



ECONOMIC REVIEW
2/2023



BULGARIAN NATIONAL BANK

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The BNB quarterly Economic Review presents information and analysis of balance of payments dynamics, monetary and credit aggregates, their link with the development of the real economy, and their bearing on price stability. External environment developments are also analysed since they directly affect the Bulgarian economy.

The Economic Review, issue 2/2023 was presented to the BNB Governing Council at its 24 August 2023 meeting. It employs statistical data published up to 21 July 2023. Expectations of economic trends in Bulgaria in the short term (until the fourth quarter of 2023), as described in this issue, are based on the BNB macroeconomic forecast prepared as of 3 July 2023. The estimates and projections published in this issue should not be regarded as advice or recommendation. Exclusively the information user is liable for any consequences thereof.

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ABBREVIATIONS

APP	Asset Purchase Programme	ABSPP	Asset-backed security purchase programme
APRC	Annual percentage rate of charge	APP	Asset Purchase Programme
b.p.	basis points	CBPP	Covered bond purchase programme
CEE	Central and Eastern European countries	cif	cost, insurance, freight
CFP	Consolidated Fiscal Programme	COMEX	Commodity Exchange
CNY	Chinese Yuan	CSPP	Corporate Sector Purchase Programme
CPI	Consumer Price Index	fob	free on board
EC	European Commission	FOMC	Federal Open Market Committee
ECB	European Central Bank	ISM	Institute for Supply Management
EIB	European Investment Bank	LTRO	Longer-term refinancing operation
EONIA	Euro OverNight Index Average	PELTRO	Pandemic emergency longer-term refinancing operations
EU	European Union	PEPP	Pandemic Emergency Purchase Programme
EURIBOR	Euro Interbank Offered Rate	PMI	Purchasing Managers' Index
EWRC	Energy and Water Regulatory Commission	PSPP	Public sector purchase programme
FDI	Foreign Direct Investment	TLTRO	Targeted longer-term refinancing operation
FOB	Free on Board	TPI	Transmission Protection Instrument
FOMC	Federal Open Market Committee	€STR	Euro Short-Term Rate
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		
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		
PMI	Purchasing Managers' Index		
p.p.	percentage points		
PPI	Producer Price Index		
SITC	Standard International Trade Classification		
SNA	System of National Accounts		
TPI	Transmission Protection Instrument		
VAT	Value Added Tax		
€STR	Euro Short-Term Rate		

SUMMARY

In the second quarter of 2023, dynamics of global economic indicators points to a maintenance of quarterly growth in world economic activity, similar to the 0.8 per cent growth recorded in the first quarter. The services sector had a major contribution to the increase in economic activity globally, while manufacturing registered a further decline. The US economic indicators for the second quarter suggest real growth in economic activity, which is expected to be close to the quarterly growth of 0.5 per cent reported in the first quarter. In China, quarterly real GDP growth slowed down to 0.8 per cent in the second quarter (compared to 2.2 per cent in the first quarter), while available data on euro area economic indicators for that period signal a close to zero quarter-on-quarter change in real GDP.

Global inflation continued to decline year on year, driven by a fall in commodity prices traded in international markets. Annual inflation in the US and the euro area followed a downward trend in the second quarter of 2023, remaining, however, at high levels well above the Federal Reserve's and the ECB's target rates. During this period, the two central banks slowed the pace of their key interest rate increases. In May, the Federal Reserve raised them by 25 basis points, and in June it kept them unchanged, with the US federal funds rate range reaching 5.00–5.25 per cent. The ECB raised its interest rates by 25 basis points at each of the May and June meetings, compared with an increase of 50 basis points at each of the previous three Governing Council meetings on monetary policy. The ECB's interest rates on main refinancing operations, the marginal lending facility and the deposit facility stood at 4.00 per cent, 4.25 per cent and 3.50 per cent, respectively. The two central banks continued to reduce the size of their balance sheets, limiting the reinvestment of proceeds from maturing securities.

These developments in the external environment suggest favourable price terms of trade for Bulgaria in the second quarter of 2023 and a deterioration in financing conditions in the second and third quarters of 2023. Bulgarian exports of goods are more likely to not follow the dynamics of external demand in the second quarter of 2023 and to decline on a quarterly and an annual basis due to country-specific factors.

In the January–May 2023 period, Bulgaria was a net creditor to the rest of the world, with the current, capital and financial accounts of the balance of payments recording a positive balance. As a result, Bulgaria's gross international reserves fell by EUR 3.8 billion over the period, compared with a decrease of EUR 2.4 billion in the same period of 2022. The BOP current and capital account surplus in the last 12 months as of May 2023 increased to 1.7 per cent of GDP, from 0.3 per cent of GDP in December 2022, mainly due to higher capital account and services trade surpluses and to a lower trade balance deficit. The positive financial account balance for the last 12 months as of May 2023 was formed as a result of a higher accumulation of Bulgarian residents' foreign assets compared to accumulated liabilities to non-residents.

In the first five months of 2023, annual growth of non-government sector's deposits in the banking system remained high, but started to decelerate gradually due to a lower growth rate of non-financial corporations' deposits. Concurrently, further increasing labour income and persistence of household savings preferences in the banking system were the main factors supporting the acceleration of the household deposits' growth.

In January–May 2023, annual growth of credit to non-financial corporations slowed down due to weaker corporate demand for financial resources used for working capital and accumulation of inventories, thus leading to a lower growth rate of the business overdraft. In the household sector, annual growth in both residential and consumer loans remained high. This was largely due to the limited effects of the increases in key euro area interest rates on deposit and lending rates in the household sector, which was one of the main reasons behind the decision of the BNB Governing Council to raise the minimum reserve rate of banks.

In the first quarter of 2023, NSI seasonally adjusted data show that real GDP increased by 0.5 per cent compared to the previous quarter. On an annual basis, economic activity growth continued to slow down and reached 2.1 per cent. This was determined by the simultaneous weakening of the growth in domestic demand and in exports of goods and services, which was only partially offset by the recorded decline in imports. A year-on-year increase in gross value added was recorded in the agriculture and services sectors, while industry reported a decrease. In the first quarter of 2023, employment rose by 1.8 per cent year on year, mainly driven by the increased number of employed in the services sector. At the same time, growth in compensation per employee slowed down on an annual basis, reflecting primarily developments in manufacturing.

In the second quarter of 2023, the growth rate of the composite economic activity indicator for Bulgaria constructed by the BNB decelerated on both quarterly and annual basis, which is a precondition for similar dynamics to be observed in Bulgaria's real GDP as well. In the third and fourth quarters of 2023, real GDP is expected to record low year-on-year growth, reflecting mainly the contribution of households' and firms' expenses on consumption and investments. Factors expected to constrain economic activity growth over the second half year are the projected negative contribution of net exports, the anticipated decline in government consumption in real terms and the continued trend of end-2022 towards a decrease of accumulated inventories in the economy.

Annual inflation, measured by the HICP, continued to follow a downward trend and stood at 7.5 per cent in June 2023. This development reflected primarily declines in energy prices and a the base effect of high growth rates of consumer prices in 2022, with HICP monthly growth rates in the first half of 2023 further exceeding the observed historical values. Pro-inflationary factors related to the internal environment continued to be the sustained strong consumer demand and the increase in unit labour costs in a context of labour shortages. The food group, followed by services and industrial goods, had the highest positive contribution to the overall annual inflation. We expect the gradual downward trend in inflation to continue in the second half of 2023, mainly as a result of our assumptions of a year-on-year decline in oil and gas prices in international markets and their pass-through to consumer prices of relevant energy products in Bulgaria. Strong consumer demand is expected to be a precondition for a limited pass-through by firms of decreases in international energy and non-energy commodity prices into the other HICP components.

1. EXTERNAL ENVIRONMENT

1.1. Current Business Situation

Global Environment

In the first quarter of 2023, global GDP growth accelerated to 0.8 per cent on a quarterly basis (from 0.4 per cent in the fourth quarter of 2022), but data on economic indicators (global PMIs in services and manufacturing sectors) pointed to a similar growth in the second quarter of 2023. In the April–June period, the services sector had a major contribution to the global economic activity, while manufacturing registered a further decline. The deterioration of economic activity indicator in the manufacturing sector, as well as the indicator of the number of new orders, including those for exports, was a prerequisite for a year-on-year decrease in global industrial production and world trade in goods in the second quarter of 2023.

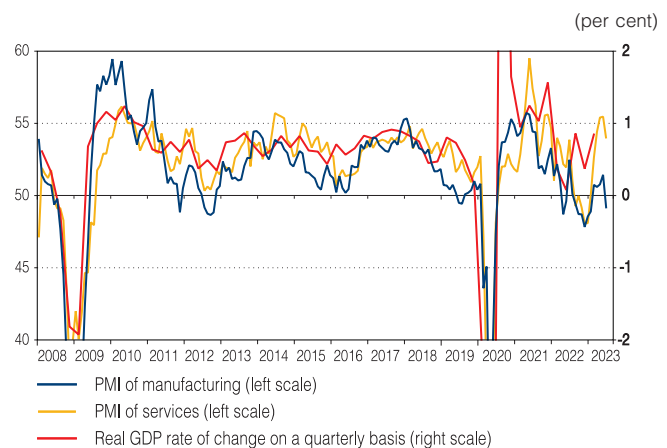
Over the same period global inflation continued to moderate, reaching 6.2 per cent on an annual basis in May. A major factor behind the downward trend in global inflation was the annual decline in international commodity prices.

International Commodity Prices

The Brent oil price continued to decline in the second quarter of 2023, reaching USD 78.2¹ per barrel (EUR 71.8 per barrel), registering a strong year-on-year fall in both US dollar (-30.6 per cent) and euro (-32.2 per cent). Natural gas prices also posted a significant annual decline in the European market (-64.2 per cent in US dollars, -65.0 per cent in euro) and the US market (-70.9 per cent in US dollars) and the Japanese market (-15.5 per cent in US dollars). Over the quarter, market participants' concerns about global economic growth slowdown as a result of monetary policy tightening by leading central banks was a key factor behind the oil price decline. These concerns increased markedly

¹ Hereinafter referred to as the US dollar.

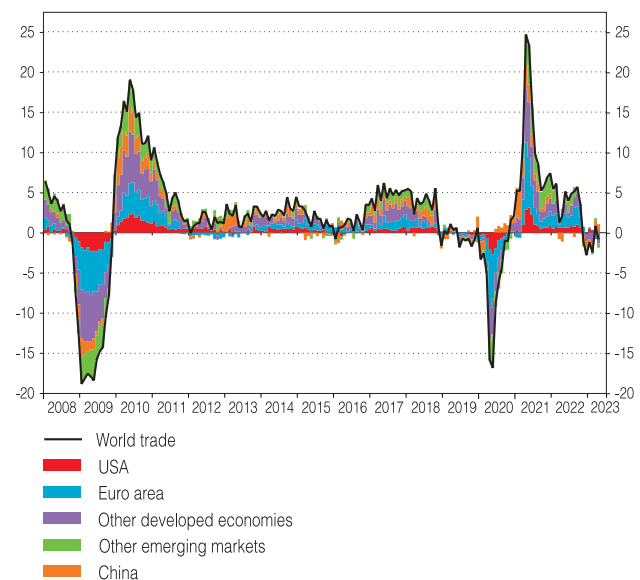
Manufacturing and Services PMIs and Change in World Real GDP



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.

when a series of economic indicators signalled a marked slowdown of China's economy and a possible recession in Germany. In response to the above developments, Saudi Arabia and Russia² announced unilateral oil production cut³ in addition to the already existing quota restrictions adopted by OPEC+ in April, which limited the fall in oil prices⁴.

The main contributors to the decline in natural gas price in Europe over the second quarter were mainly high gas stocks in most gas storage facilities following a warmer winter season, lower demand and calendar factors related to the increased production of energy from renewable energy sources in the summer months.

In the second quarter of 2023, the average metal and mineral price index decreased by 17.8 per cent on an annual basis in US dollars (-19.6 per cent in euro). This decline reflected the impact of the base effect after the outbreak of the war in Ukraine in 2022, as well as the growing indications of a deterioration in global economic activity and deterioration in prospects of manufacturing sector, respectively. At the same time, unfulfilled expectations of market participants for a rapid recovery in economic activity and rising demand for metals in China dampened prices during the quarter, but this effect was mitigated significantly at the end of the period after the Chinese authorities adopted additional monetary stimuli and released additional stimulus package guidelines to support the Chinese economy. Aluminium and copper made the largest negative contribution to the annual change in the metal index, as the price decline in copper, which is essential to Bulgarian exports, reflected the growing concerns among market participants about a deterioration of the outlook for economic

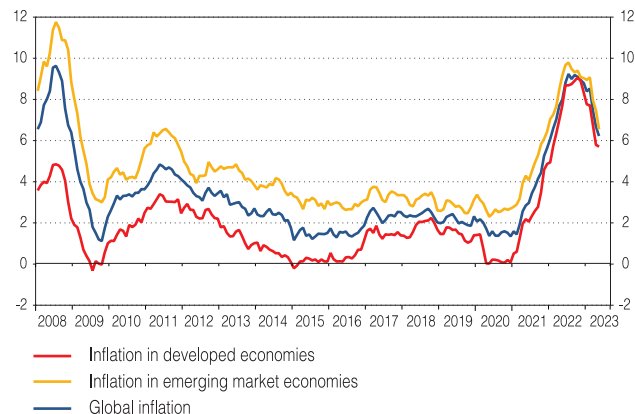
² Saudi Arabia and Russia are the world's largest oil exporters.

³ On 3 July, Saudi Arabia announced that it would extend its voluntary oil output cut (announced on 4 June) of an additional one million barrels per day in July for another month to include August, not excluding the possibility of a further extension of the cut. Also on 3 July, Russia announced a further cut in oil output by 0.5 million barrels per day in August. Total output cuts amount to 1.5 per cent of global supply, increasing the total volume of OPEC+ production restrictions to 5.16 million barrels per day.

⁴ On 2 April 2023, OPEC+ participants announced a reduction in daily production by 1.16 million barrels as of May 2023, with the measure initially in place until December 2023. These restrictions are in addition to the supply reduction of 2 million barrels per day adopted in October 2022 and the unilateral supply restriction of 0.5 million barrels per day announced by Russia in February in response to the sanctions against the country.

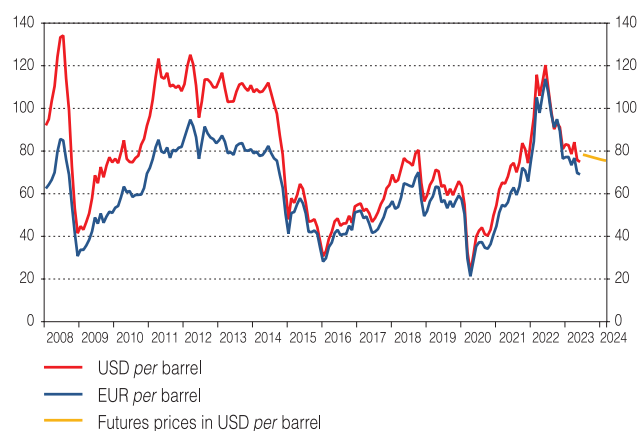
Inflation Measured through CPI

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



Source: World Bank.

Prices and Futures of Brent Crude Oil

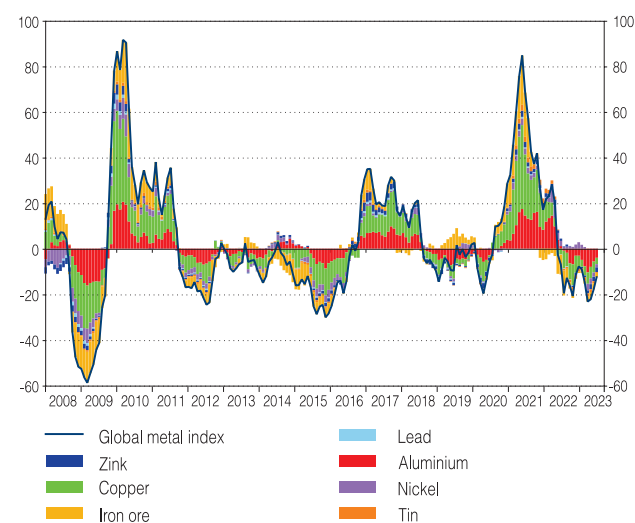


Note: Futures prices are average prices of the July 2023 contracts.

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

Metal 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.

activity mainly in China and the United States and estimates of higher cathode copper production in China in 2023 and 2024.

Between April and June 2023 the total food price index recorded an annual decrease of 15.0 per cent in US dollars (-16.9 per cent in euro). The prices of most commodities fell on an annual basis, excluding sugar and rice prices. Falling vegetable oil prices contributed most to the decline in food price index. The price of wheat, which is essential to Bulgaria's food exports, recorded an annual decrease during the quarter due to the base effect in 2022, the extension of the agreement between Russia, Ukraine, Türkiye and the United Nations for food exports and an increased global supply.⁵

The United States

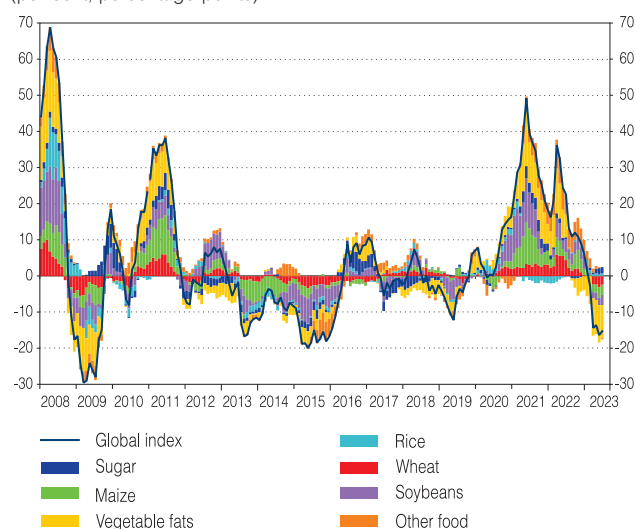
According to the latest estimate, US real GDP increased by 0.5 per cent on a quarterly basis in the first quarter of 2023 (compared to 0.6 per cent in the fourth quarter of 2022). Data on leading economic indicators available as of mid-July 2023 indicate that similar growth in economic activity was sustained also in the second quarter of the year. Over this review period consumer confidence reported quarter-on-quarter improvement, coupled with a slowdown in economic activity in the services sector and a deepening decline in the industry sector.

Over the second quarter of 2023, US labour market conditions did not change significantly, remaining favourable. The number of employees in the non-agricultural sector increased by a total of 732 thousand (compared to an increase of 937 thousand in the first quarter of 2023), with the ratio of offered new jobs to the number of unemployed remaining at historically high levels of 1.6 in May, from 1.8 in April, and 1.7 on average for the first quarter of 2023. In the second quarter the unemployment rate persisted at a historically low level, with the average value of the indicator increasing slightly to 3.6 per cent, up from 3.5 per cent in the first quarter of 2023.

⁵ On 17 July, Russia announced its withdrawal from the agreement between Ukraine, Türkiye and the United Nations to export food through the Black Sea, which led to a substantial increase in wheat prices over the next few days.

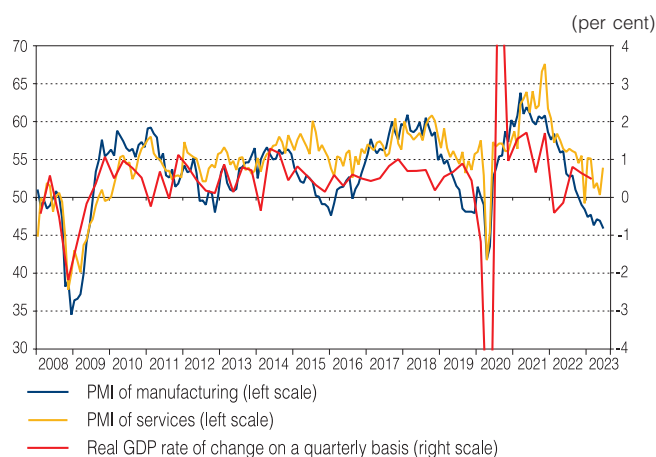
Food Price Indices

(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



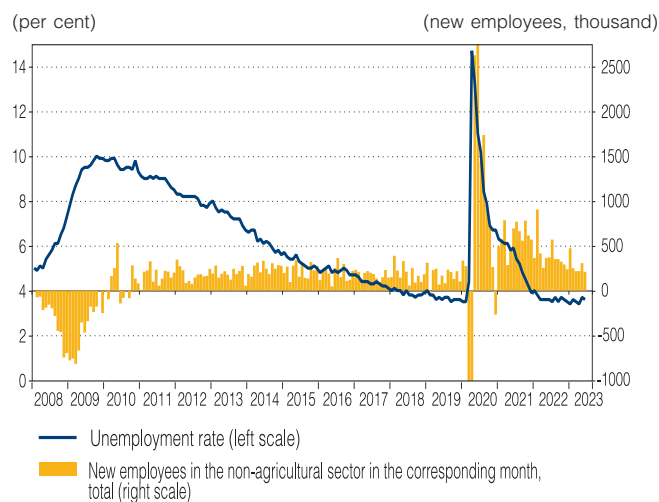
Sources: Institute for Supply Management (ISM), Bureau of Economic Analysis.

In the second quarter of 2023, the downward trend in annual consumer price inflation was sustained, remaining, however, above the 2 per cent target set by the Federal Reserve. In May the annual change of the price index of personal consumption expenditure fell to 3.8 per cent, from 4.3 per cent in April and 4.9 per cent on average over the first quarter. The decline in inflation was mainly due to the annual fall in food and transport fuel prices. The annual growth rate of the core PCE price index (excluding food and energy products) remained broadly unchanged at 4.6 per cent in May (compared to 4.7 per cent on average in April 2022), as was the average value of the indicator over the first quarter. Slight slowdown in the annual growth rate of the core PCE price index reflected mainly lower prices for utilities and for air and public transport. These developments in the core PCE price index suggest that the impact of the Federal Reserve's monetary policy measures has not yet been sufficient to achieve a sustained easing of inflationary pressures in the United States.

Therefore, the Federal Open Market Committee (FOMC) continued to adopt monetary policy tightening measures in the United States during the late April to mid-July 2023 period, albeit at a lower pace on the period since the start of the process. In May the FOMC decided to raise the federal funds rate corridor by 25 basis points to a range of 5.00 – 5.25 per cent. In June, an unanimous decision was taken to keep the target range unchanged due to the need for additional time to assess the impact of monetary policy tightening measures on the economy. During the late April to mid-July 2023 period the Federal Reserve continued to reduce the size of its balance sheet, limiting the reinvestment of proceeds from maturing treasury securities in its portfolio.

In June 2023, the median of FOMC members' individual forecasts about the federal funds rate was increased by a total of 50 basis points at the end of 2023, corresponding to a corridor of 5.50–5.75 per cent of the federal funds rate. The federal funds rate forecasts for 2024 and 2025 were also raised by 30 basis points each.

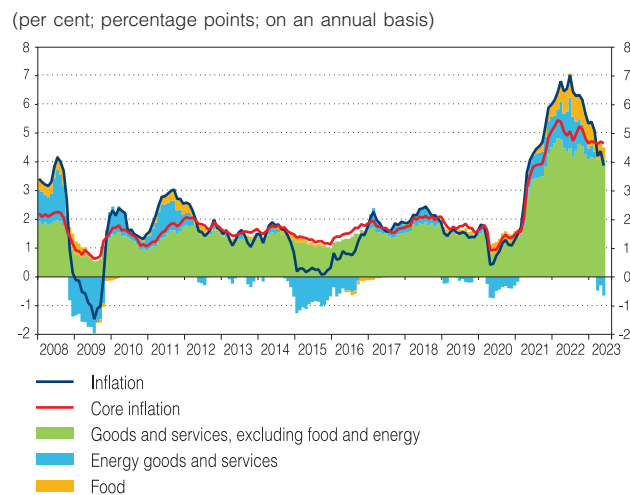
US Unemployment Rate and a Monthly Change in Number of New Employees in the US Non-agricultural Sector



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

Source: Bureau of Labor 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.

