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Summary

In the first months of 2023, global economic activity demonstrated relative resilience to the still elevated inflation and tightened financing conditions; the continued decline in the prices of energy and other raw materials and the recovery in real income should support real dynamics in the upcoming period as well. The main driver of economic activity in most countries is still the personal consumption of households which continues to be supported by favourable labour market developments and the recovery of real income. As the pandemic subsided, demand shifted from goods to services, which contributed to the strong recovery of the services sector. In contrast, the recovery of the manufacturing sector is still subdued despite the almost complete return of global supply chains to normal and even lower production costs. Global price pressures are easing as the prices of energy and other raw materials are falling; however, due to the spillover of the previous increases in the prices of raw materials, increasing pressures from the labour market and the strong demand for some goods and particularly services, core inflation remains high in a large number of countries.

Euro area gross domestic product decreased slightly in the first three months of 2023, but leading indicators point to a gradual pick-up in real activity, which could result in an annual rate of real growth of 0.9% in 2023 as a whole and the continued slowdown of inflation. The moderately positive contribution to real growth came from net exports and investments in early 2023, while personal consumption dropped slightly. Confidence indicators point to positive rates of growth in the second quarter, which is why the new ECB projection anticipates real growth of 0.9% in the euro area in 2023 coupled with the gradual further strengthening of real activity towards the end of the projection period. The annual rate of inflation in the euro area decelerated noticeably by the end of May. This was a result of the fall in energy prices on an annual level, while the prices of other components of the consumer basket proved to be more persistent than anticipated earlier. According to current expectations, overall inflation in the euro area could reach 5.4% in 2023, slightly exceeding the previous projection, and should come closer to the ECB target level by the end of the projection horizon.

Developments on euro area financial markets in the first half of 2023 were under the influence of the tightening of the ECB's monetary policy and issues related to US regional banks and one large bank in Switzerland. In the period from July 2022 to May 2023, the ECB's Governing Council lifted key interest rates by 375 basis points, which is the strongest monetary policy tightening cycle in the euro area since the euro was introduced as a currency.[1] In addition to standard measures, the ECB tightened its monetary policy by the gradual reduction of Eurosystem balance sheet (primarily due to

1 At the meeting of the ECB's Governing Council held on 15 June, a decision was adopted to increase key interest rates by an additional 25 basis points (effective as of 21 June) and it was confirmed that the re-investment under the Asset Purchase Programme (APP) would end on 1 July. The effects of the aforementioned decisions on financial markets and the banking system are not discussed in this issue of Macroeconomic Developments and Outlook as the decisions enter into force after its publication.

banks' repayment of funds from the third series of targeted longer-term financing operations). The increase in ECB key interest rates led to a hike in interest rates on the interest rate market, resulting in almost full transmission. Yield trends on the bond market were stable from the beginning of the year, and yields at the end of May were at levels similar to those recorded in the early months of the current year. A deviation from such trends was only recorded during a brief period of increased volatility in March, stemming from uncertainties regarding the condition of US banks and, to a smaller extent, European banks. This temporarily reduced yields as investors, in light of the aforementioned events, expected a delay or a slowdown in the further intensity of ECB monetary policy tightening. Since regulatory measures prevented the spillover of effects of the failure of regional banks in the US to the wider banking and financial system, movements in euro area financial markets stabilised quickly, which enabled the ECB to persist in continued monetary policy tightening.

The Croatian economy continued to grow robustly, with the real growth rate expected to reach 2.9% in the current year, and a slightly lower growth rate anticipated in the remainder of the projection horizon. Favourable domestic economic developments are predominantly attributable to investments (supported by EU funds) and strong (mostly foreign) demand for services. At the beginning of the year, personal consumption began to recover under the influence of favourable labour market developments and the relatively strong growth in real wages. In contrast, exports of goods shrank, and developments in industrial production suggest that they could remain subdued. Over the rest of the projection horizon, growth could drop slightly to 2.6%, with components likely to grow in a more balanced manner, i.e. personal consumption and exports of goods are expected to increase assuming that price shocks disappear, favourable developments on the labour market continue and foreign demand intensifies.

In the first five months of the year, inflation in Croatia slowed down steadily, primarily owing to the prices of energy; however, core inflation still persists, as does, in particular, the inflation of service prices. An inflation rate of 7.7% is expected in 2023, while the subsequent two years should witness a gradual decline. The annual rate of overall inflation dropped from 12.7% in December 2022 to 8.3% in May 2023, primarily as a result of weaker external inflationary pressures following the decrease in the prices of energy and other raw materials on the global market and the return of global supply chains to normal. In addition, the slowdown in inflation is also attributable to a favourable base effect, i.e. the disappearance of the effect of the significant increase in the prices of a large number of products in 2022, particularly in mid-year. Still, short-term developments suggest there will be elevated current inflationary pressures under the influence of the indirect effects of the earlier increase in the prices of energy, food and other input costs and the shift of demand towards services, which enabled corporate profitability to rise and the labour market to strengthen, supported by stable employment growth, labour shortage and strong nominal wage growth. Most recent projections show that, in 2023 as a whole, average inflation could be 7.7%, and that its expected slowdown mostly results from prices of energy, and, to a smaller extent, prices of food. In contrast, despite the expected slowdown towards the end of the year, core inflation could be higher

in 2023 than in 2022 due to the faster growth in the prices of services. Over the next two years, inflation is expected to slow down further, so that in 2024 and 2025 it could drop to 3.9% and 2.3%, respectively.

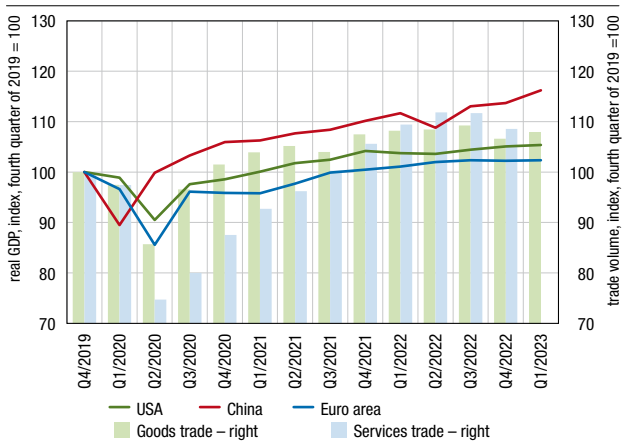
Even though monetary policy tightening in the euro area and increasingly unfavourable financing conditions began to affect interest rates and lending conditions, the lending activity of Croatian banks remained relatively strong. Under the influence of the increase of ECB key interest rates, interest rates on corporate loans rose in Croatia in the second half of 2022 and in early 2023, while interest rates on loans to households began to increase gradually only this year. Corporate lending standards continued to tighten at a pace similar to that recorded in the second half of 2022, primarily under the influence of the lower risk tolerance of banks and the outlook for particular activities and/or firms. Corporate lending remains relatively strong despite deteriorating financing conditions. The growth in housing loans slowed down, which may be linked to the deteriorating outlook on the real estate market and interest rate hikes, although the government housing loans subsidy programme may provide some impetus in the upcoming months. On the other hand, demand for consumer loans increased as a result of growing income and consumer optimism spurring the purchase of durable goods.

1 Global economy

Despite the still-high inflation and tightened financing conditions, in the first quarter of 2023, global economic activity was stronger than expected in both developed and emerging economies. Since early 2023, the recovery in the global economy has mostly been a result of the economic pick-up in China supported by the lifting of strict pandemic-related restrictions in late 2022 (Figure 1.1). As its domestic demand recovered, particularly that for services, in the first three months of 2023, the Chinese economy grew by 2.2% from the preceding quarter. In the same period, the US economy continued to grow despite tightened financing conditions, albeit at a very low rate (0.3% at a quarterly level). Owing to the strong labour market and consumer confidence, the growth in personal consumption accelerated, but the investment activity of US companies weakened considerably. The failure of three regional US banks and the emergency rescue of the systemically important bank Credit-Suisse by means of acquisition by UBS, which involved the intermediation of regulatory authorities and the Swiss government in March, contributed to increased uncertainty and volatility on global financial markets. In the meantime, however, concerns regarding a possible systemic bank crisis waned, and trends on financial markets stabilised.

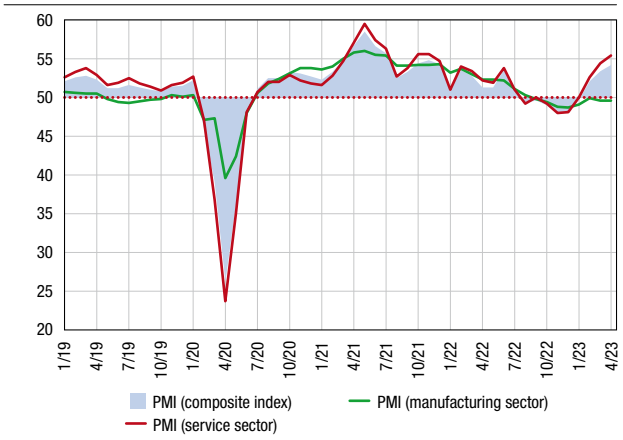
The global composite purchasing managers' index (PMI) continued to improve in April, pointing to the further strengthening of global economic activity at the beginning of the second quarter. Increasing divergence is noticeable between the service sector and the manufacturing sector (Figure 1.2). While the indicator of demand for services reached its highest level since mid-2022, the manufacturing sector indicator is still in slightly negative territory. On the one hand, the normalisation of global supply chains is supporting activity in the manufacturing sector, but high production costs and the redirection of demand towards services is still limiting activity in that segment of the global economy.

Figure 1.1 Economic activity in major markets and global trade



Note: The data on global trade for the first quarter of 2023 are based on UNCTAD analyses.
Sources: Eurostat, BEA, NBS and IMF.

Figure 1.2 Confidence indicators for the global economy

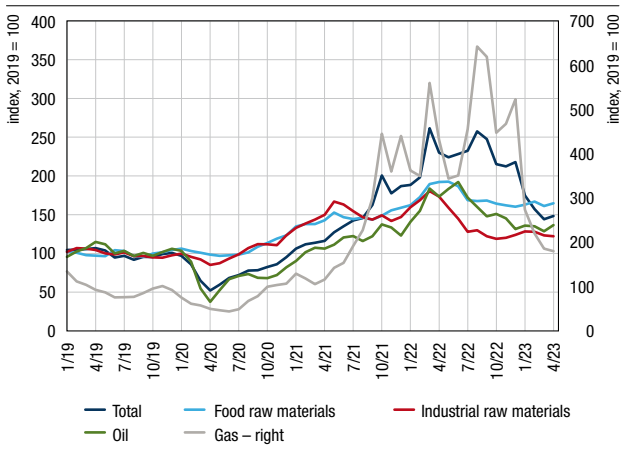


Note: Index value below 50 indicates expansion, while index value below 50 indicates contraction of economic activity.
Source: S&P Global.

In contrast to real activity, global trade remained subdued in the early months of 2023 in line with the developments seen in industrial activity. Considering that in most countries the recovery of economic activity was concentrated in service activities, which are less represented in international trade, the recovery of global trade lags behind real developments in the past several quarters. Goods trade volume shrank noticeably in the last quarter of 2022, greatly under the influence of the stagnation in the Chinese economy, after which it began to recover slowly, thanks to reduced limitations in global supply chains and the fall in the prices of energy and transportation costs. In the global services trade, the past several quarters saw strong growth in the trade of tourist services, which continued in early 2023, while the recovery in the trade of other services remained modest.

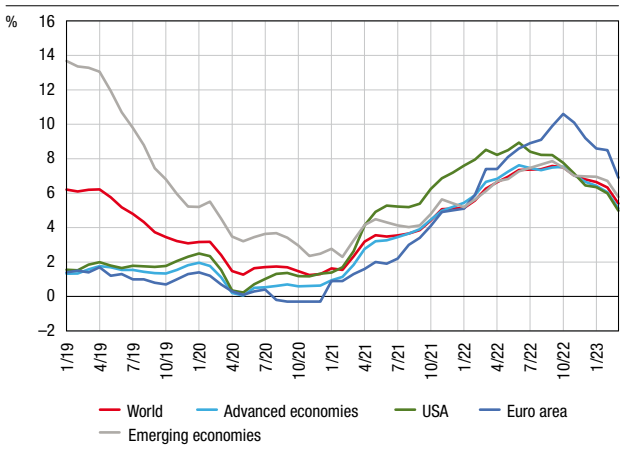
Energy prices have been decreasing on the global market since mid-2022, which greatly mitigated the intensity of pressures on the increase in consumer prices. Following a continuous decline since mid-2022, in the first months of 2023, prices of crude oil stabilised, hovering around an average of USD 80 per barrel. The imposition of additional sanctions in the trade in Russian oil (prohibition of imports of seaborne Russian crude oil and refined petroleum products in the EU) and the agreement of EU and G7 countries concerning price caps in the trade in Russian oil with third countries did not have a significant impact on prices. A somewhat more pronounced pressure on the drop in oil prices was recorded only in mid-March amid the turmoil in the banking sector and increased uncertainty regarding global demand; however, prices recovered soon after OPEC+ members announced additional output caps. Prices of gas on the European market sank from EUR 80/MWh in late 2022 to EUR 30/MWh at the end of May, which is below the levels recorded prior to the Russian invasion on Ukraine. The substantial decline in gas prices reflects exceptionally favourable weather conditions seen in the winter and the successful efforts of EU member states to ensure high levels of stored gas and achieve energy savings.

Figure 1.3 Prices of energy and other raw materials



Source: HWWI.

Figure 1.4 Global inflation



Source: Federal Reserve Bank of Dallas (adjusted by the CNB).

Prices of other raw materials have mostly held steady on somewhat elevated levels over the past several months. The somewhat higher volatility in the prices of food raw materials on the global market is, among other things, a result of the reduced supply of particular crops due to unfavourable weather conditions; in addition, the European market is significantly affected by uncertainty regarding the export of grain from the Ukraine via the Black Sea. Prices of industrial raw materials were mostly stagnant on the global market, with the exception of metal, whose prices grew, albeit slightly, under the influence of the somewhat improved global economic outlook since the beginning of the current year (Figure 1.3).

