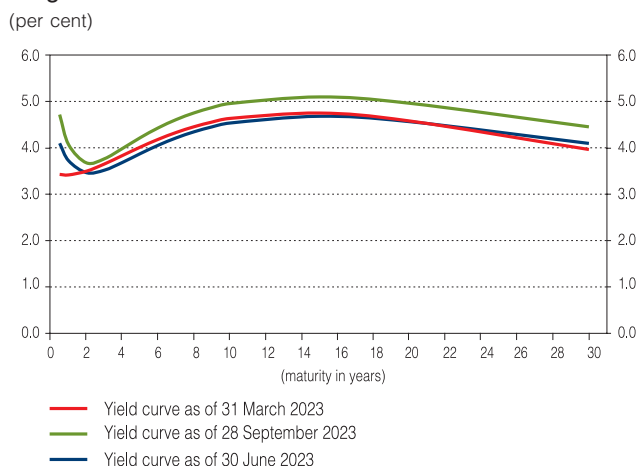
Government Securities Yields

As of end-September 2023, the benchmark yield curve of Bulgarian Eurobonds issued and traded in international capital markets increased from the end of June 2023 in all maturity sectors. Similar dynamics was observed in German and other euro area government bond yields under the influence of further increases in key ECB interest rates. By the end of September 2023, the spread between Bulgarian and German government bond yields narrowed compared with the end of June 2023 for all government securities excluding those maturing in 2024. Declining spreads reflected a stronger rise in German government bond yields, particularly pronounced for longer-term maturity sectors, compared with the rise in Bulgarian government bond yields. Developments in German government bond yields reflected growing market expectations that euro area interest rates would remain at elevated levels for an extended period of time. At the same time, the stabilisation of the political situation in Bulgaria after the formation of a regular government in June 2023 was a factor potentially influencing the observed narrowing of spreads between Bulgarian and German government bond yields over the review period.

In August 2023, the long-term interest rate for assessing Bulgaria's degree of convergence was 4.03 per cent, remaining unchanged from June⁴⁰, and the spread *vis-à-vis* Germany's long-term interest rate was 149 basis points.

⁴⁰ Daily data indicate that the long-term interest rate remained unchanged from 20 March 2023 to 31 August 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.

Bulgarian Government Bond Yield Curve

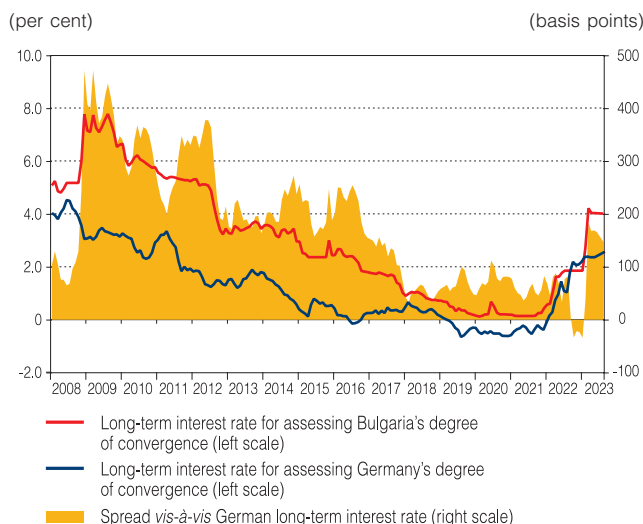


Notes: The reference yield curve of Bulgarian government bonds is constructed on the basis of an extended version of the Nelson–Siegel–Svensson model (1994).

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, real GDP increased in the second quarter of 2023 by 0.4 per cent compared to the previous quarter.⁴¹ According to the non-seasonally adjusted data, economic activity growth continued to slow down on an annual basis, reaching 1.8 per cent (compared to 2.1 per cent in the previous quarter). By final consumption expenditure component, this slowdown was driven by a significant rise in the negative contribution of changes in inventories, which was only partly offset by a decline in goods imports. Inventories dynamics can be explained by firms' decision to reduce significantly the stock of raw materials and finished goods accumulated over the last two years in the light of improved functioning of global supply chains, falling commodity prices in international markets and a declining uncertainty about economy's development. The review quarter saw an acceleration in the annual growth of domestic demand, reflecting primarily private consumption, while government consumption contributed negatively to GDP changes.

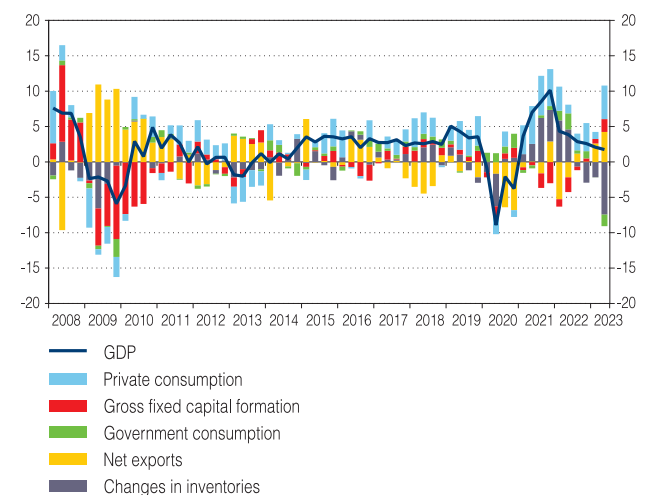
In the second quarter of 2023, private consumption increased by 8.2 per cent year on year (up from 1.5 per cent in the previous quarter), supported by the growth of employed persons in the economy, rising social payments by the government in real terms and a lower household propensity to save⁴² in an environment of negative deposit rates in real terms. Other factors positively affecting final consumption expenditure were the year-on-year increase in consumer loans and the improvement of the consumer confidence indicator.

⁴¹ The analysis is based on NSI national accounts data published on 7 September 2023.

⁴² To assess the household savings rate, the analysis employs seasonally adjusted data of the BNB obtained from the NSI Household Budget Survey.

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

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



Sources: NSI, BNB calculations.

In the second quarter of 2023, government consumption at constant prices decreased by -8.0 per cent on an annual basis (against 0.1 per cent growth in the previous quarter). Available data on the implementation of the consolidated fiscal programme (CFP) for the second quarter of 2023 signal that the decline in government consumption was probably due to a fall in government intermediate consumption and a slowdown in the public sector wage growth⁴³.

In the second quarter of 2023, fixed capital investment rose by 10.8 per cent year on year (compared with 5.4 per cent in the previous quarter). According to BNB estimates⁴⁴, the public and private sectors both contributed to this growth. The CFP implementation data indicate that government investment in the second quarter of 2023 was supported by both national-funded investments and EU co-financed investments. The main factors favouring private sector investment growth were the increase in final consumption expenditure, improved managers' perceptions of the domestic economic situation and the strong supply of credit resources by banks amid persistently negative real rates on new loans to non-financial corporations and on housing loans.

Net exports had a high positive contribution to the annual growth of real GDP in the second quarter of 2023, driven by a stronger decline in imports than exports of goods and services⁴⁵. The reported drop of -1.0 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, with declines recorded in both goods and services. The downward dynamics of goods imports can be explained by the reduced stocks of commodities, raw materials and finished products maintained by firms since the end of 2022.

In the second quarter of 2023, gross value added in Bulgaria increased by 0.6 per cent quarter on quarter, according to seasonally adjusted data, and

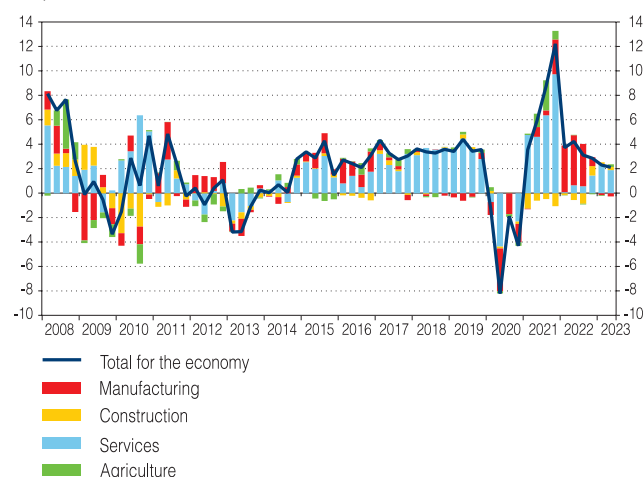
⁴³ For details, see Fiscal Policy Effects on the Economy Section in Chapter 3.

⁴⁴ 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. Public investment estimates for the second quarter of 2023 are based on information from the monthly reports on the implementation of the CFP as at end-June 2023.

⁴⁵ 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

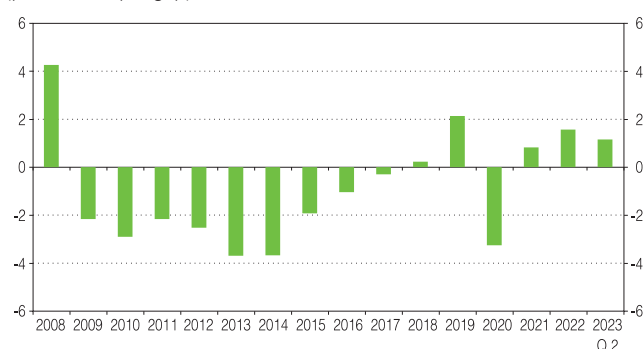
(per cent; percentage points; on an annual basis; non-seasonally adjusted data)



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 research topic on Methods for Estimating the Cyclical Position of the Economy, *Economic Review*, 1/2019.

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

Sources: NSI, BNB calculations.

by 2.1 per cent year on year, according to non-seasonally adjusted data. Value added in the services sector recorded annual growth of 2.8 per cent in the second quarter of 2023, with all sub-sectors contributing to this, and trade, transport, accommodation and food service activities making the largest positive contribution. In the second quarter of 2023, value added in agriculture also increased on an annual basis by 5.1 per cent. In industry, gross value added fell by -1.0 per cent year on year, entirely determined by a decrease in activity in the manufacturing sub-sector, in line with the reported drop in sales of industrial enterprises in real terms in the domestic and international markets.⁴⁶

Cyclical Position of the Bulgarian Economy

According to BNB estimates, the cyclical position of the economy in the second 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 attained low historical level of unemployment and the persistent upward pressure on wages at a rate above that of labour productivity.

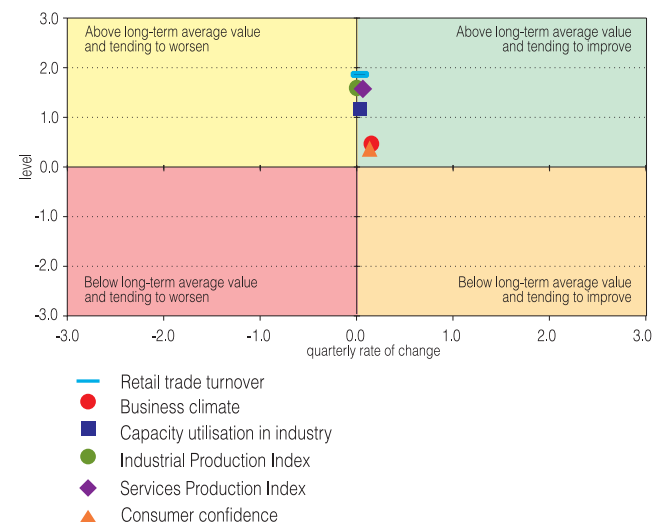
Short-term indicators of economic activity predominantly signalled continued quarterly growth in economic activity over the third quarter of 2023⁴⁷. Indicators tracking capacity utilisation in manufacturing, output in services and retail trade volumes⁴⁸ reported a continued rise on quarter-on-quarter basis, while the industrial production index declined. However, the level of all listed indicators continued to exceed their long-term average, which was in line with the positive output gap. Indicators reflecting economic agents' sentiment (business climate and consumer confidence) continued to improve on a quarterly basis, while surpassing their long-term average value. These developments were driven by improved assessments of economic agents about the current economic situation in Bulgaria, as well

⁴⁶ For details, see the Behaviour of Firms Section in this Chapter.

⁴⁷ Data on the services production index are available as of June 2023, while industrial production and retail turnover indices are as of July 2023. Data on business climate, consumer confidence and capacity utilisation are available as of August 2023.