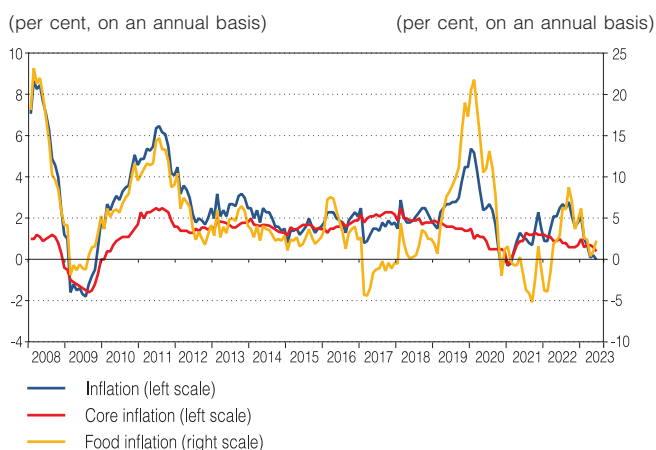
China

In China, quarterly real GDP growth slowed down to 0.8 per cent in the second quarter of 2023, compared to 2.2 per cent in the first quarter, mainly driven by the slowdown in economic activity in the services sector and lower investment activity in the real estate sector.

In the second quarter of 2023, annual inflation in China slowed down, standing at 0.0 per cent in June (compared to 0.7 per cent in March). The moderation in inflation was mainly due to the fall in transport fuel prices and, to a lesser extent, in some durable goods prices. Core inflation decelerated to 0.4 per cent on an annual basis in June from 0.7 per cent in March.

In June 2023, the People's Bank of China eased its monetary policy to support domestic demand, cutting its benchmark interest rates by 10 basis points. The one-year and five-year loan prime rates (LPR) were reduced to 3.55 per cent and 4.20 per cent respectively, and the interest rate on seven-day reverse repurchase operations and the interest rate on one-year medium-term lending facility (MLF) for financial institutions to 1.90 per cent and 2.65 per cent, respectively.

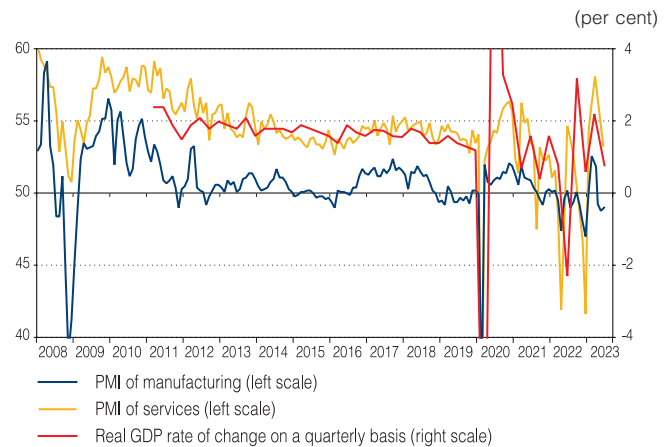
China's Inflation Rate



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

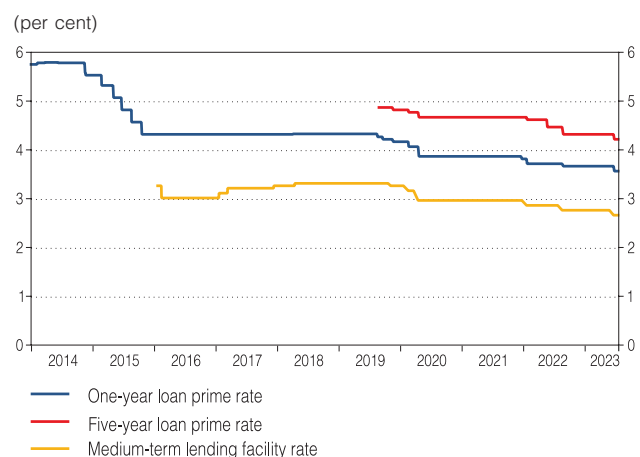
Source: National Bureau of Statistics of China.

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.

Reference Rates in China



Source: People's Bank of China.

Euro Area

Euro area quarterly real GDP growth was 0.0 per cent in the first quarter of 2023, compared to -0.1 per cent in the fourth quarter of 2022. By final consumption expenditure component, net exports and investment made a major positive contribution to the change in quarterly real GDP change, while changes in inventories, government and private consumption contributed negatively. Germany, Bulgaria's largest trading partner, reported a 0.3 per cent decline in real GDP compared to the previous quarter, while growth accelerated to 0.6 per cent in Italy, Bulgaria's other main trading partner.

Data available as of end-July 2023 on economic indicators, including services and manufacturing PMI, indicated a close to zero euro area quarterly real GDP change in the second quarter of 2023.

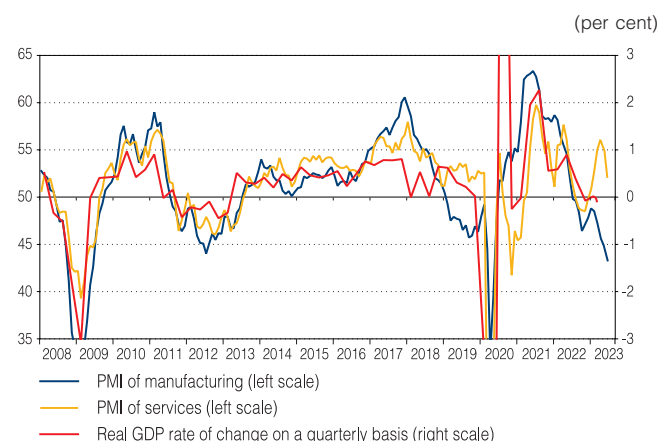
Labour market conditions in the euro area remained historically very favourable. The unemployment rate fell slightly to 6.5 per cent in April and May 2023, from 6.6 per cent in the previous quarter, while the employment growth remained relatively high in the first quarter.

Between April and June 2023, the downward trend in euro area annual HICP inflation was sustained. At the end of June, inflation stood at 5.5 per cent on an annual basis, down from 6.9 per cent in March, driven by a significant decline in the contribution of energy and food commodities and, to a lesser extent, a slowdown in inflation of non-energy industrial goods. Concurrently, the contribution of services continued to increase, due mainly to increases in public transport prices and accommodation services. Core euro area inflation, excluding food and energy products, moderated to a much lesser extent to 5.5 per cent in June, compared to 5.7 per cent in March 2023.

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 benchmark rates and to take measures to reduce its balance sheet size. The interest rate increased by a total of 50 basis points⁶ in the second quarter, with the interest rates on the main refinancing operations, the marginal lending facility and the deposit facility

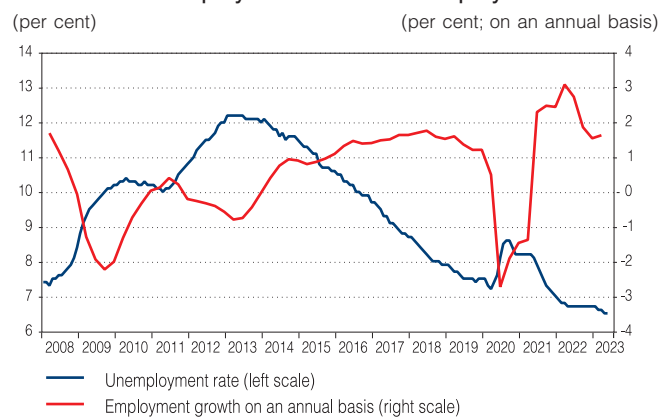
⁶ By 25 basis points at each of the May and June 2023 meetings.

Manufacturing and Services PMIs and Change in Euro Area Real GDP



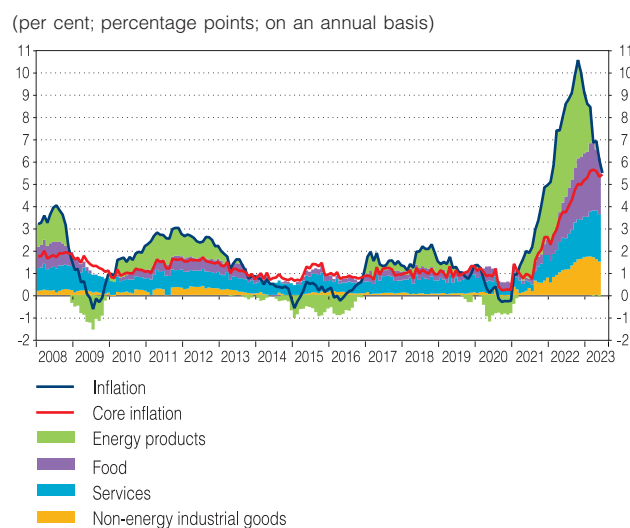
Source: Eurostat.

Euro Area Unemployment Rate and Employment Growth



Source: Eurostat.

Euro Area Inflation Rate



Notes: The inflation is measured by HICP.

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

Source: Eurostat.

standing at 4.0, 4.25 and 3.5 per cent, respectively. At its June 2023 meeting, the ECB Governing Council confirmed that it would discontinue the reinvestments of the principal payments from maturing securities under the Asset Purchase Programme (APP) as of July 2023. Following the June meeting, many members of the ECB Governing Council agreed with the position that, in the absence of a substantial change in the baseline scenario of the ECB's forecast, it was very likely that the Governing Council would raise interest rates at its monetary policy meeting in July.

In the second quarter of 2023, the ECB's interest rate rise and market participants' expectations of their further increase continued to exert upward pressure on interest rates in the unsecured euro area money market and German government bond yields. The average value of the €STR, the overnight euro area's money market rate, increased in the second quarter to an average of 3.08 per cent, from 2.25 per cent in the first quarter of 2023. The German government bond yields in the two-year maturity sector increased by 51 basis points in the second quarter to 3.20 per cent, and in the ten-year maturity sector yields rose by 10 basis points to 2.39 per cent.

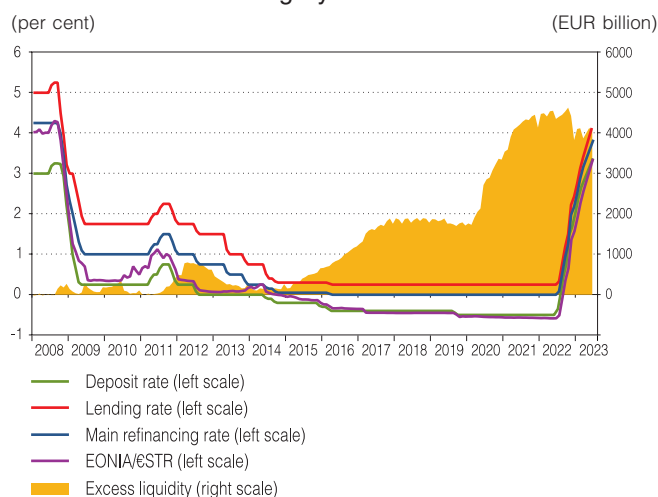
1.2. Impact on the Bulgarian Economy

Bulgarian exports of goods are more likely not to keep pace with external demand dynamics in the second quarter of 2023 and to decline on a quarterly and annual basis, although signals from global economic indicators suggest that global economic activity will maintain quarterly growth, similar to that of the first quarter. The more negative trajectory of Bulgarian exports *vis-à-vis* external demand can be explained by country-specific factors related to the entry into force on 5 February 2023 of the ban on exports to countries other than Ukraine of oil and petroleum products produced from Russian oil as well as planned repairs in large manufacturing enterprises in the second quarter of 2023⁷.

The developments in commodity prices in international markets in the second quarter of 2023, mainly resulting in falling prices on an annual basis, especially of energy products, combined with the structure of the Bulgarian economy and foreign trade, point to

⁷ For further details, see the BNB [Macroeconomic Forecast](#), June 2023.

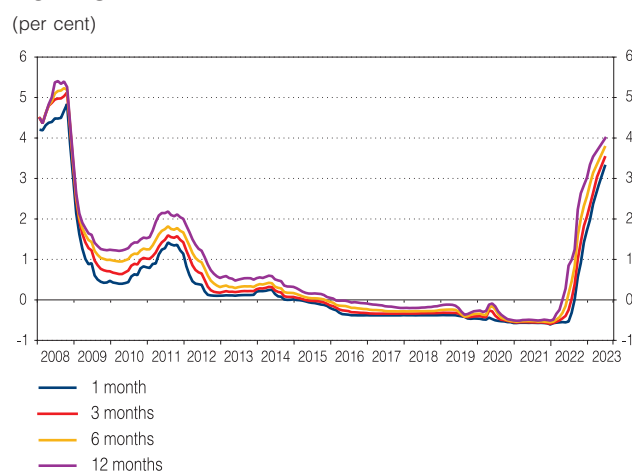
ECB Interest Rates, EONIA, €STR and Excess Liquidity in the Euro Area Banking System



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.

the existence of favourable terms of trade for Bulgaria in the first quarter of 2023⁸.

The ongoing increase in key interest rates by the Federal Reserve System and the ECB may result in deterioration of financing conditions for the Bulgarian government and private sector. According to the currency board principles, the upward trend in euro area money market rates in the euro area may be expected to continue to be passed through relatively quickly to interest rates on the interbank money market in Bulgaria. By the end of the second quarter of 2023, this pass-through was significantly lower in lending and deposit rates in Bulgaria, especially in the household sector, as continued high inflows of attracted funds, ample liquidity and competition in the banking sector remained the main factors behind the limited transmission. However, further increases in interest rates on loans and deposits in the country can be expected in the third quarter of 2023, driven by the decision of the BNB Governing Council of 26 April 2023 under which, as of 1 July 2023 the percentage of the minimum required reserves on funds attracted by banks from residents and non-residents is raised from 10 to 12 per cent.

⁸ Favourable terms of trade refer to a more significant annual decline in the deflator of exports of goods than that of imports of goods.

2. EXTERNAL FINANCIAL FLOWS

2.1. Balance of Payments and Foreign Trade

In the January–May 2023 period, Bulgaria's current and capital account was positive, which does not imply the need for external financing of the economy. This, combined with the significant increase in foreign assets of Bulgarian residents, was the reason for maintaining a positive financial account balance, whereby Bulgaria continued to be the net creditor to the rest of the world⁹. As a result of these developments, Bulgaria's gross international reserves fell by EUR 3.8 billion in the January–May 2023 period, compared with a decrease of EUR 2.4 billion in the January–May 2022 period. As regards the structure of international reserves, there was a shift towards an increase in the share of securities and a decrease in reserves in the form of currency and deposits, which was partly influenced by the rise in government bond yields on international markets. As of May 2023, the amount of gross international reserves was equal to the amount of nominal imports of goods and services over a period of 7.3 months (8.0 months in December 2022). The ratio of international reserves¹⁰ to Bulgaria's short-term external debt remained also high, reaching 4.5 times in April 2023 (4.4 times in December 2022).

Current Account and Capital Account

The BOP current and capital account surplus in the last 12 months as of May 2023 increased significantly compared with December 2022 (0.3 per cent of GDP) to 1.7 per cent of GDP. This was mainly due to higher capital account and services trade surpluses and to lower trade balance deficit. The capital account surplus in the last 12 months as of May 2023¹¹ stood at 1.8 per cent of GDP. Its

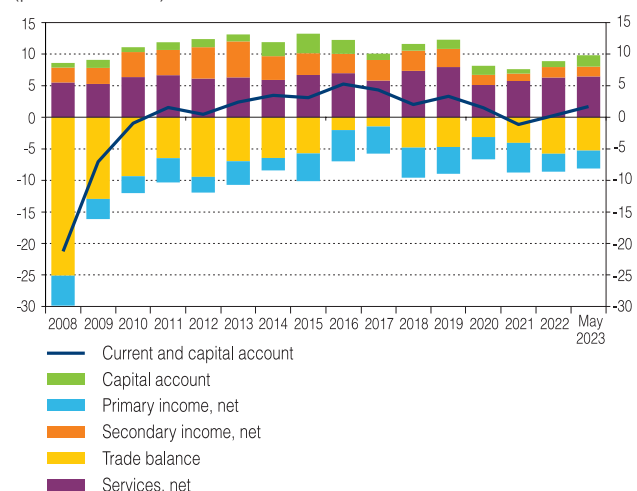
⁹ The analysis is based on the analytical reporting of the balance of payments.

¹⁰ 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.

¹¹ Preliminary data subject to revision.

Current and Capital Account Flow Dynamics and Contribution by Components

(per cent of GDP)



Notes: May 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 first quarter of 2023 are used in calculating current and capital account flows to GDP ratios for May 2023.

Sources: BNB, NSI, BNB calculations.

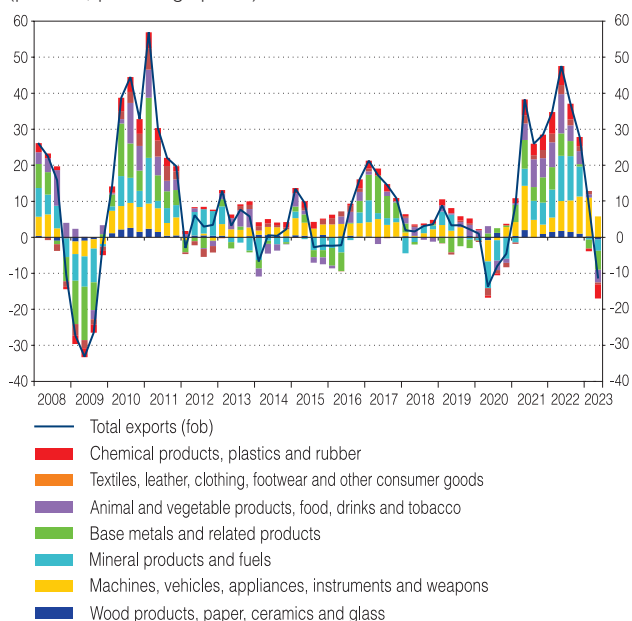
increase compared with December 2022 (0.9 per cent of GDP) reflected mainly greenhouse gas emission allowances trading.

Trade Balance and Foreign Trade in Goods

The trade balance deficit for the last 12 months as of May 2023 (-5.3 per cent of GDP) decreased compared with December 2022 (-5.8 per cent of GDP), reflecting a stronger annual growth in nominal exports of goods (1.4 per cent) compared to that in imports (0.1 per cent) from January to May 2023. There is considerable uncertainty as to how much these developments are driven by changes in prices and/or physical volumes. National accounts data for the first quarter of 2023 show that year-on-year exports of goods increased by 1.8 per cent in real terms, with imports falling by -0.9 per cent, while enjoying favourable terms of trade.

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

(per cent, percentage points)

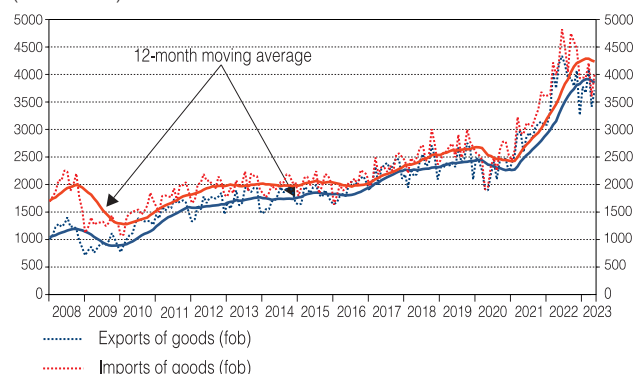


Notes: Quarterly data are used. Data on foreign trade flows for the second quarter of 2023 are for April and have been compared with the respective data for April 2022. Source: BNB.

Concurrently, the BNB calculations based on more detailed data on foreign trade under the Standard

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

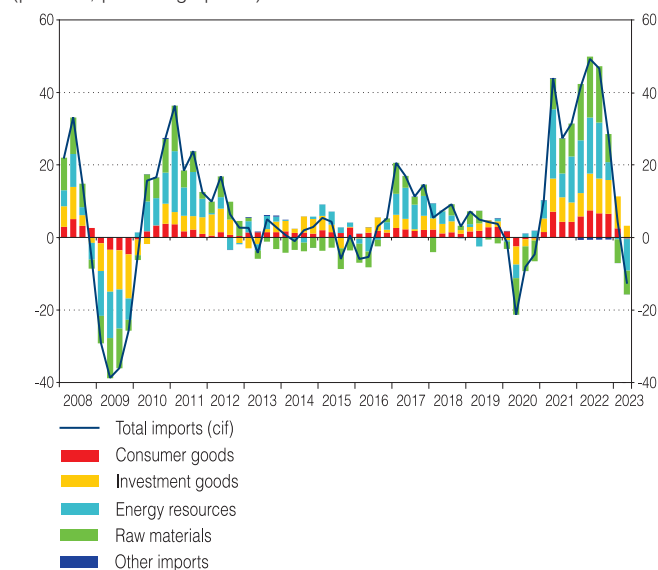
(EUR million)



Note: Monthly data are used. The last observation is for May 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. Data on foreign trade flows for the second quarter of 2023 are for April and have been compared with the respective data for April 2022. Source: BNB.

International Trade Classification (SITC)¹² in the first quarter of 2023 indicate a decline in annual exports of goods in real terms and import growth, implying a much larger impact of price effects on nominal trade balance dynamics. According to the breakdown by commodity group of external trade statistics, the annual growth of nominal exports of goods in the first four months of 2023 was almost entirely due to exports of machinery¹³ (in particular due to the aircraft and spacecraft subgroup) to the United Kingdom, Türkiye, Switzerland and the United Arab Emirates.¹⁴ At the same time, there was also an annual decrease in the amount of electricity exported in the January–May 2023 period¹⁵, which is likely to have contributed to a significant annual decline in electricity prices in Europe. A factor limiting both nominal exports and imports of goods between January and April 2023 was the entry into force from 5 February 2023 of the ban on exports to countries other than Ukraine of Russian refined oil products¹⁶. Another factor potentially contributing to the restriction of imports of goods was the decline in the stocks of commodities and raw materials accumulated over the previous two years.

Balance on Trade in Services

The surplus on trade in services over the last 12 months as of May 2023 increased compared with December 2022 (6.3 per cent of GDP) to 6.5 per cent of GDP. This reflected the year-on-year growth in nominal exports of services by 8.0 per cent over the January–May 2023 period and a drop of -0.4 per cent in imports. Exports growth reflected mainly higher revenue from telecommunications, computer and information services (16.8 per cent growth) and travel-related services (23.7 per cent growth). According to NSI data, the number of visits of foreign nationals to Bulgaria increased by

¹² Real volumes of exports and imports of goods have been constructed by using NSI data on export and import prices by commodity groups under the Standard International Trade Classification (SITC) and Eurostat data on nominal values of the relevant commodity groups under the SITC available by March 2023.

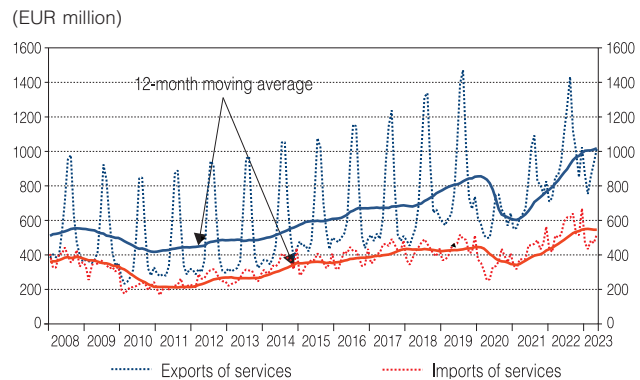
¹³ In this chapter, it should read the machines, vehicles, appliances, instruments and weapons group under the nomenclatures for foreign trade statistics (Combined Nomenclature – CN).