A significant drop in energy prices contributed greatly to the continued slowdown in global inflation in the first months of 2023. Global inflation peaked in October 2022, after which a decline was recorded that was equally pronounced in both developed and emerging economies (Figure 1.4). In addition to reduced energy prices, the slowdown in the growth of consumer prices was also supported by the normalisation of global supply chains and the tightening of global financing conditions. The intensity of monetary policy tightening of central banks in certain economies, for instance, in the US and the UK, slowed down noticeably over the past months.

Core inflation continues to grow in many countries or remains elevated despite lower prices of energy and most raw materials. Core inflation is increasingly dominated by the rise in the prices of services, which proved to be more persistent than the growth in the prices of goods seeing that they are relatively more dependent on labour costs which continue to grow sharply, particularly in developed countries. Changes in the structure of global demand following the pandemic also contribute to the pronounced increase in the prices of services.

2 Euro area

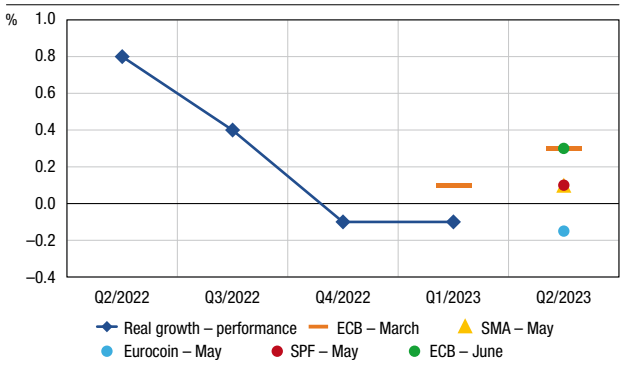
2.1 Real developments

Real economic activity in the euro area decreased marginally in the first quarter of 2023, by 0.1% on a quarterly level, while the last official ECB projection anticipated slight growth. Personal consumption of households was lower than expected, although the relatively strong growth in nominal wages and the inflation slowdown offset the intensity of the drop in the disposable income of households to a certain extent. Amid growing uncertainty and rising deposit interest rates, the propensity of households to save increased, which further curbed consumption. Positive contributions to economic growth came from the net exports of goods and services in the early months of 2023, owing to a drop in imports that exceeded the decline in exports and, to a much smaller extent, from private sector investments.

The service sector continues to grow faster than expected, while the recovery of the manufacturing sector remains hampered. The continued strengthening of activity in the service sector, particularly in contact-intensive activities, was supported by the strong demand following the pandemic and changes in consumer habits. On the other hand, the recovery of the manufacturing sector remains hampered, despite lower energy prices, reduced uncertainty regarding energy supply and the normalisation of global supply chains, due to high production costs and worsened financing conditions. This is confirmed by the data on the industrial production in the euro area, which stagnated in the first three months of 2023 relative to the last quarter of 2022, almost entirely as a result of an exceptionally strong contraction in industrial production in March.

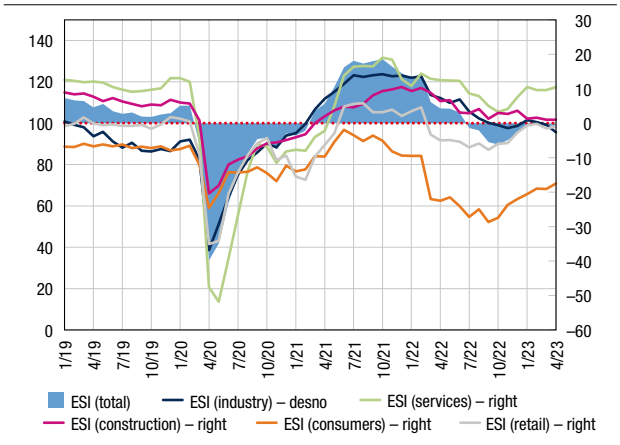
Confidence indicators point to the gradual economic recovery of the euro area in the second quarter, albeit at very low rates (Figure 2.1). The past several months saw more favourable developments in most confidence indicators. On the one hand, confidence indicators in manufacturing remained below their long-term average, in line with

Figure 2.1 Economic activity in the euro area



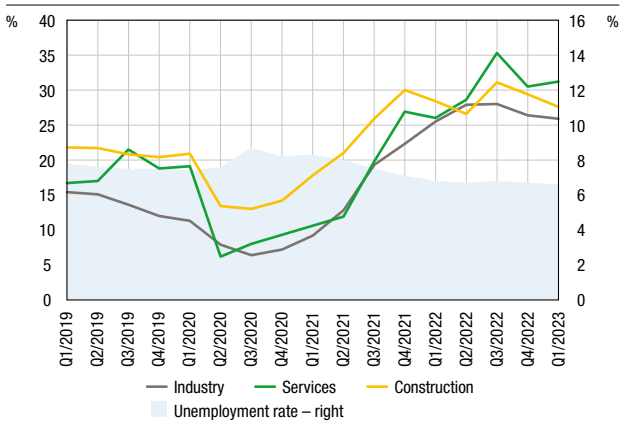
Note: ECB – March and ECB – June refer to the previous and the current ECB projection, respectively. Abbreviations SMA (Survey of Monetary Analysts) and SPF (Survey of Professional Forecasters) refer to the results of the May ECB survey of market participants. The Eurocoin indicator developed by Banca d'Italia refers to the model for nowcasting the quarterly rate of change in the real GDP of the euro area derived from high-frequency data (May estimate).
Source: Eurostat.

Figure 2.2 Euro area confidence indicators



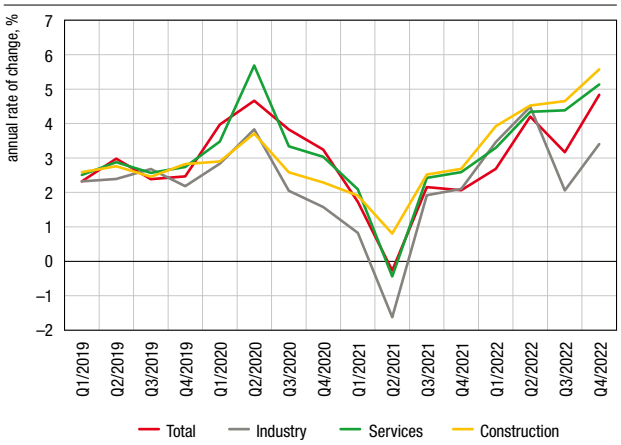
Note: Index value above (below) 100 refers to values higher (lower) than the long-term average.
Source: Eurostat.

Figure 2.3 Labour shortage and unemployment rate in the euro area



Note: Labour shortage is measured by a quarterly survey and indicates the percentage of firms reporting labour shortage as the main obstacle for business activity.
Source: Eurostat.

Figure 2.4 Employee compensation by individual activities in the euro area



Source: Eurostat.

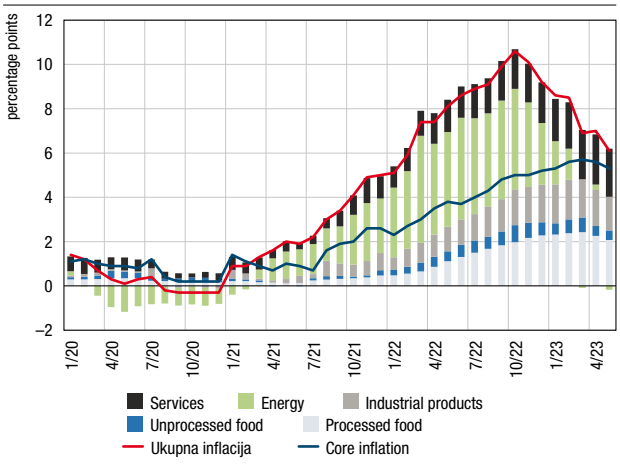
the trends referred to above. In contrast, confidence in the service sector continues to improve owing to strong demand supported by the gradual recovery in consumer confidence (Figure 2.2).

Trends seen on the labour market in 2022, i.e. widespread labour shortages and the increasingly strong nominal wage growth, continued. By the end of March 2023, the unemployment rate in the euro area went down to 6.5% of the labour force, with most activities, most notably service activities, exhibiting pronounced labour shortages (Figure 2.3). Against such a backdrop, coupled with demands of workers and unions to offset the decline in purchasing power caused by high inflation, pressures on nominal wage growth continued. In the last quarter of 2022, the annual rise in nominal wages in the euro area reached 4.8%, with the most significant increases recorded in activities with the most pronounced labour shortages (services and construction). In some activities facing limitations on the supply side and strong demand, corporate profits grew, contributing further to inflationary pressures.

2.2 Price developments

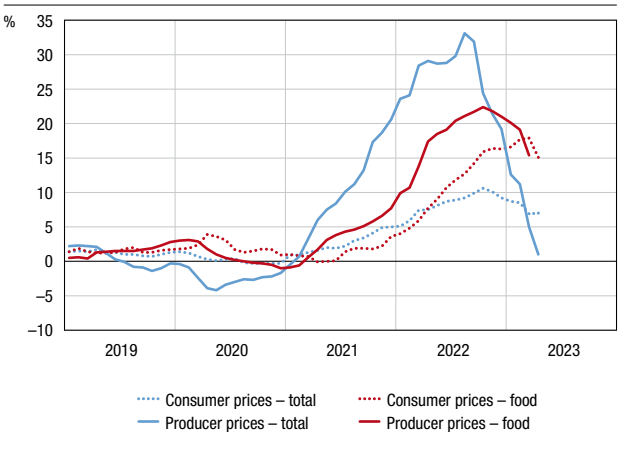
After accelerating slightly in April and thus ending a several-month long slowdown in growth, in May, the annual rate of inflation of the euro area decelerated noticeably to 6.1% versus 7.0% in the preceding month. The drop in energy prices contributed the most to the slowdown in overall inflation in May, in line with favourable price developments in the global markets. The slowdown in the increase in the prices of food continued in May thanks to the base effect and in line with the slower growth in food producer prices. Nevertheless, the increase in food prices is still pronounced and contributes significantly to overall inflation trends. Core inflation, which excludes food and energy prices, slowed down from 5.6% in April to 5.3% in May (Figure 2.5) due to the slowdown in the growth of prices of services and industrial products. Core inflation remains relatively high in view of the decrease in the prices of energy and other raw materials not having spilled over significantly to other inflation components.

Figure 2.5 Euro area inflation



Source: Eurostat.

Figure 2.6 Selected indicators of consumer and producer prices

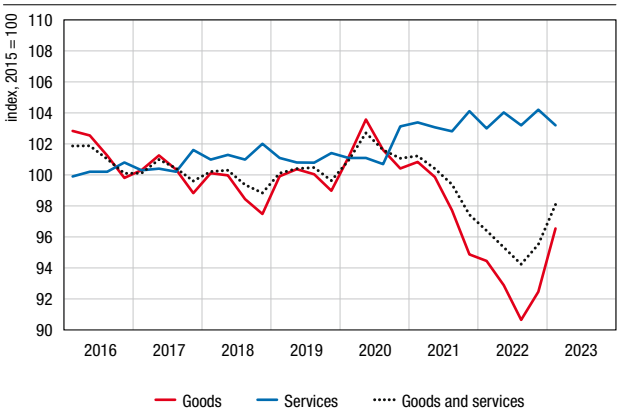


Source: Eurostat.

Although inflationary pressures have abated since mid-2022, they are still pronounced for the majority of components. This is a result of labour market pressures and nominal wage growth, increased profits in particular activities and the delayed transmission of the earlier shock in the prices of energy and raw materials to producer prices, particularly food prices (Figure 2.6). In addition, the delayed transmission of higher food and energy prices is also noticeable in the segment of services, particularly in accommodation and food service activities. Still, even though current inflationary pressures are still pronounced, available indicators suggest that medium-term inflationary expectations still hover around 2%.

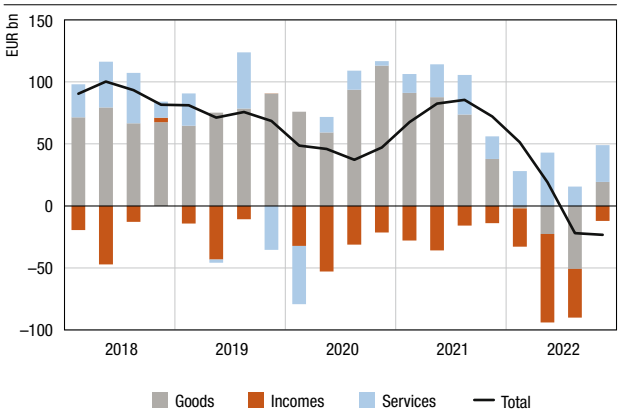
Since the beginning of the inflationary wave in mid-2021, import prices in the euro area have grown significantly faster than export prices, resulting in a strong deterioration of terms of trade and the current account balance. Considering that the

Figure 2.7 Euro area terms of trade in goods and services



Note: Terms of trade refer to the ratio of import and export prices of goods and services from the national accounts.
Source: Eurostat.

Figure 2.8 Euro area balance of payments current account



Note: Total current account balance has been calculated as the moving average of the last four quarters.
Source: ECB.

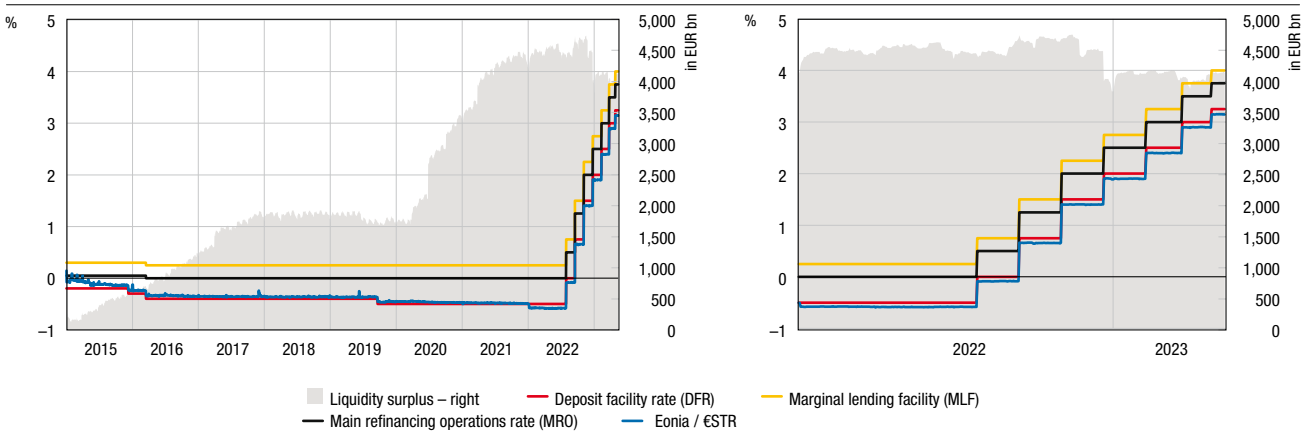
euro area is a net importer of energy, the considerable rise in energy prices affected its terms of trade negatively, and the growth in the export prices of services, which exceeded the rise in the import prices of services, particularly transport and tourist services, mitigated the deterioration of prices in the goods trade only partly (Figure 2.7). Following the decline in energy prices in late 2022, terms of trade began to improve, as reflected in the recent current account data, according to which a surplus was recorded in the last quarter of 2022 (Figure 2.8).