⁴⁸ In July 2023, a slight decline in the quarterly retail trade index was reported. 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.

Cyclical Position of the Economy in the Third Quarter of 2023, According to Selected Economic Indicators

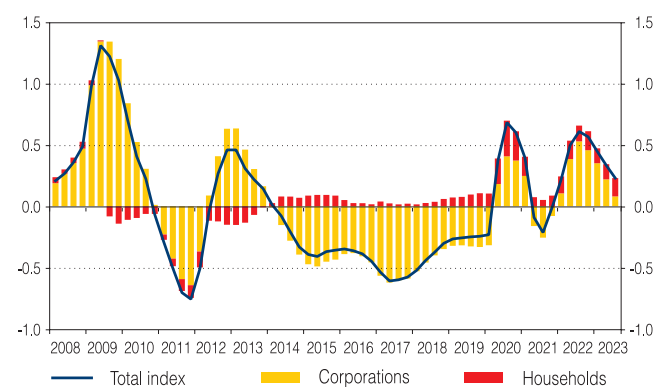


Notes: The chart compares the level (the vertical axis) and the quarterly change (the horizontal axis) of selected economic indicators. Data are averaged for available months in the third quarter of 2023. Data on the services output index, which are published with a considerable delay, refer to the second quarter of 2023. Each series is transformed using the HP filter (with a parameter $\lambda = 100$) in order to eliminate short-term fluctuations, and then it is 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 upper right grid, it 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.

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

(deviation from long-term average value)



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. Indicator values for the third quarter of 2023 are calculated based on July and August data.

Sources: EC, BNB calculations.

as by emerging more optimistic expectations for the coming months. Reduced differences in firms' assessments of their current economic situation and short-term economic outlook resulted in the decrease of the uncertainty indicator calculated by the BNB in the third quarter of 2023.

Economic Activity Expectations

According to the composite economic activity indicator constructed by the BNB⁴⁹, in the third quarter of 2023, Bulgaria's real GDP is expected to rise on a quarterly basis at a rate similar to that of the previous quarter which is a prerequisite for a continued gradual slowdown in economic activity on an annual basis. Quarterly growth of the composite indicator over the review quarter reflected mostly data on improving consumer confidence and credit growth for July–August compared with the second quarter of 2023. In the fourth quarter of 2023 and the first quarter of 2024, real GDP is expected to record low quarter-on-quarter growth, largely supported by domestic demand and assumed growth in external demand (compared with a decline in the third quarter of 2023). There is a considerable uncertainty about the profile of annual rates of change in economic activity arising from the forthcoming revision of GDP time series,⁵⁰ according to the NSI calendar.

4.2. Labour Market

Labour Supply

In the second quarter of 2023, the supply of labour in the economy grew at a much slower pace than in the previous year. Labour force growth⁵¹ slowed down to 0.1 per cent year on year (1.7 per cent in the first quarter of 2023), reflecting lower activation of the persons outside labour force, while the pace of decline in working-age population, as a result of adverse demographic developments, remained close to that recorded in the first quarter of 2023.

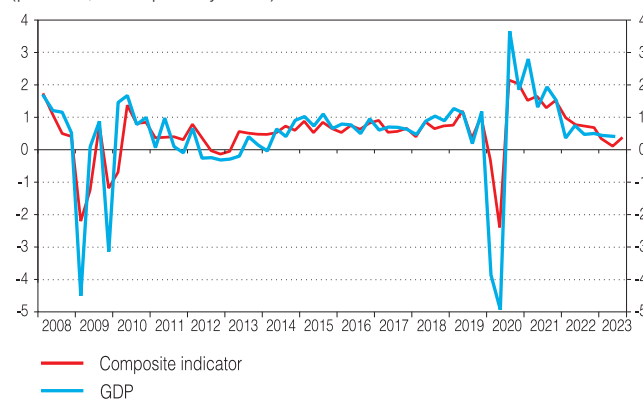
⁴⁹ The services production index is available as of June 2023, while production indices for industry, construction and retail trade turnover and producer prices in manufacturing are available as of July 2023. The unemployment rate, global PMI, business climate and consumer confidence indicators, as well as new loans to firms and households are available as of August 2023.

⁵⁰ Revised GDP figures are expected to be published by the NSI on 19 October 2023.

⁵¹ Labour force includes employed and unemployed persons in the age group 15 and over.

Composite Economic Activity Indicator

(per cent, on a quarterly basis)



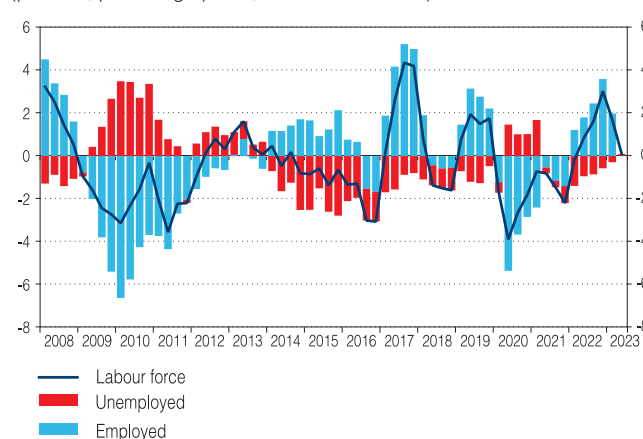
Notes: This indicator is constructed on the basis of a dynamic factor model whose purpose is to derive the total component in dynamics of various indicators with a monthly frequency. Dynamics of the composite indicator may be used as a guidance for the change in real GDP of Bulgaria.

Selected indicators of the model include: production indices in industry, construction and services; retail trade turnover indices; unemployment rate; indicators of the business climate and consumer confidence; producer price index in industry; new loans to corporations and households; global PMI.

Sources: NSI, Employment Agency, BNB calculations.

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. There is a break in the time series since the beginning of 2023 due to the population data used from the Census 2021. The NSI publishes revised data based on the census results only for the first two quarters of 2022 and these data are used in calculating the annual changes for the first two quarters of 2023.

Sources: NSI Labour Force Survey, BNB calculations.

At the same time, economic activity rate⁵² continued to rise on an annual basis, with the largest growth recorded for persons aged 55 and over. The LFS data for the first and second quarters of 2023 reflect the results of the 2021 census, which are not reflected in previous years and lead to a break in the time series.⁵³

In the second quarter of 2023, the unemployment rate⁵⁴ increased slightly on both an annual (0.1 percentage point) and a quarterly basis (0.2 percentage points), to stand at 4.6 per cent, according to non-seasonally adjusted LFS data⁵⁵. This increase was entirely due to the rise in the number of unemployed people aged up to 44. More frequent data published by the Employment Agency also recorded a slight increase in the unemployment level over the second quarter of 2023, and this trend will be maintained in the third quarter of 2023, according to July and August data.

Labour Demand

In the second quarter of 2023, the number of persons employed⁵⁶ increased by 0.1 per cent year on year (compared with 1.8 per cent growth in the previous quarter), entirely due to the services sector, in particular general government, education, health and social work, and information and communication. Data on job vacancies⁵⁷ in the economy point to lower labour demand, with the number of vacancies falling by 16.8 per cent year-on-year in the second quarter of 2023, with all main sectors contributing to this. At the same time, the share of firms identifying labour short-

⁵² The economic activity rate is the proportion between economically active persons (labour force) and the population of the same age.

⁵³ The NSI publishes revised data based on the census results only for the first and second quarters of 2022, while data for the following quarters are expected to be revised at a later stage. Revised data for the relevant quarters of 2022 are used in calculating the annual changes in LFS data for the first two quarters of 2023.

⁵⁴ 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.

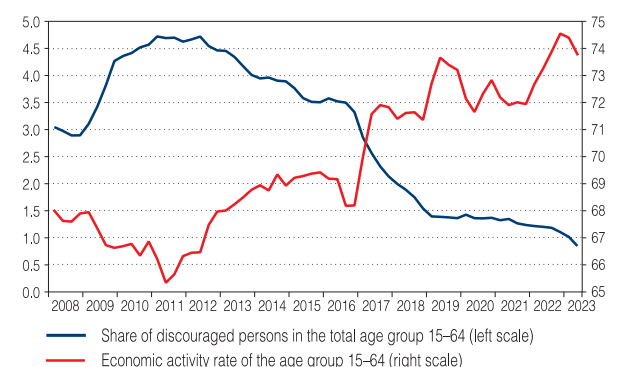
⁵⁵ According to the seasonally adjusted data from the LFS, the unemployment rate is affected by the break in the time series in early 2023, therefore non-seasonally adjusted data are commented on here.

⁵⁶ NSI System of National Accounts data are used.

⁵⁷ Based on NSI short-term statistics on employment and labour costs.

Economic Activity and Share of Discouraged Persons

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

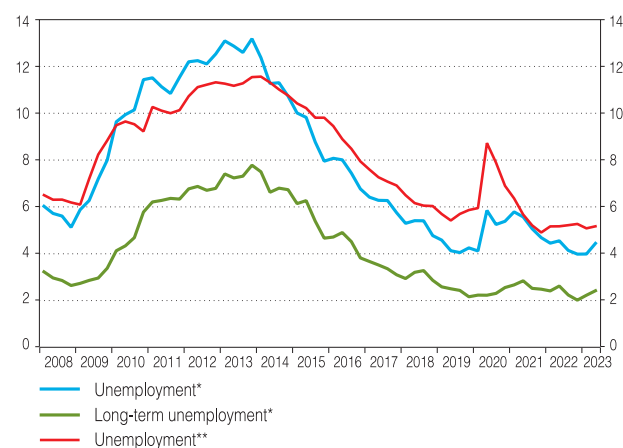


Notes: There is a break in the time series since the beginning of 2023 due to the population data used from the Census 2021. The seasonally adjusted data presented here are affected by the break in the time series.

Sources: NSI Labour Force Survey, BNB calculations.

Unemployment Rate

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



* Based on NSI data.

** Based on Employment Agency data.

Note: There is a break in the time series since the beginning of 2023 due to the population data used from the Census 2021 in the estimation of Labour Force Survey' results. The seasonally adjusted data presented here are affected by the break in the time series.

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

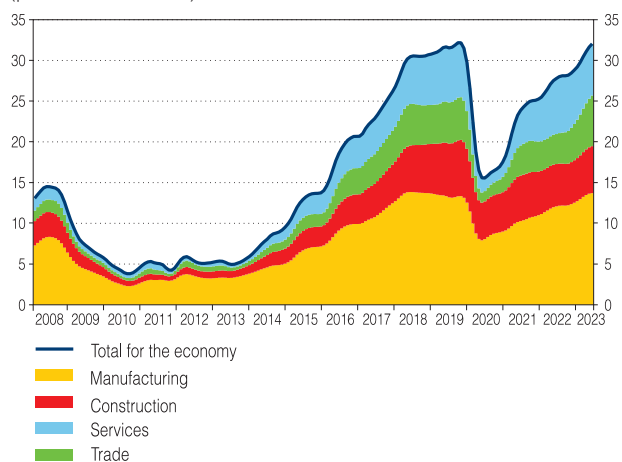
ages as a factor hampering their activity⁵⁸ continued to increase in all sectors (with the exception of services, where the attained levels were retained), reaching some of the highest historical values. This suggests that, despite slowing, labour demand in the economy continued to outpace supply in the second quarter of 2023.

Productivity and Compensation per Employee

In the second quarter of 2023, labour productivity⁵⁹ rose by 2.1 per cent year on year, driven by increasing real productivity in agriculture, construction and services. At the same time, labour productivity in manufacturing declined for a second consecutive quarter, as employers opted not to lower the number of persons employed in the sector, in sync with the reported fall in value added, which can be explained by the increasing labour shortages in Bulgaria and the temporary nature of some of the factors that led to a decline in industrial value added over the first half of 2023.⁶⁰

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

(per cent of the firms)



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

Sources: NSI, BNB calculations.