¹⁴ The exports of goods reported in the January–April 2023 period in the aircraft and spacecraft group exceeded many of the historical values repeatedly observed and, given the preliminary nature of the data, could be revised.

¹⁵ According to data from the European Network of Transmission System Operators for Electricity (ENTSO-E).

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

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



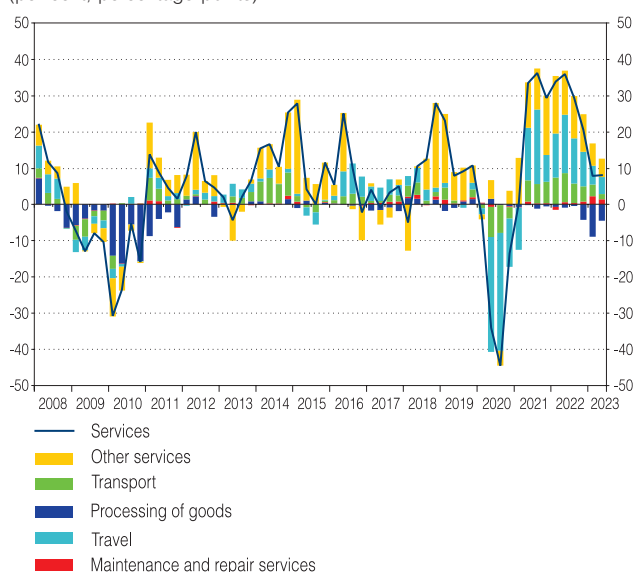
Notes: Monthly data are used. The last observation is for May 2023.

Source: BNB.

27.4 per cent in January–May 2023, with visits from Greece and Romania contributing most significantly to this. Thus, the number of visits of foreigners to Bulgaria over the first five months of 2023 exceeded the level of the relevant period of 2019, before the COVID-19 pandemic hit the tourism sector. Year-on-year fall in nominal imports of services over the January–May 2023 period was driven by the lower expenditure of Bulgarian residents on insurance and pension services¹⁷. Concurrently, NSI data for January–May 2023 indicate that Bulgarian residents' visits abroad rose by 8.2 per cent on an annual basis.

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 second quarter of 2023 are for April – May 2023 and have been compared with the corresponding period of the previous year.

Source: BNB.

Net Primary Income Account and Net Secondary Income Account

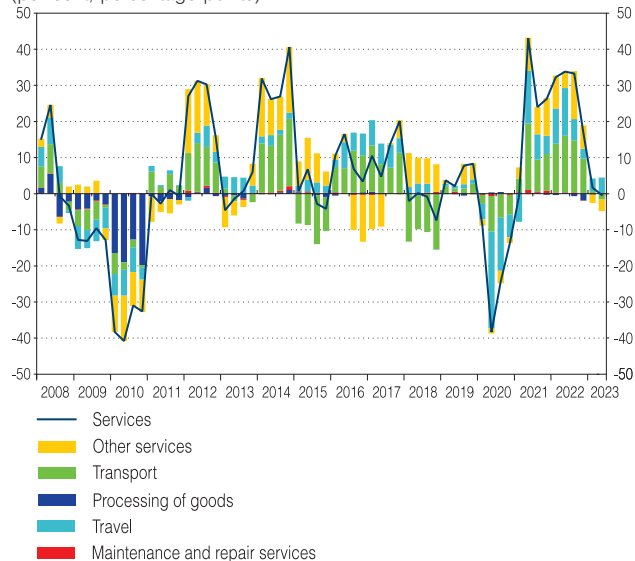
Net primary income deficit for the last 12 months as of May 2023 remained broadly unchanged compared with December 2022, standing at -2.8 per cent of GDP¹⁸. Between January and May 2023, outflows were higher under equity income sub-item related to reinvested earnings on direct investment. Concurrently, dividends paid to non-residents over the first five months of 2023

¹⁷ Preliminary data subject to revision.

¹⁸ 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 second quarter of 2023 are for April – May 2023 and have been compared with the corresponding period of the previous year.

Source: BNB.

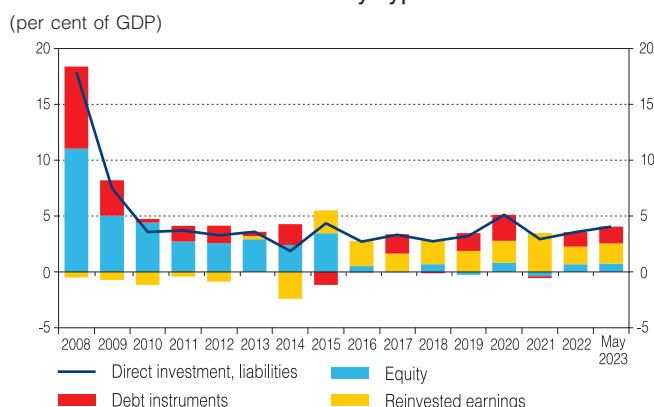
increased compared with the same period of 2022, driven by the suspension of restrictions imposed by the BNB on profit distribution and banks' foreign exposures¹⁹.

Net secondary income surplus for the last 12 months as of May 2023 did not change substantially from December 2022 and stood at 1.6 per cent of GDP. In the January-May 2023 period, flows with a mutually offsetting effect were observed: a decline in incoming current transfers to the general government sector and a decrease in outflows of other sectors for non-life insurance premiums and claims.

Financial Account and International Investment Position

For the last 12 months as of May 2023, the financial account balance was positive at EUR 1266.6 million (EUR 689.2 million as of December 2022). Higher financial account balance over the first five months of 2023 was formed as a result of a higher accumulation of Bulgarian residents' foreign assets over the review period compared to liabilities to non-residents. The increase in foreign assets was largely driven by 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–May 2023 period increased due mainly to the rise in direct investment of other sectors.

Direct Investment – Liabilities by Type of Investment

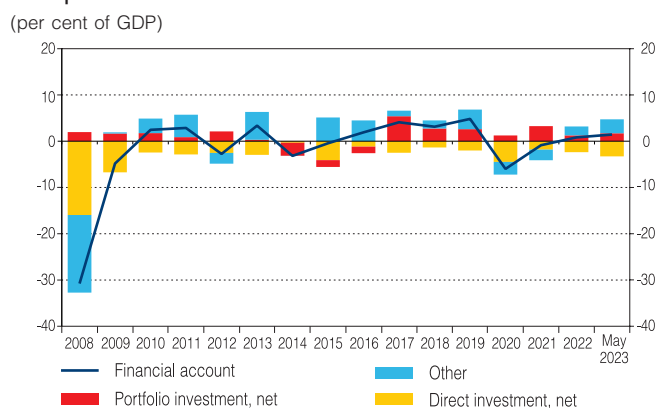


Notes: May 2023 data on direct investment liabilities flows are accumulated for the last 12 months. Nominal GDP data for the last four quarters up to the first quarter of 2023 are used in calculating the direct investment liabilities to GDP ratios for May 2023.

Sources: BNB, NSI, BNB calculations.

¹⁹ On 24 February 2022 the BNB decided to suspend the restriction on banks' profit distribution for 2019 and 2020. From 1 April 2022, the Bank discontinued also the measure limiting banks' foreign exposures, which was introduced in March 2020 and extended in January 2021.

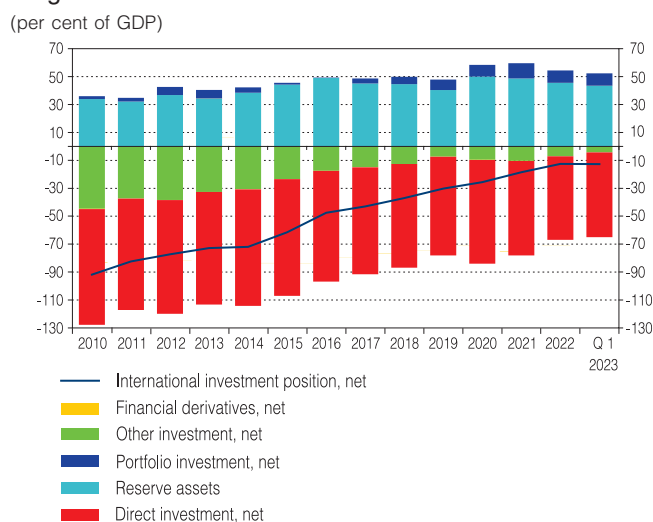
Financial Account Flow Dynamics and Contribution by Components



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

Sources: BNB, NSI, BNB calculations.

Bulgaria's International Investment Position



Sources: BNB, NSI, BNB calculations.

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 rose by 39.0 per cent on an annual basis to stand at EUR 1944.3 million²⁰ between January and May 2023, mainly in the form of reinvested earnings and debt instruments of non-financial corporations.

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 foreign assets (mostly in the form of direct investment) compared to the increase in Bulgarian residents' foreign assets (mostly banking sector foreign currency and deposits).

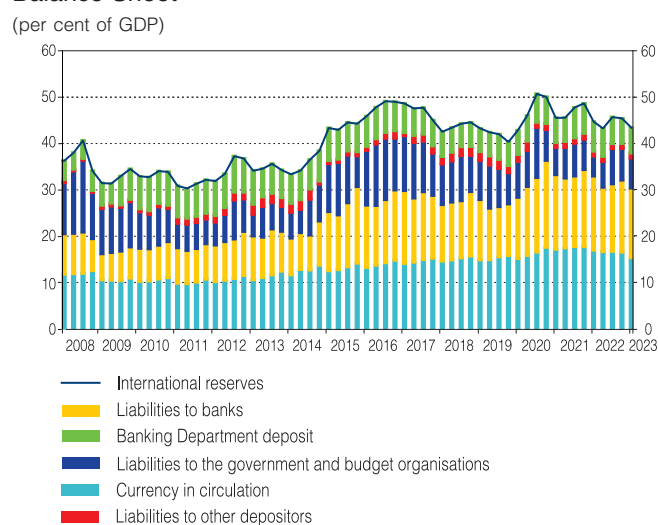
2.2. BNB Gross International Reserves

By the end of June 2023, the market value of Bulgaria's international reserves (including valuation adjustments and price revaluations) was EUR 35.2 billion (BGN 68.9 billion), falling by EUR 3.2 billion (BGN 6.2 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 by the end of the first half of 2023 *vis-à-vis* the end of 2022 was largely driven by a reduction in liabilities to banks, mainly due to a decline in BNB banks' excess reserves. Concurrently, liabilities to the government and budget organisations along with Banking Department deposit rose, reflecting higher returns from international reserve management. In March 2023, BNB's international reserves picked up by EUR 5.1 billion on an annual basis, accounting for 43.4 per cent of GDP (44.7 per cent of GDP at the end of March 2022), largely reflecting the increase

²⁰ Preliminary data subject to revision.

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.

Liabilities Structure of the BNB Issue Department Balance Sheet



Sources: BNB, NSI, BNB calculations.

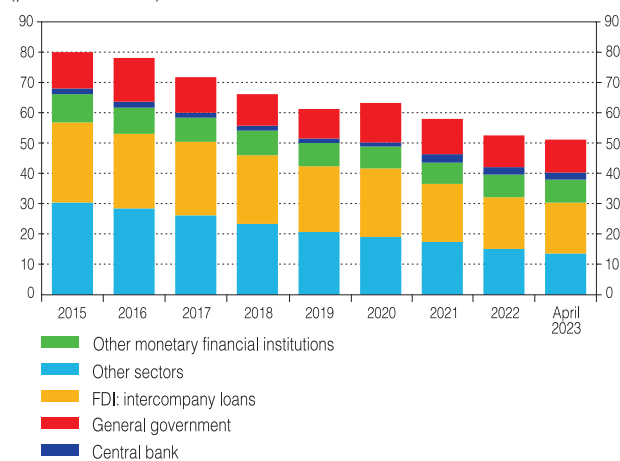
in liabilities to the government and other budget organisations and, to a lesser extent, the increase in liabilities to banks and cash in circulation.

2.3. External Debt

As of April 2023, Bulgaria's gross external debt amounted to EUR 44.5 billion (50.7 per cent of GDP), rising by EUR 28.0 million compared to December 2022 (52.5 per cent of GDP). The increase in debt was entirely due to the general government sector as a result of the issuance of EUR 1.5 billion Eurobonds on international markets in January 2023, which was partially offset by the maturity of government bond issue in March. Higher debt was also observed in intercompany lending, while the debt of the other major economic sectors declined in April 2023 compared with December 2022. As of April 2023, the share of long-term debt in total gross external debt rose to 82.7 per cent from 80.3 per cent in December 2022.

Gross External Debt

(per cent of GDP)



Note: Nominal GDP data for the last four quarters up to the first quarter of 2023 are used in calculating gross external debt to GDP ratio for April 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 five months of 2023, the annual growth of non-government sector's deposits²² in the banking system followed a downward trend, remaining, however, comparatively high at 12.4 per cent as of May (14.3 per cent at end-2022). Annual growth of non-financial corporations' deposits slowed down, while the growth of household deposits accelerated further.

In the March–May period, the growth of non-financial corporations' deposits decelerated and reached 20.6 per cent as of end-May (27.0 per cent as of February). The weaker growth can be partially explained by the base effect of the strong increase in deposits of Production and distribution of electricity, heating, and gaseous fuels sector at the end of the first quarter of 2022 and the reported decline in firms' nominal turnover in this sector in the first quarter of 2023.²³ Data on deposits by economic sector show that deposits of Production and distribution of electricity, heating, and gaseous fuels sector decreased on an annual basis at the end of the first quarter of 2023. At the same time, wholesale and retail trade, repair of motor vehicles and motorcycles sector retained its main contribution to the growth of corporate deposits. However, this contribution declined from the end of 2022.

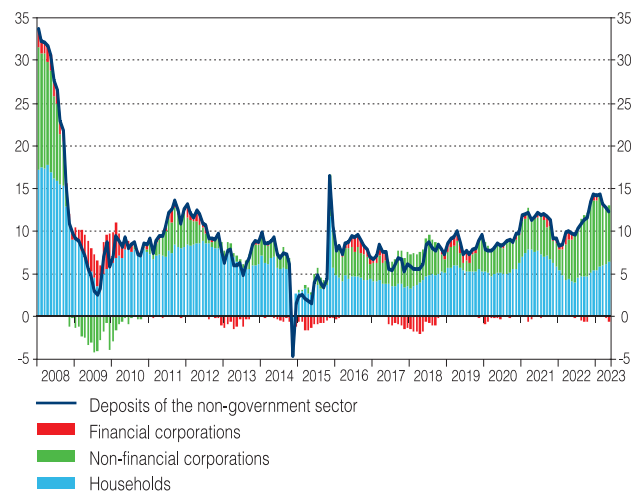
The upward trend in annual deposit growth of the household sector, which started in the third quarter

²² Non-government sector's deposits include deposits of households, non-financial corporations and financial corporations. Deposits of households and non-financial corporations comprised the largest share of all non-government sector's deposits (96.6 per cent on average for the last 12 months as of May 2023), and therefore, the analysis is focused on these two sectors.

²³ The nominal turnover in the electricity, heat and gas production and distribution sector fell by 43.0 per cent on an annual basis in March 2023, decreasing further to 55.9 per cent in May (compared to a year-on-year increase of 189.6 per cent and 209.3 per cent in the turnover in this sector in March and May 2022).

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

(per cent, percentage points)

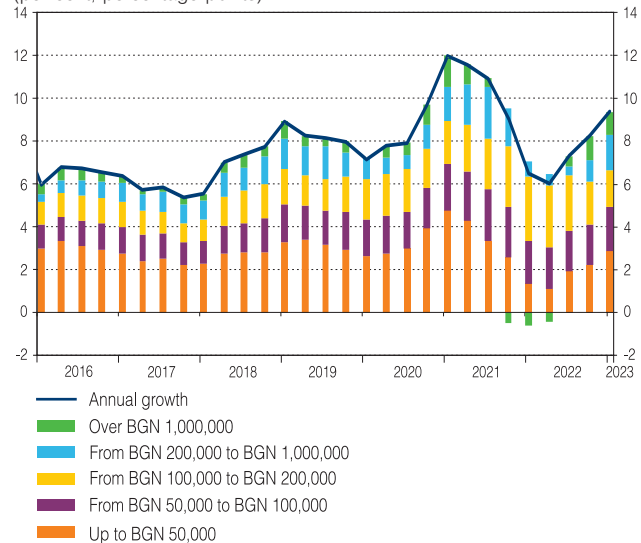


Note: The annual growth rate of non-government sector deposits in November 2015 reflects the exhausted base effect of KTB removal as a reporting unit from the monetary statistics in November 2014.

Source: BNB.

Annual Growth of Household Deposits and Contribution by Deposit Amount

(per cent, percentage points)



Source: BNB.

of 2022, continued in the first five months of 2023, with growth reaching 10.0 per cent as of end-May 2023 (8.3 per cent in December 2022). Further wage growth and persistence of household savings preferences in the banking system were the main factors supporting the upward dynamics of household deposits. Household deposit growth was also potentially driven by the removal of the fee for cash above a certain amount by large commercial banks in the third quarter of 2022²⁴.

Annual growth of the broad monetary aggregate M3 slowed in the first five months of 2023, remaining however relatively high at 11.5 per cent by end-May. Overnight deposits continued to make a major, but gradually declining contribution to M3 growth. Concurrently, the contribution of deposits with an agreed maturity of up to two years turned from negative in early 2023 to low positive. The ongoing rise in interest rates on new time deposits, which is more pronounced in the deposits of non-financial corporations than of households, encourage savings of available funds in this type of products due to the increased profitability. In the January–May 2023 period, the preferences of firms and households to save in local currency remained.

Reserve Money

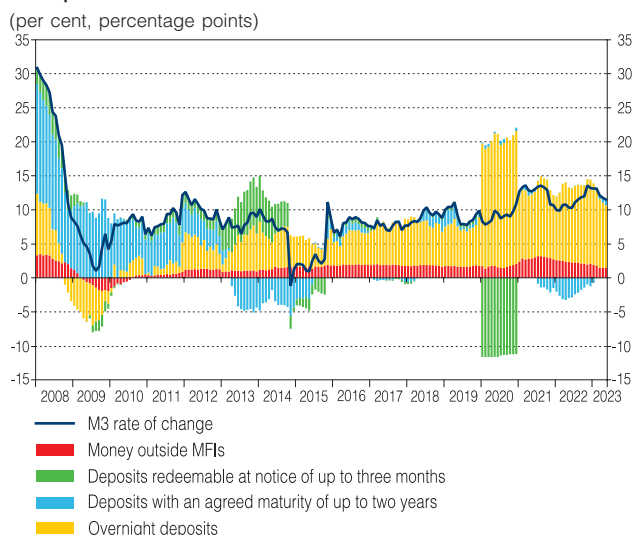
At the end of May 2023, reserve money grew by 4.0 per cent on an annual basis (11.1 per cent in December 2022), with currency in circulation contributing primarily to this growth.

The first five months of the year saw a decrease in banks' deposits with the BNB, driven by the reduction in banks' excess reserves²⁵ and, to a lesser extent, banks' funds in the TARGET2-BNB system. The increase in minimum required reserves, driven by the growing deposit base, limited only partly the decline in banks' reserves. In May 2023, excess funds over the required minimum of reserve assets under Ordinance No 21 was 12.2 per cent of

²⁴ The removal of this fee is the likely reason for the deposits from BGN 200,000 to BGN 1 million, and those of over BGN 1 million to increase their contribution to the annual growth of household deposits at the end of 2022 and in the first quarter of 2023. At the same time, the contribution of deposits of up to BGN 100,000 rose.

²⁵ The amendments to Ordinance No 21 of the BNB on the Minimum Required Reserves Maintained with the Bulgarian National Bank, effective from 4 June 2021 changed the definition of banks' excess reserves. According to the new definition, excess reserves shall be the excess of the holdings in reserve assets over the required amount of minimum required reserves.

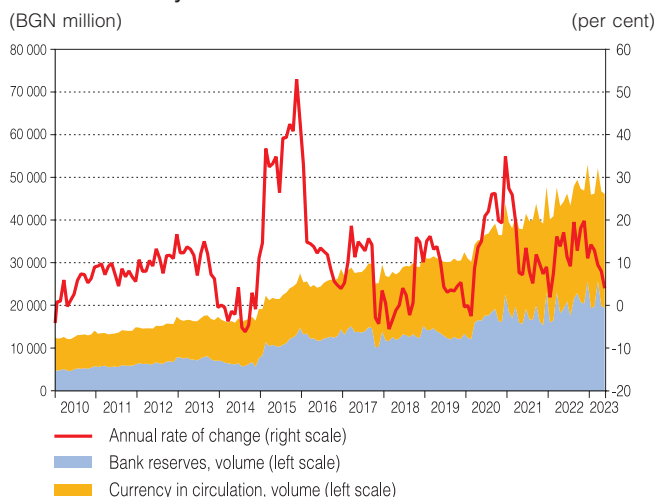
Annual Rate of Change in M3 and Contribution by Components



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.

minimum required reserves on an average daily basis, from 32.0 per cent in December 2022. The continued negative spread between the interest rate on banks' excess reserves rate with the BNB (0 per cent) and the ECB deposit facility rate²⁶ was a factor potentially driving the decline in bank excess reserves, as this spread has created an incentive to reduce part of excess reserves of banks owned by euro area banks. In addition, the upward dynamics of interest rates worldwide, and in the euro area in particular, have created potential alternatives and more profitable investment opportunities for free liquidity for Bulgarian banks as well, which are not owned by euro area banks. This could also have an impact on lowering their excess reserves in the BNB.

The measure taken by the BNB to raise the MRR rate on funds attracted by banks from non-residents from 5 per cent to 10 per cent as of 1 June 2023²⁷ affected the increase in minimum required reserves maintained by banks with the BNB. As of June 2023, the effective implicit rate of minimum reserve requirements²⁸ rose to 9.73 per cent (9.33 per cent in May 2023) as commercial banks' deposits with the BNB comprised 8.84 percentage points in minimum reserve requirements and the remaining 0.90 percentage points were in the form of recognised cash balances.

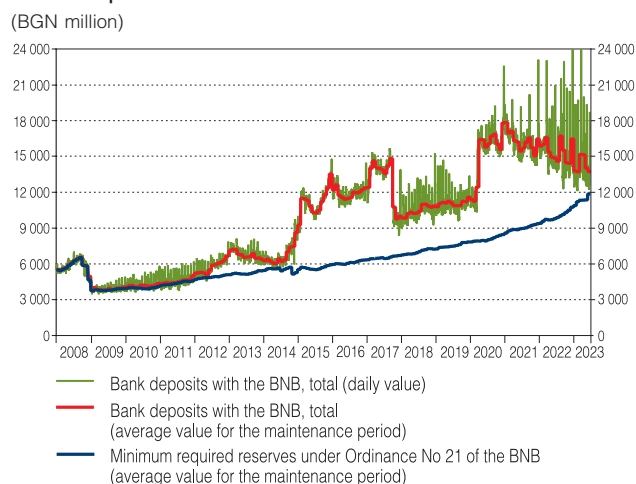
In June 2023, excess funds over the required minimum of reserve assets under Ordinance No 21 declined to 6.8 per cent of MRR on an average daily basis, from 12.2 per cent in

²⁶ The ECB increases in the deposit facility rates in the January–May 2023 period were as follows: from 2.00 to 2.50 per cent as from 8 February 2023, to 3.00 per cent as from 22 March 2023, and to 3.25 per cent as from 10 May 2023.

²⁷ For more information, see the BNB [press release](#) of 26 April 2023.