2.3 Monetary policy

From July 2022 to May 2023, ECB lifted its key interest rates by 375 basis points, which has been the strongest monetary policy tightening cycle in the euro area since the euro was introduced as a currency. By decisions adopted in the aforementioned period, the deposit facility rate (DFR) (which, due to currently high liquidity surpluses, is the Eurosystem's benchmark interest rate) was raised from –0.50% to 3.25%, the main refinancing operations rate (MRO) was lifted from 0% to 3.75% and the marginal lending facility rate (MLF) was increased from 0.25% to 4.00% (Figure 2.3.1). Further decisions on interest rates will rely on the assessment of price developments based on incoming economic and financial data, the dynamics of underlying inflation, and the strength of monetary policy transmission.

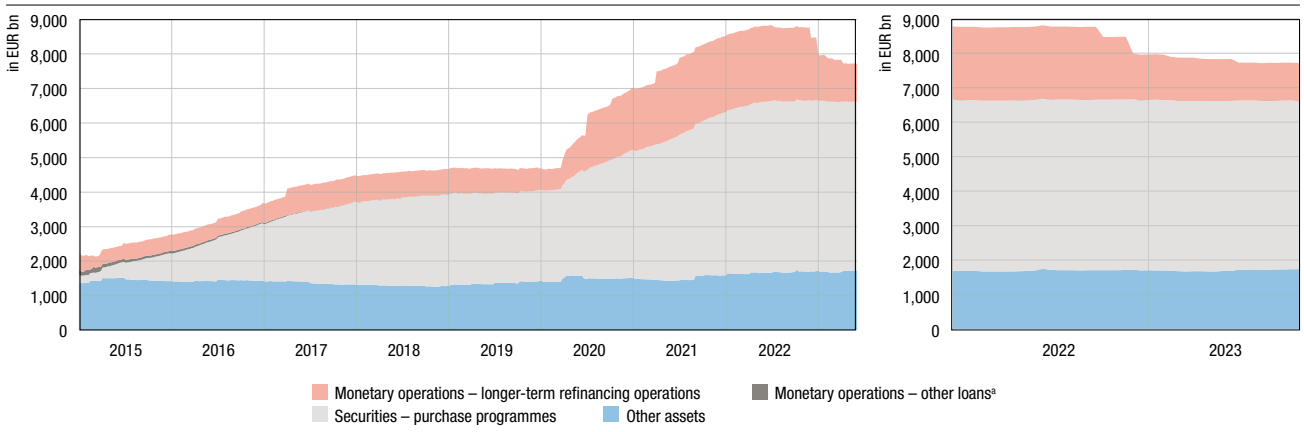
In addition to the use of standard monetary policy measures, the ECB reinforced the effects of interest rate increase by the gradual reduction of the Eurosystem balance sheet (Figure 2.3.2). Balance sheet reduction was mainly supported by banks' repayment of funds from the third series of targeted longer-term refinancing operations (TLTRO III) driven by the recalibration of refinancing conditions of November 2022. Furthermore, after ending the net asset purchases via the Asset Purchase Programme (APP) in December 2021, as of March 2023, the Eurosystem stopped reinvesting a part of principal payments from maturing securities. In contrast, securities falling due under the pandemic emergency purchase programme (PEPP) will be reinvested in a flexible manner until at least the end of 2024. With a view to preventing fragmentation in the

Figure 2.3.1 ECB key interest rates



Source: ECB.

Figure 2.3.2 Eurosystem balance sheet



Note: Red and gray shaded areas show the monetary items of Eurosystem balance sheet assets, while the blue shaded areas represent the non-monetary items.
[a] Other loans include: main refinancing operations, fine-tuning reverse operations, structural reverse operations, marginal lending facilities and credits related to margin calls.
Source: ECB.

transmission of monetary policy arising from increases in the sovereign bond spreads of euro area member states, i.e. from unwarranted and disorderly market dynamics, in July 2022, the Governing Council announced a possible implementation of the transmission protection instrument (TPI).

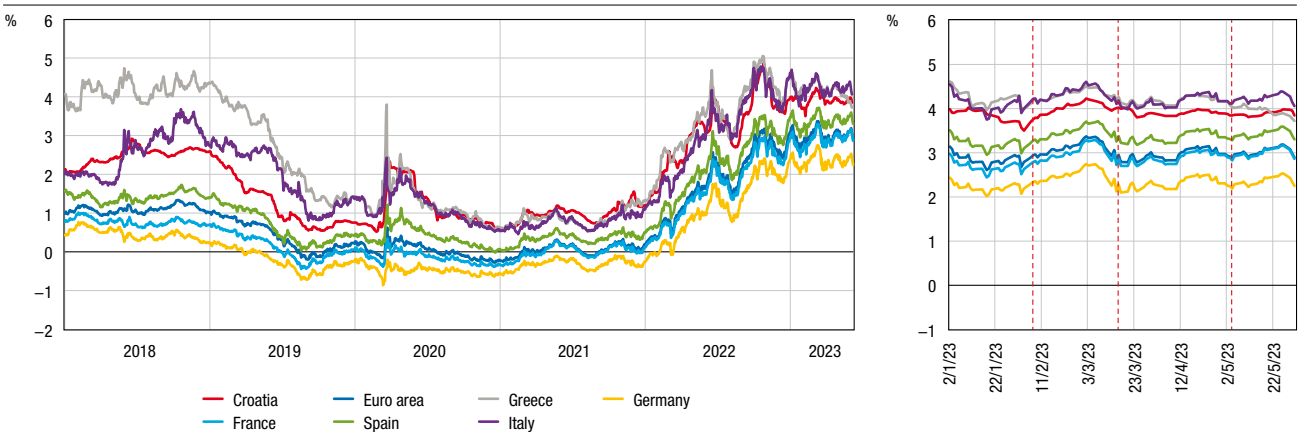
At the meeting of the ECB's Governing Council held on 15 June, a decision was adopted to increase key interest rates by 25 additional basis points (effective as of 21 June) and it was confirmed that re-investment under the Asset Purchase Programme (APP) would end on 1 July. The effects of the aforementioned decisions on the financial markets and the banking system are not discussed in this issue of Macroeconomic Developments and Outlook as the decisions enter into force after its publication.

2.4 Financial markets and the banking system

The increase in ECB key interest rates has been almost fully transmitted to interest rates on the money market. In the first half of 2023, the transmission of the increase in ECB key interest rates to the unsecured segment of the money market was immediate and full, while in the secured segment, the transmission was strong but not full, with some cross-country heterogeneity. Following the last increase in ECB interest rates of 25 basis points in May, the €STR went up from 2.9% to 3.2% at the end of May (Figure 2.3.1). In somewhat longer-term lending, oscillations were more pronounced under the influence of changed expectations regarding the speed and intensity of monetary policy tightening. After the three-month EURIBOR dropped to 2.7% at the beginning of the year, signalling expectations of a more moderate increase in ECB interest rates, steady inflationary pressures and continued monetary tightening coupled with reduced tensions pushed the three-month EURIBOR up to 3.3% at the end of April and, ultimately, to 3.5% in late May.

In addition to being affected by monetary policy changes, trends on the bond market were also determined by growing uncertainty following the failure of the

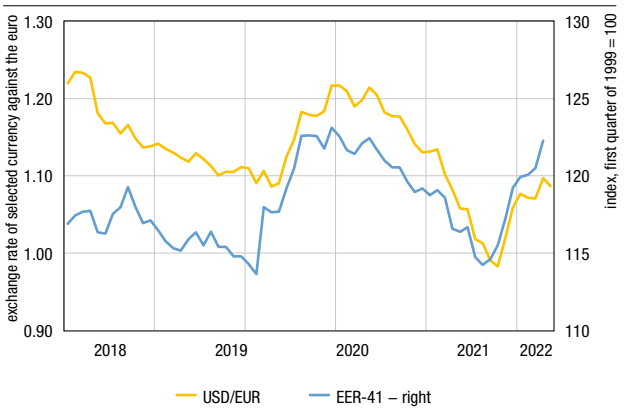
Figure 2.4.1 Yields on long-term government bonds with the remaining maturity of approximately 10 years



Note: Yields for the euro area have been weighted by the shares in GDP of countries included. Data from the euro area do not include those from Estonia, Latvia, Luxembourg and Malta. The red dotted lines denote ECB Governing Council meetings in February, March and May.
Sources: Bloomberg, Eurostat and CNB calculations.

first two out of three regional US banks and one Swiss bank in March. Yield trends on the bond market were stable from the beginning of the year, and yields at the end of May were at a level similar to that recorded in the early months of the current year (Figure 2.4.1). March was an exception, when uncertainty related to the situation in US banks, and, to a significantly smaller extent, in European banks, increased volatility in the short term. These events briefly reduced yields as investors expected a delay or a slowdown in the further intensity of ECB monetary policy tightening. Considering the regulatory measures taken to prevent the spillover of effects of the failure of large banks in the US and Switzerland to the wider banking and financial system, movements in euro area financial markets stabilised quickly, which enabled the ECB to persist in continued monetary policy tightening. The yield on the long-term bonds of Croatia did not react significantly to the aforementioned events, standing at 3.9% at the end of May, down by 14 basis points from the beginning of 2023 and five basis points from the end of April.

Figure 2.4.2 Exchange rates of selected currencies against the euro and the nominal effective exchange rate of the euro



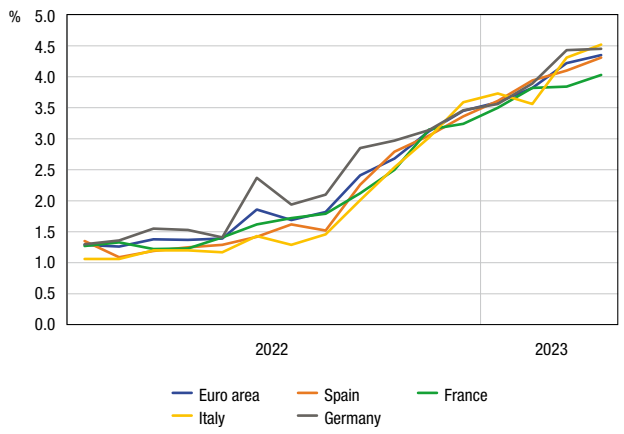
Note: EER-41 is the nominal effective exchange rate index of the euro against 41 major trading partners of the euro area. Exchange rate increase indicates euro appreciation.
Source: ECB.

In the global foreign exchange market, the euro began to recover relative to the US dollar towards the end of 2022, so that by May 2023 it regained most of the value lost in 2022. This was primarily brought about by expectations that the pace of the FED key interest rate increase could slow down and that the US monetary policy could change course earlier than expected. In addition, the euro was supported by expectations of the continued normalisation of ECB monetary policy. The failure of two regional US banks in March 2023 had an unfavourable effect on economic

outlook and additionally lowered expectations of key interest rate increase. The exchange rate of the euro versus the US dollar hovered around an average value of USD/EUR 1.09 in May 2023, which is an appreciation of around 11% relative to the level in September 2022. Over the same period, the nominal effective exchange rate of the euro against a basket of currencies of the main trading partners of the euro area appreciated by around 6% and returned to the level recorded in mid-2021 (Figure 2.4.2).

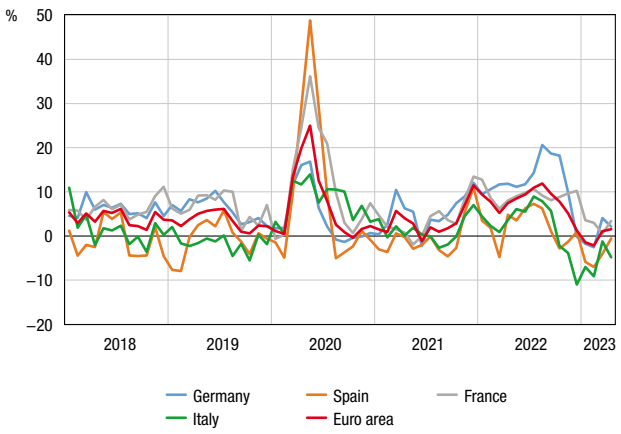
Corporate and household borrowing costs continued to grow, reflecting the fast pace and intensity of ECB interest rate increases, while lending activity stabilised. At euro area level, the average interest rate on pure new loans granted to non-financial corporations reached 4.35% in April (Figure 2.4.3), having gone up by 75 basis points from the end of the preceding year. The increase in interest rates was accompanied by a decline in the total volume, with the quarterly annualised rate of growth in loans to non-financial corporations entering negative territory in all euro area countries except France

Figure 2.4.3 Interest rates on pure new corporate loans



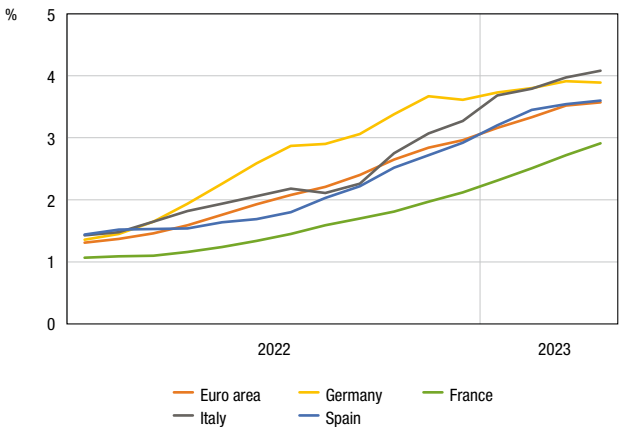
Source: ECB.