Despite stronger labour productivity growth in the second quarter compared to the previous quarter of 2023 and increasing labour shortages in the country, nominal growth of compensation

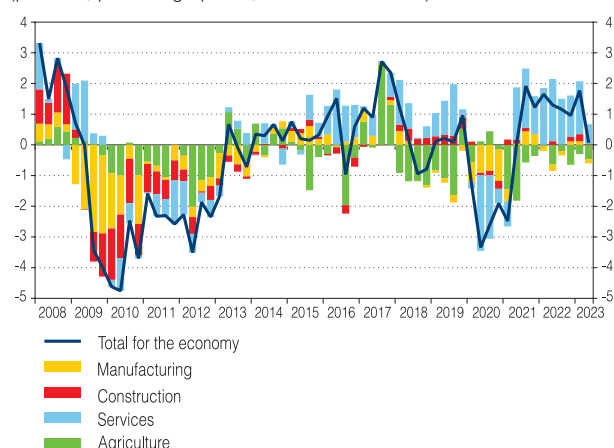
⁵⁸ According to NSI business situation survey data.

⁵⁹ Labour productivity is calculated after adjusting gross value added (total for the economy) for imputed rent.

⁶⁰ For details, see the Balance of Payments and External Trade Section in Chapter 2: External Financial Flows.

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

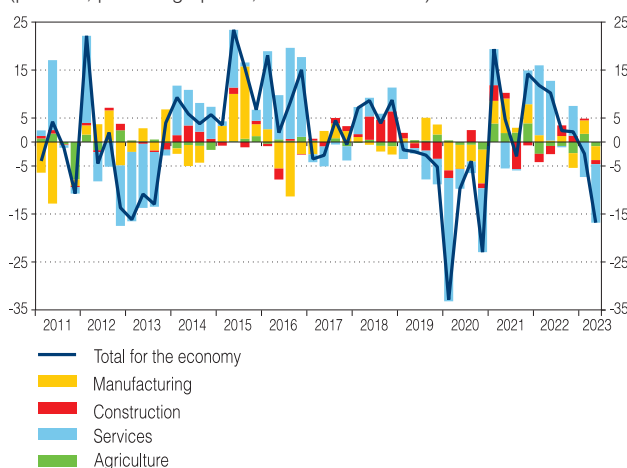
(per cent; percentage points; on an annual basis)



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

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

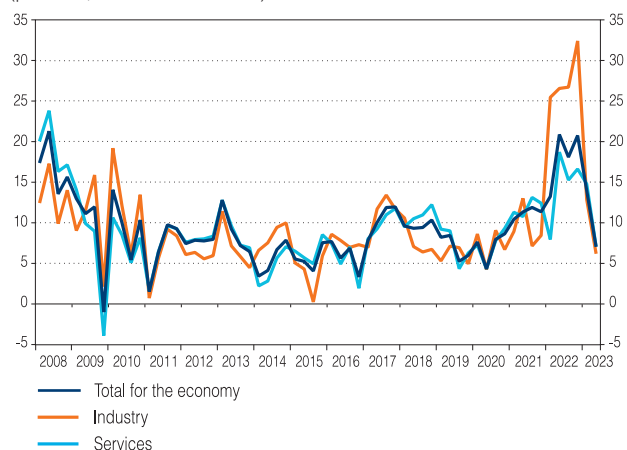
(per cent; percentage points; on an annual basis)



Sources: NSI, BNB calculations.

Compensation per Employee at Current Prices

(per cent; on an annual basis)



Source: NSI – System of National Accounts (SNA).

per employee slowed to 7.2 per cent on an annual basis (14.0 per cent in the first quarter of 2023). In real terms⁶¹, compensation per employee fell by 1.4 per cent year on year in the second quarter of 2023, driven by declines in manufacturing and services.

Data on average gross monthly wage⁶² also show a slowdown in the nominal annual growth to 13.1 per cent in the second quarter of 2023 (17.3 per cent in the first quarter), with lower wage increases vis-à-vis the previous quarter observed in both private and public sectors.

4.3. Behaviour of Firms

Data for the second quarter of 2023 signal that firms' nominal unit labour costs for the economy as a whole are kept unchanged compared with the corresponding period of the previous year.⁶³ According to the breakdown of the final demand deflator, higher compensation of employees 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 effect of the external environment, which was transmitted by import prices on products for intermediate consumption in agriculture and industry, contributed negatively to the developments in both the final demand deflator and domestic producer prices of corporations. In the context of strong consumer demand, corporations' price policy was oriented towards some increase in profit margins on an annual basis, which explains the weak annual growth recorded in the final demand deflator over the review quarter. Firms' operating costs were financed by both own and attracted funds.

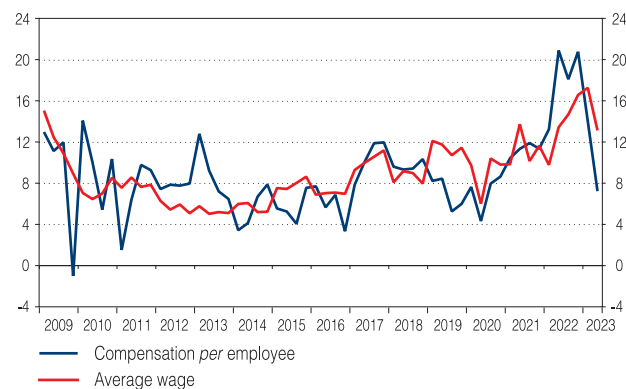
⁶¹ Nominal compensation per Employee was deflated by the HICP to calculate the indicator in real terms.

⁶² According to NSI short-term statistics on employment and labour costs.

⁶³ This section reviews in detail corporations' labour costs, while expenditure on raw materials (the so-called intermediate consumption) is not explicitly analysed due to the lack of public data at a quarterly frequency. However, the data on industrial producer prices for intermediate goods presented in the section provide an indication of the evolution of these costs.

Compensation per Employee and Average Wage at Current Prices

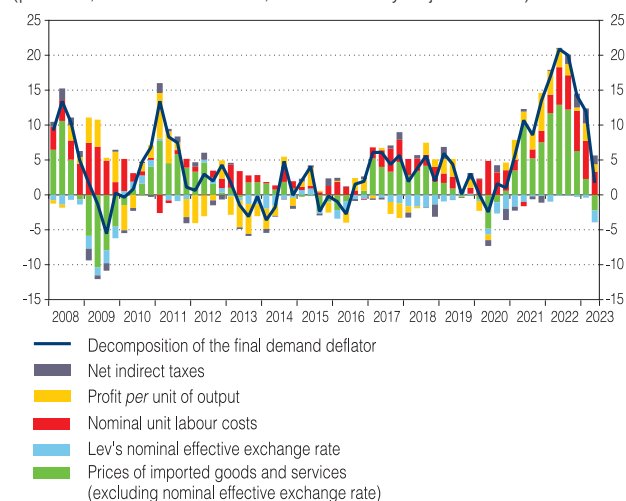
(per cent; on an annual basis)



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.

Labour Costs of Corporations

In the second quarter of 2023, unit labour costs of firms continued to increase, but the growth rate moderated to 5.0 per cent year on year (13.0 per cent in the first quarter of 2023). The slowdown in growth reflected both weaker growth in nominal compensation *per* employee compared with the increase in the first quarter of 2023 (in line with the high base of the previous year and the deceleration in inflation) and the acceleration in annual real labour productivity growth. All economic sectors contributed to the reported slowdown in nominal unit labour cost growth, with the exception of agriculture.

Investment Costs of Corporations

According to BNB estimates, in the second quarter of 2023 private sector spending on investment in real terms picked up on an annual basis in line with improved economic sentiment in Bulgaria, final consumption expenditure growth and the continuing environment of negative interest rates on new loans in real terms. By asset type, investment in machinery, equipment and weapon systems were the main contributor to growth, followed by investment in non-residential buildings and other structures.

Financing Sources of Corporations

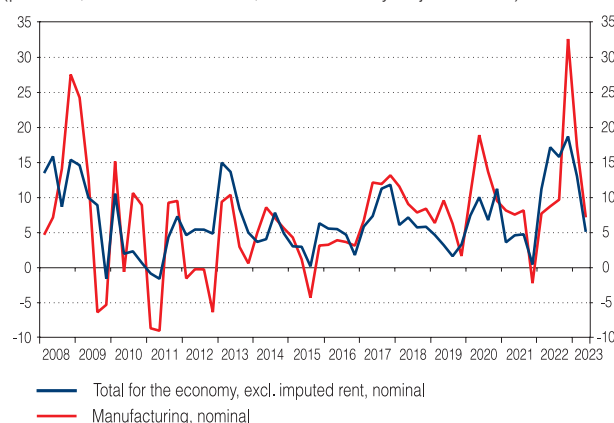
Firms continued to use both internal and external sources to finance their activities. According to non-seasonally adjusted data, the nominal gross operating surplus, which could be used by firms to finance their activity, rose by 4.0 per cent year on year in the second quarter of 2023, with a positive contribution of the services (6.8 percentage points), agriculture (2.4 percentage points) and construction (1.5 percentage points) sectors and a negative contribution of the industrial sector (-6.6 percentage points). Firms' financing by means other than gross operating surplus also increased in nominal terms compared to the previous year, mainly due to borrowings.

Price Policy of Corporations

In the second quarter of 2023 firms' selling prices in industry, as measured by the Producer Price Index in Industry (PPI), reported a decline of -7.1 per cent on an annual basis. Price declines

Unit Labour Costs

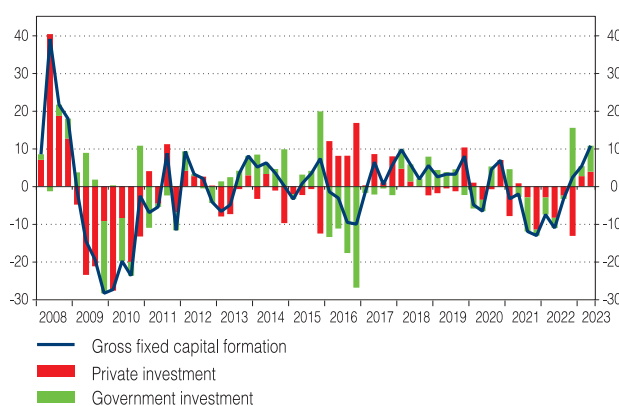
(per cent, on an annual basis; non-seasonally adjusted data)



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.

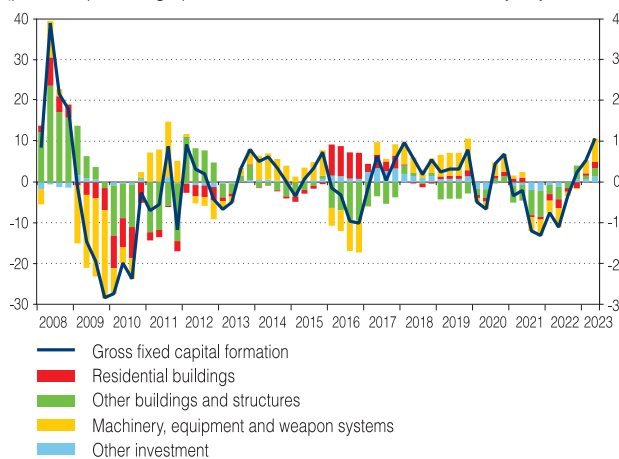
The series on private investment is constructed by the BNB as a difference between total investment and the estimated amount of public investment on an accrual basis in real terms.

Data on public investment are based on information from quarterly non-financial accounts of the general government sector, published by the NSI. Public investment estimates for the second quarter of 2023 are based on information from the monthly reports on the implementation of the CFP as at end-June 2023.

Sources: NSI, BNB calculations.

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.

were recorded in both domestic and international producer prices. This was mainly due to the fall in energy prices and, to a lesser extent, to the decline in prices of intermediate consumption goods, which account for a significant part of firms' domestic production costs. However, producer prices for consumer and investment products recorded a year-on-year growth, most likely due to the continued increases in unit labour costs in industry in the context of deepening labour shortages.⁶⁴ The annual growth rate of decline in PPI accelerated in the beginning of the third quarter of 2023, reaching -13.7 per cent in July, mainly driven by the downward trend in oil, natural gas and electricity prices on international markets.