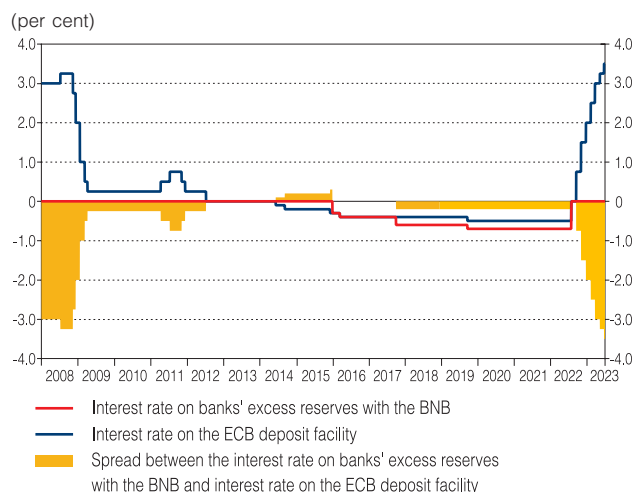
²⁸ Under Article 3 of BNB Ordinance No 21 on the Minimum Required Reserves Maintained with the Bulgarian National Bank by Banks, effective as of 1 July 2023, the rate of minimum required reserves is 12 per cent of the reserve base, with banks not maintaining MRR on attracted funds from government and 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 rate of minimum required reserves on funds attracted from residents is 10 per cent of the reserve base, from non-residents 5 per cent and from government and local budgets 0 per cent.

Bank Deposits with the BNB



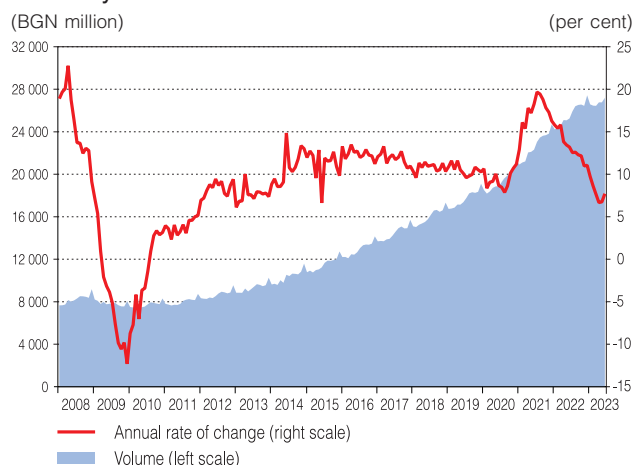
Source: BNB.

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



Sources: BNB, ECB.

Currency in Circulation



Source: BNB.

May 2022. The decrease from the previous month was also registered for banks' funds in TARGET2.²⁹

In the first half of 2023, the annual growth of currency in circulation continued to follow a downward trend, coming to 7.7 per cent at end-June (11.0 per cent in December 2022). The lower growth rate of currency in circulation since the beginning of the year has also been affected by one-off factors.

Reserve currency (euro) trading with the BNB is the main lev liquidity management instrument of banks under currency board arrangements. In the first quarter of 2023, BNB sales (net) to banks amounted to EUR 1.7 billion.

Credit to the Non-government Sector

In the first five months of 2023, annual growth of credit to non-financial corporations slowed to reach 8.3 per cent in May (10.4 per cent at the end of 2022). Lower overdraft growth, which reached 10.5 per cent in May (17.5 per cent in December 2022), fully contributed to the downward dynamics of corporate loans. The continued trend of end-2022 towards a decrease in accumulated inventories in the economy is a potential factor for lower demand for financial resources for working capital and build-up of inventories by non-financial corporations, which implies lower rates of increase in overdrafts. In addition, the increases in interest rates on new loans, which started after the ECB's tightening of monetary policy, also had a potential moderating effect on corporate loan growth. The results of the Bank Lending Survey conducted by the BNB show that the level of interest rates is dampening the demand for corporate loans between the second half of 2022 and the first quarter of the year. The upward trend³⁰ in newly extended corporate loans³¹ recorded in 2022, came to a halt towards the end of the first quarter of 2023, followed by a slight decrease in volumes in April and May 2023.

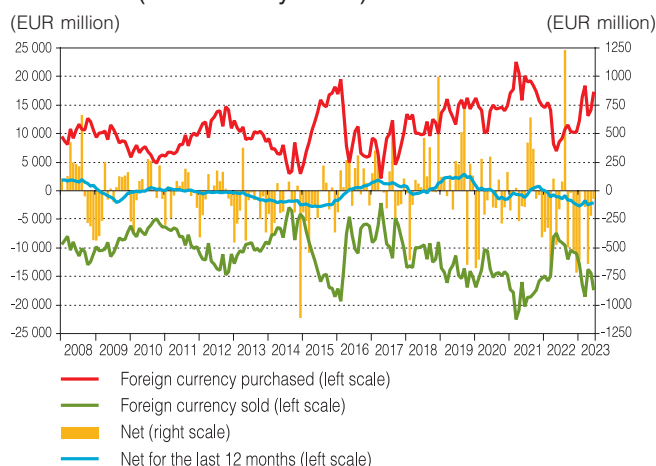
Annual growth of credit to households remained high over the first five months of 2023, standing at 14.3 per cent at the end of May (14.6 in December 2022). Annual growth rates of both residential and consumer loans as of May remained close to those

²⁹ Daily average data are used.

³⁰ Based on 12-month moving average.

³¹ The terms 'new' and 'newly extended' hereinafter referred to as the statistical category 'new business'.

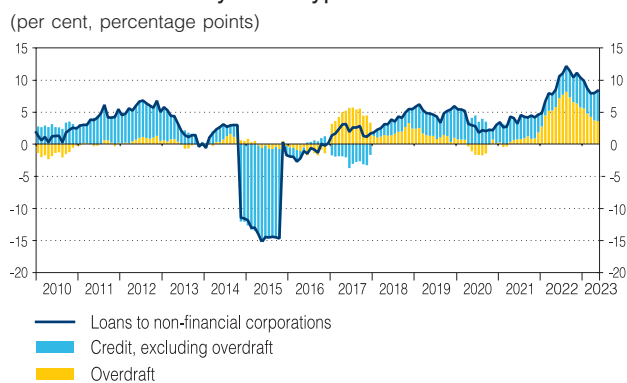
Foreign Currency Purchases and Sales between the BNB and Banks (on a Monthly Basis)



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



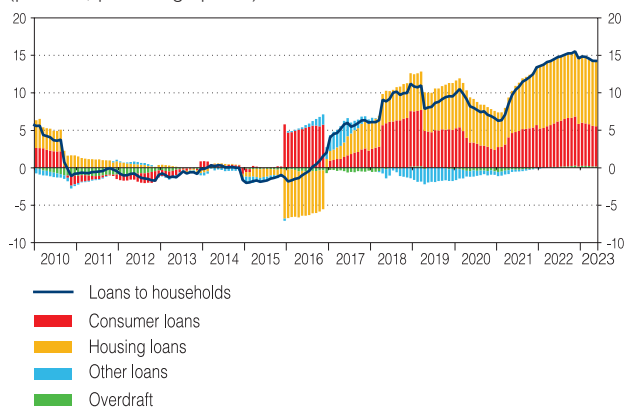
Note: The annual growth rate of loans to non-financial corporations in November 2015 reflects the exhausted base effect of KTB removal as a reporting unit from the monetary statistics in November 2014.

Source: BNB.

registered at the end of the previous year and stood at 17.8 per cent and 11.6 per cent respectively. High growth rates of credit to households were mainly driven by the low and slow transmission of the ECB's monetary policy tightening to lending rates amid ample liquidity in the banking system and strong competition in the banking sector for market share in the consumer and housing loan segment. In real terms, interest rates on housing loans and, to a lesser extent, on consumer loans remained negative, thereby continuing to support household demand for loans.³² Higher growth of housing loans was driven, in addition to interest rates, by households' maintained preferences for real estate purchases as an alternative form of saving or investment, as well as higher house prices which lead to the increase in the volume of new housing loans. In the first five months of 2023, volumes of newly extended household loans (both housing and consumer loans)³³ tended to grow slightly compared to the high levels in 2022.

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.

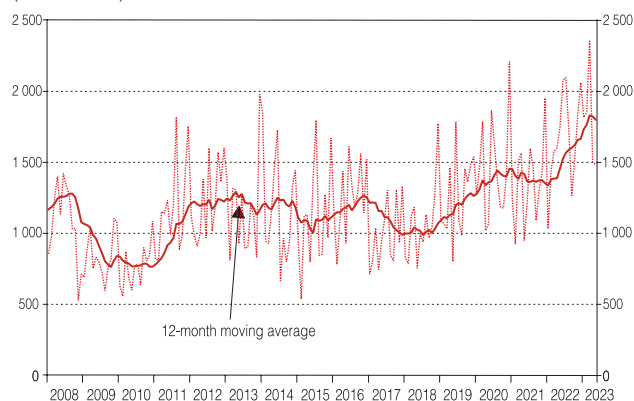
Source: BNB.

³² In real terms, the interest rate on newly extended consumer loans was negative until April 2023, while in May it stood at 0.0 per cent. 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.

³³ Based on 12-month moving average.

New Loans to Non-financial Corporations (Monthly Volumes)

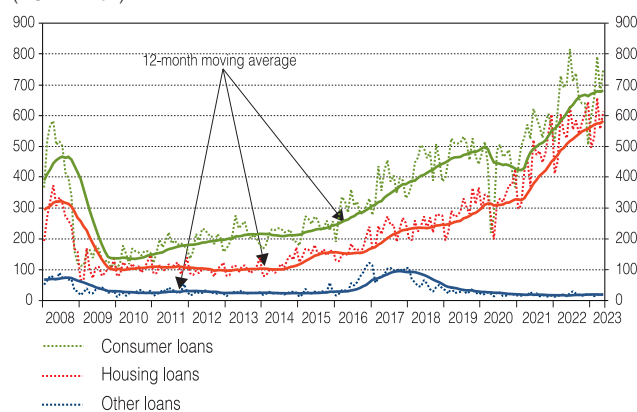
(BGN million)



Source: BNB.

New Loans to Households (Monthly Volumes)

(BGN million)



Source: BNB.

Bank Lending Survey

In the first quarter of 2023, the weighted results of the BNB Bank Lending Survey³⁴ suggest tightening of standards³⁵ for granting long-term loans to large corporations and consumer and housing loans, and retention of broadly unchanged lending standards for small and medium-sized enterprises. The strongest tightening of credit conditions for corporations and households was in terms of interest rates. In addition, the tightening of loans to corporations was stronger also in terms of premia for riskier loans, while in the case of household loans the tightening concerned fees and commissions charged as well. The tightening of banks' credit policies (credit standards and conditions³⁶) with regard to corporate loans was mainly driven by the cost of attracted funds, while with regard to consumer and housing loans by the higher risk assessment, which reflected the general state of the macroeconomic environment.

Banks reported an increase in demand for corporate loans and consumer loans in the first quarter of 2023, while demand for housing loans remained broadly unchanged compared to the October–December 2022 period. The main factor behind the higher demand for corporate loans continued to be the need for financial resources for working capital and inventories. In the household sector, financial resources required for purchasing goods intended for current consumption and durable goods are a key factor contributing positively to the demand for consumer loans, while households' needs of funds for purchasing first and additional residence, as well as the still low interest rates supported mainly the demand for housing loans. At the same time, the assessment of the macroeconomic environment and housing market outlook have had an impact

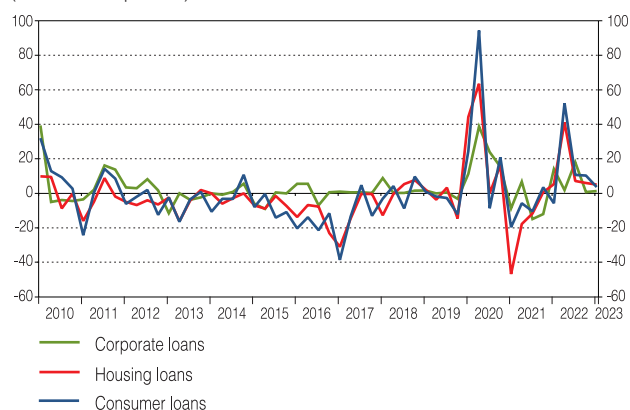
³⁴ Bank Lending Survey in Bulgaria is carried out by the BNB on a quarterly basis. Summarised results of the survey are presented through weighted bank responses by their market share in the relevant credit segment.

³⁵ Credit standards are understood as internal bank guidelines or banks' 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.

³⁶ Credit conditions typically involve the reference interest rate surcharge, the loan amount, conditions for its utilisation and other conditions, fees and commissions, collateral or guarantees to be provided by a borrower.

Changes in Credit Standards

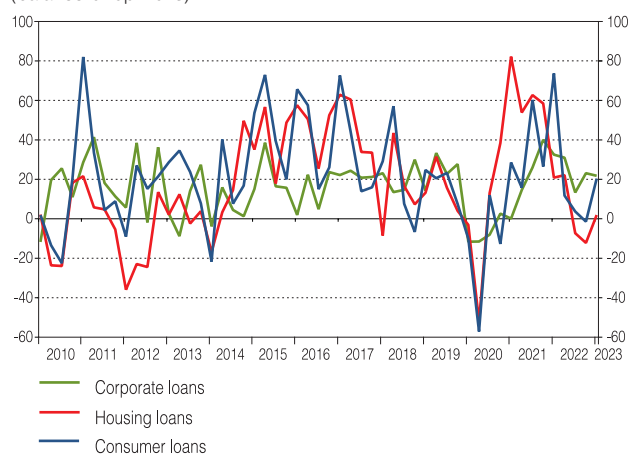
(balance of opinions)



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 bank's market share in the relevant credit segment. Data presented in the chart show the change from the previous quarter.

Source: BNB.

lowering the demand for house purchase loans over the quarter.

3.2. Interest Rates

Interbank Money Market Interest Rates

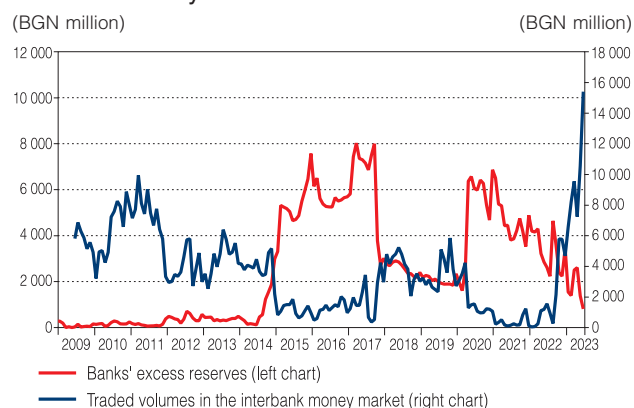
The trend towards strong growth of traded volumes of interbank money market, which started since the end of the third quarter of 2022, continued in the January–June 2023 period. The concluded transactions for the provision of unsecured overnight deposits in levs came to BGN 44,950 million (BGN 13,540 million in the October–December 2022 period), with a marked increase observed in May and June, when the total number of concluded transactions came to BGN 20,764 million. A possible factor behind the continued higher activity on the interbank money market is the decrease in banks' excess reserves with the BNB.

In the context of the currency board in Bulgaria, the increase in key euro area interest rates continued to be transmitted rapidly into interest rates on concluded transactions in the interbank money market. As of June 2023, the monthly value of the LEONIA Plus index rose to 3.12 per cent (1.42 per cent in December 2022), while the spread between LEONIA Plus and *€STR* was negative, amounting to -3 basis points (-15 basis points in December 2022).

Interest Rates on Deposits

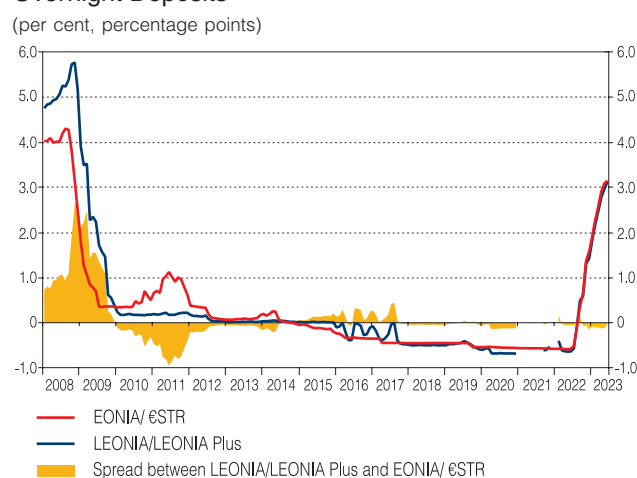
In the context of continued high inflows of attracted funds, ample liquidity and strong competition in the banking sector, the extent of passing-through of effects of the ECB monetary policy tightening on deposit and lending rates in Bulgaria remained weak, particularly in the household sector. In the first five months of 2023, the average weighted interest rate on new time deposits of non-financial corporations and households continued to increase gradually to 1.52 per cent at end-May (1.01 per cent at the end of December 2022). The growth of interest rates in the non-financial corporations sector contributed to the observed developments, with the weighted average interest rate on the new fixed-term deposits of this sector reaching 1.88 per cent (an increase of 83 basis points compared to the end of 2022).

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



Source: BNB.

Interbank Money Market Rates (Average Monthly Value) Overnight Deposits

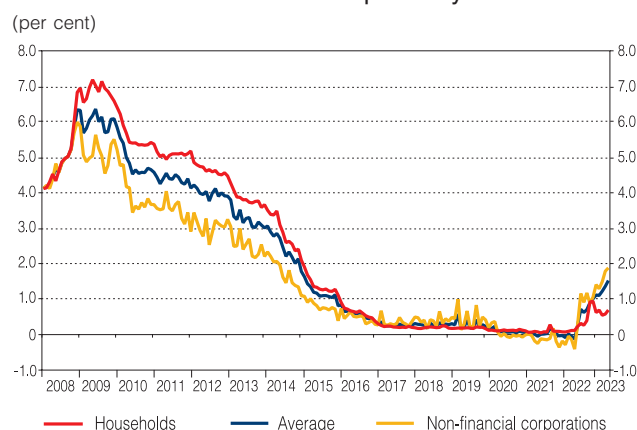


Notes: The EONIA/*€STR* series is composed of: EONIA between 2008 and 14 March 2017; pre-*€STR* between 15 March 2017 and 30 September 2019; *€STR* in the period after 30 September 2019.

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

Sources: BNB, ECB.

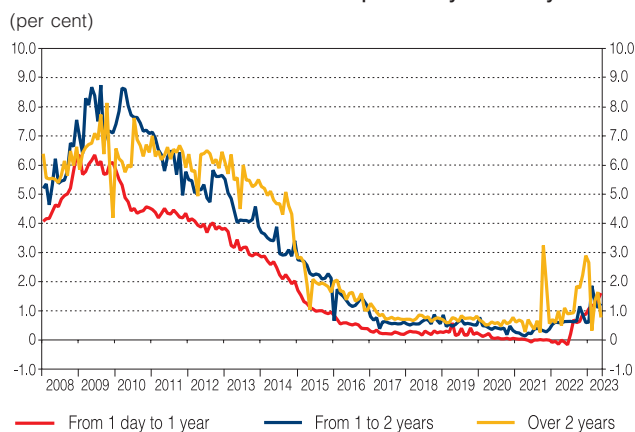
Interest Rates on New Time Deposits by Sector



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.

Interest Rates on New Time Deposits by Maturity



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

Source: BNB.

The most significant increase over this period was reported in interest rates on new time deposits of corporations of one to two years. In the household sector, the average weighted interest rate on new time deposits remained at a low level and stood at 0.69 per cent in May (0.94 per cent in December 2022). More significant increases in the first five months of 2023 were recorded in household deposits with a maturity of one to two years.

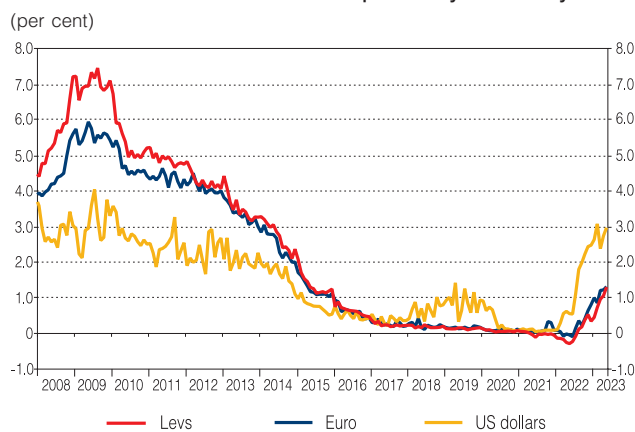
Interest Rates on Loans

The ample liquidity and strong competition in the banking sector remained the main factors behind the very limited transmission of euro area rate increases to the lending rates in Bulgaria and especially those on household loans.

In the non-financial corporations sector, the weighted average interest rate on new loans increased by 101 basis points compared with its level in December 2022 and in May it came to 4.56 per cent. The largest increase was recorded for new loans denominated in dollars, while in the case of new loans denominated in levs and in euro the increase was less pronounced.³⁷

³⁷ Indicated values of interest rates on new loans to non-financial corporations and on new loans to households are on a monthly basis.

Interest Rates on New Time Deposits by Currency

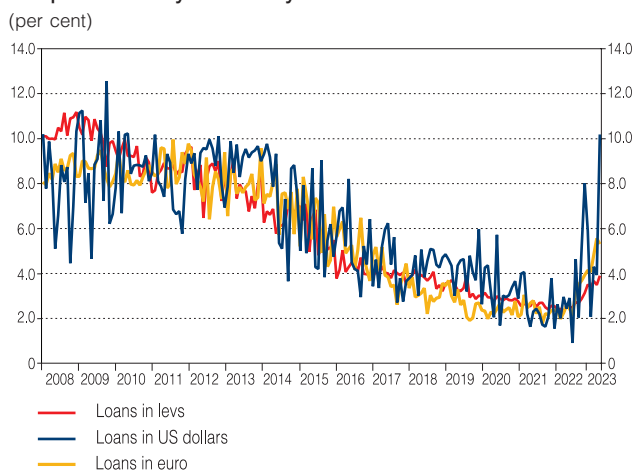


Note: The average interest rate by currency is calculated from the interest rates for all sectors and maturities weighted by the relevant volumes of new deposits.

Source: BNB.

In the first five months of 2023, the annual percentage rate of charge (APRC) on housing loans in the household sector remained unchanged at a very low level of 2.90 per cent in May (2.89 per cent in December 2022). APRC on newly extended consumer loans decreased to 9.1 per cent (10.2 per cent in December 2022), entirely driven by lower interest rates.

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

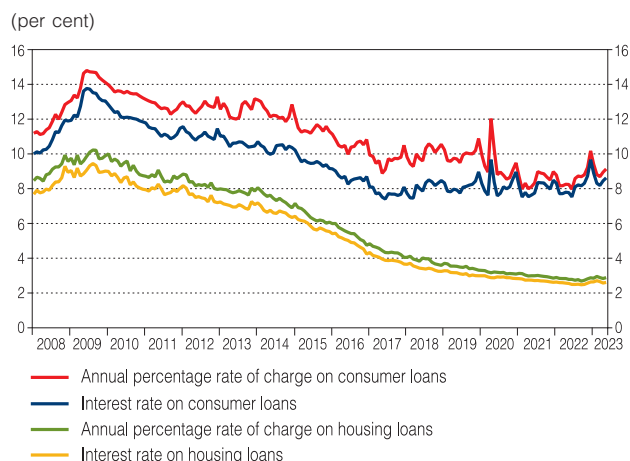


Source: BNB.