Slika 2.4.4 Lending momentum in the euro area (corporations)



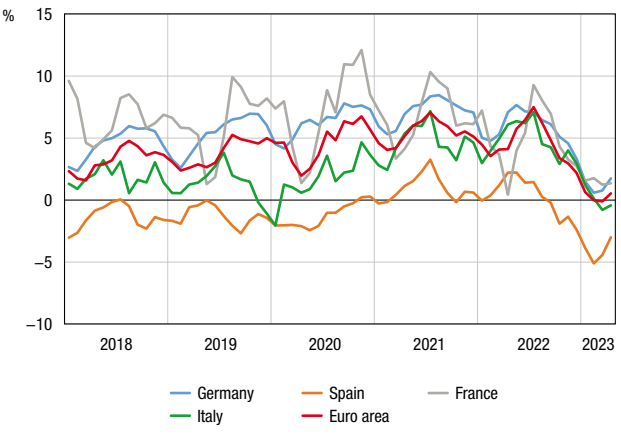
Note: Quarterly rate of change on an annual level.
Source: ECB and CNB calculations.

Figure 2.4.5 Interest rates on pure new household loans



Note: Series refer to housing loans.
Source: ECB.

Figure 2.4.6 Lending momentum in the euro area (households)



Note: Quarterly rate of change on an annual level. Series refer to housing loans.
Sources: ECB and CNB calculations.

at the beginning of the year (Figure 2.4.4). With heterogeneity across countries, loans to non-financial corporations decreased the most in Italy, while lending to non-financial corporations is still growing in France. Following a brief slowdown in lending, which was relatively consistent across all euro area countries, signs of stabilisation are noticeable from the beginning of this year. In addition, after the rise in lending to households ended at the beginning of the year (Figure 2.4.6), in the last two months, loans to households began to increase again. The interest rate on original new housing loans to households was 3.6% in April relative to 3.16% in January (Figure 2.4.5). Overall, relative to the preceding year, the intensity of lending weakened noticeably more in the segment of lending to non-financial corporations than in the segment of lending to households. This fact is also related to base effects from 2022 when lending was very strong due to increased needs for financing working capital driven by increases in the prices of energy and raw materials.

3 Croatian economy

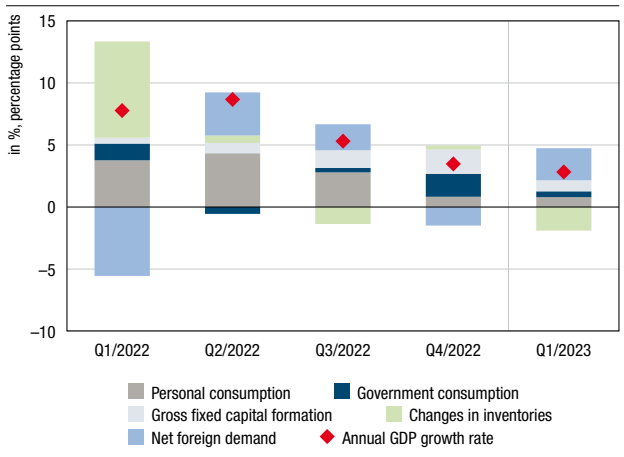
3.1 Real developments

Under the influence of recovery in domestic demand and the redirection of demand in the European market towards services, followed by reductions in the prices of energy and raw materials, economic activity in Croatia continued increasing at the same intensity as at the end of the last year. These favourable effects eclipsed the limitations stemming from geopolitical instability, still-high inflation and restrictive monetary policy (Figure 3.1.1). The real GDP increased 1.4% in the first three months of the current year from the previous quarter, growing by 2.8% from the same period of the previous year. Higher real GDP growth rate from the euro area and EU average (Figure 3.1.2) gradually reduced income differences, after domestic product per capita (in terms of purchasing power) reached 73% of the EU average.

Investments and strong demand for services contributed considerably to favourable economic developments in the first quarter. Nevertheless, developments in construction and imports of capital goods indicate a slowdown in the growth of private investments, which is partly to be attributed to a gradual deterioration in financing conditions. As for service activities, especially those connected with tourism, relatively favourable developments linked to the annual increase in foreign tourist arrivals and overnight stays continue to be observed. While the exports of services increased from the end of the previous year, the exports of goods strongly contracted. These developments could be partly influenced by the dynamics in 2022 when exports of goods went up exceptionally well. However, the contraction in the exports of goods is probably also linked with subdued activity in countries that are Croatia's main trading partners, as well as in changes in the demand structure, from goods towards services.

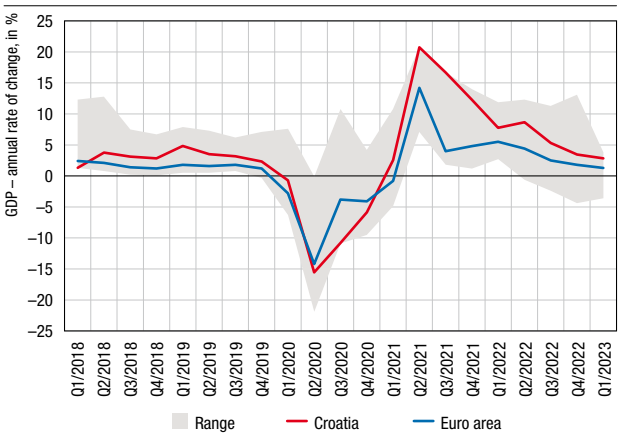
Personal consumption recovered at the beginning of 2023 from the strong fall at the end of last year (Figure 3.1.6). Consumption decline in the fourth quarter of 2022 was partly a reflection of households striving to increase savings from the very low level

Figure 3.1.1 Contributions to the change in real economic activity



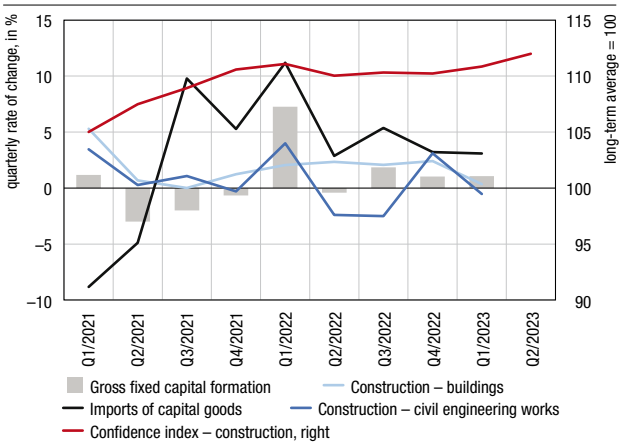
Source: Eurostat.

Figure 3.1.2 Trends in economic activity in Croatia and the euro area



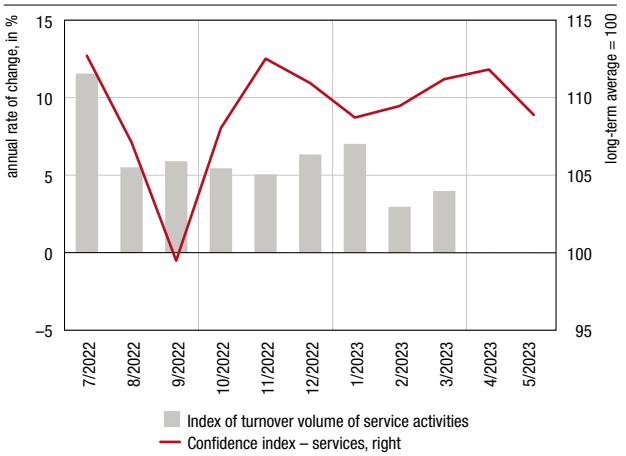
Note: The figure shows the range of values of real GDP growth of individual euro area Member States.
Source: Eurostat.

Figure 3.1.3 Investment activity indicators and confidence in the construction sector



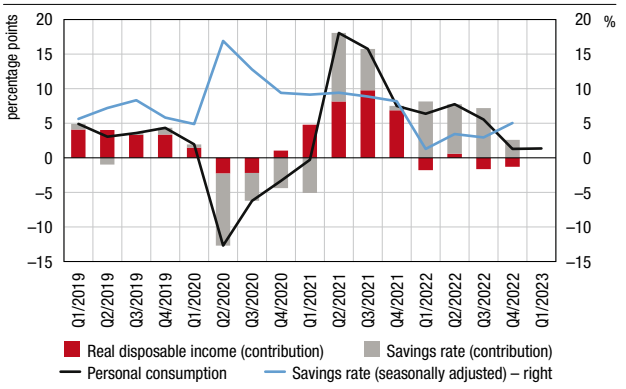
Note: Data on confidence in the construction sector for the second quarter of 2023 refer to April and May.
Sources: CBS, Ipsos and CNB.

Figure 3.1.4 Developments in the turnover volume of service activities and confidence in the services sector



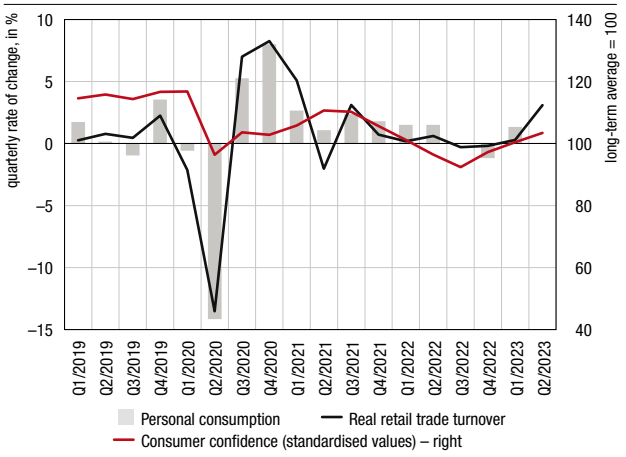
Note: Services include sectors H, I, J, L, M i N.
Sources: CBS, Ipsos and CNB.

Figure 3.1.5 Contribution of disposable income and savings rate to the annual change in personal consumption



Note: Quarterly disposable income values have been estimated using the Chow-Lin method and series of employee compensation and gross operating surplus and mixed income as indicators. The savings rate is calculated as the ratio of the estimated nominal amount of savings and estimated disposable income and excludes adjustments for changes in pension rights.
Sources: Eurostat and CNB calculations.

Figure 3.1.6 Personal consumption, retail trade and consumer confidence

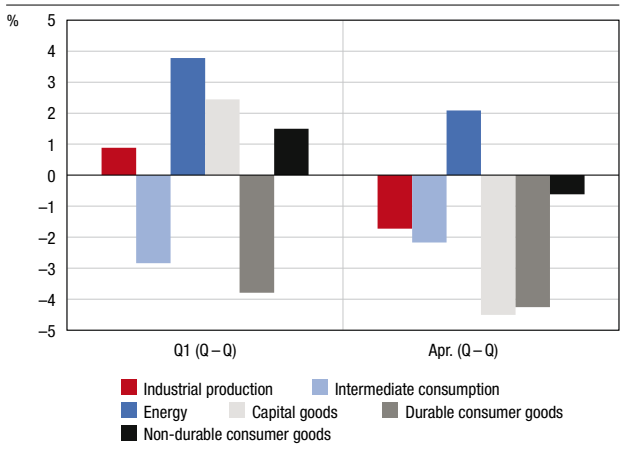


Sources: CBS, Ipsos and CNB.

reached at the beginning of last year (Figure 3.1.5.) and of the suppression of consumer confidence resulting from the decline in real income and uncertainty regarding future economic developments. The strong labour market in the first quarter 2023, marked by continued growth in the number of employed persons and partial recovery in real wages, resulted in improved consumer optimism and increased personal consumption.

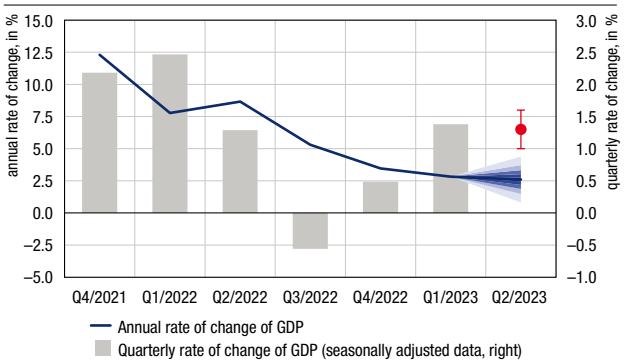
The available monthly data indicate a continuation of favourable trends in the second quarter. According to the CNB's nowcasting model of economic activity (MR-GA), which currently draws on a relatively small number of available data for the second quarter, real GDP is expected to grow in the period from April to June at a similar intensity as in the first quarter (Figure 3.1.8). However, due to the base effect, the annual growth rate might decelerate to 2.6%. Real retail trade turnover increased strongly in April, with consumer confidence continuing to grow, thus indicating a recovery in

Figure 3.1.7 Industrial production



Note: (QoQ) signifies growth relative to the average of the preceding quarter.
Source: CBS.

Figure 3.1.8 Quarterly GDP, seasonally adjusted real values



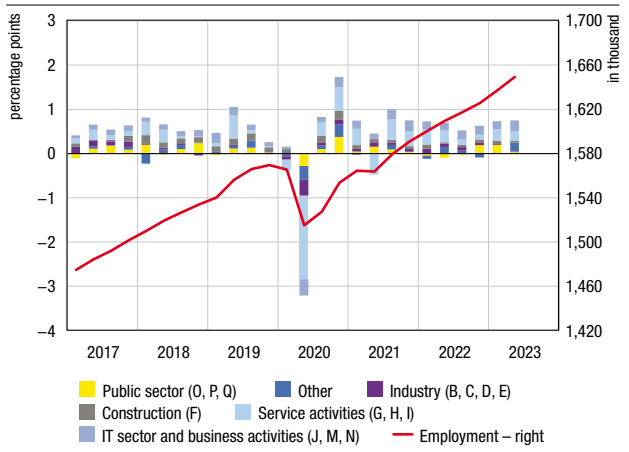
Note: The estimate for the second quarter of 2023 refers to the Monthly indicator of real economic activity of the CNB (for more details on the calculation of the MRGA indicator, see CNB survey Kunovac, D., and B. Špalat: "Nowcasting GDP Using Available Monthly Indicators". The models are estimated on the basis of data published up to 29 May 2023. The red dot denotes an estimate of the quarterly change in real GDP, with historical errors of estimates within ±1 standard deviation.
Sources: Eurostat, CBS and HNB.

demand for goods, while data on the amount of fiscalised receipts, as well as the optimism maintained in the services sector, reflect the relatively strong demand for services. In addition, companies in the construction sector continue to be relatively optimistic as regards developments over the next three months, planning further hiring (availability of workers remains to be singled out as one of the main factors restricting growth). In contrast, industrial production contracted substantially in April, with all main industrial groupings except energy registering a decline in production (Figure 3.1.7); optimism in industry also continued deteriorating in April and May. This suggests poor foreign demand for goods which could subdue the growth of exports of goods as the year goes on.