In the second quarter of 2023, producer price indices in services reported annual growth in all sub-sectors. Cleaning activities (14.5 per cent), information services (13.9 per cent) and postal services (12.1 per cent) reported the most sizeable year-on-year increase. Selling prices in the retail sub-sector, which is the closest to the customers in the supply chain, went up by 5.7 per cent in the second quarter (compared with 13.2 per cent in the previous quarter of 2023). Annual growth in the NSI retail price index (excluding trade in motor vehicles and motorcycles) slowed down to 3.2 per cent in July 2023. The increase in prices in the services sector can be explained with the higher producer prices of consumer goods, the increase in unit labour costs and the observed growth in profit margins.

Economic Indicators

NSI data on short-term business statistics provide divergent signals about firms' behaviour in the third quarter of 2023.⁶⁵

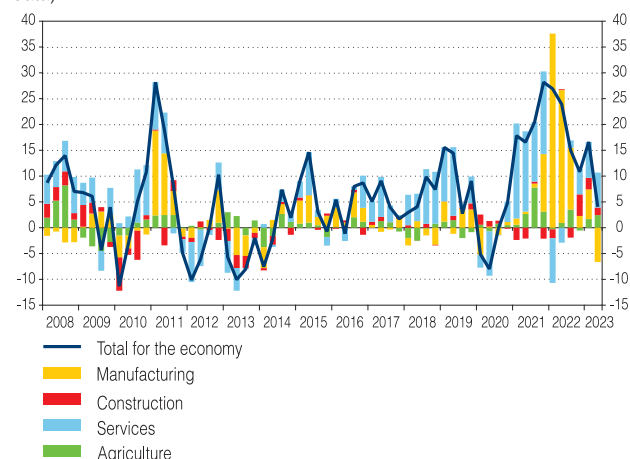
According to the BNB's seasonally adjusted data, the overall business climate indicator remained unchanged between July and August compared with the second quarter of 2023. A deterioration in sentiment was recorded in industry and trade, while an improvement in the business climate was observed for firms in construction and services. The uncertain economic environment remained the most serious constraint hampering corporations' activities,

⁶⁴ For details, see the Labour Market Section in this Chapter.

⁶⁵ For more details on the composite economic indicator, see the Current Economic Environment Section in this Chapter.

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

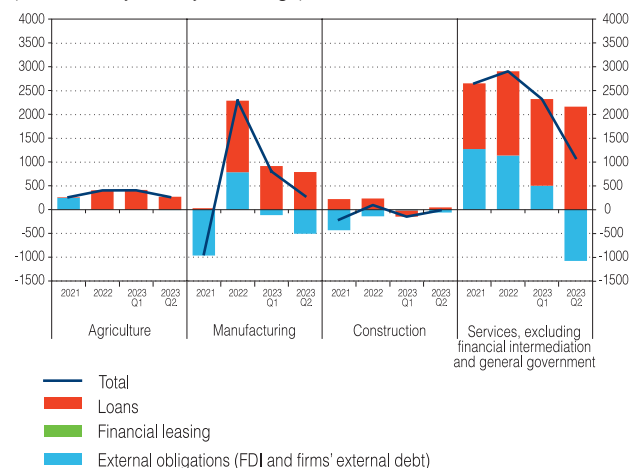
(per cent; percentage points; on an annual basis; non-seasonally adjusted data)



Sources: NSI, BNB calculations.

Financing Sources*

(BGN million, year-on-year change)

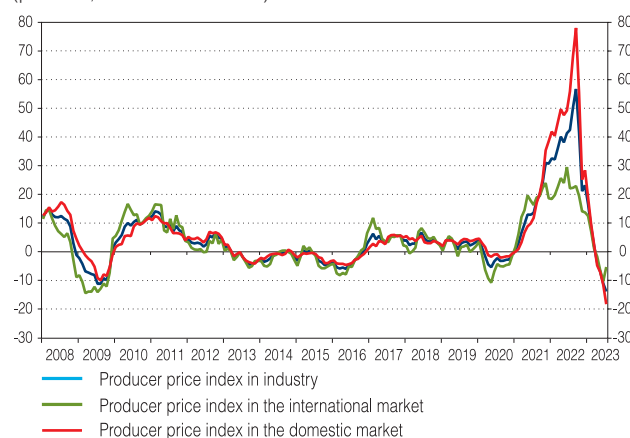


* Sources of financing other than the gross operating surplus.

Source: BNB.

Rate of Change of Producer Price Index in Industry

(per cent; on an annual basis)



Source: NSI.

but the impact of this factor continued to weaken from its peak in late 2022. At the same time, the share of corporations that identify labour shortages as a limiting factor for their activity has increased to one of the highest values in historical terms and now represents the second most serious constraint to the activity of companies after the uncertain economic environment. Over the July–August 2023 period, managers' estimates of firms' expected production activity for the next three months have increased compared with the second quarter.

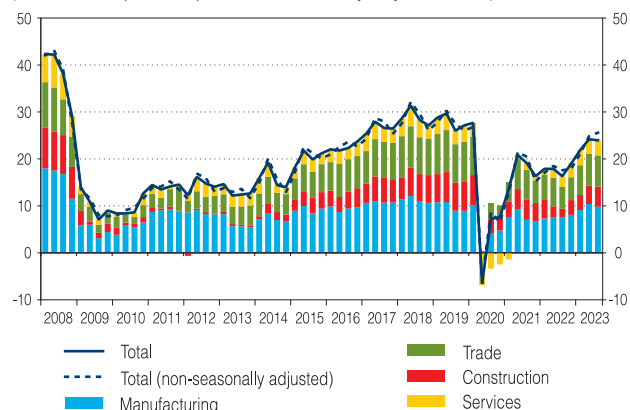
NSI data on short-term business statistics on the indices of construction production, output and turnover in manufacturing, and retail trade turnover in July 2023 reported a decrease in real terms compared with the previous month.

In July 2023, construction production decreased both on a quarter-on-quarter and year-on-year basis, largely due to the weaker activity in civil engineering construction. According to the NSI business climate surveys conducted over the July–August 2023 period, the main factors hampering firms' activity in construction continued to be the uncertain economic environment, commodity prices and labour shortages.

In July 2023, the industrial production index also declined both on a quarterly (-1.3 per cent according to seasonally adjusted data) and an annual basis (-11.5 per cent according to non-seasonally adjusted data). All major sub-sectors, namely mining and quarrying, manufacturing and production and distribution of electricity, heat and gas contributed to the decline in the index over the review period on the corresponding period of the previous year. According to nominal turnover data in industry, the drop in sales on an annual basis was due to the decrease in both volumes and prices on the international and domestic markets. In July 2023, retail trade turnover at constant prices also decreased slightly on the previous month (-0.2 per cent), but grew by 1.6 per cent compared with the same period of the previous year, as retail of food, beverages and tobacco was the main contributor to the year-on-year growth rate.

Business Climate

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

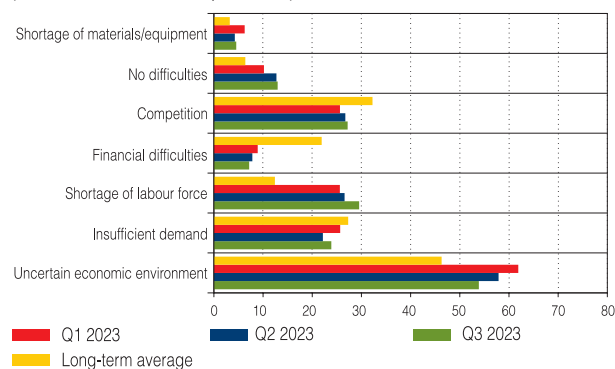


Notes: The answers to the NSI survey questions are presented in a three-tier category scale: 'increase', 'unchanged', 'decrease'. Balances of opinions are calculated as a difference between relative shares of extreme options of replies: 'increase' minus 'decrease'. The business climate indicator is a geometric average of the balances of opinions about the current and expected business situation in corporations in the next six months. Data for the third quarter of 2023 relate to the July–August period.

Sources: NSI, BNB calculations.

Factors Hampering Economic Activity of Corporations

(relative share of all corporations)

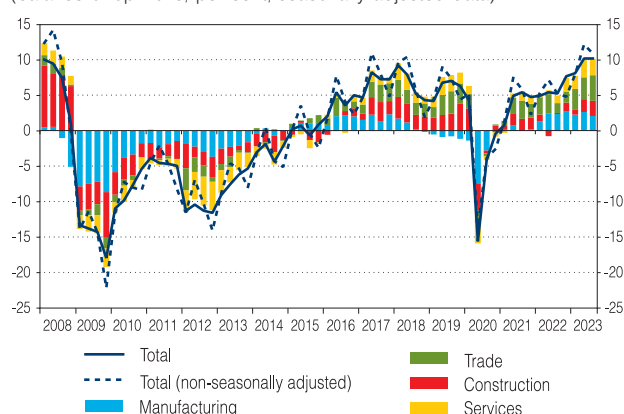


Note: Average data for the relevant period, weighted by the relative share of corporations by sector (manufacturing, construction, trade and services). Data for the third quarter of 2023 relate to the July–August period.

Sources: NSI, BNB calculations.

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'. Data for the third quarter of 2023 relate to the July–August period.

Sources: NSI, BNB calculations.

4.4. Household Behaviour

Household Revenue

According to NSI household budget survey data, household revenue growth⁶⁶ accelerated year-on-year in nominal terms in the second quarter of 2023, largely supported by the rise in total income, but income from withdrawn savings also increased.

Total household income grew in nominal terms by 20.9 per cent on an annual basis in the second quarter of 2023 (up from 19.3 per cent in the previous quarter), with wage income, followed by income from self-employment, being the main contributors to this growth. Concurrently, pension income recorded a significantly lower increase, possibly due to a base effect related to factors such as paid Easter supplements (in April 2022 all pensioners received Easter supplements of BGN 70, while in April 2023 only elderly people with pensions below the poverty threshold received BGN 70 each) and the increase in the social disability pension, which entered into force in April 2022.

In real terms⁶⁷, household total income also posted a stronger increase (12.1 per cent) on an annual basis in the second quarter compared with the first quarter of 2023, in line with the moderation in inflation. Real wage growth stood at 17.7 per cent, while pension income fell by 1.8 per cent in real terms. Households' disposable income⁶⁸ also reported accelerated growth in real terms, which stood at 8.8 per cent on an annual basis (5.2 per cent in the first quarter of 2023), although growth moderated in nominal terms due to stronger growth in spending on tax, social security and regular transfers to other households compared to the increase in total income.

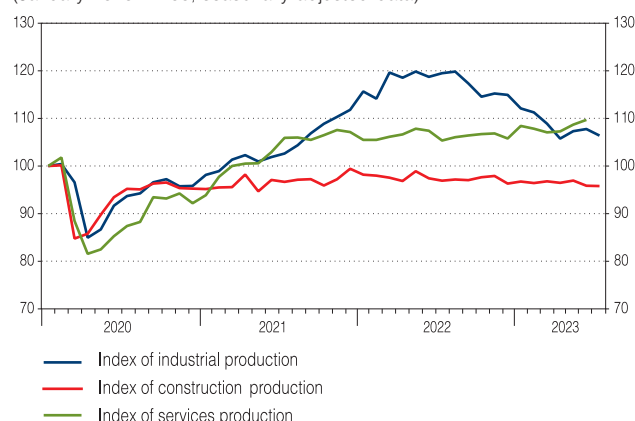
⁶⁶ Household income includes all household cash income from sources such as wages, pensions, self-employment, social security benefits, allowances and valued in-kind income (the monetary value of goods and services received in kind by households, such as social transfers in kind) grouped under the 'Total income' category, as well as withdrawals of savings and loans.

⁶⁷ To obtain total income in real terms, nominal values are deflated by the HICP.

⁶⁸ Real disposable income of households is calculated based on the NSI household budget survey data and represents total nominal income less taxes, social security contributions and regular transfers to other households, deflated by the HICP.

Dynamics of the Production Index in Manufacturing, Construction and Services

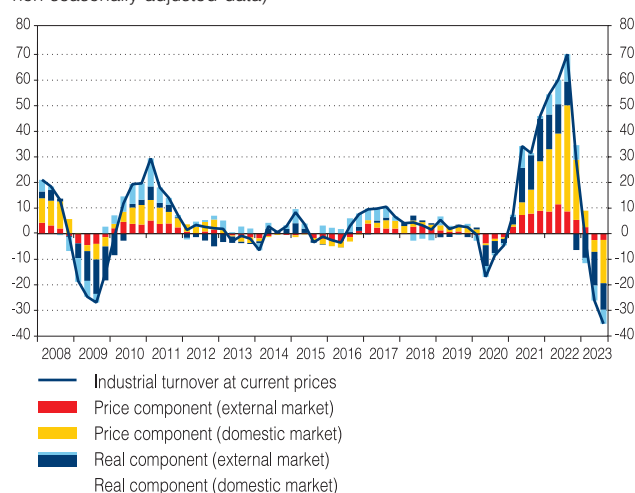
(January 2020 = 100; seasonally adjusted data)



Sources: NSI, Eurostat, BNB calculations.