Government Securities Yields

At the end of June 2023, the benchmark yield curve of Bulgarian Eurobonds issued and traded in international capital markets showed a slight decline compared to end-March 2023, with the exception of the maturity sectors of up to one year and 30 years for which a rise was reported. Over the same period, German government bond yields increased, driven by the continued rise in key ECB interest rates and market participants' expectations of their further increase. At end-June 2023, the yield spread between Bulgarian and German government bonds narrowed compared with the end of March 2023 in all maturities except for bonds maturing in 2050. The spread narrowing reflected the increase in German government bond yields, while yields on most of Bulgarian government bonds fell. A factor potentially influencing Bulgarian government bond yield dynamics over the review period was the reduced political uncertainty in Bulgaria, helped

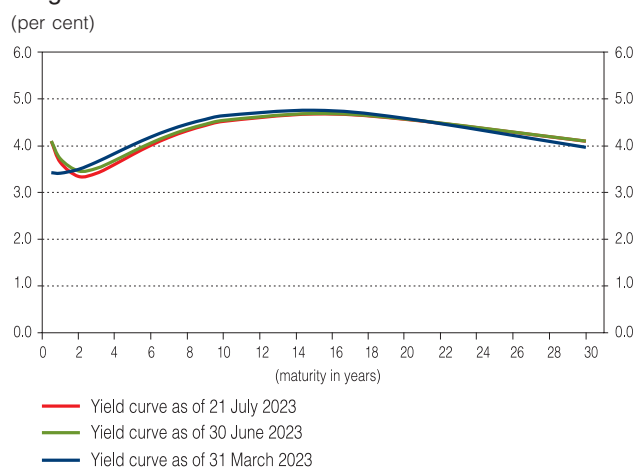
Interest Rates and APRC on New Household Loans



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.

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).

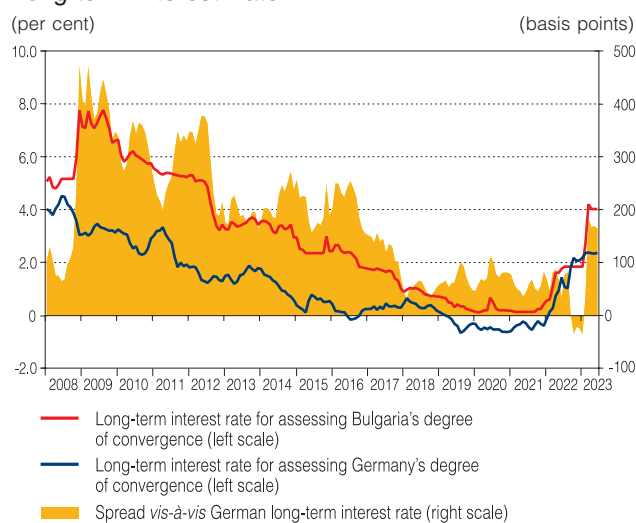
The chart employs daily yield data on Bulgarian government securities issued and traded in international capital markets, published in the MF Central Government Debt and Guarantees Monthly Bulletin.

Sources: MF, BNB calculations.

by the formation of a regular government after the early elections for National Assembly held in April 2023. As of 21 July 2023, Bulgaria's government bond yield curve remained close to that at the end of June 2023.

In June 2023, the long-term interest rate for Bulgaria's degree of convergence was 4.03 per cent (4.21 per cent in March 2023)³⁸, while the spread *vis-à-vis* Germany's long-term interest rate stood at 165 basis points.

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



Sources: BNB, ECB.

³⁸ Daily data indicate that the long-term interest rate remained unchanged from 20 March 2023 to 30 June 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.

4. ECONOMIC ACTIVITY

4.1. Current Economic Environment

Gross Domestic Product

Based on NSI seasonally adjusted data, real GDP increased by 0.5 per cent in the first quarter of 2023, compared to the previous quarter. According to the non-seasonally adjusted data, economic activity growth continued to slow down on an annual basis reaching 2.1 per cent (compared to 2.6 per cent in the previous quarter). By final consumption expenditure component, the slowdown was driven by the simultaneous weakening of the growth in domestic demand and in exports, which was only partially offset by the recorded decline in imports. Although the change in inventories continued to contribute negatively to real GDP dynamics, its contribution declined slightly on the previous quarter. The decline in inventories on an annual basis can be explained by the improved functioning of global supply chains and the fall in commodity prices in international markets.

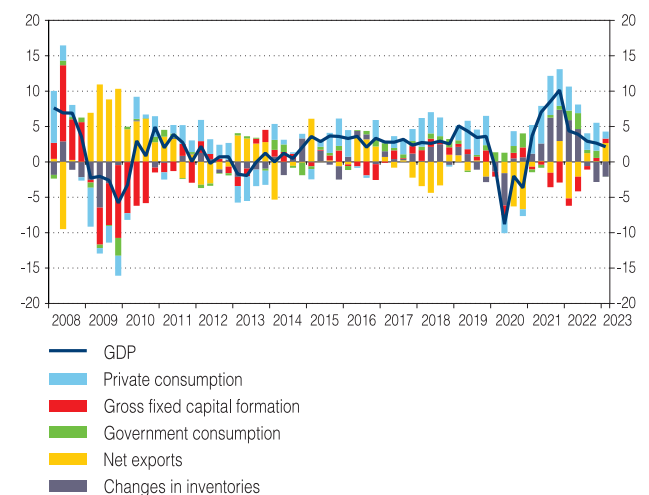
In the first quarter of 2023, real household consumption grew by 1.5 per cent on an annual basis (compared to 6.8 per cent in the previous quarter). The slowdown in private consumption growth was stronger than that suggested by the data on retail trade turnover and NSI household budget survey. Factors supporting final consumption expenditure included the reported increase in compensation per employee in real terms, the year-on-year growth of household credit, the growth of government social payments, as well as the improved consumer confidence indicator.

In the first quarter of 2023, government consumption at constant prices decelerated its growth pace to 0.1 per cent year on year (against 4.5 per cent in the previous quarter). This development was mainly driven by a decline in intermediate consumption expenditure in real terms³⁹.

³⁹ The estimate of the real size of the relevant government consumption components is made by deflating them by the total government consumption deflator.

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

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

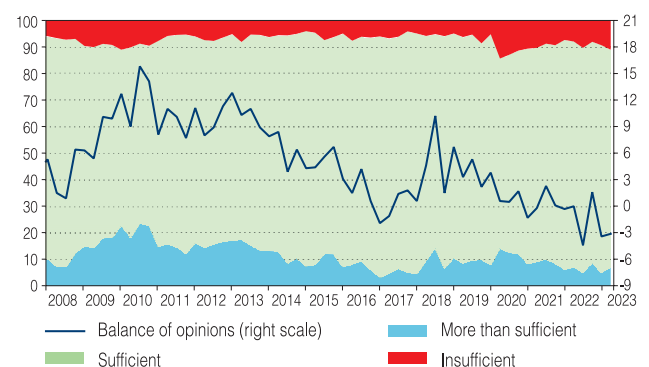


Sources: NSI, BNB calculations.

Current Production Capacity with Regard to Expected Demand over the Next Months

(per cent, share of managers)

(balance of opinions)



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

Source: NSI.

Over the first quarter, investment in fixed capital grew by 5.4 per cent on an annual basis compared to 2.4 per cent in the previous quarter. According to BNB estimates,⁴⁰ this growth has been driven to a similar extent by the public and private sectors. Data on consolidated fiscal programme performance signal that government investment in the first quarter of 2023 have been supported by the implementation of public projects financed by national funds. The main factors favouring the growth of private sector investment activity were the increase in final demand, improved managers' sentiment about the economic situation in the country, an increase in the share of firms with insufficient spare production capacity, as well as the active credit supply by banks in the context of persistent negative real interest rates on new loans.

Net exports made the highest positive contribution to the annual growth of real GDP in the first quarter of 2023, driven by the rise in exports of goods and services coupled with a decline in imports.⁴¹ Both goods and services contributed positively to the 2.3 per cent growth in exports. The change in imports on an annual basis was -1.5 per cent with decline 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.

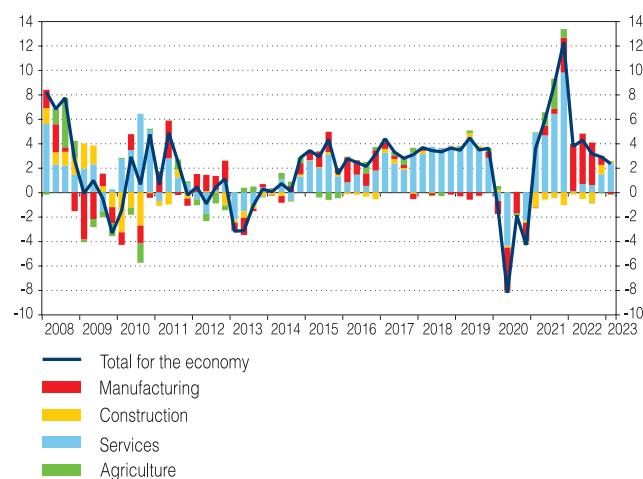
In the first quarter of 2023, gross value added in Bulgaria increased by 0.6 per cent quarter on quarter according to seasonally adjusted data, with a 2.3 per cent year-on-year growth according to non-seasonally adjusted data. Annual value added in the services sector grew by 3.6 per cent in the first quarter of 2023 with all sub-sectors contributing to this effect except culture, sport and entertainment, while the trade, transport, accommodation and food service activities sub-sector had the most significant positive contribution. In the first quarter, value added in agriculture also increased by 1.3 per cent on an annual basis. In industry, gross value added fell by -1.1 per cent year on year, which was entirely determined by the decline in activity in the manufacturing sub-sector, while construction recorded growth. The decrease in value added in manufacturing was in line with the

⁴⁰ The NSI does not provide official data on the breakdown of total investments into private and public. The series on private investment is constructed by the BNB as a difference between total investment and the estimated amount of public investment on an accrual basis in real terms. Public investment estimates are based on information from quarterly non-financial accounts of the general government sector, published by the NSI.

⁴¹ For details, see the Balance of Payments and Foreign Trade Section in Chapter 2: External Financial Flows.

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

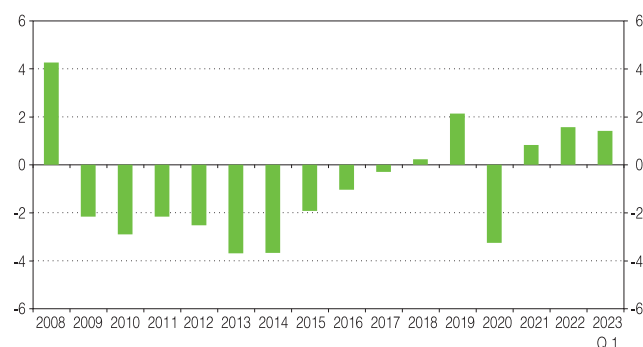
(per cent; percentage points; on an annual basis; non-seasonally adjusted data)



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 first quarter of 2023 is calculated on the basis of actual GDP and estimated potential output for the last four quarters as of March 2023.

Sources: NSI, BNB calculations.

reported decline in sales of industrial enterprises in real terms on the domestic and international markets⁴².

Cyclical Position of the Bulgarian Economy

According to BNB estimates, the cyclical position of the economy in the first quarter of 2023 continued to be characterised by a positive output gap, given the significant increase in economic activity in 2021 (up 7.6 per cent) and in 2022 (up 3.4 per cent). This suggests that some of the output factors in the economy were employed above their potential level, which is in line with the upward pressure on the prices in the product and factor markets, and primarily in the labour market.

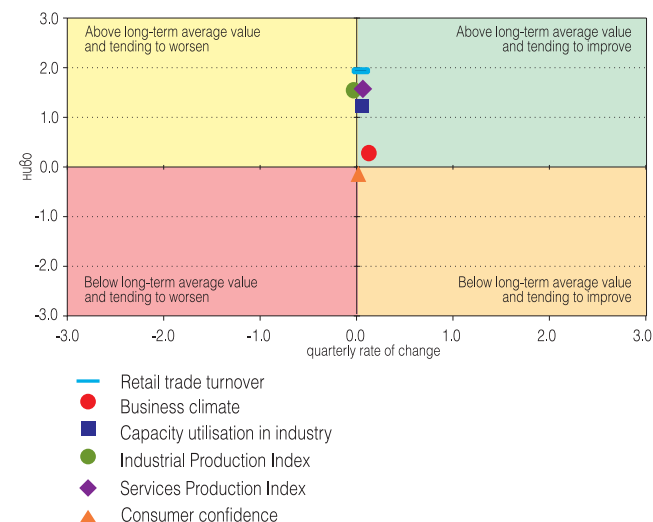
Short-term economic activity indicators sent mixed signals about economic developments in the second quarter of 2023.⁴³ Indicators tracking capacity utilisation in manufacturing, output in services and retail trade volumes⁴⁴ reported a continued improvement on quarter-on-quarter basis, while the industrial production index showed a downward trend. 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, with the business climate indicator surpassing its long-term average. These developments were driven by improved assessments of economic agents about the current economic situation in Bulgaria, as well 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 a decrease of the uncertainty indicator calculated by the BNB in the second quarter of 2023.

⁴² For details, see the Behaviour of Firms Section in this Chapter.

⁴³ Data on the services production index are available as of April 2023, while industrial production and retail turnover indices are available as of May 2023. Data on business climate, consumer confidence and capacity utilisation are available as of June 2023.

⁴⁴ In the April–May 2023 period, a slight decrease was reported in the retail turnover index as compared to the first quarter of the year. However, after the application of the HP filter (with a parameter $\lambda = 100$) in order to eliminate short-term data fluctuations, the transformed series shows a continued improvement in retail trade turnover.

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

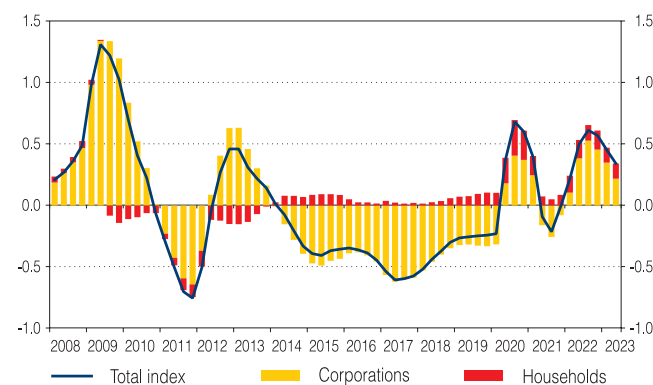


Notes: The chart compares the level (the vertical axis) and the quarterly change (the horizontal axis) of selected economic indicators. Data are averaged for available months in the first quarter of 2023. Each series is transformed using the HP filter (with a parameter $\lambda = 100$) in order to eliminate 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.

Sources: EC, BNB calculations.

Economic Activity Expectations

In the second quarter of 2023, the growth rate of the composite economic activity indicator in Bulgaria constructed by the BNB⁴⁵ decelerated on both a quarterly and annual basis, which was a precondition for observing similar dynamics in Bulgaria's real GDP. The weaker quarter-on-quarter growth of the composite indicator was driven mainly by the data on the decrease in production, as well as in the turnover in the manufacturing and retail trade at constant prices between April and May, compared with the first quarter of 2023.

In the third and fourth quarters of 2023, real GDP is expected to record low year-on-year growth, reflecting mainly the contribution of households' and firms' expenses on consumption and investments.⁴⁶ Factors expected to constrain economic activity growth over the second half year are the projected negative contribution of net exports (given the emergence of export specific factors and weakening global economic activity), the anticipated decline in government consumption in real terms and the continued trend of end-2022 towards a decrease of accumulated inventories in the economy.

4.2. Labour Market

Labour Supply

In the first quarter of 2023, labour supply measured by the labour force⁴⁷, increased by 1.7 per cent on an annual basis. The inclusion of economically inactive persons in the labour market, whose number decreased by 3.3 per cent on an annual basis and offset the negative effect on the labour force resulting from the decline in the working-age population due to demographic processes, contributed most to this. As a result of these developments,

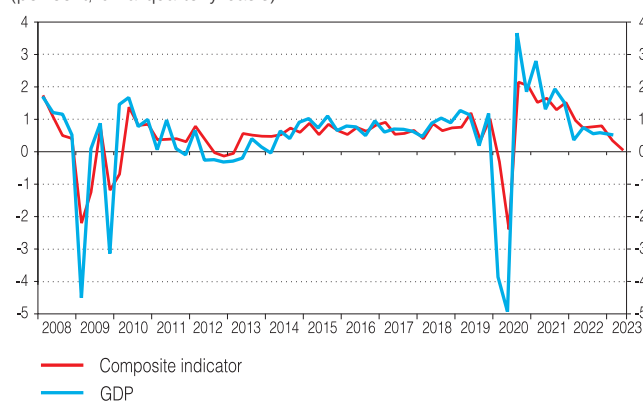
⁴⁵ The services production index is available as of April 2023, while production indices for industry, construction and retail turnover and producer prices in manufacturing are available as of May 2023. The unemployment rate, global PMI and new loans to firms and households are also available as of May 2023. The data available for the whole second quarter of 2023 are the climate and consumer confidence indicators.

⁴⁶ For further details, see the BNB [Macroeconomic Forecast, June 2023](#).

⁴⁷ Labour force represents employed or unemployed persons aged 15 or older.

Composite Economic Activity Indicator

(per cent, on a quarterly basis)



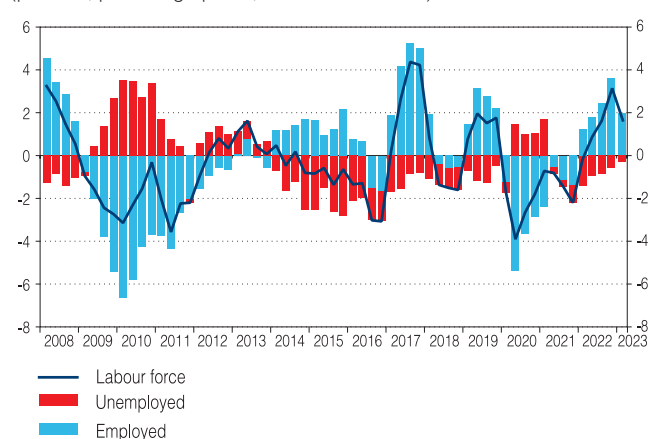
Notes: This indicator is constructed on the basis of a dynamic factor model whose purpose is to derive the total component in dynamics of various indicators with a monthly frequency. Dynamics of the composite indicator may be used as a guidance for the change in real GDP of Bulgaria.

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 of persons aged 15 and older. There is a break in the time series in the first quarter of 2023 due to the use of 2021 population census data in the estimation of Labour Force Survey results. Revised data for the first quarter of 2022 are used in calculating the annual changes for the first quarter of 2023.

Sources: NSI Labour Force Survey, BNB calculations.

economic activity rate⁴⁸ increased on an annual basis. Labour Force Survey data for the first quarter for 2023 report the results of the 2021 census, which are not reflected in previous years and lead to a break in the time series.⁴⁹ As a result, data for the first quarter of 2023 are not comparable to those for previous periods.

Given the tight labour market conditions and labour shortages, the unemployment rate fell⁵⁰ to 4.4 per cent year-on-year in the first quarter of 2023 according to non-seasonally adjusted LFS data.⁵¹

According to Employment Agency data, published with greater frequency, the seasonally adjusted unemployment rate also decreased in the first quarter of 2023 and remained relatively unchanged in the second quarter.

The number of newly registered unemployed persons fell on both an annual and quarterly basis in the first quarter of 2023, and this trend continued in the second quarter, according to the administrative statistics data of the Employment Agency.

⁴⁸ The economic activity rate is the proportion between economically active persons (labour force) and the population of the same age.

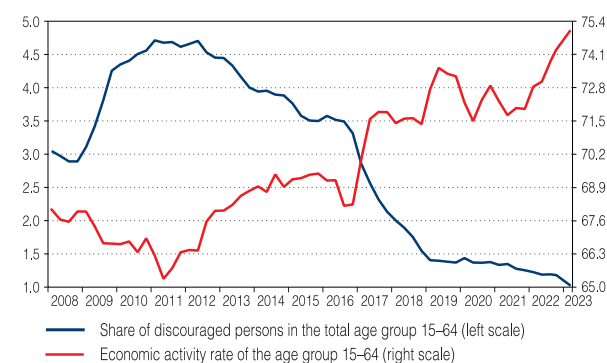
⁴⁹ The NSI publishes revised data based on the census results only for the first quarter of 2022, while data for the following quarters are expected to be revised at a later stage. In this analysis, the revised data for the first quarter of 2022 are used in calculating the annual changes in LFS data for the first quarter of 2022.

⁵⁰ 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.

⁵¹ 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.

Economic Activity and Share of Discouraged Persons

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

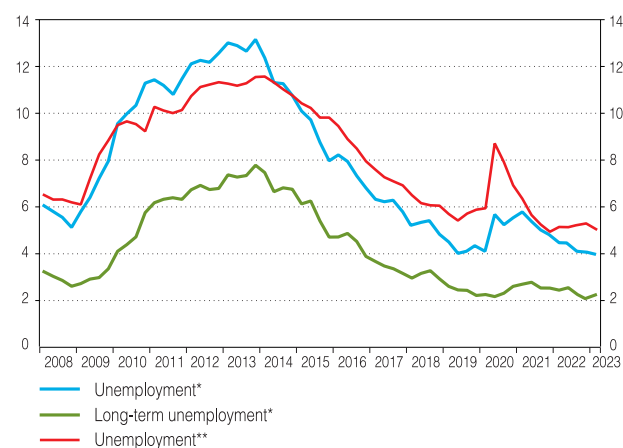


Notes: There is a break in the time series in the first quarter of 2023 due to the use of 2021 population census data in the estimation of Labour Force Survey results. Seasonally adjusted data presented here are affected by the break in time series.

Sources: NSI Labour Force Survey, BNB calculations.

Unemployment Rate

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



* Based on NSI data.

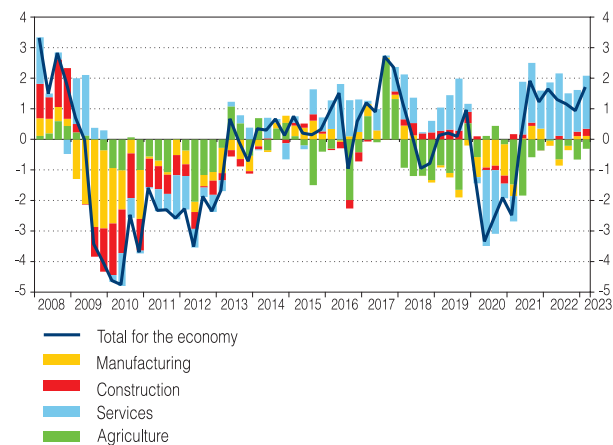
** Based on Employment Agency data.

Notes: There is a break in the time series in the first quarter of 2023 due to the use of 2021 population census data in the estimation of Labour Force Survey results. Seasonally adjusted data presented here are affected by the break in time series.

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

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.

Labour Demand

In the first quarter of 2023 the number of employed⁵² increased by 1.8 per cent year on year, with the services sector contributing most to the reported growth.

According to the short-term NSI statistics, the number of job vacancies posted a decrease of 2.4 per cent on an annual basis. The reported decline was due entirely to the decrease in job vacancies in the services sector, while in agriculture, forestry, industry and construction there was an increase in this indicator. Concurrently, the relative share of firms identifying labour shortages as a factor hindering their activity declined on a quarterly basis in the services sector, but continued its upward trend across the rest of sectors and the economy as a whole. These developments suggest that upward wage pressures in the services sector due to constrained labour supply are easing from early 2023.

Productivity and Compensation per Employee

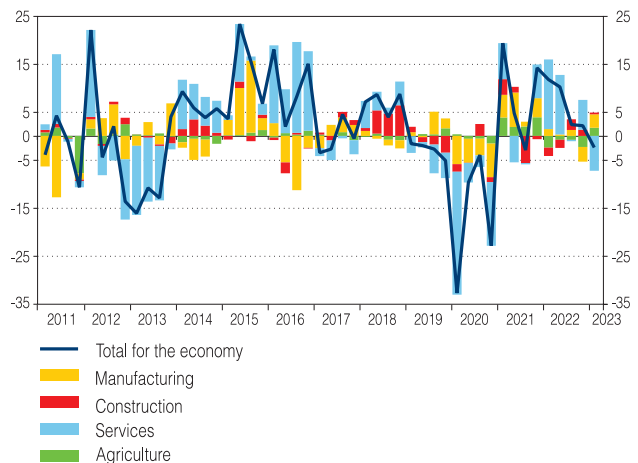
In the first quarter of 2023, labour productivity growth in real terms⁵³ for the economy as a whole moderated to 0.9 per cent on an annual basis as a result of the reported decline in industry. The services sector reported growth in labour productivity for the first time since 2021, mainly

⁵² NSI System of national accounts data are used.