3.2 Labour market

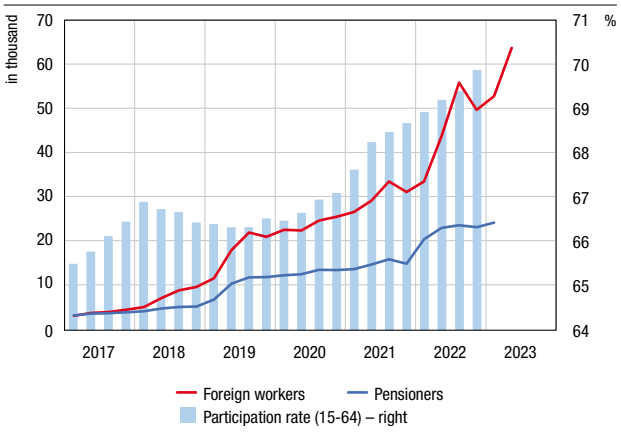
Robust economic activity contributed to the strong increase in the number of employed persons in Croatia. In the first quarter of 2023, total employment increased by 0.7% from the previous quarter. Employment in tourism-related service activities, the IT sector and the public sector made the biggest contribution to total employment growth, while the number of persons employed in construction and industry grew at a slower intensity (Figure 3.2.1). At the annual level, the number of employed persons was 2.4% higher in the first quarter of this year than in the same period in 2022. Data for April and May point to continued growth in employment at an intensity similar to that in the first quarter, the monthly growth rates achieved to some extent surpassing those in the same period of 2022. All this was reflected in a slight increase in the growth of employment (shown in relation to the same period of the previous year) in April and May. The demand for labour continues to be partially met by the employment of third-country workers (from non-EU countries) and by hiring pensioners who work up to half time (Figure 3.2.2). Workers from third countries are represented predominantly in labour-intensive activities such as construction, industry and tourism-related service activities, while the majority of pensioners work in retail trade (Figure 3.2.3). Amid shortages in labour

Figure 3.2.1 Employment by NCA, seasonally adjusted data, contributions to the quarterly rate of change



Note: Data for the second quarter of 2023 refer to April and May.
Source: CPII (seasonally adjusted by the CNB).

Figure 3.2.2 Participation rate, employed pensioners and foreign nationals

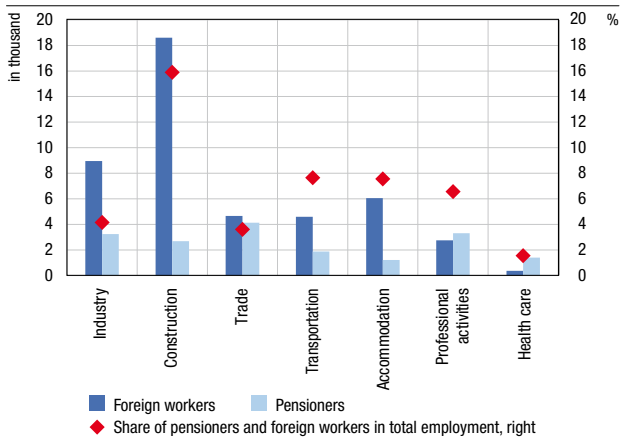


Note: Data for the second quarter of 2023 for third-country foreign workers refer to April and May. The participation rate is calculated for the population aged 15 to 64.
Source: CPII.

supply and the increased hiring of pensioners and foreigners, the labour force participation rate in the age group 15–64 continued gradually increasing and reached 70.4% in the period from October to December.

Employment growth partially contributed to a reduction in the unemployment rate, with strong demand for labour reflected in the still high job vacancy rate (Figure 3.2.4). The seasonally adjusted registered unemployment rate fell to 6.1% of the labour force in the third quarter, from 6.6% in the previous three months. Data for April indicate a continued decline in the unemployment rate, which totalled 6% in April (seasonally adjusted). In view of the further decline in the number of the unemployed in May, when the number of unemployed persons went down to below 100,000, it is to be expected that unemployment rate will continue to fall. The internationally comparable ILO unemployment rate is available for the last quarter of 2022, when it amounted to 6.5% of the labour force (seasonally adjusted).

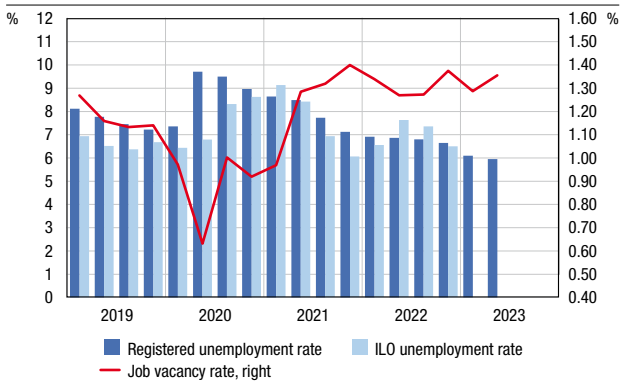
Figure 3.2.3 Employed pensioners and foreign workers as at March 2023



Note: The chart shows data for third-country workers and pensioners working up to half-time in 2023 as at end of March.
Source: CPII.

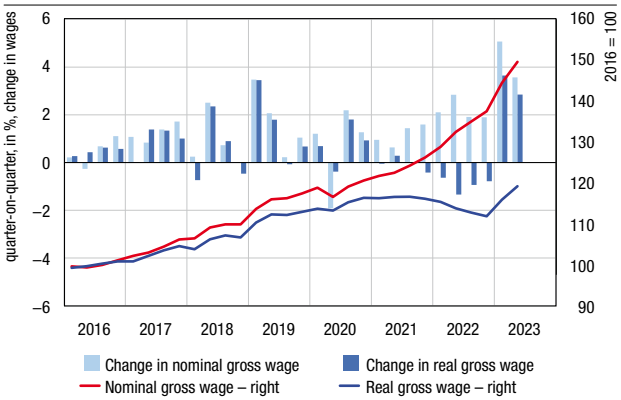
Strong employment paired with the shortage in the labour force, very low unemployment and accumulated loss of purchasing power due to rising inflation, strongly accelerated nominal wage growth at the beginning of the year, so purchasing power grew (Figure 3.2.5). Wage growth was widespread across different activities, although growth acceleration was most prominent in the private sector. The growth of nominal wages and gradual slowdown in inflation also resulted in the quarterly increase in real wages. In the first quarter 2023, the average real

Figure 3.2.4 Unemployment and job vacancy rates, seasonally adjusted data



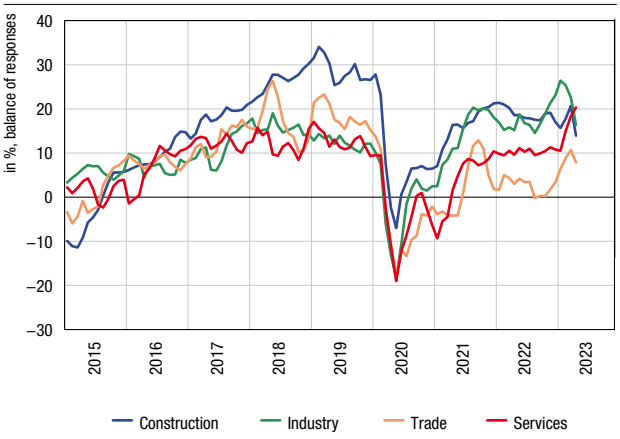
Note: Data for the second quarter of 2023 refer to April. Since January 2015, the calculation of the registered unemployment rate has used data on employed persons from the JOPPD form. The job vacancy rate is calculated as the share of total positions that are vacant in the total demand for labour (the sum of the number of persons insured with the CPII and vacant positions).
Sources: CBS, CES and CNB calculations (seasonally adjusted by the CNB).

Figure 3.2.5 Average nominal and real wage, seasonally adjusted data



Notes: Data for the second quarter of 2023 refer to April. As of January 2016, data refer to the JOPPD form, while earlier data refer to the RAD-1 form. Data on average wages paid in February 2020 were reported in full-time equivalent. Data on wages in 2019 reported in full-time equivalent were released for analytical purposes.
Sources: CBS and CNB calculations (seasonally adjusted by the CNB).

Figure 3.2.6 Employment expectations by sectors (in the following three months) seasonally adjusted data, three-member moving average of monthly data



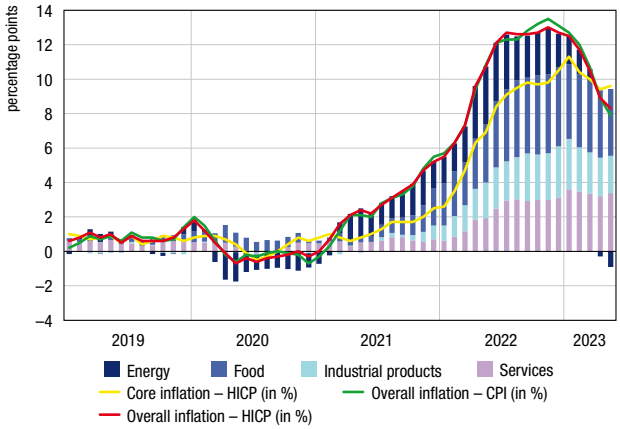
Source: Business Confidence Survey (seasonally adjusted by the CNB).

gross wage thus increased by 3.6% after having declined for five consecutive quarters. Developments in the first quarter were largely affected by the noticeable spike in wages paid out in February for January, which was, judging by the substantially less prominent increase in March, a one-off occurrence. It is possible that such strong wage growth at the beginning of the year reflects the fact that in a certain number of companies at the beginning of the year wages are adjusted to business results and/or macroeconomic trends in the previous year. In addition, present labour shortages might spur employers to reduce employee fluctuations and the related costs by raising wages. Some of the impact could also have come from the increase in the minimum wage as of 1 January (from EUR 560 to EUR 700 in gross amount). Data for April indicate that the monthly growth in both nominal and real wages at the beginning of the second quarter additionally weakened from March. Indicators of expected employment point to a continuation in increased labour market pressures (Figure 3.2.6), especially in service activities.

3.3 Price developments

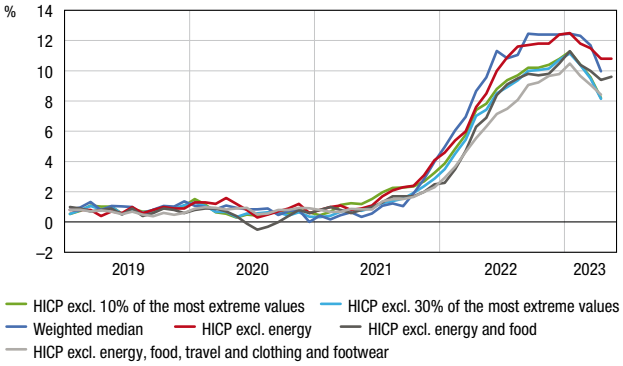
Overall inflation measured by the harmonised index of consumer prices (HICP) has been decreasing steadily over the first five months of 2023, reaching 8.3% in May according to the first estimates, down from the 12.7% recorded in December 2022 (Figure 3.3.1). Energy prices contributed the most to the slowdown in overall

Figure 3.3.1 Inflation indicators in Croatia



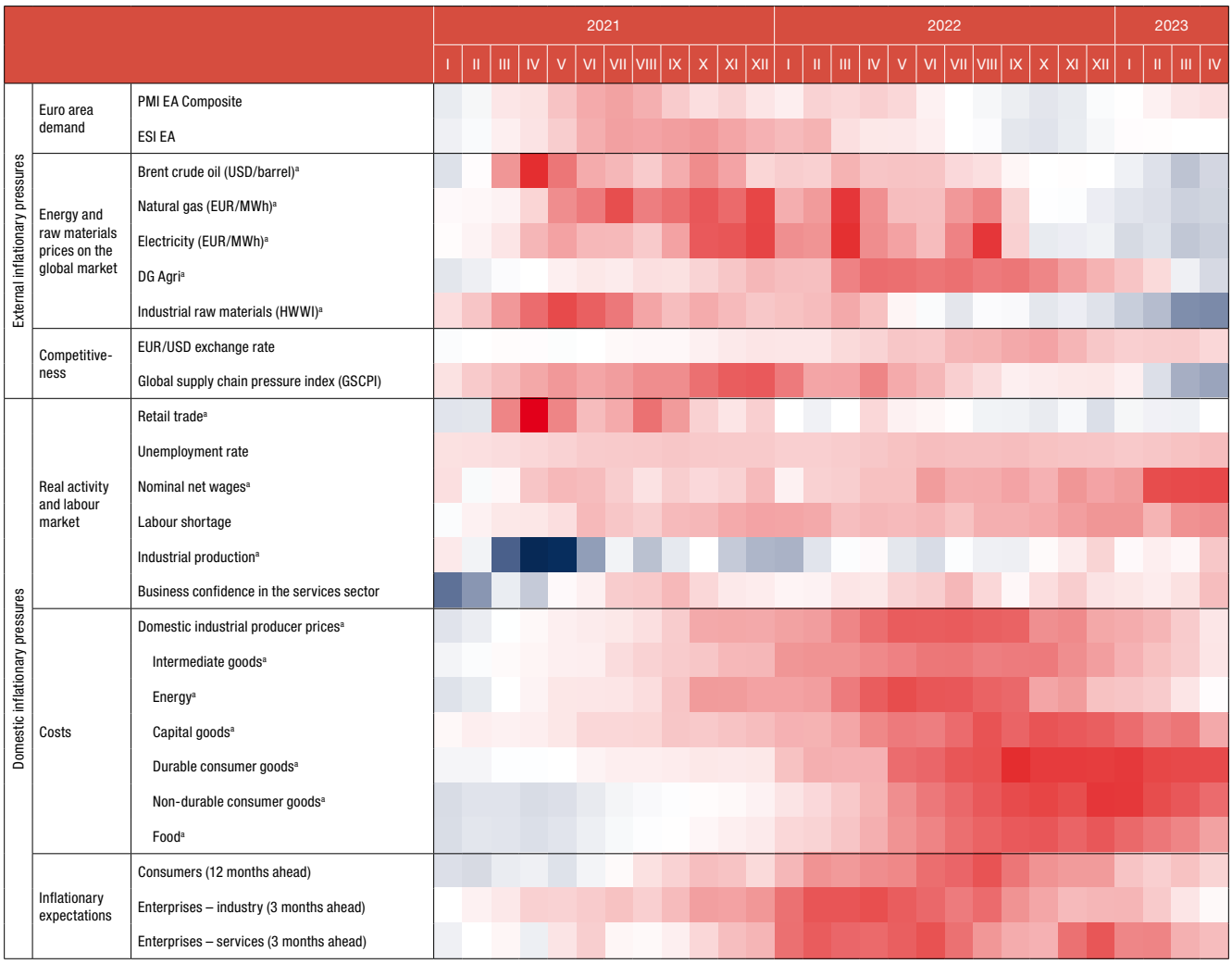
Note: Core inflation is measured by the harmonised index of consumer prices, which excludes the prices of energy, food, alcoholic beverages and tobacco.
Sources: Eurostat and CNB calculations.