Industrial Turnover Dynamics

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

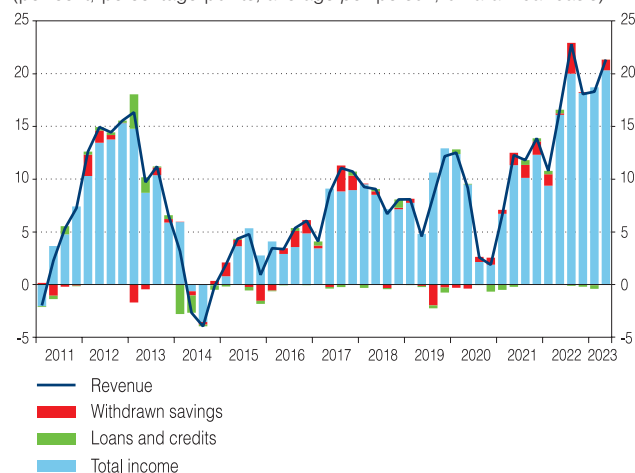


Note: Data for the third quarter of 2023 relate to July.

Sources: NSI, BNB calculations.

Contributions to the Change in Household Revenue

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



Source: NSI – Household Budget Survey, BNB calculations.

At the same time, the strong increase in real wage income⁶⁹ according to the Household Budget Survey data was not in line with the reported 0.9 per cent year-on-year decline in real wages *per* employee according to the NSI national accounts data. NSI data on average monthly gross wages also recorded a significantly weaker real growth of 4.0 per cent on an annual basis.⁷⁰ Given the greater representativeness of the national accounts data due to their wider coverage and the use of additional estimates of labour costs in the 'shadow economy' and payments in kind, it seems more likely that wage income supported household consumption to a lesser extent in the second quarter of 2023.

Household Expenditure

Total household expenditure⁷¹ increased by 21.3 per cent year on year in nominal terms in the second quarter of 2023 (up from 18.0 per cent in the first quarter), with stronger growth being recorded for both consumer spending and tax and social security expenditure. Consumer expenditure growth accelerated to 19.5 per cent on an annual basis (17.5 per cent in the first quarter), mainly due to higher spending in the leisure, cultural recreation and education group. At the same time, food and non-alcoholic beverages continued to be the main contributor to the growth in consumer spending, but their growth eased slightly compared with the increase reported in the first quarter of 2023.

According to NSI Household Budget Survey data, in real terms⁷² consumer expenditure increased by 9.8 per cent on an annual basis in the second quarter (up from 3.6 per cent in the first quarter of 2023), with the largest increase reported in leisure, cultural recreation and education.

⁶⁹ The wage is calculated by dividing the wage bill to the number of employed.

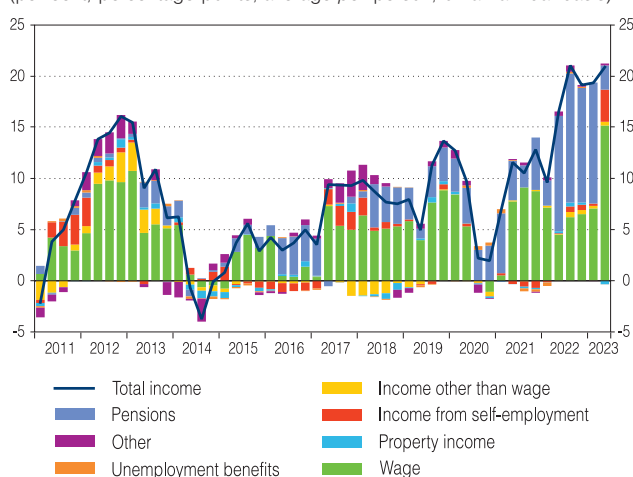
⁷⁰ The discrepancy in the dynamics presented by the NSI budget survey data, national accounts data and NSI short-term statistics data on wage is likely to stem from the differences in the three statistics in terms of how the data are collected, their scope and the definitions used.

⁷¹ Total expenditure include consumer spending, taxes, social contributions, regular transfers to other households and other expenditure. For more details, see [NSI's Methodology](#) on the Household Budget Survey.

⁷² Household consumer expenditure are deflated by overall HICP. Sub-components of consumer expenditure are deflated by the corresponding HICP groups.

Contribution to the Change in Total Monthly Household Income

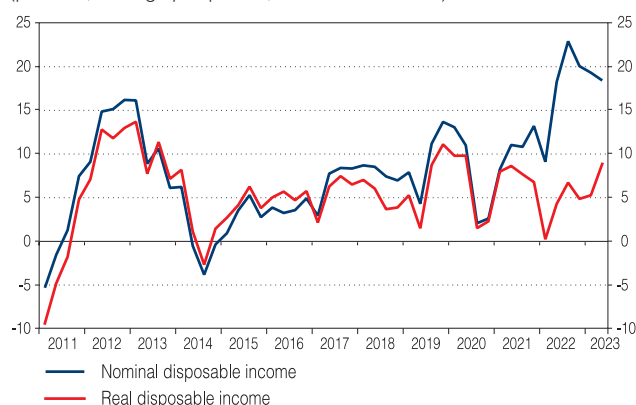
(per cent, percentage points; average *per* person, on an annual basis)



Sources: NSI – Household Budget Survey, BNB calculations.

Household Disposable Income

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

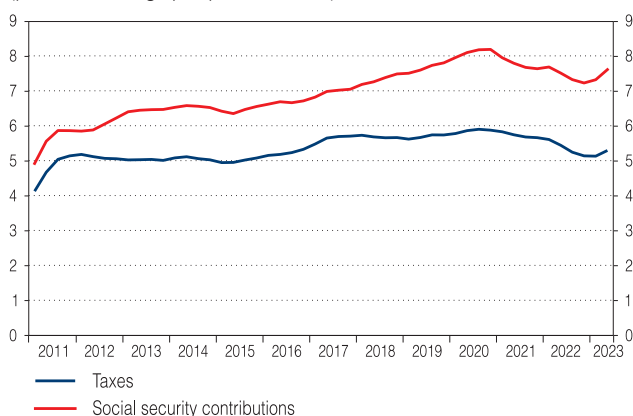


Note: Real disposable income of households represents total income reduced by taxes, social security contributions and regular transfers to other households, HICP deflated.

Sources: NSI – Household Budget Survey, BNB calculations.

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 data and indicate developments.

Source: NSI – Household Budget Survey.

NSI national accounts data also reported an acceleration in annual real private consumption growth to 8.2 per cent on an annual basis, from 1.5 per cent in the first quarter of 2023.

Household Savings

In the second quarter of 2023, households' propensity to save⁷³ part of their income⁷⁴ declined to 9.0 per cent, from 9.8 per cent in the first quarter, according to seasonally adjusted data, probably reflecting strong household consumption over the period and negative real deposit rates. The accumulated amount of households' net assets in the banking system also decreased from the previous quarter as a result of continued strong credit growth, thus supporting household consumption.

4.5. Fiscal Policy Effects on the Economy

In the second quarter of 2023, the impact of fiscal policy on economic activity in the country was mixed, following the reported significant decline in government consumption in nominal and real terms on a year-on-year basis while supported by the impact of government investment on GDP growth.⁷⁵ There was also a mixed indirect impact of fiscal policy, with social payments continuing to support households' disposable income, while the decline in the exchange price of electricity below the threshold for compensation to non-household electricity consumers triggered the discontinuation of these compensations.⁷⁶

⁷³ 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.

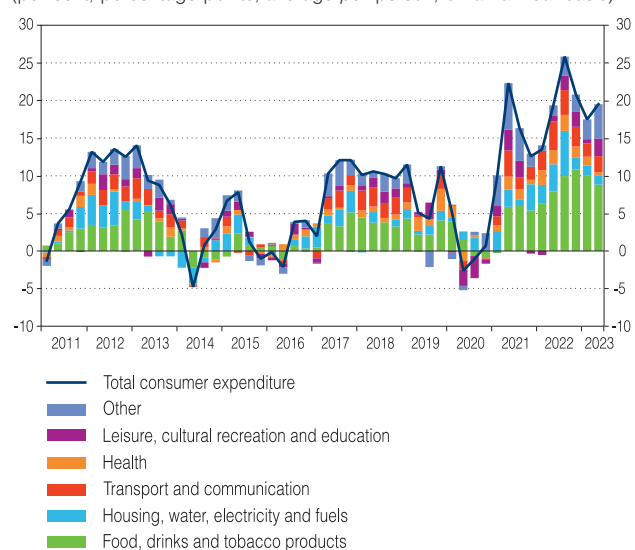
⁷⁴ Income is gross income in the relevant quarter reduced by taxes and social security contributions.

⁷⁵ The assessment of general government investment is based on data on the implementation of the Consolidated Fiscal Programme. At the time of the preparation of this issue of the Economic Review the quarterly general government non-financial accounts published by the NSI are available up to and including the first quarter of 2023.

⁷⁶ In the first quarter of 2023 additional fiscal measures with an indirect impact on economic activity in Bulgaria were the increased amount of tax relief for children, the exemption from excise duties for electricity, liquefied petroleum gas and natural gas, the introduction of a reduced 9 per cent VAT rate for central heating and natural gas suppliers, restaurant, catering and tourist services, as well as for books, baby food and diapers, and the introduction of a zero VAT rate for bread supplies.

Contribution to the Change in Household Consumer Expenditure

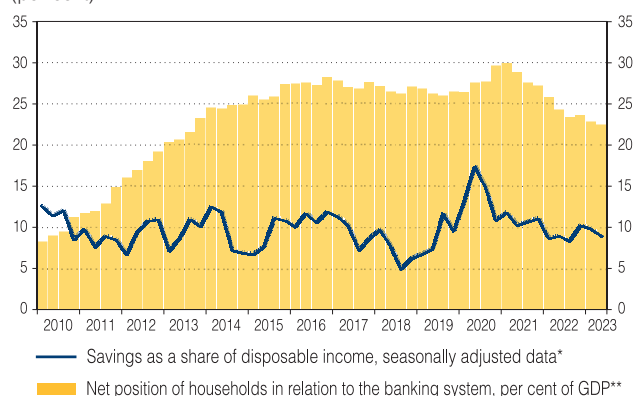
(per cent, percentage points; average per person, on an annual basis)



Sources: NSI – Household Budget Survey, BNB calculations.

Household Propensity to Save

(per cent)



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.

* 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, BNB.

The data on the implementation of the Consolidated Fiscal Programme (CFP) for the second quarter of 2023 provide indications that declining government consumption on an annual basis over that period is likely to have contributed to a decline in government intermediate consumption expenditure and to a slowdown in the growth of the compensation *per* employee in the public sector. The developments in government consumption components can be partly explained by a base effect stemming from higher expenditure on medicines in the second quarter of 2022 and the increase in public sector wages as of 1 April 2022.⁷⁷ At the same time, according to BNB estimates⁷⁸ government investment contributed positively to real growth in gross fixed capital formation in the total economy in the second quarter of 2023.