⁵³ Labour productivity is calculated after adjusting gross value added (total for the economy) for imputed rent.

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

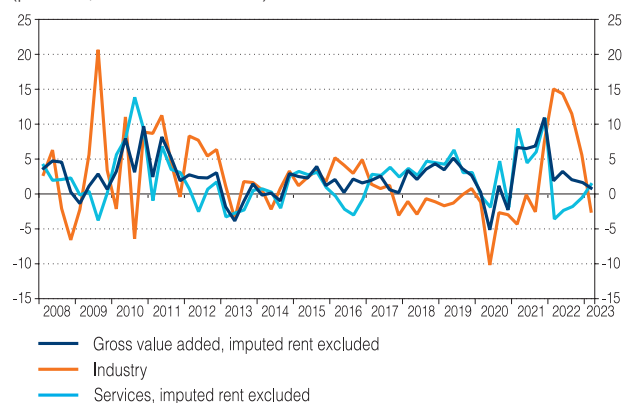
(per cent; percentage points; on an annual basis)



Sources: NSI, BNB calculations.

Labour Productivity Dynamics (Value Added per Employee)

(per cent; on an annual basis)



Sources: NSI, BNB calculations.

as a result of productivity growth in the trade; repair of motor vehicles and motorcycles; transportation and storage; accommodation and food service sub-sector.

The weaker increase in economic activity, as well as the moderation in inflation and labour productivity growth were reflected in the less pronounced increase in compensation *per* employee in nominal terms in the first quarter of 2023 (which stood at 14.0 per cent compared to 20.8 per cent in the last quarter of 2022), with industry reporting the largest slowdown. The growth of total compensation *per* employee in real terms⁵⁴ also slowed down on an annual basis, reaching 0.6 per cent. Services and manufacturing contributed positively, while the contribution of the agricultural sector and construction was negative.

At the same time, average gross monthly wages went up by 17.3 per cent⁵⁵ in nominal terms on an annual basis, with the industrial and services sectors contributing most to the observed growth. The increase in the minimum wage of 20.0 per cent on an annual basis (from BGN 650 to BGN 780) since the beginning of 2023 and the high relative share of minimum wage workers in the services sector and in manufacturing, 59.2 per cent and 24.7 per cent, respectively, in the first quarter of 2023, also contributed to this.

4.3. Behaviour of Firms

Data for the first quarter of 2023 provide indications of a continued year-on-year increase in firms' nominal unit labour costs.⁵⁶ Rising labour costs contributed most to this, while data on the final demand deflator signal that the upward pressure from raw materials import prices is likely to have eased. Higher operating costs were financed from both own and attracted funds. Corporations' price policy was oriented towards passing on the higher production costs to final prices, coupled with some increase in the profit margin on an annual basis.

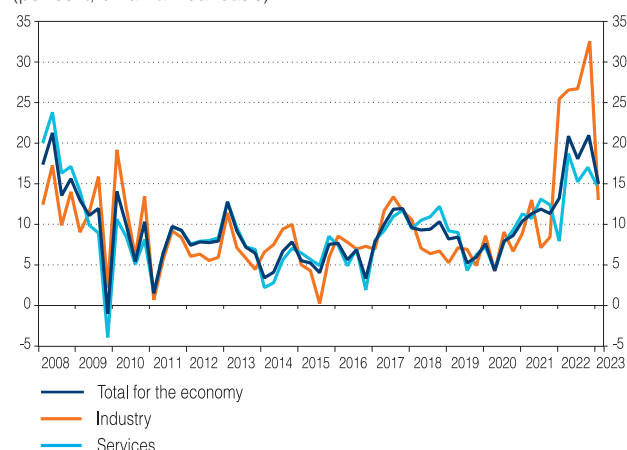
⁵⁴ Nominal compensation *per* employee was deflated by the HICP to calculate the indicator in real terms.

⁵⁵ According to NSI short-term statistics on employment and labour costs.

⁵⁶ This section reviews corporations' labour costs, while expenditure on raw materials (the so-called intermediate consumption) are not analysed due to the lack of public data at quarterly frequency.

Compensation *per* Employee at Current Prices

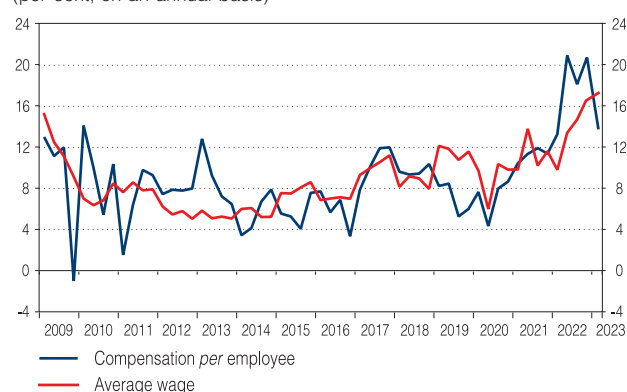
(per cent; on an annual basis)



Source: NSI – System of national accounts (SNA).

Compensation *per* Employee and Average Wage at Current Prices

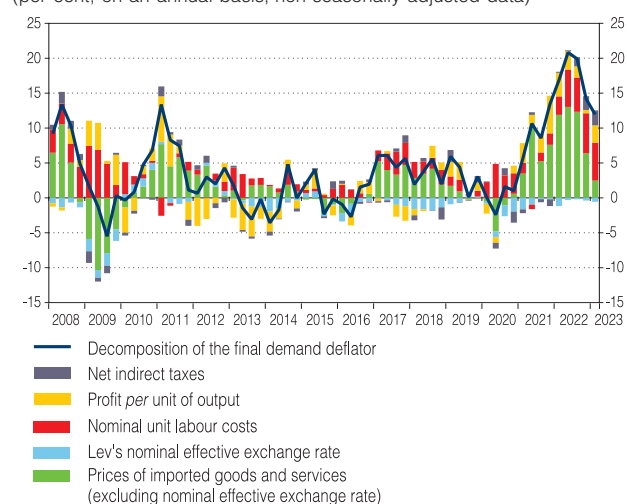
(per cent; on an annual basis)



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

Decomposition of the Final Demand Deflator

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



Sources: NSI, BNB calculations.

Labour Costs of Corporations

In the first quarter of 2023, unit labour costs growth slowed down to 13 per cent on an annual basis (18.6 per cent in the fourth quarter of 2022), but remained high in historical terms. Across economic sectors, the strongest growth in unit labour costs was observed in industry (17.3 per cent), which was due to the increase in compensation *per* employee as labour productivity declined. The reported decline in real labour productivity in manufacturing was due to the decrease in the gross value added in this sector, with lower volumes of sales of manufactured goods on both the domestic and international markets. Concurrently, the increase in wages in industry was in line with the continuing growth of labour shortages and the more optimistic manager sentiment about the economic situation in Bulgaria⁵⁷. Nominal unit labour cost growth in the services sector also remained high (13.3 per cent), reflecting higher wages, although the share of firms identifying labour shortages as a limiting factor for their activity started to decrease gradually from the last quarter of 2022.

Investment Costs of Corporations

In the first quarter of 2023, private sector investment in real terms increased on an annual basis in line with the improved manager sentiment about the economic situation in Bulgaria and the higher share of firms with insufficient spare production capacity in this period. By asset type, investment in machinery, equipment and weapon systems was the main contributor to growth.

Financing Sources of Corporations

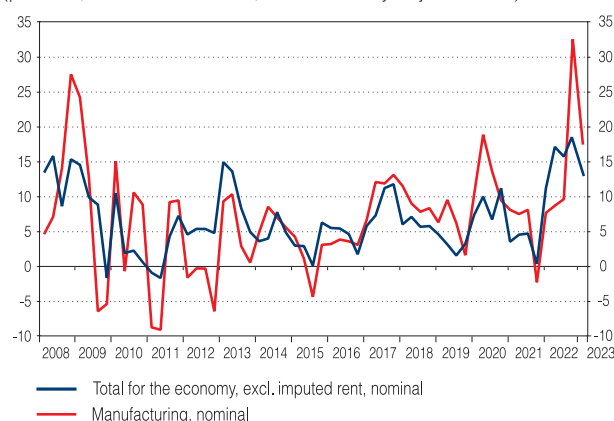
Firms continued to use internal and external sources to finance their activities. Based on non-seasonally adjusted data, nominal gross operating surplus which can be used by firms for funding their activities increased by 16.6 per cent on an annual basis in the first quarter of 2023, with all main sectors contributing to this: agriculture by 1.7 percentage points, industry by 8 percentage points and services by 6.9 percentage points. At the same time, the indicator fell in real terms⁵⁸ both in industry and

⁵⁷ According to NSI business situation survey data.

⁵⁸ Nominal gross operating surplus by economic sector was deflated by the deflators for the respective sectors to calculate the indicators in real terms.

Unit Labour Costs

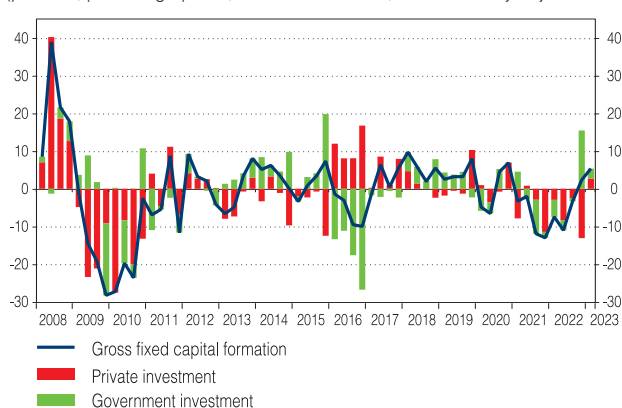
(per cent, on an annual basis; non-seasonally adjusted data)



Sources: NSI, BNB calculations.

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

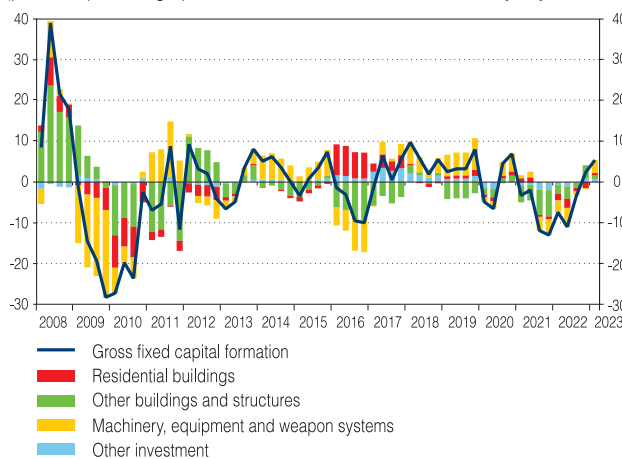
(per cent; percentage points; on an annual basis; non-seasonally adjusted data)



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. 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.

services, suggesting that the increases observed in nominal terms are driven by the price effects of high domestic inflation, and are not necessarily responsible for increasing firms' ability to finance themselves internally. Firms' financing of funds other than gross operating surplus also increased year on year in nominal terms and was mainly driven by borrowings.

Price Policy of Corporations

In the first quarter of 2023 firms' selling prices, as measured by the Producer Price Index in Industry (PPI), posted a 9.1 per cent increase year on year. This was driven by the increase in the prices of energy products and investment goods, intermediate consumption and consumer goods. Price increases were reported in both domestic and international producer prices. The annual rate of change of PPI slowed down in the second quarter of 2023, reaching -6.7 per cent in May 2023, mainly driven by the downward trend in oil, natural gas and electricity prices in international markets. Concurrently, a factor that continued to put upward pressure on firms' labour costs and to drive up their selling prices was the persistent high level of labour shortages based on NSI business situation survey data.

Producer price indices in the first quarter of 2023 also reported strong annual growth in all sub-sectors. Maritime transport (up 34.1 per cent), security and investigation activities (up 14.2 per cent), and information services (up 13.1 per cent) reported the most sizeable increase on an annual basis. Selling prices in the retail trade sub-sector, which is the closest to the customers in the supply chain, went up by 13.2 per cent in the first quarter of 2023 (compared to 17.7 per cent in the previous quarter). Annual growth in the NSI retail price index (excluding trade in motor vehicles and motorcycles) reached 6.9 per cent in the April to May 2023 period.

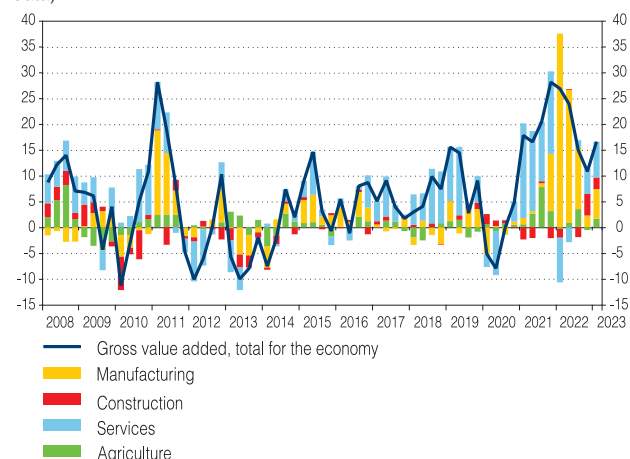
Economic Indicators

NSI data on short-term business statistics provide divergent signals about firms' behaviour in the second quarter of 2023.⁵⁹

⁵⁹ 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

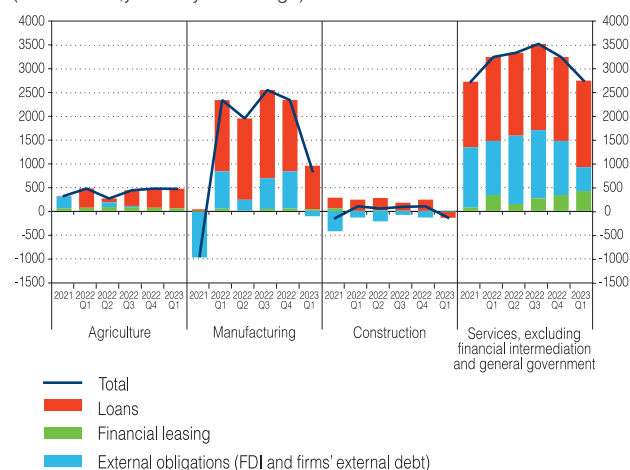
(per cent; percentage points; on an annual basis; non-seasonally adjusted data)



Sources: NSI, BNB calculations.

Financing Sources*

(BGN million, year-on-year change)

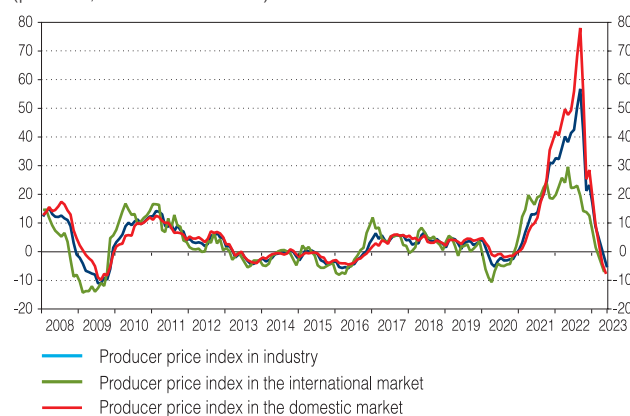


* Sources of financing other than the gross operating surplus.

Source: BNB.

Rate of Change of Producer Price Index in Industry

(per cent; on an annual basis)



Source: NSI

BNB seasonally adjusted data show that in the second quarter of 2023 the overall business climate indicator improved on the previous quarter, with manufacturing, construction and trade contributing most to this. The uncertain economic environment remained the most serious obstacle hampering corporations' activity, but its impact weakened for the second consecutive quarter. At the same time, the share of corporations identifying competition and labour shortages as limiting factors for their activities has increased. Managers' estimates of firms' expected production activity over the next three months have also increased, consistent with the improved sentiment about staff employment.

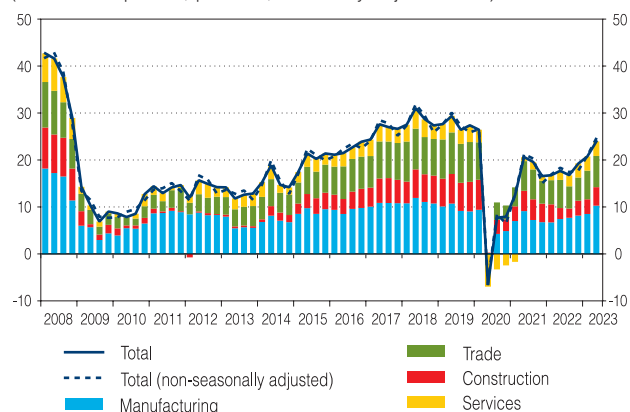
NSI data on short-term business statistics on construction production in the April to May 2023 period also recorded a slight increase in real terms compared with the first quarter, production and turnover in manufacturing, retail and services reported a decline.

Over the April to May 2023 period, construction production increased on the first quarter of 2023, but declined on an annual basis as a result of weaker activity in both building and civil engineering construction. The NSI business climate survey suggests that in the second quarter of 2023 the uncertain economic environment, commodity prices and labour shortages remained the main constraints for the construction firms.

At the same time, over the April to May 2023 period the industrial production index declined both on a quarterly basis (-3.7 per cent according to seasonally adjusted data) and on an annual basis (-13.3 per cent according to non-seasonally adjusted data), with mining and quarrying, manufacturing and electricity, gas, steam and air conditioning supply also posting a decline on both a quarterly and annual basis. According to nominal turnover data in industry, the drop in sales was due to a decrease in both volumes and prices on the international and domestic markets. Between April and May 2023, retail trade volumes at constant prices also decreased both compared to the first quarter and to the same period of the previous year, with retail trade in computer and communication services contributing most to the reported decline on an annual basis. In April 2023 the services production index (excluding trade) also recorded a decline on both a quarterly and annual basis. By sub-sector, the largest year-on-year decline in activity was

Business Climate

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

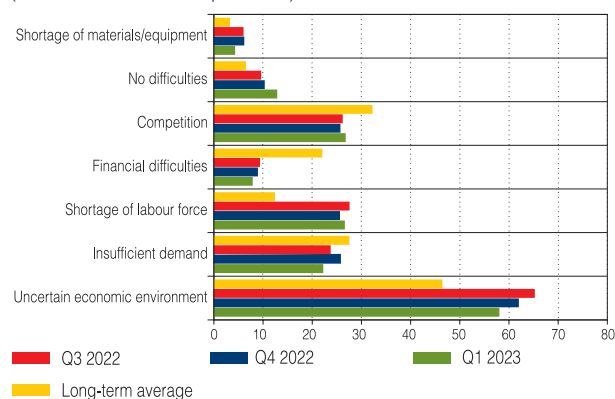


Notes: The answers to the NSI survey questions are presented in a three-tier category scale: 'increase', 'unchanged', 'decrease'. Balances of opinions are calculated as a difference between relative shares of extreme options of replies: 'increase' minus 'decrease'. The business climate indicator is a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

Sources: NSI, BNB calculations.

Factors Hampering Economic Activity of Corporations

(relative share of all corporations)

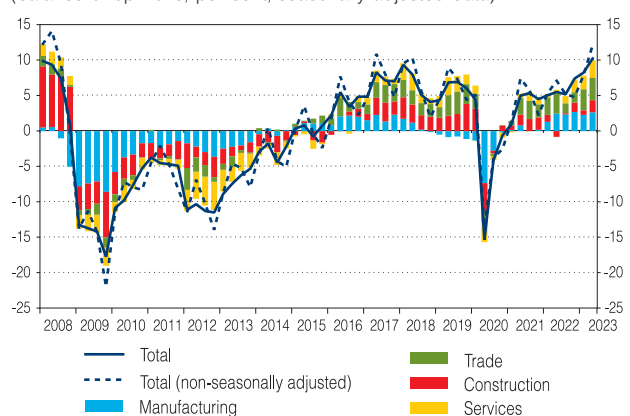


Note: Average data for the relevant period, weighted by the relative share of corporations by sector (manufacturing, construction, trade and services).

Sources: NSI, BNB calculations.

Corporations' Expectations about Staff Recruitment in the Following Three Months

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

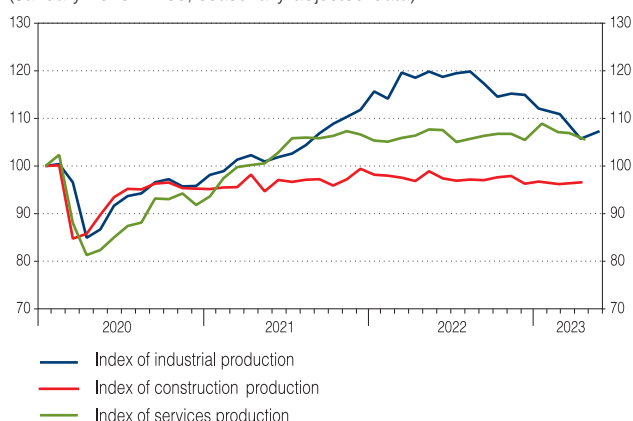


Notes: The answers to the NSI survey questions are presented in a three-tier category scale: 'increase', 'unchanged', 'decrease'. Balances of opinions are calculated as a difference between relative shares of extreme options of replies: 'increase' minus 'decrease'.

Sources: NSI, BNB calculations.

Dynamics of the Production Index in Manufacturing, Construction and Services

(January 2020 = 100; seasonally adjusted data)



Sources: NSI, Eurostat, BNB calculations.

recorded in services related to warehousing and support activities for transportation (-20.2 per cent), which was in line with the decline in inventories in the economy.

4.4. Household Behaviour

Household Revenue

According to NSI household budget survey data⁶⁰, household revenue continued to grow in nominal terms on an annual basis in the first quarter of 2023 due to the increase in total income growth. Income from withdrawn savings declined on an annual basis for the first time since mid-2020, while those from loans and credits declined for the third consecutive quarter.

Total household income increased in nominal terms by 19.3 per cent year on year in the first quarter of 2023 (compared to 19.1 per cent in the fourth quarter of 2022), with income from pensions and wages being the main contributor to growth.

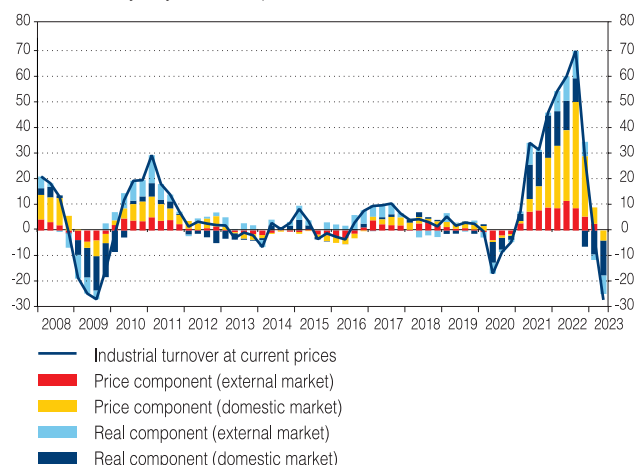
Total household income accelerated in real terms⁶¹ in the first quarter of 2023 compared with the last quarter of 2022 and came to 5.3 per cent on an

⁶⁰ 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.

⁶¹ To obtain total income in real terms, nominal values are deflated by the HICP.