Figure 3.3.2 Core inflation indicators in Croatia



Notes: Trimmed mean is the measure of the central tendency calculated by eliminating 5% (15%) of components with maximum and minimum annual rates of change in a given month. The total data set refers to 87 HIPC components. The weighted median is a form of median without the most extreme values, which excludes all values but the weighted median of the distribution of price change.
Izvor: HWWI

Figure 3.3.3 Indicators of external and domestic price pressures



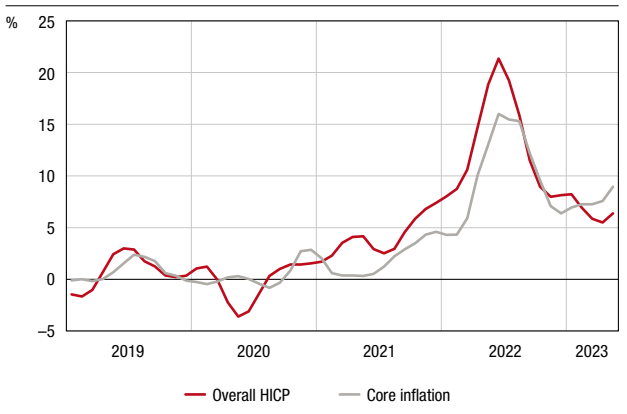
a Annual rate of change
Notes: Labour shortage shows the ratio between the vacancy rate and the registered unemployment rate. The PMI EA Composite and ESI EA series have been corrected after standardisation so as to show the neutral value in white. Grey indicates that no data are available in the last month.
Sources: ECB, SDW, Eurostat, Bloomberg, NY Fed, HWWI, CBS and Ipsos.

inflation thanks to the decrease in the prices of refined petroleum products and the favourable base effect due to the significant increase in energy prices in the same period last year. The annual inflation of energy prices, which began to decline in mid-2022, dropped to –7% in May. To a smaller extent, food prices (including alcohol and tobacco) also contributed to the slowdown of inflation, although their annual increase in May was nevertheless sharp (13.3%) due to the continued spillover of the earlier strong increase in the prices of energy and food raw materials. Therefore, of all the main components of the consumer price index, food prices continue to contribute the most to overall inflation, accounting for almost a half of it.

Core inflation (excluding the prices of energy and food) slowed down relatively slightly, from 10.5% in December 2022 to 9.6% in May (Figure 3.3.2), reflecting a decrease in the inflation of prices of industrial products. Foreign pressures on the increase in core inflation are abating due to the decrease in the prices of energy and other raw materials on the global market and the elimination of remaining bottlenecks in global supply chains (Figure 3.3.3). The slowdown in core inflation is also under the impact of the favourable base effect, i.e. the waning effect of the sharp increase in the prices of numerous products in 2022. In contrast to the inflation in the prices of goods, inflation in the prices of services (for more information, see Box 1 Recent developments in the inflation of services) is significantly more persistent so that, even though it dropped in the four months following January, when the prices of certain services jumped immediately upon the introduction of the euro, it remains higher than at the end of 2022. Alternative indicators of core inflation, which exclude certain volatile components, remain elevated, although they also point to the gradual waning of inflationary pressures.

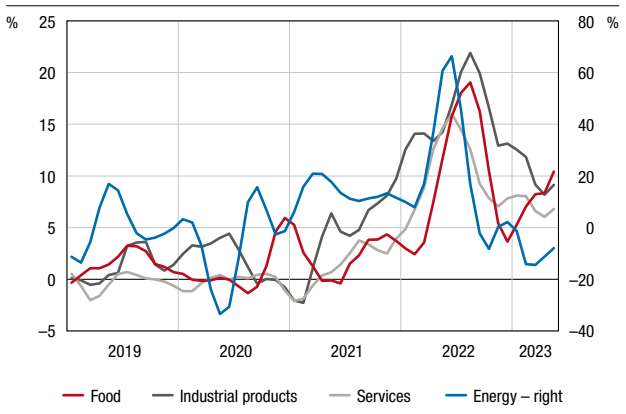
Despite the slight monthly increase recorded in May 2023, the short-term indicator of overall inflation (Figure 3.3.4), which reflects current developments, went down from the end of 2022. The decrease in imported inflationary pressures contributed the most to the mitigation of current inflation, particularly in the segment of energy prices**.** In May 2023, prices of crude oil on the global market were a third lower than they were following the Russian invasion of Ukraine, while prices of gas and

Figure 3.3.4 Momentums of overall and core inflation



Note: Annual rate of change on an annual level has been calculated based on the quarterly moving average of seasonally adjusted harmonised inidces of consumer prices.
Sources: Eurostat and CNB calculations.

Figure 3.3.5 Momentums of main inflation components



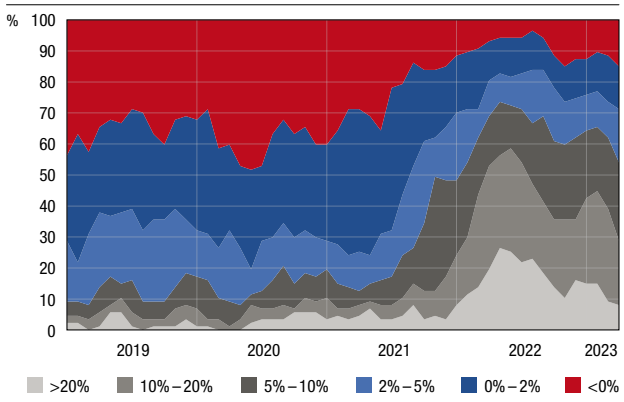
Note: Annual rate of change on an annual level has been calculated based on the quarterly moving average of seasonally adjusted harmonised inidces of consumer prices.
Sources: Eurostat and CNB calculations.

electricity dropped by 60%. Still, current inflation remains elevated because the decrease in input costs (energy, food raw materials, fertilisers and transport) is spilling over to the prices of individual goods only gradually, which is particularly noticeable in the prices of food. The practice of some corporations to conclude long-term agreements with suppliers in which prices of particular input costs are fixed over a defined period may be a possible cause for the time lag. In addition, it is also possible that corporations are directing savings generated from lower input costs towards increased profits and wage rises, rather than to decreases in product prices.

In contrast to overall inflation, short-term indicators of core inflation increased slightly over the first five months of the current year, although they are still significantly lower than the peaks recorded in mid-2022. Persisting core inflation is still, to a large extent, attributable to the indirect effects of the earlier increases in the prices of energy, food and other input costs. Furthermore, while in 2022, growing inflation was supported by corporate profits, this year, persisting elevated core inflation, particularly with regard to the prices of services, is increasingly affected by the strong labour market characterised by stable employment growth, labour shortages and the relatively strong increase in nominal wages. Increased prices of services (Figure 3.3.5) are also supported by the shifting of demand towards services.

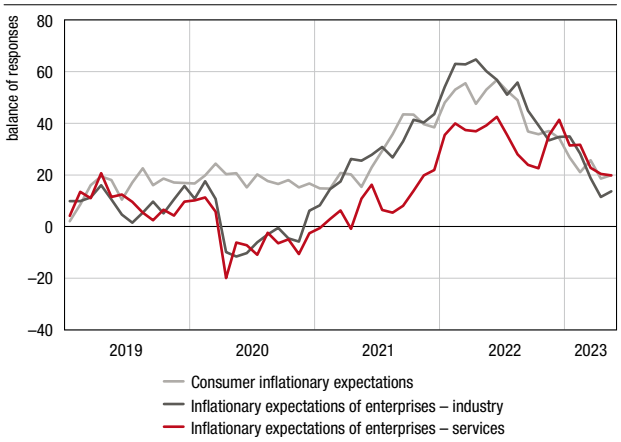
Elevated inflation remained broad-based (Figure 3.3.6) and the share of subcomponents in the consumer price index whose annual growth stands above 2% exceeds 70% (which is nevertheless more than 10 percentage points lower than in the third quarter of 2022, when that share peaked at around 84%). Despite that, **the downward trend in short-term inflationary expectations, which began in mid-2022, continued over the first five months of the current year (Figure 3.3.7) in line with the trends in the prices of individual frequently purchased products**. Trends seen in energy prices, i.e. the decrease in the prices of refined petroleum products in the domestic market coupled with the continued "freezing" of consumer prices of natural gas and electricity have, most probably, contributed to the decrease in consumer inflationary expectations.

Figure 3.3.6 Diffusion of consumer price inflation



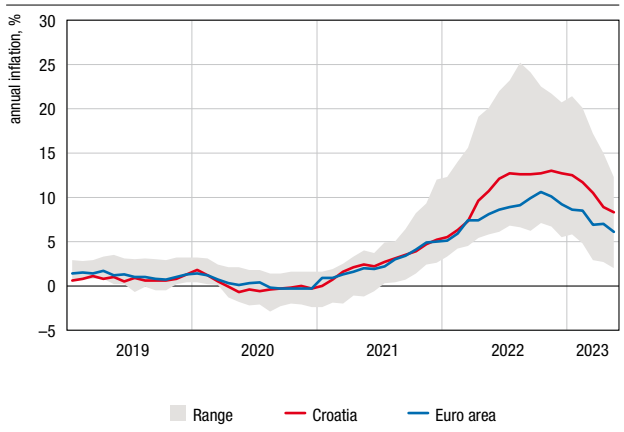
Note: The figure shows the share of products whose prices changed within a defined range in the total number of products according to quarterly moving averages of annual rates of change of seasonally adjusted price indices of 87 components of the harmonised consumer price index.
Sources: Eurostat and CNB calculations.

Figure 3.3.7 Short-term consumer and corporate inflationary expectations



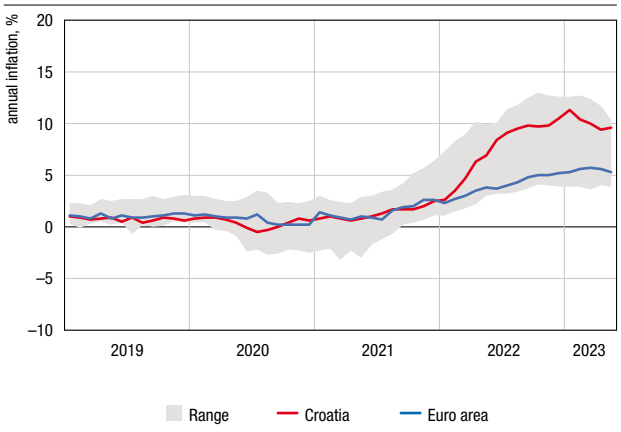
Note: Consumer expectations refer to a twelve-month period ahead and corporate expectations refer to a three-month period ahead.
Source: Ipsos.

Figure 3.3.8 Synchronisation of overall inflation in Croatia and the euro area



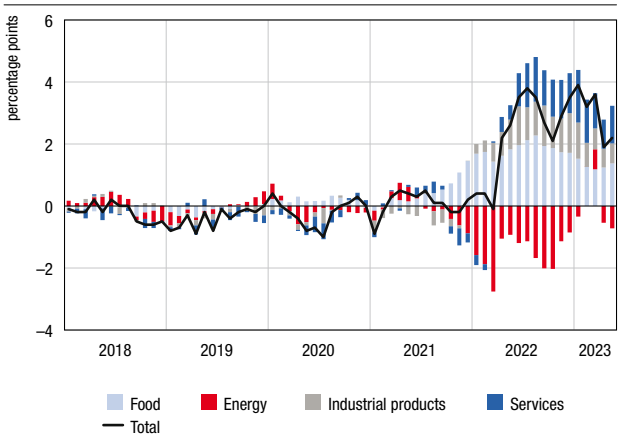
Note: Gray areas show the range of values of individual member states.
Source: Eurostat.

Figure 3.3.9 Synchronisation of core inflation in Croatia and the euro area



Note: Gray areas show the range of values of individual member states.
Source: Eurostat.

Figure 3.3.10 Difference between overall inflation rates and the contributions of individual components to consumer price inflation in Croatia and the euro area



Sources: Eurostat and CNB calculations.

The decrease in the prices of energy and other raw materials on the global market and reduced inflationary pressures caused by disruptions in global supply chains are some of the factors contributing to the decrease in short-term inflationary expectations of corporations in manufacturing and services in 2023.

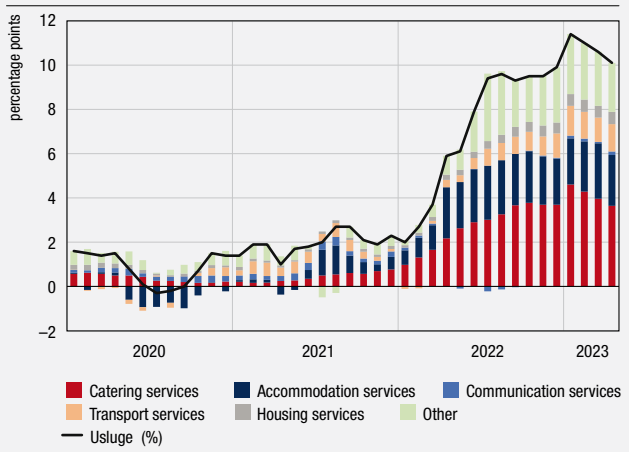
Although inflation levels and trends primarily reflect developments that are shared by a large number of countries, the impact of certain locally specific features is noticeable as well. Overall and core inflation in Croatia in May were, respectively, 2.2 and 4.3 percentage points higher than in the euro area (Figures 3.3.8 and 3.3.9). This inflation differential was primarily a result of a larger weight of food in the basket for the calculation of the HIPC (and only to a lesser extent of a more pronounced annual increase in their prices), but also of the stronger annual growth in the prices of services in Croatia than in the euro area (Figure 3.3.10).