At the end of July 2023, total government expenditure under the CFP stood at 14.7 per cent on an annual basis, with social expenditure contributing most to this.⁷⁹ Budget expenditure growth slowed from 27.1 per cent in the first quarter, largely driven by spending on subsidies and current operating expenditure. Subsidy expenditure posted a year-on-year decline from the end of the second quarter of 2023, due to the fall in the electricity exchange price below the threshold for compensation payments to non-household electricity consumers and the base effect related to compensation payments in 2022. A base effect associated with the more substantial rise in the cost of ongoing repairs and medicines in the second quarter of 2022

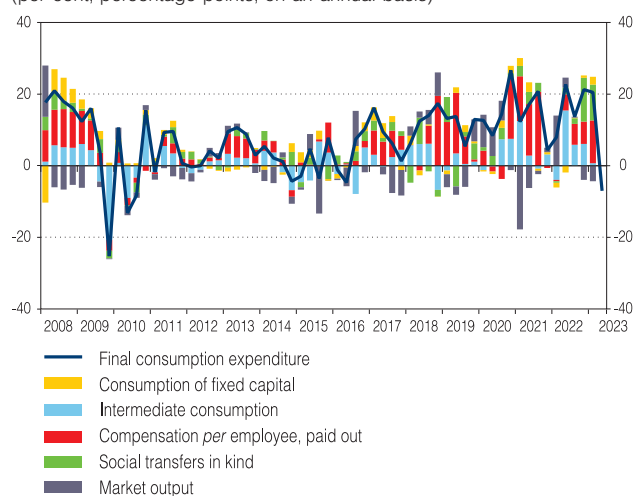
⁷⁷ For more information on operating expenditure dynamics in the second quarter of 2022 see [Economic Review, issue 2/2022](#). The slowdown in the annual growth of payroll expenditure contributed to a base effect related to the increase in the minimum wage in Bulgaria and pedagogical staff salaries as of 1 April 2022 in the absence of such changes over the same period in 2023.

⁷⁸ The estimate of the amount of fixed investment in general government for the second quarter of 2023 is based on information from the monthly reports on the implementation of the CFP as at end-June 2023. The estimate for these investment in real terms is made by deflating it with the deflator of gross fixed capital formation for the total economy.

⁷⁹ The reported annual growth in total budget expenditure has been affected by the allocation of BGN 1.2 billion for the payment of pension allowances and energy subsidies in 2022, reported as cash expenditure in December 2021, but were not reflected as cash-based budget expenditure in 2022.

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

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



Note: At the time of the preparation of this issue of the Economic Review, the quarterly general government non-financial accounts published by the NSI are available up to and including the first quarter of 2023 and therefore, a breakdown of the components of government consumption for the second quarter of 2023 is not available.

Sources: NSI, BNB calculations.

contributed to the increase in the moderation in ongoing expenditure growth⁸⁰.

The Law on the State Budget adopted on 28 July 2023, which provides for higher wages for public sector employees and higher health spending as compared to 2022, implies enhancing of the impact of government consumption on the country's economic activity in the third quarter of 2023. At the same time, CFP capital expenditure growth accelerated to 46.6 per cent on an annual basis by the end of July 2023 signalling that government investment is likely to continue to support real GDP growth in the third quarter of the year.

By the end of July 2023, the growth of total CFP budget revenue amounted to 10.9 per cent on an annual basis, mainly driven by tax and, to a lesser extent, non-tax revenue⁸¹. Tax revenue growth has been determined most by revenue from social and health contributions and revenue from other taxes.⁸² At the same time, the drop in VAT revenue recorded in the second quarter slowed down as of July, due to the acceleration of VAT revenue growth in domestic transactions and intra-Community acquisitions (net) as the negative contribution of VAT revenue from imports increases. Factors with a potential impact on the lower VAT receipts from imports are the continued decline in inventories in the economy, which are characterised by a high import component, the depreciation of oil and the lesser quantities of oil, gas and chemical products imported into Bulgaria as compared to the previous year.

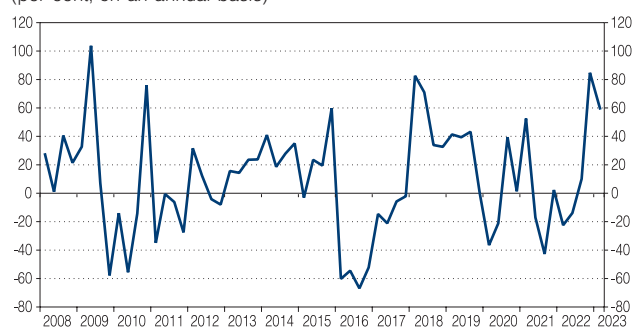
⁸⁰ In the second quarter of 2022, the government made payments for current repair services provided for a period prior to 2022, and therefore the expenditure incurred is recorded only on a cash basis but has no impact on government intermediate consumption expenditure on an accrual basis.

⁸¹ Non-tax revenue growth during the period was driven by dividends received from state-owned enterprises and commercial companies with state participation in the capital, as well as European Investment Bank funds received in June 2023 on projects financed by the Modernisation Fund.

⁸² Energy companies' contributions to the Electricity System Security Fund, which are recorded as revenue from other taxes since early 2023, had an impact on the increase in revenue from other taxes.

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

(per cent; on an annual basis)

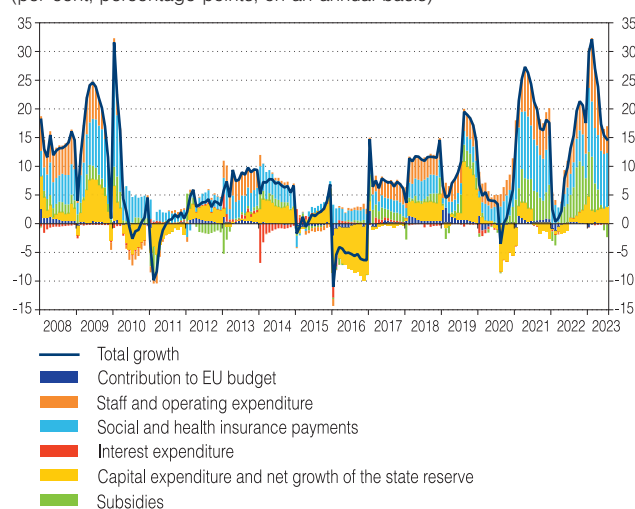


Note: At the time of the preparation of this issue of the Economic Review the quarterly general government non-financial accounts published by the NSI are available up to and including the first quarter of 2023.

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.

By end-July 2023 the CFP budget balance was positive and amounted to BGN 455 million or 0.3 per cent of GDP⁸³.

⁸³ Nominal GDP data for the last four quarters up to and including the second quarter of 2023 are used in calculating the ratio.

5. PRICE DEVELOPMENTS

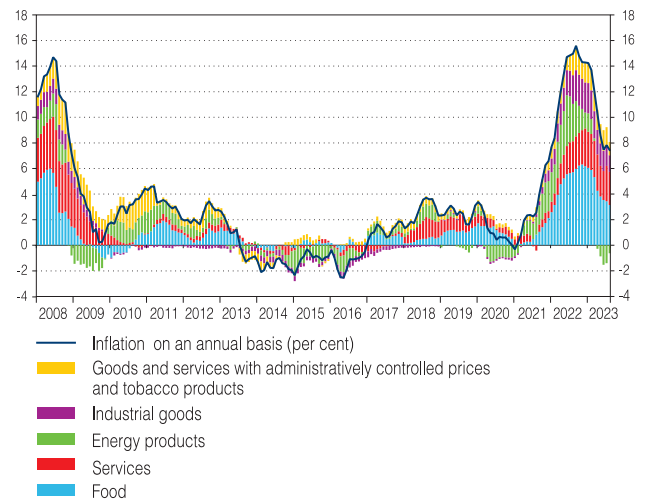
5.1. Consumer Prices

Annual inflation, measured by the HICP, continued to moderate, but remained high: 7.5 per cent in August 2023 compared with 14.3 per cent in December 2022. The main factors contributing to this slowdown were the year-on-year decline in energy prices, reflecting the downward dynamics of international energy commodity prices over the review period, and the base effect from the high growth rates of consumer prices in 2022, mainly in the food group. At the same time, the reported HICP growth rates on a monthly basis for the January–August 2023 period remained at a higher level compared to the historically observed values, and inflationary pressures were observed stemming from the internal macroeconomic environment. Continued strong consumer demand and rising unit labour costs amid growing labour shortages created conditions for a limited pass-through by firms of falling international prices of key energy and agricultural commodities to final consumer prices. Over the January–August 2023 period, fiscal policy continued to have a divergent influence on inflation. Discretionary fiscal measures that were in place to mitigate the pro-inflationary impact of the international environment included reduced excise and VAT rates, mainly targeting energy products and food, and the programme for providing compensations for electricity prices to non-household final customers⁸⁴. At the same time, growth in social payments and continued year-on-year growth in the compensation of employees in the public sector supported private consumption growth and set preconditions for retention of high inflation in the more demand-sensitive HICP components, such as services. Monetary conditions in Bulgaria also had a pro-inflationary effect, as strongly negative interest rates on deposits and loans continued to contribute to ongoing robust private consumption.

⁸⁴ For details, see Fiscal Policy Effects on the Economy Section in Economic Activity Chapter 4.

Inflation and Contribution of Major Commodity and Services Groups to It

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

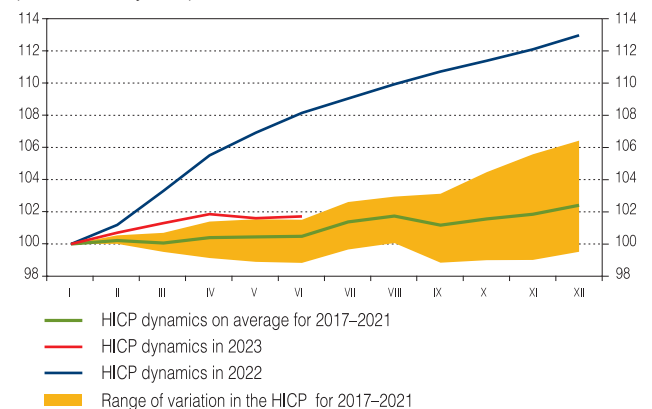


Notes: This structure corresponds to the Eurostat classification; tobacco products and goods and services with administratively controlled prices are presented separately. The index of goods and services with administratively controlled prices is calculated by weighing the relevant elementary aggregates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

Sources: NSI, BNB calculations.

HICP Dynamics by Month for Selected Years

(index, January=100)



Sources: NSI, BNB calculations.

Energy Products Prices

In August 2023, energy products had a negative contribution to headline inflation, which recorded a 7.1 per cent year-on-year fall in prices (compared to a 15.9 per cent growth in December 2022). These developments were mainly driven by declines in transportation fuel prices and reflected direct effects of lower oil prices on an annual basis in international markets. At the same time, household gaseous fuels and solid fuels contributed slightly positively to inflation in the energy product group.

Food Prices

Food price inflation fell to 12.3 per cent in August 2023 (from 25.0 per cent in December 2022), mainly driven by a base effect stemming from the strong price rise in this group in the previous year. In the first eight months of 2023, food price inflation remained high despite reported declines in the international prices of key agricultural and energy commodities, and this group continued to have the largest positive contribution to headline inflation since the beginning of the year, due to both processed and unprocessed food.

Unprocessed food prices posted annual growth of 15.9 per cent (compared with 22.3 per cent in December 2022). The meat and meat products sub-group had the largest positive contribution to the price increase which was due to the year-on-year increase in the prices of chicken, pork and beef⁸⁵, as well as to the persistently high costs of feed inputs⁸⁶. In August 2023, the fruit and vegetables sub-group also had a significant positive contribution to food inflation, which was in line with the year-on-year increase in wholesale fruit and vegetable prices, as well as the higher prices of products imported into Bulgaria.⁸⁷

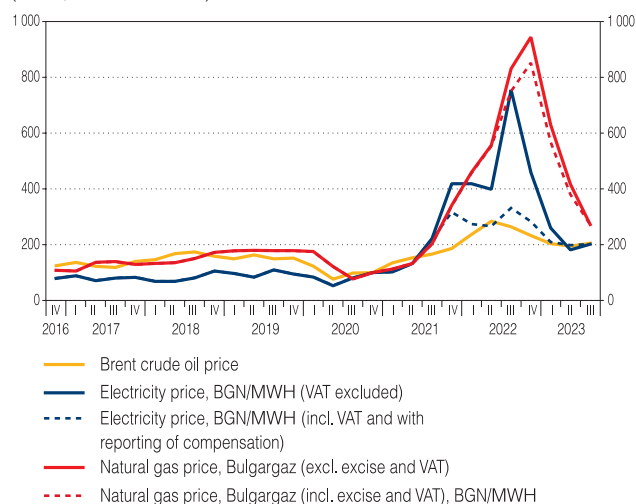
⁸⁵ The analysis employs data as of August 2023 from the Ministry of Agriculture and Food on retail prices in Bulgaria and prices in the European Union.