Industrial Turnover Dynamics

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

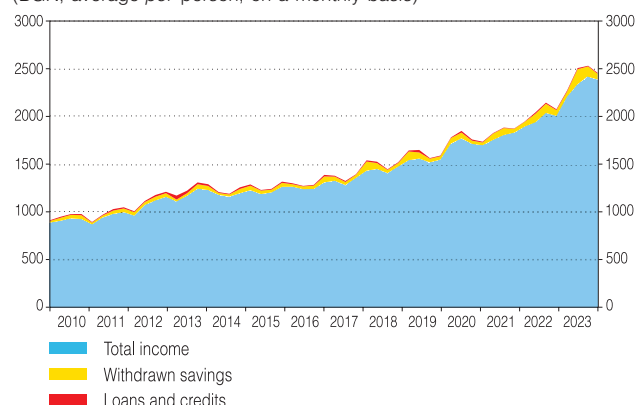


Note: Data for the second quarter of 2023 refer to the April–May period.

Sources: NSI, BNB calculations.

Household Revenue

(BGN, average *per person*, on a monthly basis)



Source: NSI – Household Budget Survey.

annual basis in line with the observed deceleration in inflation. Pension income increased by 22.0 per cent in real terms on an annual basis and was the main contributor to the increase in total household income, while wage income fell by 0.8 per cent on an annual basis in real terms. In contrast to the household budget survey data, data on wages *per* employee from the NSI national accounts, which have a broader scope, imply an increase in real terms of 1.1 per cent on an annual basis in the first quarter of 2023 (compared to 4.1 per cent in the fourth quarter of 2022).⁶² Given the tight labour market conditions and labour shortages, the rise in unit labour costs, and taking into account the greater representativeness of national accounts data, it may be assumed that wage income supported the annual growth in households' real total income in the first quarter of 2023.

As a result of the described trends, households' real disposable income⁶³ accelerated to 5.2 per cent on an annual basis in the first quarter of 2023, with an annual increase of 4.8 per cent at the end of 2022. Higher disposable income of households supported their consumption.

Household Expenditure

Total household expenditure⁶⁴ rose in nominal terms by 18.0 per cent on an annual basis over the first quarter of 2023 (compared with 19.9 per cent in the fourth quarter of 2022). The increase was mainly due to a 14.4 per cent year-on-year increase in consumer spending, with food and non-alcoholic beverages contributing the most.

In real terms⁶⁵, consumer expenditure in the first quarter of 2023, according to NSI household budget survey data, increased by 3.6 per cent on annual basis, with growth reporting a slowdown

⁶² The discrepancy in the dynamics presented by the NSI budget survey data and the national accounts data is likely to stem from the differences in the two statistics in terms of how the data are collected, their scope and the definitions used.

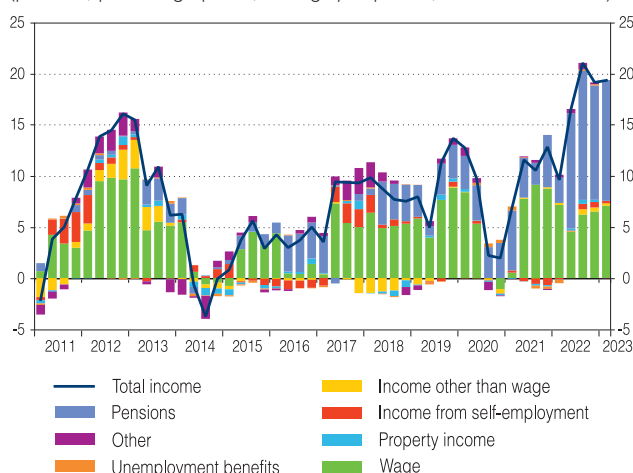
⁶³ Real disposable income of households is calculated based on the NSI household budget survey data and represents total income less taxes, social security contributions and regular transfers to other households, deflated by the HICP.

⁶⁴ 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.

⁶⁵ 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

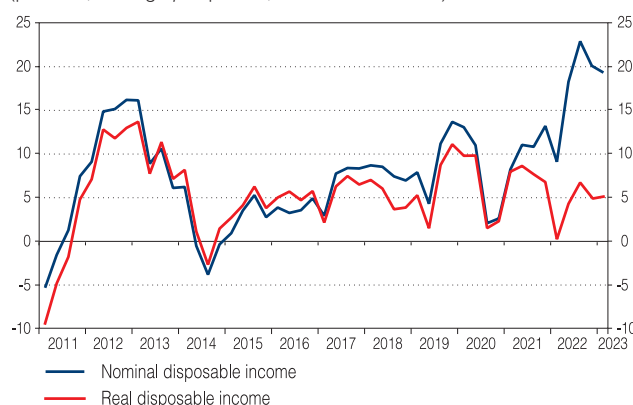
(per cent, percentage points; average *per* person, on an annual basis)



Sources: NSI – Household Budget Survey, BNB calculations.

Household Disposable Income

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

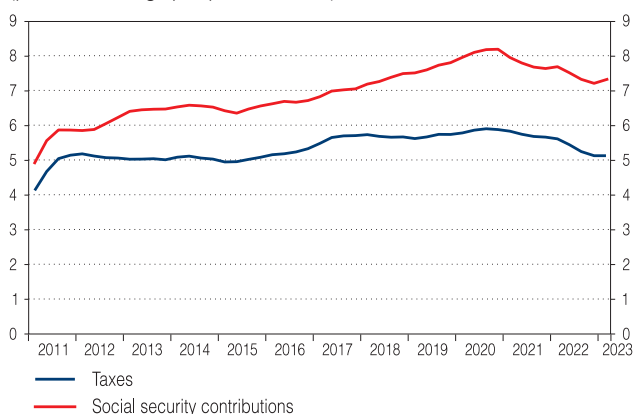


Note: Real disposable income of households represents total income reduced by taxes, social security contributions and regular transfers to other households, HICP deflated.

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.

compared to the end of the previous year (5.5 per cent in the fourth quarter of 2022). Given that the year-on-year increase in household expenditure on food and non-alcoholic beverages in nominal terms was comparable to the increase in consumer prices of these goods, expenditure on alcoholic beverages and tobacco products, home furnishings and home maintenance were the largest contributors to the increase in real terms in the first quarter of 2023. NSI national accounts data also report a slowdown in annual real private consumption growth to 1.5 per cent on an annual basis, from 6.8 per cent in the last quarter of 2022.

Household Savings

As a result of income and expenditure dynamics, households' propensity to save increased in the first quarter of 2023 compared with the end of 2022, but this was entirely due to the seasonality of this indicator, while according to seasonally adjusted data, households' propensity to save⁶⁶ part of their income fell to 9.6 per cent in the first quarter of 2023, compared with 10.5 per cent in the fourth quarter of 2022. This decline can be explained by the still low saving incentives in view of the negative real interest rates on deposits for households. Concurrently, the accumulated amount of households' net assets in the banking system at the end of the first quarter of 2023 increased compared with the end of 2022, driven by continued growth in household deposits, despite negative real deposit rates. The latter can be explained by limited investment alternatives for households' accumulated savings.

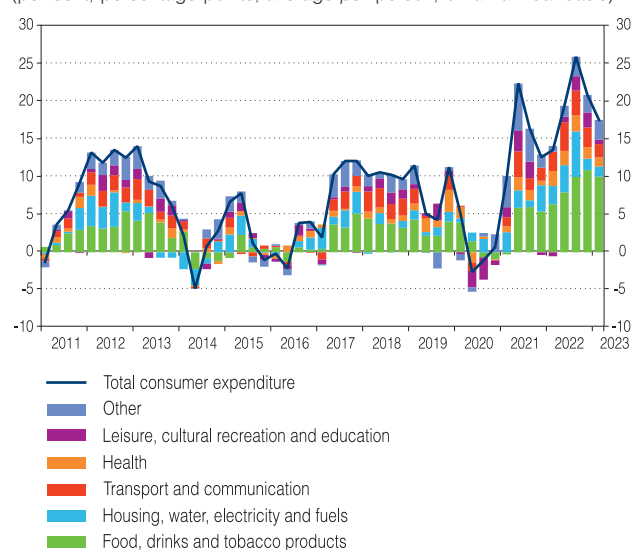
4.5. Fiscal Policy Effects on the Economy

In the first quarter of 2023 fiscal policy had a more restrictive although direct impact on the economic activity in Bulgaria due to the slowdown in the annual growth rate of government consumption in real terms. At the same time, the indirect impact on economic activity of social payments and measures to support households'

⁶⁶ 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.

Contribution to the Change in Households' Consumer Expenditure

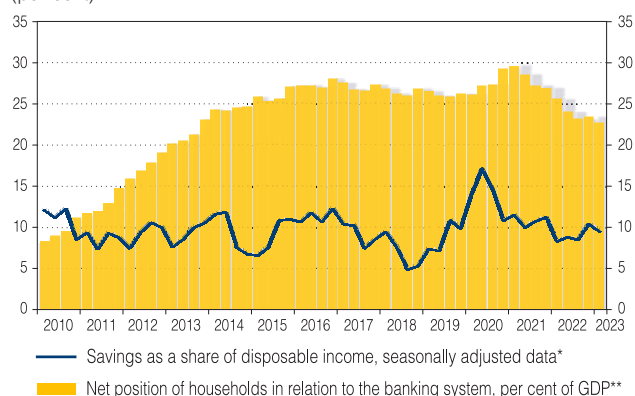
(per cent, percentage points; average per person, on an annual basis)



Sources: NSI – Household Budget Survey, BNB calculations.

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 first quarter of 2023 are used to calculate the ratio to GDP.

Sources: NSI – Household Budget Survey, BNB.

disposable income and firms' financial position in relation to the high electricity price continued.⁶⁷

Social expenditure increased in nominal terms by 13.9 per cent on an annual basis, largely as a result of the increases in pensions paid in the second half of 2022.⁶⁸ Expenditure on production subsidies grew strongly in nominal terms (44.2 per cent on an annual basis), supported by compensations paid to non-household electricity end-users.

Data from the non-financial accounts of the general government sector show that the compensation paid to public sector employees and health care spending had the most sizeable positive contribution to the reported nominal growth of government consumption in the first quarter of 2023 (20.5 per cent on an annual basis). Real government consumption growth slowed to 0.1 per cent on an annual basis (from 4.5 per cent in the previous quarter), driven mostly by the reported year-on-year decline in intermediate consumption expenditure in real terms⁶⁹. Fixed capital investment of the general government sector posted robust growth in both nominal and real terms of 60.3 per cent and 23.9 per cent on an annual basis, respectively. Data on the implementation of the Consolidated Fiscal Programme (CFP) indicate that in the first quarter of 2023 government investment was supported by the implementation supported by the implementation of public projects financed with national funds.

At the end of May 2023, total government expenditure stood at 17.3 per cent on an annual basis, with social expenditure contributing most

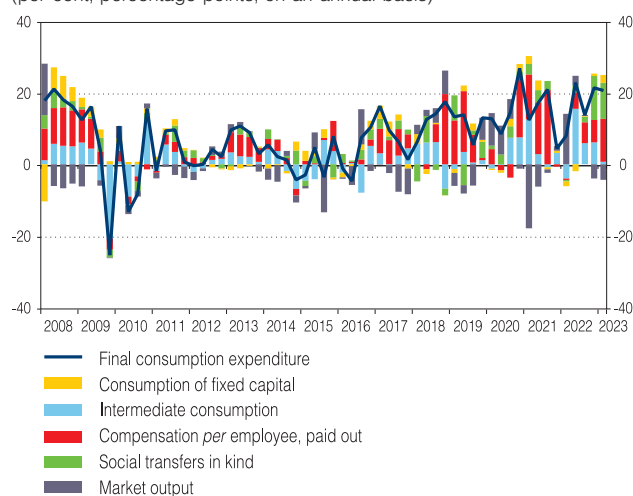
⁶⁷ In the first quarter of 2023 additional fiscal measures with an indirect impact on economic activity in Bulgaria were the increased amount of tax relief for children, the exemption from excise duties for electricity, liquefied petroleum gas and natural gas, the introduction of a reduced 9 per cent VAT rate for central heating and natural gas supplies, 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.

⁶⁸ Social benefits other than in kind from quarterly non-financial accounts of the general government sector are considered. For more information on increases in pensions in the second half of 2022, see [Economic Review, issue 4 of 2022](#).

⁶⁹ The estimate of the real size of the relevant government consumption components is made by deflating them by the total government consumption deflator.

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

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



Sources: NSI, BNB calculations.

to this.⁷⁰ Total government expenditure growth slowed down on an annual basis compared to that reported at the end of the first quarter of the year (27.1 per cent as of March 2023). Operating expenditure and spending on subsidies which reported an increase of 5.6 per cent and 6.0 per cent on an annual basis, respectively, played a decisive role for the lower budget expenditure growth as of May. A base effect associated with the more substantial rise in the cost of ongoing repairs and medicines in the second quarter of 2022 contributed to the further moderation in ongoing expenditure growth.⁷¹ The lower rate of increase in subsidy expenditure compared to the same period in 2022 was impacted by the significant decrease in the exchange price of electricity below the threshold for compensation payments to non-household electricity consumers. As a result, no compensations were paid for April and May. By the end of May 2023, the annual growth of payroll also moderated but remained relatively high (17.1 per cent).⁷²

The observed dynamics, in operating expenditure and, to a lower extent, in payroll expenditure, suggest a further weakening of the impact of household consumption on economic activity in Bulgaria during the second quarter of 2023. At the same time, CFP capital expenditure growth accelerated to 40.9 per cent by the end of May 2023 (22.4 per cent as of March), signalling that government investment remained supportive of real GDP growth in the second quarter of the year.

By the end of May 2023 Consolidated Fiscal Programme revenue grew by 9.1 per cent on an annual basis, with revenues from social and health care contributions contributing most to this. Total budget revenue growth slowed down on an annual basis compared to March 2023 (18.6 per cent), with lower growth mainly driven by tax rev-

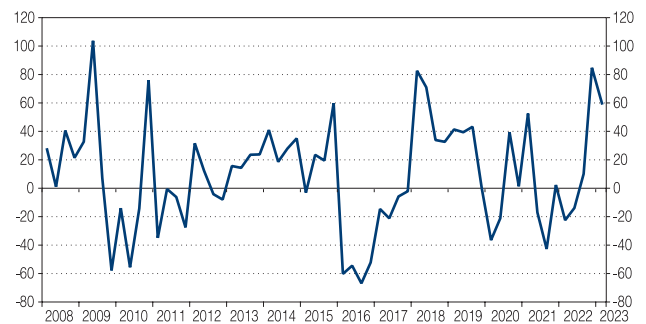
⁷⁰ The reported annual growth in total budget expenditure has been affected by the allocation of BGN 1.2 billion for the payment of pension allowances and energy subsidies in 2022, reported as cash expenditure in December 2021, but were not reflected as cash expenditure in the first half of 2022 for which they were budgeted.

⁷¹ For more information, see [Economic Review, issue 2 of 2022](#).

⁷² The slowdown in the 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.

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

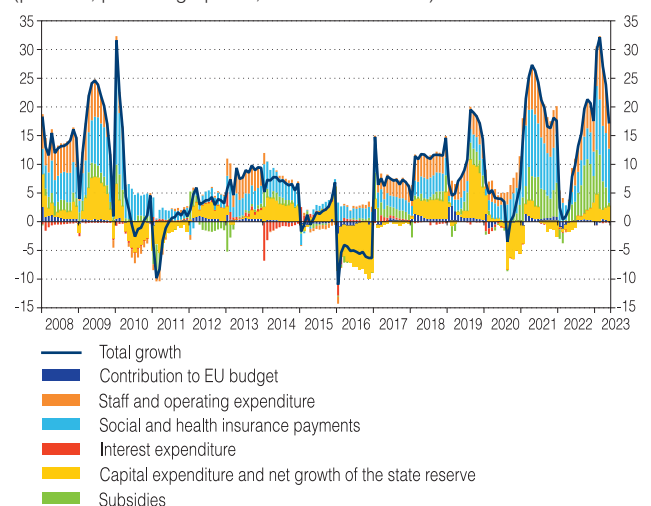
(per cent; on an annual basis)



Source: NSI.

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

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



Notes: In January 2016 reports under the CFP, staff costs include expenditure on wages, social security and other remunerations, while in those for previous periods, the latter were included in operating expenditure. To prevent inconsistencies of data prior to and after January 2016 resulting from the methodological change, staff costs and operating expenditure data are presented aggregately in the chart.

Sources: MF, BNB calculations.

enues, in particular excise duties.⁷³ At the same time, VAT revenue fell by 2.5 per cent on an annual basis as of May, which was entirely driven by a fall in VAT revenue from imports by 9.0 per cent. 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 lower quantities of oil imported into Bulgaria as compared to the previous year.

By end-May 2023, the CFP budget balance was negative at BGN -1178 million (-0.7 per cent of GDP⁷⁴).

⁷³ Dynamics of excise revenue reflected the significant slowdown in the growth of revenue from excise duties on tobacco products, possibly due to the discontinued pre-stocking of cigarettes and other tobacco products after the introduction of higher excise duty rates for these products as of 1 March 2023.

⁷⁴ Nominal GDP for the last four quarters up to the first quarter of 2023 inclusive is used in calculating the ratio.

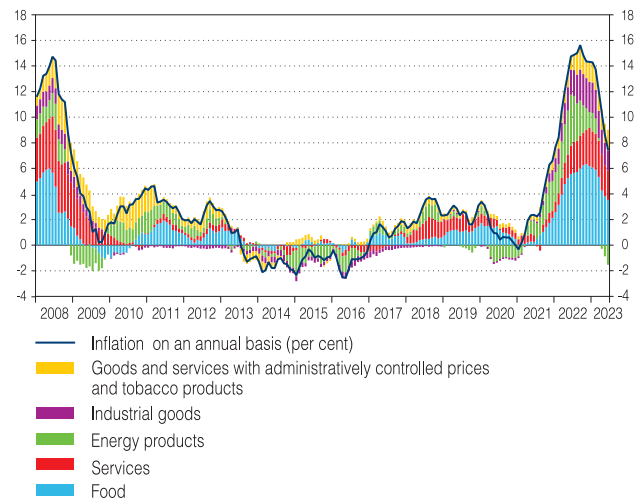
5. PRICE DEVELOPMENTS

5.1. Consumer Prices

Annual inflation, measured by the HICP, continued to follow a downward trend, reaching 7.5 per cent in June 2023 (from 14.3 per cent in December 2022). Most notably, this reflected decreases in energy prices on an annual basis owing to the downward movements in their international prices as well as a base effect in the rest of the goods and services groups compared to the high rates of increase in consumer prices over 2022. For January–June 2023, reported monthly HICP growth rates were higher than the observed historical values. As regards the internal macroeconomic environment, persistently strong consumer demand and comparatively high growth rates in unit labour costs in a context of rising labour shortages continued to exert an upward pressure on prices. The above developments brought about a limited pass-through by firms of declines in international agricultural and energy commodity prices to final consumer prices, especially in the groups of food and core components. In June 2023, food, followed by services and industrial goods continued to make the largest positive contribution to headline inflation, while the group of energy products had a negative contribution. Fiscal policy continued to have a divergent influence on inflation in the first half of 2023. Discretionary fiscal measures launched to mitigate the pro-inflationary impact of the international environment included the programme for providing compensations to business electricity consumers and reduced excise duties and VAT rates, focused mainly on energy commodities and food. Concurrently, increased pensions and higher staff expenditure in the public sector supported private consumption growth and were a prerequisite for retention of high inflation in more demand-sensitive HICP components, such as services. Monetary conditions in Bulgaria were another factor with a potential pro-inflationary effect, as strongly negative real interest rates on deposits and loans have contributed to persistently robust domestic demand.

Inflation and Contribution of Main Goods and Services Groups to It

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

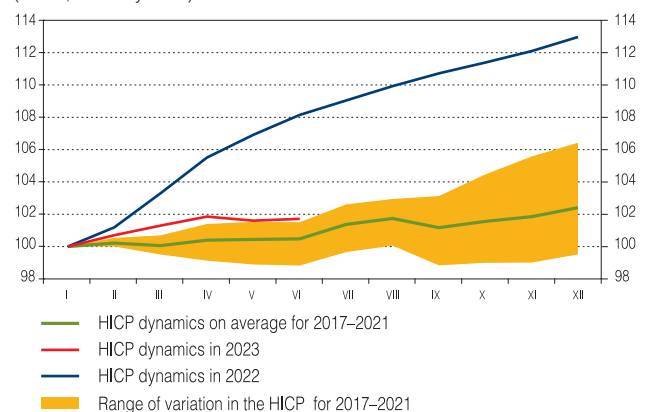


Notes: This structure corresponds to the Eurostat classification; tobacco products and goods and services with administratively controlled prices are presented separately. The index of goods and services with administratively controlled prices is calculated by weighing the relevant elementary aggregates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

Sources: NSI, BNB calculations.

HICP Dynamics by Month for Selected Years

(index, January=100)



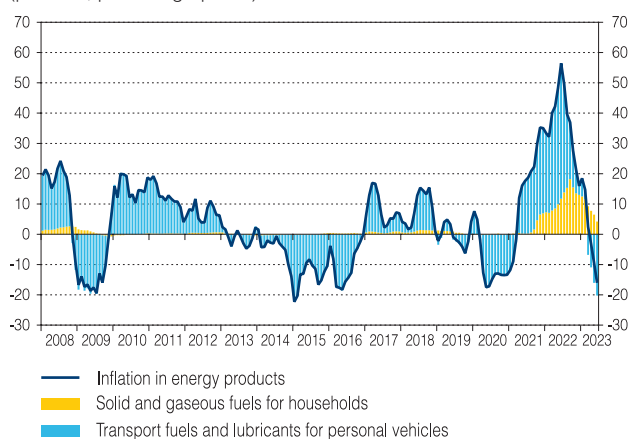
Sources: NSI, BNB calculations.

Energy Products Prices

The group of energy products, which recorded a price decline of 16.0 per cent on an annual basis in June 2023 (compared to 15.9 per cent growth in December 2022), had a negative contribution to headline inflation. This significant decrease in prices was due mainly to lower prices of transportation fuels and, to a lesser extent, gaseous fuels for households, reflecting direct effects of downward movements in international oil prices. At the same time, the sub-group of solid fuels had a low positive contribution to energy products inflation.

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

(per cent; percentage points)



Sources: NSI, BNB calculations.

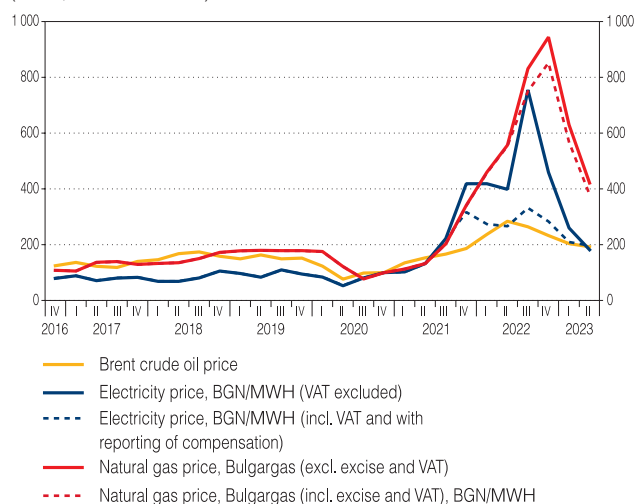
Food Prices

Food inflation followed a decelerating trend and stood at 13.8 per cent in June 2023 (from 25 per cent in December 2022), remaining at a higher level than implied by the declines in international agricultural and energy commodity prices. This group had again the highest positive contribution to the HICP increase on an annual basis, with both processed and unprocessed food contributing to this effect.