Box 1 Recent developments in the inflation of service prices

Short-term indicators of price inflation increased in 2023, suggesting that it was more persistent than had been expected earlier; what is more, in Croatia, it was noticeably higher than at euro area level. This box therefore focuses, in more detail, on the developments in the inflation of service prices in Croatia and the euro area, which is linked to the overall price growth. The inflation of prices of services is primarily spurred by catering and accommodation services, which account for more than a half of the annual inflation of service prices and which also contribute the most to the difference between the inflation of service prices in Croatia and the euro area. Factors affecting the growth in the prices of services, include, among other things, the long-term effect of the price convergence due to the lower level of prices relative to other euro area countries, the recent rise in input costs brought about by increases in the prices of energy and food, wage growth, labour shortages and the strong demand of foreign visitors for tourism services. The growth in the prices of these services improves terms of trade and has a positive effect on domestic income.

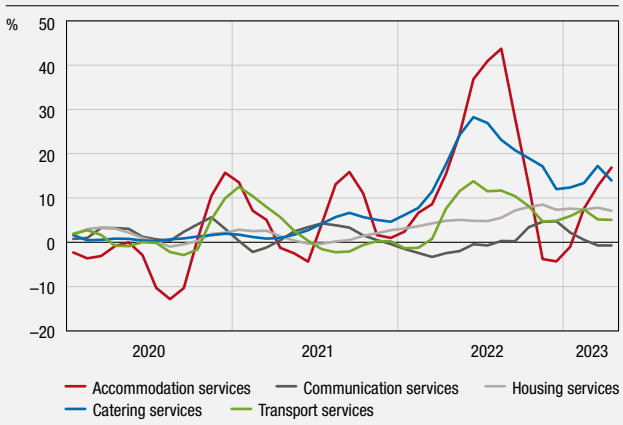
Indicators of current trends in the inflation of service prices in Croatia increased in the first four months of 2023, which particularly applies to catering and accommodation services, accounting for more than a half of the annual inflation in service prices. Following the strong acceleration in 2022, particularly in the first part of the year, in January 2023 (partly as a result of a one-off effect of euro introduction), the annual inflation in service prices began to slow down gradually and slowly, but remained high nevertheless, standing at 10.1% in April 2023 (Figure 1.1). More than a half of the inflation of service prices was attributable to catering (services of restaurants, cafés and canteens) and accommodation services. The aforementioned services also stand

Figure 1.1 Inflation of service prices in Croatia and contributions of main components



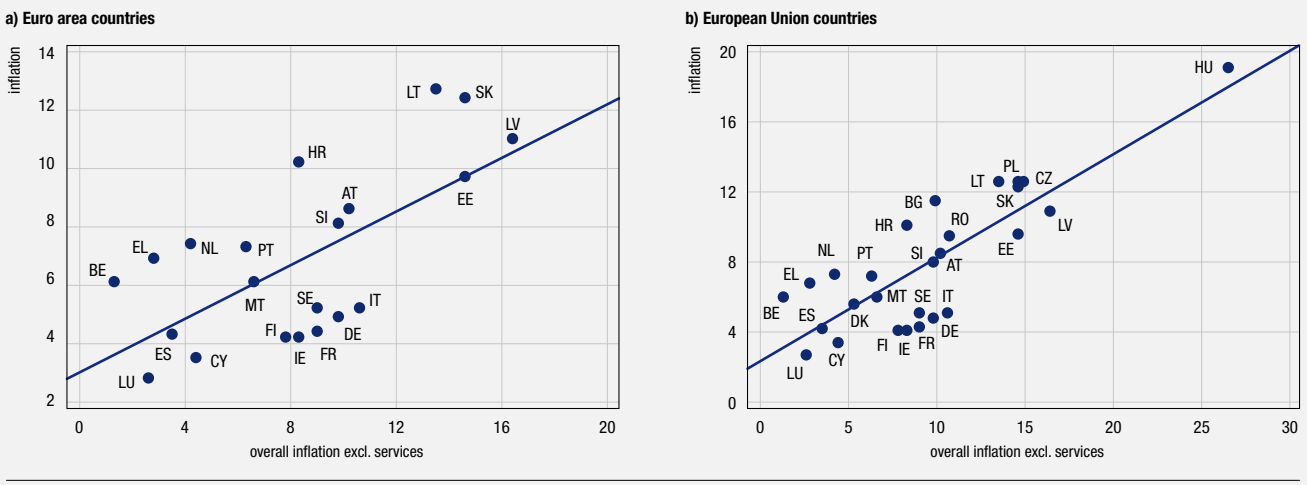
Sources: Eurostat and CNB calculations.

Figure 1.2 Momentums of price inflation in individual types of services



Note: The quarterly rate of change on an annual level is calculated from the quarterly moving average of seasonally adjusted harmonised consumer price indices.
Sources: Eurostat and CNB calculations.

Figure 1.3 Inflation in the prices of services and overall inflation excluding services, April 2023



Source: Eurostat.

out if indicators of current trends in the inflation of service prices, i.e. momentums of individual types of services are observed, which are most pronounced precisely in catering and accommodation services (Figure 1.2). Furthermore, in contrast to energy, food and industrial products (Figure 3.3.5.), whose momentum indicators decreased in the first four months of 2023[2], momentum indicators of inflation in the prices of services went up. This points to the evident persistence of inflation in service prices, suggesting that developments in the inflation of service prices could, in the upcoming period, to a crucial extent, determine the dynamics of slowdown in overall inflation and the moment of return to target levels.

In addition to food, prices of services contribute the most to the difference between overall inflation in Croatia and the whole of the euro area. Inflation of service prices in Croatia is twice as high as that in the euro area, where in April 2023, it stood at 5.2% (Figure 1.4.a). Croatia stands out as one of the euro area countries with the highest rates of inflation of service prices. In April 2023, only Lithuania, Slovakia and Latvia recorded higher annual increases in the prices of services among euro area countries, while Estonia, Austria and Slovenia saw rates of inflation in service prices slightly below that of Croatia. Inflation in the prices of services is the highest in countries where overall inflation (excluding services) is also the highest (Figure 1.3.a) and a clear positive link between the inflation in the prices of services and the growth in overall price levels is also noticeable when CEE countries are included in the analysis (Figure 1.3.b). This points to spillover effects of the increase in the prices of food and energy on the prices of services and to a link with wage growth. Furthermore, strong demand for contact-intensive services following the pandemic is an additional factor in Croatia.

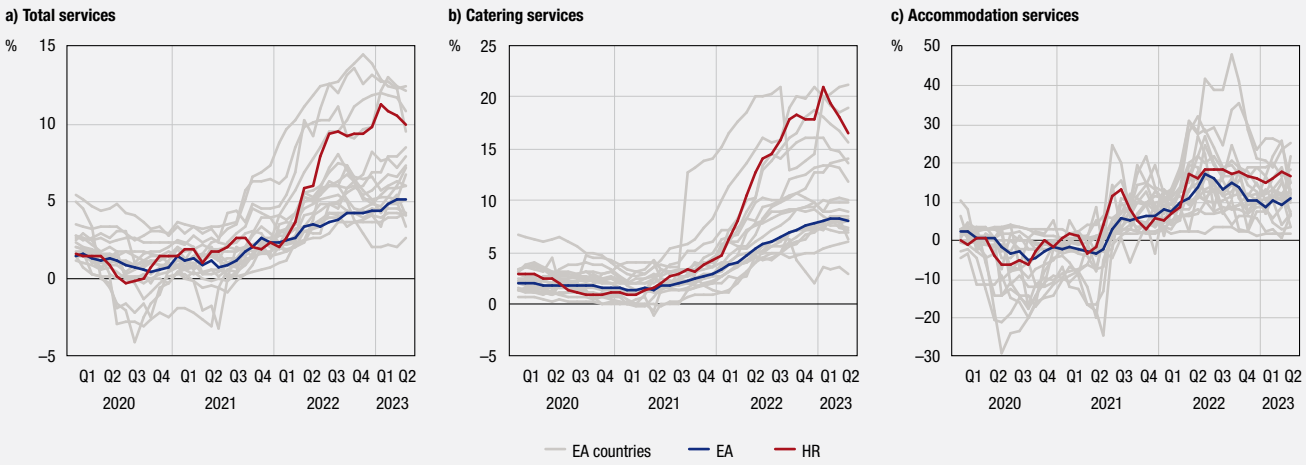
The difference in the rates of inflation of service prices between Croatia and the euro area average is primarily due to the prices of catering and accommodation services. The inflation of catering services picked up in Croatia at a much faster rate than at

2 The analysis in this box is based on the detailed data on the developments in consumer prices available as at April 2023. According to the first estimations for May, momentum indicators of all main components of the consumer price index increased from the month before, but are still lower than at the end of 2022 for all components except services.

euro area level, resulting in a noticeable divergence in their paths (Figure 1.4.b). Croatia is one of the three euro area countries that recorded the highest annual increases in the prices of catering services in April 2023. Prices of catering services in Croatia in April 2023 grew at the same rate as prices of accommodation (16.5%), but the latter grew at a higher rate than catering services at euro area level, so that the difference between Croatia and the euro area was less pronounced (Figure 1.4.c). Compared with developments in mid-2021, in April 2023, prices of catering services in Croatia were higher by almost 30%, while in the euro area, they went up by some 15%. At the same time, prices of accommodation in Croatia grew by around one quarter, and in the euro area, by one fifth. Still, when prices of accommodation are observed, Croatia is one of the countries witnessing the most substantial price increases, ranking behind Portugal, Greece and Lithuania. Croatia is followed by Italy, Latvia and Austria.

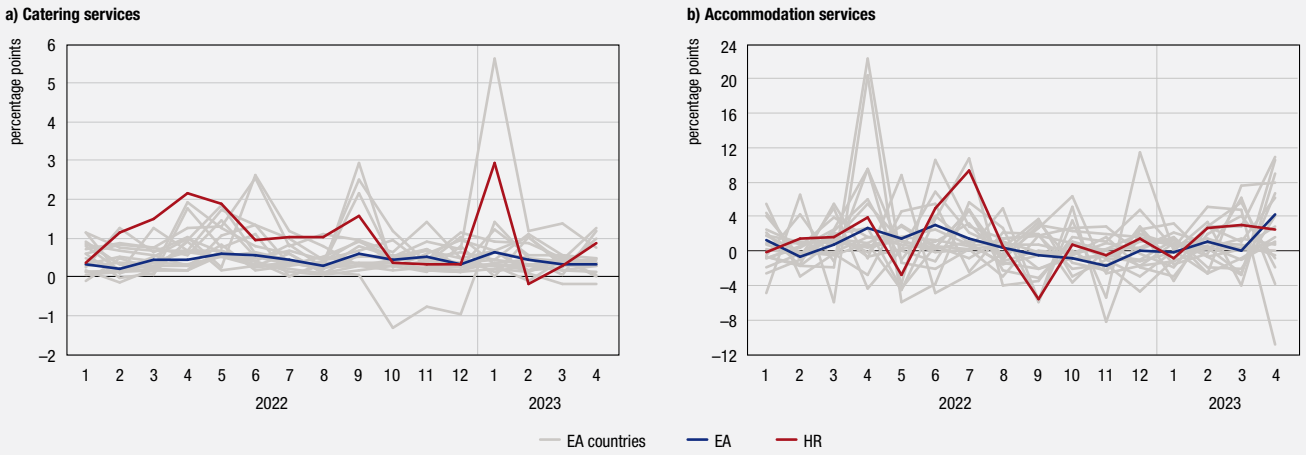
The monthly increase in catering services in Croatia was much more pronounced

Figure 1.4 Annual rate of growth in service prices in Croatia and euro area countries



Source: Eurostat.

Figure 1.5 Deviation of the monthly rate of change in prices from its long-term average

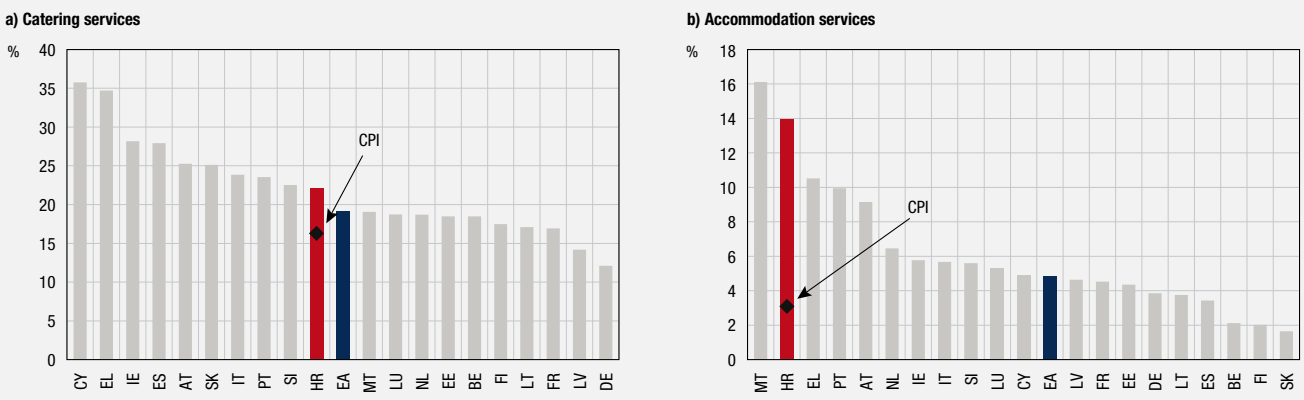


Note: The long-term average refers to the period from 2013 to 2022.
Sources: Eurostat and CNB calculations.

in 2022 than in other euro area countries, particularly in the first part of the year, while the developments in the prices of accommodation services were mostly in line with the developments in other countries. Prices of accommodation services grew in 2022 and 2023 at a noticeably faster pace than the long-term average for the whole of the euro area. However, Croatia stands out among euro area countries, including other Mediterranean countries, when the current growth in the prices of accommodation services is observed (Figure 1.5). The aforementioned growth was particularly pronounced in the first part of 2022, when it gradually became evident that tourist consumption could exceed expectations, as well as in January 2023, immediately after the introduction of the euro. In contrast to the prices of catering services, the deviation of the monthly dynamics of prices of accommodation services in Croatia from the long-term average did not differ to such an extent from that of other euro area countries. Only certain months witnessed more noticeable deviations; for example, prices went up more sharply in July, at the peak of a very successful tourist season, and then dropped slightly in September.