⁸⁶ NSI data on price indices of goods and services intended for current consumption in agriculture as of the second quarter of 2023 are used.

⁸⁷ Data from the Commodity Exchange and Wholesale Markets State Commission on the Commodity Price Index (MPI) as of August 2023 and BNB calculations based on NSI data on import prices by commodity groups under the Standard International Trade Classification (SITC) as of the second quarter of 2023 are used.

Primary Energy Commodity Prices

(index, Q4 2020 = 100)

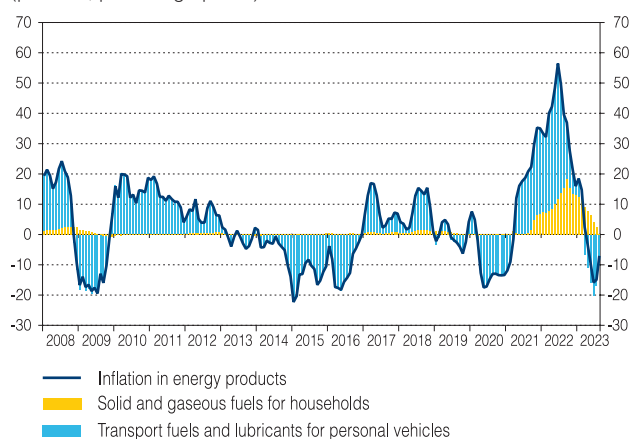


Notes: The electricity price refers to the day ahead segment of the Independent Bulgarian Energy Exchange EAD (IBEX). The price of natural gas sold by Bulgargaz EAD does not include prices for access and transmission through the gas transmission networks. The price of Brent oil in the third quarter of 2023 is calculated based on July and August 2023 data.

Sources: ECB, IBEX, EWRC.

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

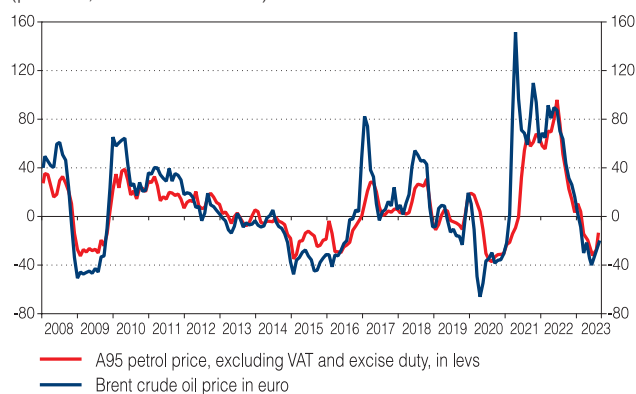
(per cent; percentage points)



Sources: NSI, BNB calculations.

Rate of Change in Brent Crude Oil and A95 Petrol Prices

(per cent; on an annual basis)



Sources: ECB, NSI, BNB calculations.

In August 2023, processed food inflation stood at 10.5 per cent on an annual basis (compared with 26.3 per cent in December 2022), with the largest positive contributions being that of milk, dairy products and eggs, bread and cereals, and sugar and chocolate products. Continued high level inflation in these groups mainly reflected the sustained year-on-year increases in producer prices of these products amid the rapid rates of increase in the costs of production recorded in 2022⁸⁸, while the international prices of major agricultural commodities for the January–August 2023 period recorded a downward dynamics.

Core Inflation

Core inflation, which includes prices of services and non-food goods, remained elevated and stood at 8.8 per cent in August 2023 (compared with 11.9 per cent in December 2022), with services having the main positive contribution to group inflation.

Annual non-food inflation stood at 5.9 per cent in August 2023 compared with 10.1 per cent at the end of 2022. The increase in the prices of non-durable goods was largely due to clothing and footwear, spare parts and automobile accessories, household goods and pet goods and services, while furniture and furnishings and major household appliances continued to contribute positively to the price rise in the durable goods sub-group. Price rises in these sub-groups were driven by the continued strong consumer demand and the trend towards an increase in the share of expenditure on home furnishing and maintenance in total consumption expenditure.⁸⁹

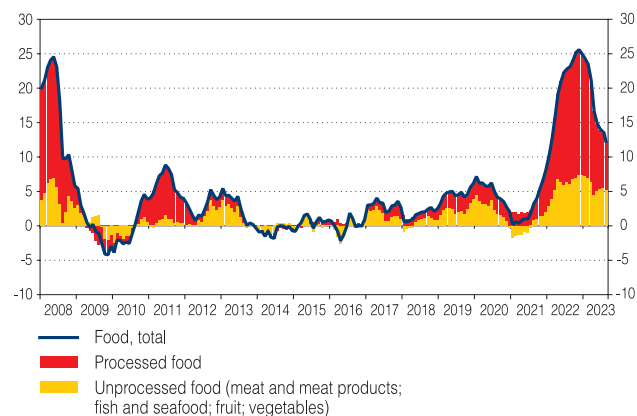
The year-on-year increase in services prices was 11.4 per cent in August 2023 (compared with 13.9 per cent in December 2022). Accommodation services, catering and package holidays had a significant positive contribution to the price growth in this group, which was due to the enhanced household consumer demand, the significant increase in foreign nationals' visits to Bulgaria, rising unit labour costs and indirect effects of the increase in food product prices.

⁸⁸ NSI data on PPI as of July 2023 are used.

⁸⁹ Data from the NSI Household Budget Survey as of the second quarter of 2023 are used.

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

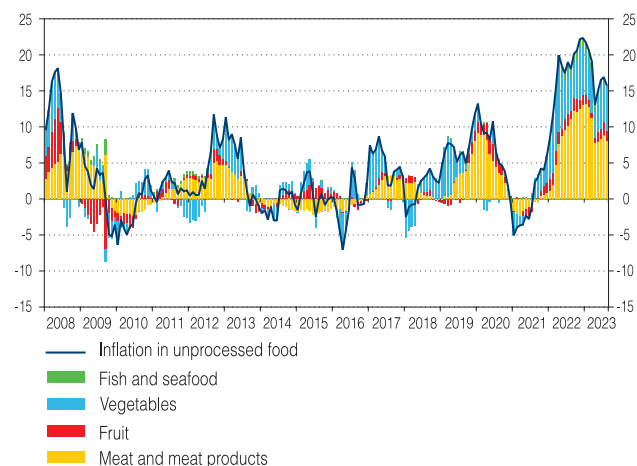
(per cent; percentage points; on an annual basis)



Sources: NSI, BNB calculations.

Contribution of Major Sub-groups to Unprocessed Food Inflation

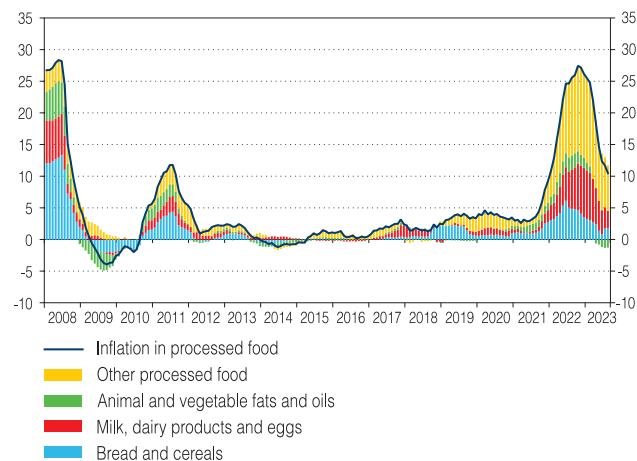
(per cent; percentage points; on an annual basis)



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.

Goods and Services with Administratively Controlled Prices and Tobacco Products

The year-on-year growth of goods and services with administered prices and tobacco products amounted to 4.9 per cent in August 2023 (compared with 6.9 per cent at the end of 2022). The largest positive contribution continued to come from medicinal products⁹⁰, where the trend towards an accelerated price growth rate that started in mid-2022 continued. Tobacco products also had a strong positive contribution, with prices rising at an accelerated pace, most likely reflecting the increase in the excise duty rate on these products from 1 March 2023.⁹¹

Other sub-groups that had a significant positive contribution were electricity⁹², education and heating⁹³. At the same time, central gas supply⁹⁴ had a significant negative contribution to inflation in goods and services with administratively controlled prices which was in line with the dynamics of international gas prices.

The diffusion index, which shows the share of goods and services groups with rising prices on an annual basis, remained at a high level, at 84.9 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 continued to prevail and stood at 72.1 per cent

⁹⁰ 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.

⁹¹ 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).

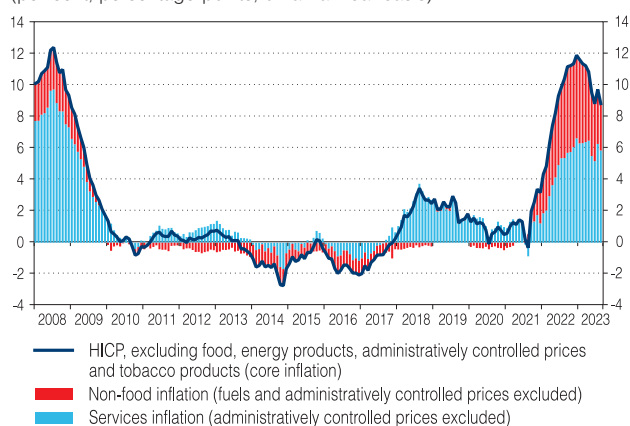
⁹² An average electricity price increase for household consumers of 4.37 per cent was adopted for the new regulatory period by a [decision of the EWRC](#) of 30 June 2023. The price increase entered into force on 1 July 2023 for a forward period of one year.

⁹³ The heating price has been increased by a [decision of the EWRC](#) with effect from 1 July 2023 for a period of one year (the more significant part of the price increase is accounted for by the NSI with the start of the heating season), while at the same time, the standard VAT rate of 20 per cent on the supply of central heating has been reintroduced with effect from 1 July 2023. These factors contributed to the annual price growth in this sub-group in August 2023.

⁹⁴ The price of central gas supply declined by 69.4 per cent on an annual basis as of August 2023. For more information, see [EWRC's press release](#) of 1 August 2023.

Core Inflation and Contribution of Services and Non-food Goods to It

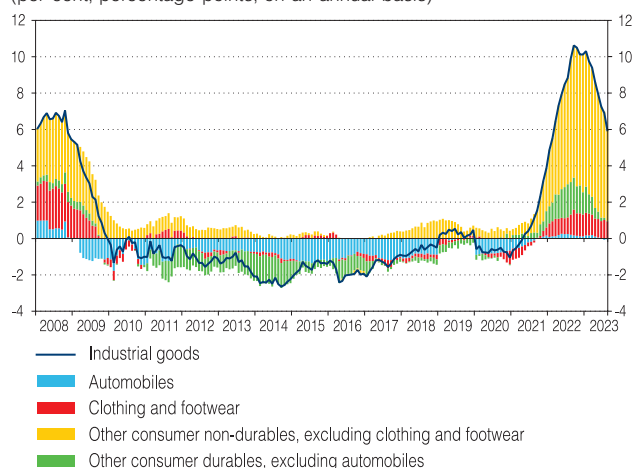
(per cent; percentage points; on an annual basis)



Sources: NSI, BNB calculations.

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

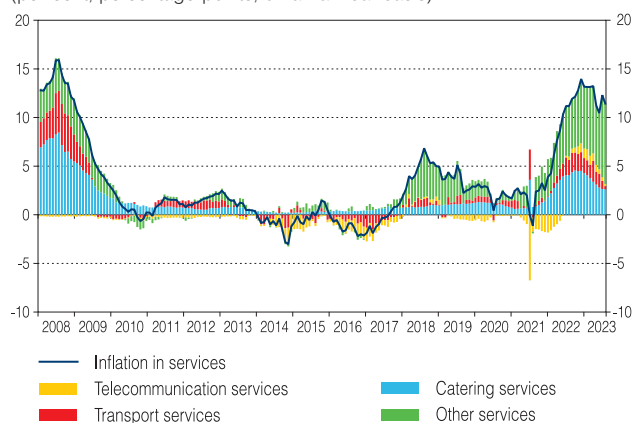
(per cent; percentage points; on an annual basis)



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.

in August 2023 (compared with 79.1 per cent in December 2022).