Unprocessed food prices posted year-on-year growth of 16.6 per cent (compared to 22.3 per cent in December 2022), with inflation moderation reflecting largely a base effect. The sub-groups of meat and meat products and fruit and vegetables continued to have the largest positive contribution to the rise in unprocessed food prices, which can

Primary Energy Commodity Prices

(index, Q4 2020 = 100)

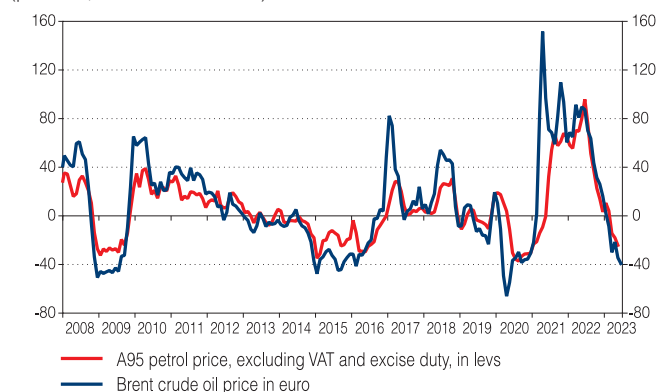


Notes: The electricity price refers to the day ahead segment of the Independent Bulgarian Energy Exchange (IBEX). The price of natural gas sold by Bulgargas EAD does not include prices for access and transmission through the gas transmission networks.

Sources: ECB, IBEX, EWRC.

Rate of Change in Brent Crude Oil and A95 Petrol Prices

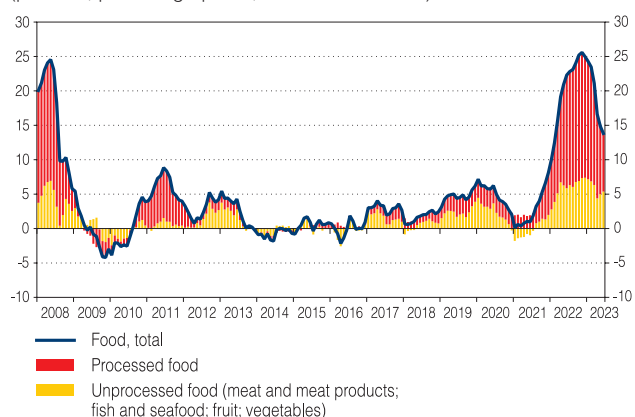
(per cent; on an annual basis)



Sources: ECB, NSI, BNB calculations.

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

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



Sources: NSI, BNB calculations.

be explained by the year-on-year increase in pig-meat and beef prices,⁷⁵ as well as by persistently high price levels for feed and mineral fertilisers used in their production.⁷⁶

Processed food inflation was 12.5 per cent year on year in June 2023 (compared with 26.3 per cent in December 2022), with milk, dairy products and eggs, followed by sugar and chocolate products and bread and cereals having the highest positive contribution. Retention of inflation in above groups at high levels was only partly due to secondary effects of the increase in domestic production expenditure⁷⁷ in 2022 on the back of a year-on-year decline in the prices of agricultural commodities in international markets over the first six months of 2023. At the same time, the sub-group of animal and vegetable fats and oils had a slight negative contribution to processed food inflation, which is in line with lower production costs in this sector.⁷⁸

Core Inflation

In the first six months of 2023, core inflation (including services and non-food prices) remained at a high level, reaching 8.8 per cent in June 2023 (from 11.9 per cent in December 2022). This dynamics reflected price rises in both industrial goods and services.

The rate of increase in industrial goods prices was 7.2 per cent in June 2023 (from 10.1 per cent in December 2022), which was primarily driven by the price rise in the sub-group of non-durable goods, mainly clothing and footwear, pet goods and services, household goods and spare parts and automobile accessories. In the sub-group of durable goods, furniture and furnishings and major household appliances continued to have the largest contribution to the persistently high price increase. Increased prices in these sub-groups

⁷⁵ The analysis employs data as of June 2023 from the Ministry of Agriculture and Food on wholesale and retail prices in Bulgaria and prices in the European Union.

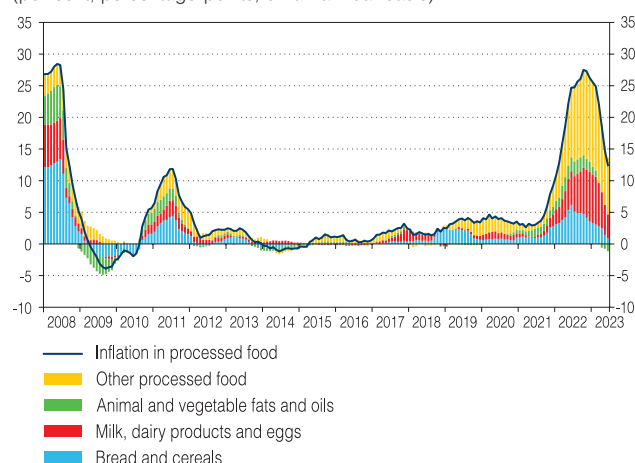
⁷⁶ NSI data on price indices of goods and services for current consumption in agriculture in the first quarter of 2023 and Ministry of Agriculture and Food data up to June 2023 are used.

⁷⁷ The analysis employs NSI data on price indices of goods and services for current consumption in agriculture in the first quarter of 2023 and industrial producer prices in May 2023.

⁷⁸ On the basis of the PPI, in May 2023 prices related to the production of vegetable and animal oils and fats decreased by 35.2 per cent on an annual basis.

Contribution of Major Sub-groups to Processed Food Inflation

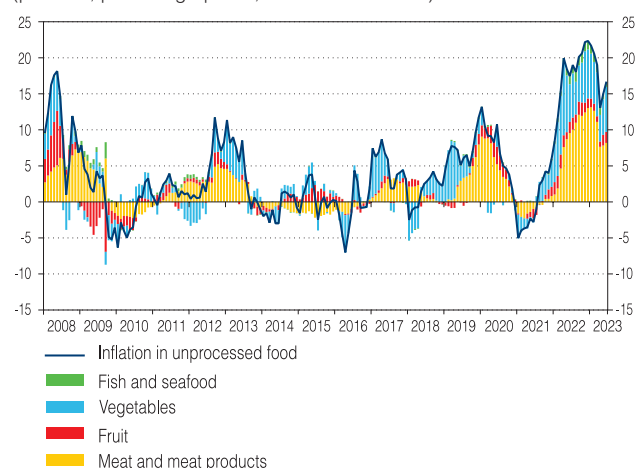
(per cent; percentage points; on an annual basis)



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.

were a result of the continued annual growth in imported industrial goods and in some raw materials used in the production process.⁷⁹

Annual services inflation was 10.4 per cent in June 2023 (compared to 13.9 per cent at the end of 2022), with the catering sub-group contributing the most positively in line with the continued rise in processed food prices and strong consumer demand in Bulgaria. Other sub-groups with a significant contribution to the price increase involved transport services, telecommunications, package holidays and accommodation. A potential factor affecting the retention of high inflation rates during the first six months of 2023 was the limited pass-through by firms of falling energy prices into final consumer prices in the context of a continuous rise in unit labour costs and sustained strong consumer demand.

Goods and Services with Administratively Controlled Prices and Tobacco Products

In June 2023, inflation in goods and services with administratively controlled prices and tobacco products accelerated to 7.6 per cent, from 6.9 per cent in December 2022. The sub-groups of medical products,⁸⁰ heating, water supply⁸¹, education and tobacco products had the highest positive contributions to this. At the same time, central gas supply⁸² had a negative contribution to inflation in administered prices, matching dynamics in international gas prices.

In June 2023, the diffusion index, showing the share of goods and services groups with rising prices on an annual basis, decreased to 83.7 per cent (against 89.5 per cent in December 2022).

⁷⁹ BNB calculations based on NSI data on import prices by commodity group according to the Standard International Trade Classification (SITC) have been used, with year-on-year price rises observed in textiles, timber and paper and certain chemical products.

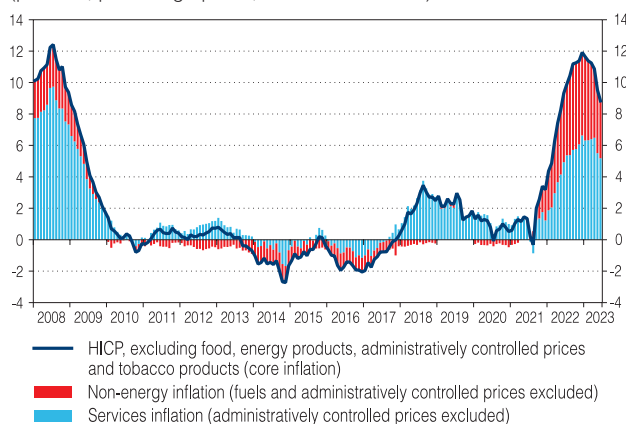
⁸⁰ Medicines included in the so-called positive drug list posted the strongest price rise. These are medicines whose prices are set administratively by the National Council on Prices and Reimbursement of Medicinal Products on the basis of the lowest producer price in the European Union and a percentage surcharge.

⁸¹ Water supply and sewerage prices increased in line with the business plans of sector's companies, as approved by the Energy and Water Regulatory Commission (EWRC).

⁸² The natural gas price declined by 53.4 per cent year on year as of June 2023. For more information, see EWRC's [press release](#) of 1 June 2023.

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

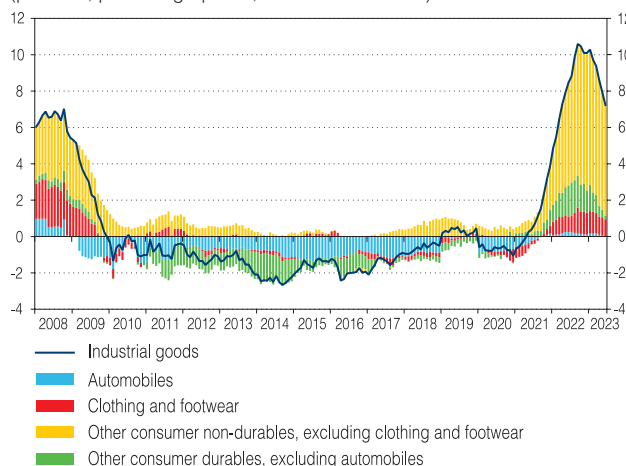
(per cent; percentage points; on an annual basis)



Sources: NSI, BNB calculations.

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

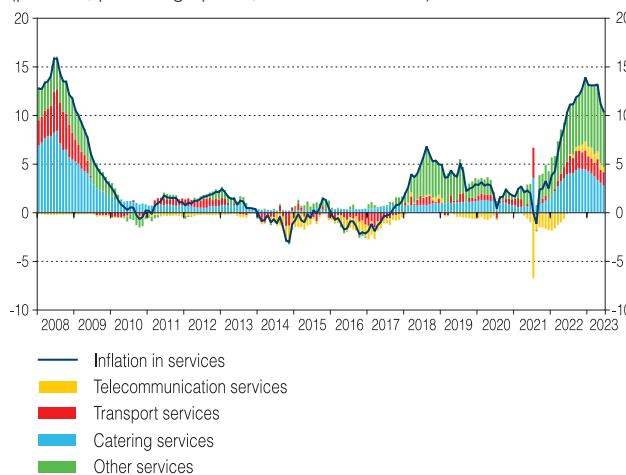
(per cent; percentage points; on an annual basis)



Sources: NSI, BNB calculations.

Contribution of Major Sub-groups to Inflation in Services

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

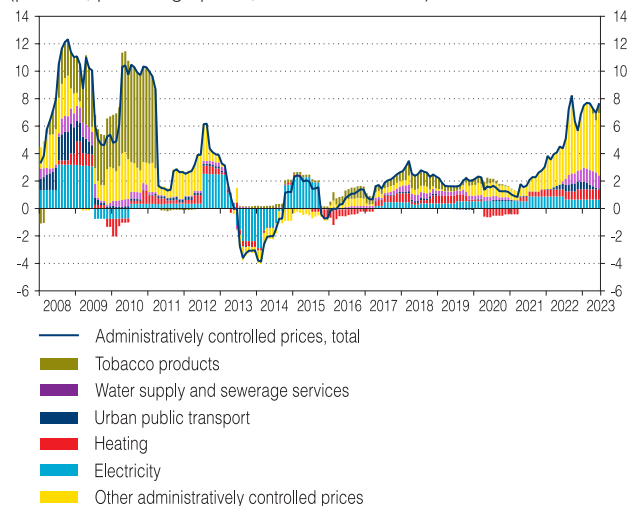


Sources: NSI, BNB calculations.

As regards the amount by which prices rose, the relative share of goods and services with inflation of above 5 per cent on an annual basis also decreased, reaching 73.3 per cent in June 2023, from 79.1 per cent at the end of 2022.

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.

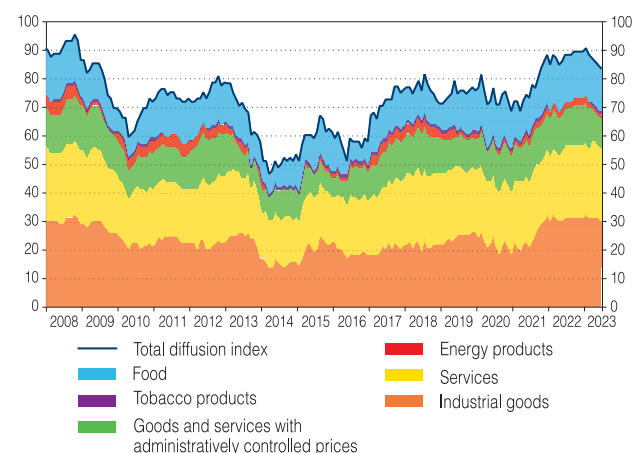
Inflation Expectations

According to the regular NSI business surveys, the share of firms which foresee an increase of selling prices in the following three months decreased gradually in the first half of 2023. By economic sector, this trend was most pronounced in industry and services and, to a lower degree, in retail trade. In addition, the prevailing expectations in the group of retail trade managers forecasting price hikes are that the increase will be at the same or faster rates than those observed previously, which implies similar dynamics of inflation also in food and non-energy goods over the following months.

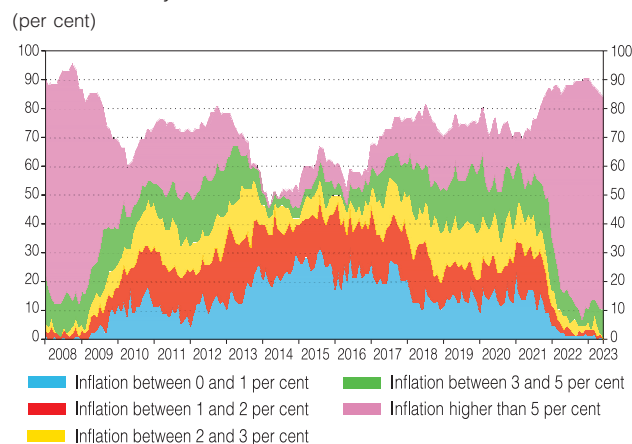
Based on managers' expectations regarding selling prices, our assumptions about movements in international commodity prices, and given labour market and economic activity developments in Bulgaria, annual inflation in the second half of 2023 is projected to follow a gradual downward trend. A factor expected to continue exerting a pro-inflationary impact is the projected increase in unit labour costs in an environment of strong consumer demand, and this is a prerequisite for a limited

Diffusion Index

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



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

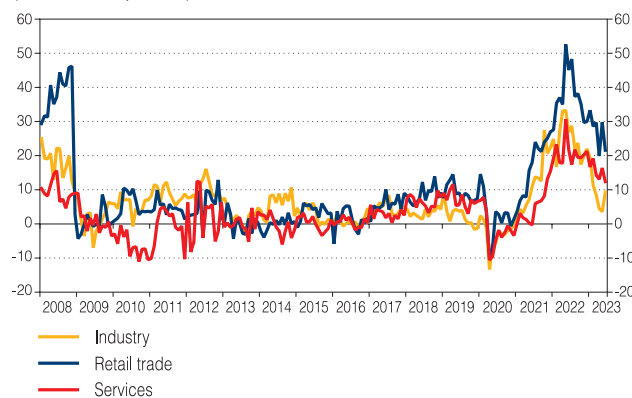


Notes: Data on the HICP 4-digit level sub-indices (sub-classes according to the NSI methodology) have been used. The diffusion index shows the share of sub-indices reporting an increase in value on an annual basis. When calculating the relative shares, the weight of the relevant sub-indices in the consumer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

pass-through by firms of the decrease in international commodity prices into final consumer prices.

5.2. Housing Prices

The annual growth rate of the house price index (HPI) slowed to 10.7 per cent in the first quarter of 2023 (down from 13.4 per cent in the previous quarter), mainly due to the emerging base effect of high price increases in early 2022. Among regional cities, the slowdown in annual house prices was most pronounced in Sofia. Factors limiting the house price increase for the total economy in early 2023 were the weakening household sentiments for house purchases⁸³ and the decreased volume of concluded sale and purchase transactions (by -20.0 per cent on a quarterly basis and by -7.8 per cent on an annual basis). At the same time, factors further supporting housing demand and thereby contributing to the price hikes were labour income growth, strong credit activity, negative real interest rates on housing loans, as well as accumulated savings in the economy and limited alternatives for their investment in an environment of negative real interest rates on deposits. In addition, the retention of comparatively high construction costs⁸⁴ of new buildings (growth of 52.8 per cent on an annual basis) was a supply-side pro-inflationary factor in the first quarter of 2023. Available data suggest that the effect of the fall in construction materials prices on firms' costs of production in the first quarter of 2023 was almost entirely offset by increases in other costs, such as labour costs.⁸⁵ Over the first quarter of 2023, the price-to-rent ratio, which is a frequently used indicator of undervaluation/overvaluation of houses, continued to exceed significantly (by 30.8 per cent) its long-term (historical) average value.⁸⁶ This signals that households' decisions to purchase a home were driven by reasons other than ensuring an immediate financial advantage by renting 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 low

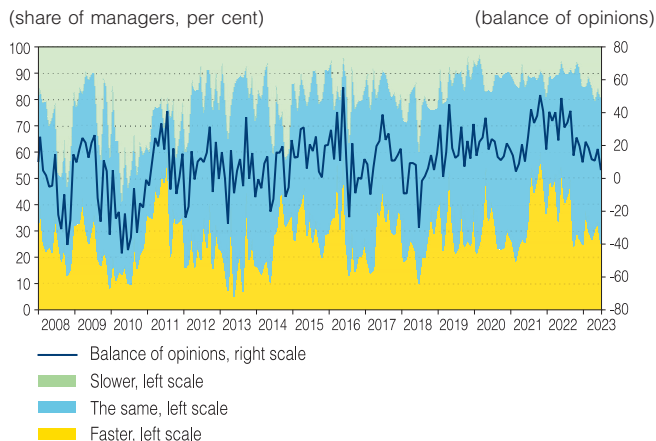
⁸³ Data from the regular NSI consumer survey, seasonally adjusted by the BNB.

⁸⁴ Eurostat data are used.

⁸⁵ According to national accounts data and NSI business situation survey data for Bulgaria.

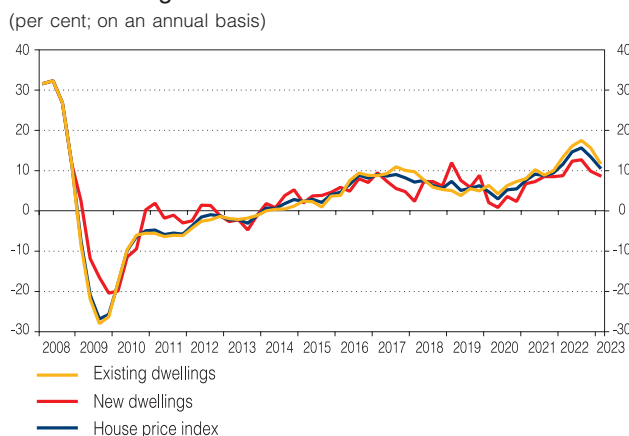
⁸⁶ Calculated for the period from the first quarter of 2000 to the fourth quarter of 2022.

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



Source: NSI.

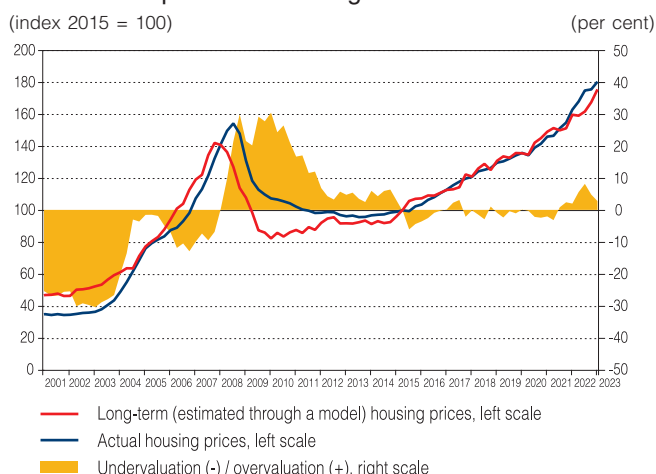
Rate of Change of House Price Index



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

Source: NSI.

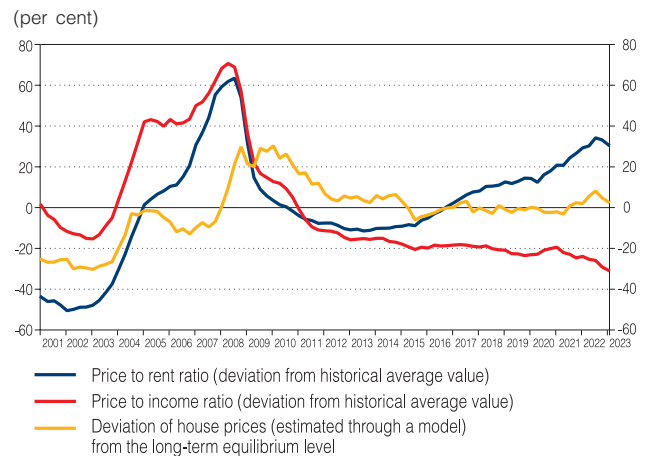
Actual and Equilibrium Housing Prices



Sources: NSI, BNB calculations.

interest rates and high inflation. At the same time, estimates based on the BNB macroeconomic model⁸⁷ suggest a significantly lower positive deviation of current residential property prices in Bulgaria from their long-term equilibrium level (about 2.7 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.

Indicators of Undervaluation/Overvaluation of Housing



Sources: NSI, BNB calculations.

⁸⁷ 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
					I	II	III	IV	
Price developments									
House Price Index, total	6.0	4.6	8.7	13.8	11.5	14.6	15.6	13.4	10.7
New dwellings	8.5	2.2	7.7	10.8	8.7	12.3	12.6	9.8	8.7
Existing dwellings	4.8	6.0	9.2	15.6	13.3	16.0	17.4	15.6	11.9
Inflation (HICP)	2.5	1.2	2.8	13.0	8.9	13.4	15.2	14.5	13.4
House rentals, paid by tenants (HICP)	3.3	2.5	1.7	6.3	4.3	6.2	7.1	7.8	9.5
Lending									
New housing loans	12.4	18.1	24.0	33.5	47.0	36.5	30.8	23.5	17.8
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	2.9	2.9	2.8	2.8	2.8
Housing loans balances	0.0	-15.5	14.4	17.5	17.1	17.0	16.9	16.8	17.8
Construction and investment									
Permits issued for the construction of new residential buildings (square meters)	-7.9	-9.0	25.1	20.6	13.9	43.3	55.5	-19.9	-16.8
Value added in construction (at average annual prices for 2015)	3.7	-1.0	-17.1	-4.5	-4.2	-12.1	-17.7	36.7	5.0
Constriction Production Index, building construction	8.4	-8.4	0.8	1.9	5.2	2.5	0.2	-0.1	1.0
Fixed investment; residential buildings	-2.2	6.6	0.7	0.6	-9.5	-13.0	-5.4	-8.8	3.8
Construction cost index for new buildings	5.6	2.3	11.0	53.6	24.2	56.7	67.8	62.3	52.8

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.