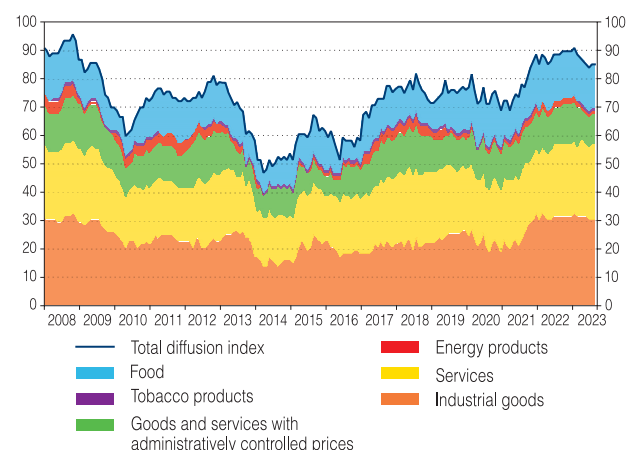
Inflation Expectations

According to the NSI's regular business surveys, in the period January to August 2023 there was a gradual weakening in firms' sentiment for further increases in selling prices over the next three months. The decline in the balance of opinions indicator was most pronounced in the industrial and services sectors. At the same time, among the group of retail trade managers expecting sales prices to rise, the share of managers expecting prices to rise at the same pace as previously observed increased at the expense of the share of managers expecting prices to rise at a faster pace than currently observed.

Diffusion Index

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

(per cent)

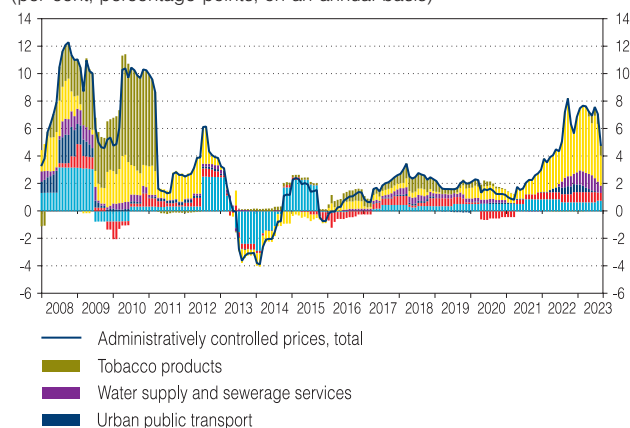


These developments are a prerequisite for inflation in the food and industrial goods groups to remain at its current high levels in the coming months.

Based on current trends, our assumptions about international commodity price developments, labour market dynamics and economic activity in Bulgaria, we expect annual inflation to continue to decline gradually in the fourth quarter of 2023, but to remain high in the first quarter of 2024. We expect persistently strong private consumption and projected increases in unit labour costs to continue to limit the speed and extent to which firms pass through declines in international agricultural commodity prices to final consumer prices. At the same time, there are risks of an accel-

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

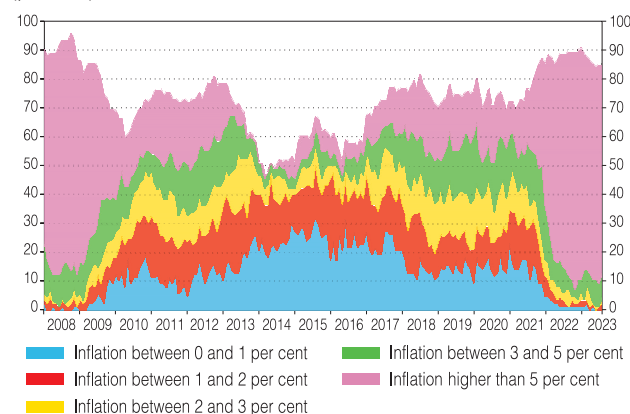
(per cent; percentage points; on an annual basis)



Sources: NSI, BNB calculations.

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

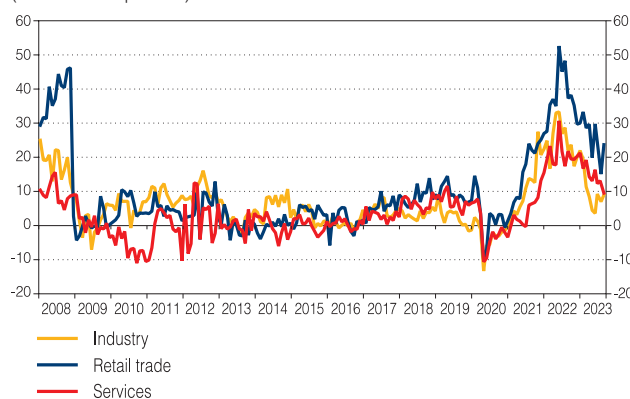
(per cent)



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.

eration in transport fuel inflation in early 2024, while the quarter-on-quarter oil price increase in international markets observed since the third quarter of 2023 continues.

5.2. Housing Prices

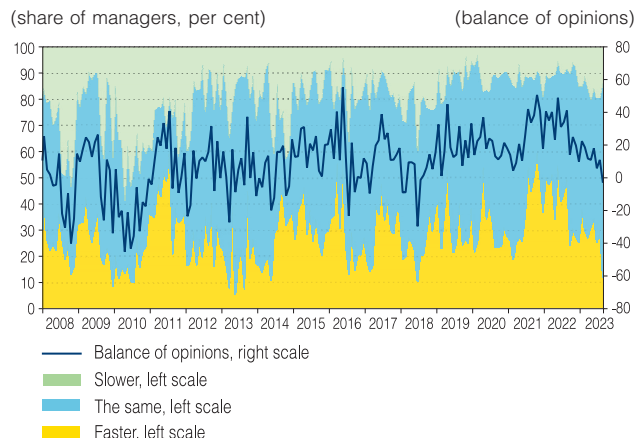
In the second quarter of 2023, the House Price Index (HPI) increased by 10.7 per cent year on year (up from 9.5 per cent in the previous quarter), reflecting simultaneously the rise in existing and new dwellings: 11.4 per cent and 9.5 per cent, respectively. Year-on-year house price increases continued to be recorded in the six largest regional cities, with a significant acceleration of the growth rate reported in Varna, Plovdiv and Sofia. Factors supporting housing demand and thereby contributing to higher prices included the increased labour income, strong credit activity in an environment of historically low annual percentage rate of charge 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. The strong growth in construction costs⁹⁵ for new buildings in the second quarter of 2023 (18.5 per cent on an annual basis) continued to be a supply-side pro-inflationary factor. At the same time, factors limiting house price increases were the weakening household sentiments for house purchases⁹⁶, as well as the decline in the volume of concluded purchases in the second quarter of 2023 (-15.5 per cent on an annual basis). The price-to-rent ratio, which is a frequently used indicator of undervaluation/overvaluation of houses, continued to exceed significantly (by 32.5 per cent) its long-term (historical) average value in the second quarter of 2023⁹⁷. This shows 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 alternative asset for preserving value in an environment of negative real interest rates on deposits. At the

⁹⁵ Eurostat data are used.

⁹⁶ Data of the regular NSI household budget survey, seasonally adjusted by the BNB.

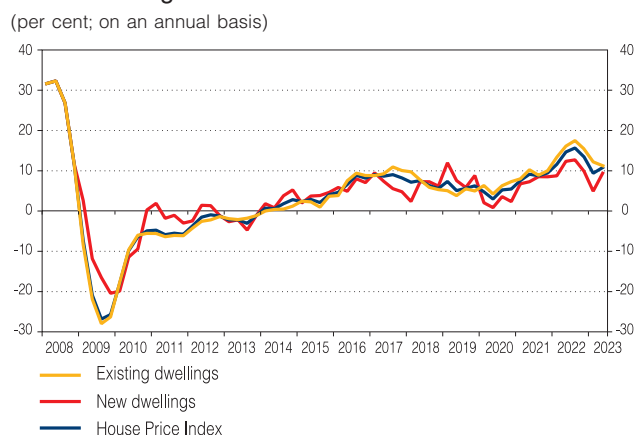
⁹⁷ Calculations for the period from the first quarter of 2000 to the second quarter of 2023.

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



Source: NSI.

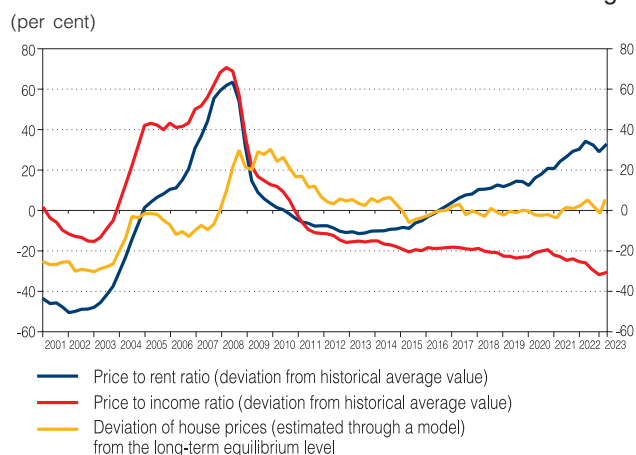
Rate of Change of House Price Index



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.

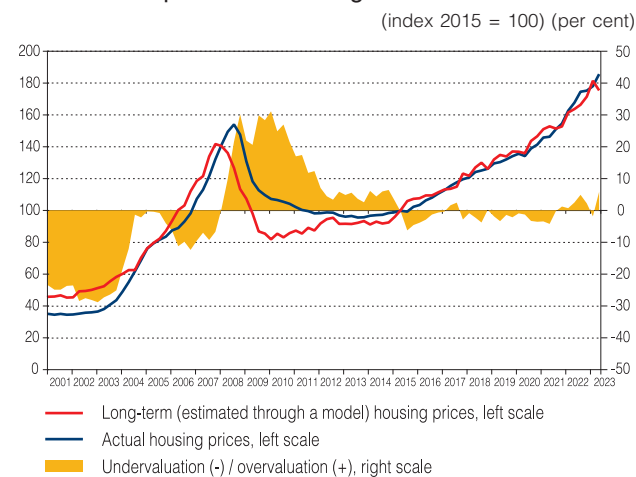
Indicators of Undervaluation/Overvaluation of Housing



Sources: NSI, BNB calculations.

same time, estimates based on the BNB macro-economic model⁹⁸ suggest a significantly lower positive deviation of current residential property prices in Bulgaria from their long-term equilibrium level (5.9 per cent). This reflects the fact that rising household income in combination with persistently negative real interest rates on housing loans have pushed up housing affordability, which is reflected in the model as an increase in their equilibrium price.

Actual and Equilibrium Housing Prices



Sources: NSI, BNB calculations.

⁹⁸ 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	
					III	IV	I	II
Price developments								
House Price Index, total	6.0	4.6	8.7	13.8	15.6	13.4	9.5	10.7
New dwellings	8.5	2.2	7.7	10.8	12.6	9.8	4.9	9.5
Existing dwellings	4.8	6.0	9.2	15.6	17.4	15.6	12.3	11.4
Inflation (HICP)	2.5	1.2	2.8	13.0	15.2	14.5	13.4	8.8
House rentals, paid by tenants (HICP)	3.3	2.5	1.7	6.3	7.1	7.8	9.5	8.5
Lending								
New housing loans	12.4	18.1	24.0	33.5	30.8	23.5	17.8	14.6
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	2.8
Housing loans balances	0.0	-15.5	14.4	17.5	18.0	17.9	17.8	18.0
Construction and Investment								
Permits issued for the construction of new residential buildings (square meters)	-7.9	-9.0	25.1	20.6	55.5	-19.9	-16.8	-18.3
Value added in construction (at average annual prices for 2015)	3.7	-1.0	-17.1	-4.5	-17.7	36.7	5.0	6.2
Construction Production Index, building construction	8.4	-8.4	0.8	1.9	0.2	-0.1	1.0	0.4
Fixed investment; residential buildings	102.1	19.2	-2.2	6.6	-5.4	-8.8	3.8	9.1
Construction Cost Index for new buildings	5.6	2.3	11.0	53.6	67.8	62.3	52.8	18.5

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 home 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.