The significance of individual services for overall inflation does not depend only on the developments in their prices, but also on their share in the consumer basket. Specifically, catering services account for an equal share in Croatia and at the entire euro area level, while accommodation services account for a much larger share of the consumer basket in Croatia, which reflects the importance of tourism in the domestic economy. The share of prices of catering services in total services in the consumer basket in Croatia is only slightly higher than the euro area average (Figure 1.6.). On the other hand, only Malta outranks Croatia among euro area countries with regard to the share of accommodation services in total services in the consumer basket. Therefore, the higher contribution of catering services to the inflation of service prices in Croatia than in the euro area is primarily a result of the faster pace of growth in their prices; on the other hand, even though the difference between the growth in the prices of accommodation services in Croatia and the euro area is smaller, their greater weight increases the contribution of accommodation services to inflation in Croatia.[3]

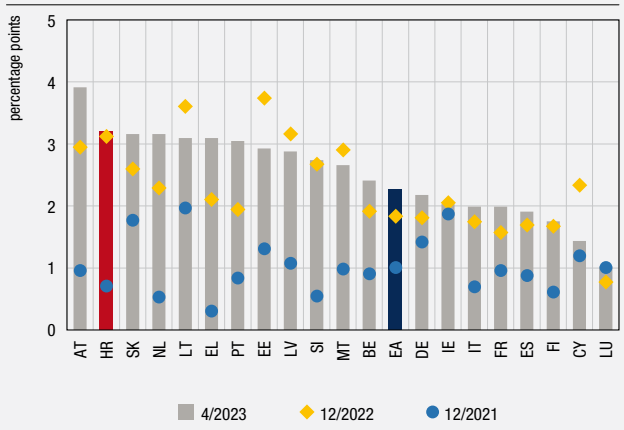
Figure 1.6 Share of accommodation and catering services in total services in the consumer basket, 2023



Sources: Eurostat, CBS and CNB calculations.

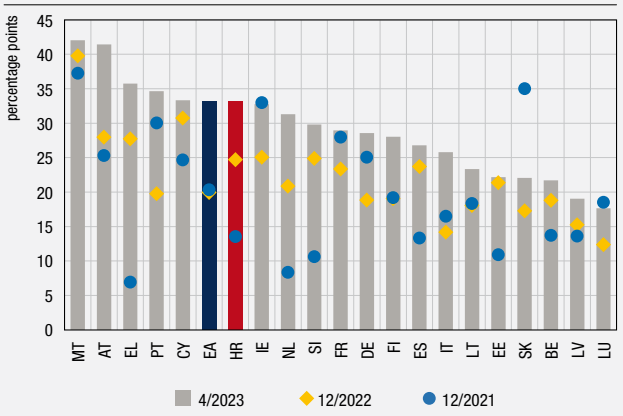
Croatia stands out among euro area member states according to the level of contribution of service prices to overall inflation and the level of the contribution of prices of catering and accommodation services to the inflation of service prices. There are substantial differences between euro area member states in the significance of services for overall inflation. The contribution of services to overall inflation is the largest in Austria, Croatia, Slovakia and the Netherlands (Figure 1.7.), while certain Mediterranean countries (Malta, Greece, Portugal and Cyprus) and Austria (Figure 1.8.) stand out in terms of the relative significance of services for the overall inflation path. Croatia is among the top euro area member states according to the respective contributions of

Figure 1.7 Contributions of services to overall inflation (HICP)



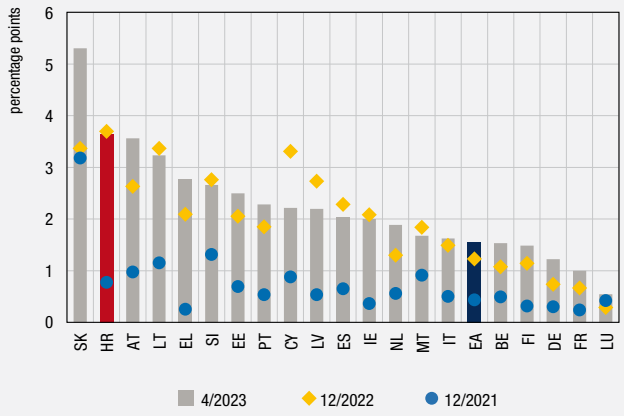
Sources: Eurostat and CNB calculations.

Figure 1.8 Relative significance of services for the overall inflation path



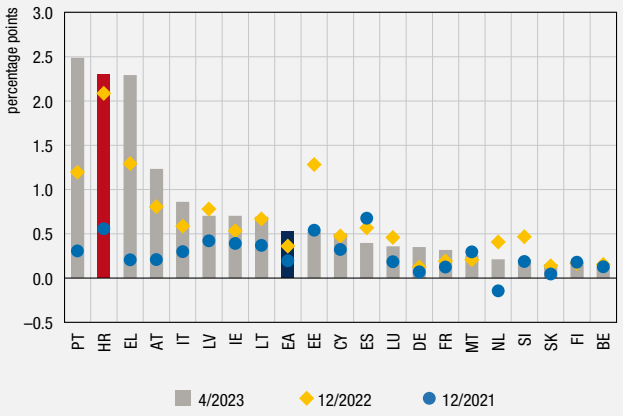
Note: Relative significance reflects the share of services in the sum of absolute values of contributions of four main components of the consumer price index (energy, food, industrial products and services) to overall inflation.
Sources: Eurostat and CNB calculations.

Figure 1.9 Contributions of catering services to the overall inflation in service prices



Sources: Eurostat and CNB calculations.

Figure 1.10 Contributions of accommodation services to the overall inflation in service prices



Sources: Eurostat and CNB calculations.

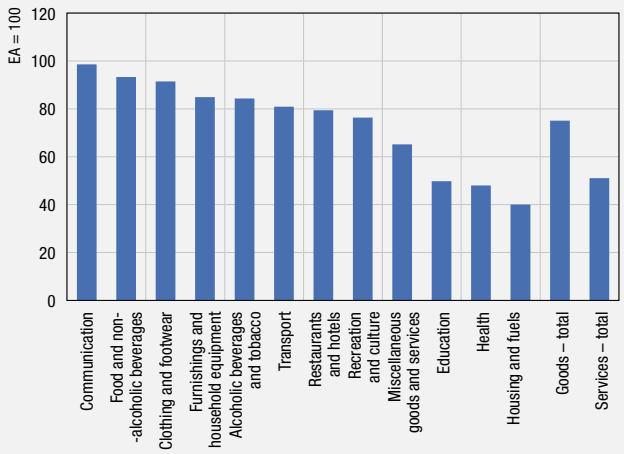
3 In contrast to the national consumer price index (CPI), the harmonized index of consumer prices (HICP) also takes into account the consumption of foreign guests, due to which the shares of catering services and, particularly, accommodation services are higher if the HICP is observed instead of the CPI. Therefore, the inflation of prices of services is lower if the CPI is observed: in April, it stood at 7.8% (10.1% according to the HICP), but that is still higher than the euro area average.

prices of catering services (Figure 1.9) and accommodation services (Figure 1.10) to the overall inflation of prices of services.

The increase in the prices of catering and accommodation services in Croatia partially reflects long-term factors, for instance the process of price convergence, considering the low level of such prices. The level of service prices in Croatia greatly lags behind the level of prices of goods relative to levels recorded in the euro area (Figure 1.11). According to the latest available data for 2021, the level of prices of restaurants and hotels was among the lowest in euro area countries (Figure 1.12) and significantly lower than the level of prices of, for example, food or clothing and footwear relative to the euro area.

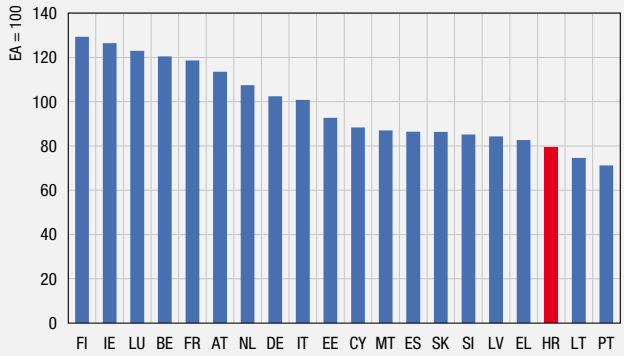
In addition, the surge in the prices of catering and accommodation services partly reflects the recent rise in input costs related to the prices of energy and food products and the increase in the wages of employed persons driven by pronounced

Figure 1.11 Price levels in the main categories of the consumer basket in Croatia, 2021



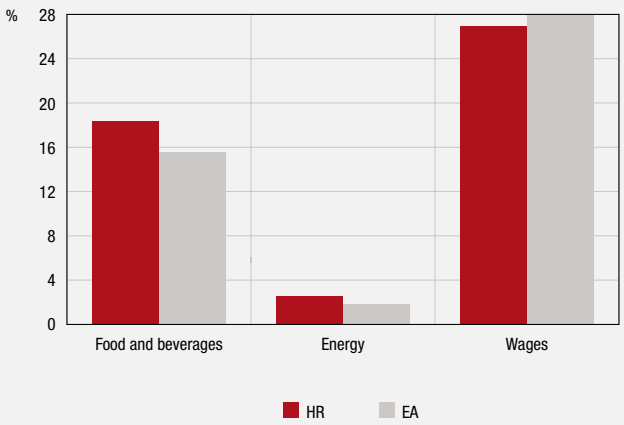
Sources: Eurostat and CNB calculations.

Figure 1.12 Levels of prices of restaurants and hotels in euro area countries, 2021



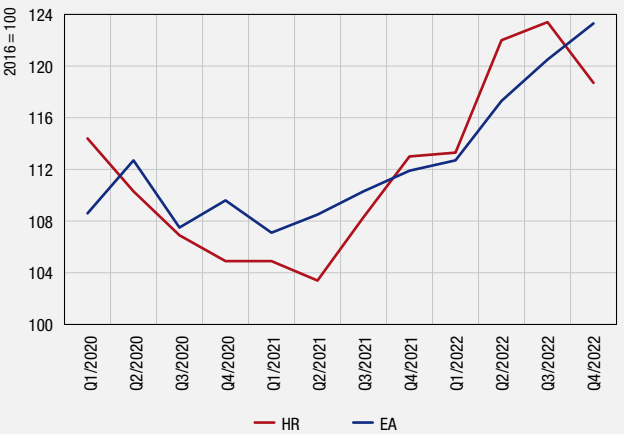
Sources: Eurostat and CNB calculations.

Figure 1.13 Shares of particular direct costs in accommodation and food service activities



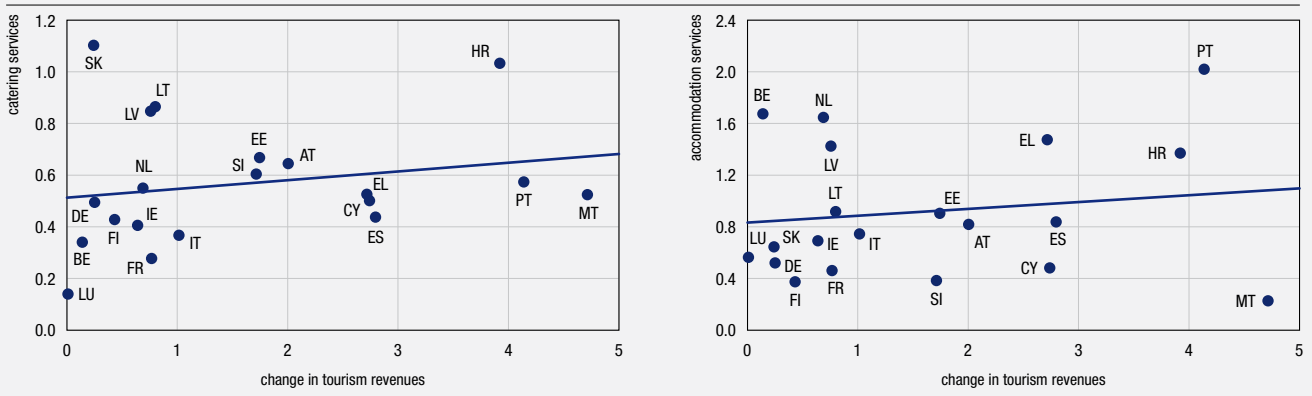
Sources: Eurostat and CNB calculations based on input-output tables from 2018.

Figure 1.14 Labour cost index in accommodation and food service activities



Source: Eurostat.

Figure 1.15 Growth in the prices of catering and accommodation services and tourism revenues, 2022



Note: The x axis shows the change in the revenues from tourism as percentage of GDP in 2022/2021, while the y axis shows the average deviation of the monthly rate of change in the respective prices of catering and accommodation services from the long-term average (2013 – 2022) in the period from January 2022 to April 2023.
Sources: Eurostat and CNB calculations.

labour shortages. The shares of direct costs of energy and employee wages in accommodation and food service activities are quite similar in Croatia and in the euro area (Figure 1.13). The share of costs of food and beverages is slightly higher in Croatia and could have, to a lesser extent, contributed to the faster growth in the prices of catering and accommodation services, even if the somewhat faster increase in the prices of food in Croatia last year is taken into account. Furthermore, in 2022, labour costs in accommodation and food service activities grew in Croatia, on average, more than in the euro area (Figure 1.14).

The increase in the prices of catering and accommodation services in Croatia was also driven by the demand of domestic and, particularly, foreign guests related to the strong recovery of tourist activity. In addition to the increase in input costs, the upward trend in catering and accommodation services was also spurred by the demand for such services which particularly strengthened as the economy opened and demand shifted towards services following the waning of the pandemic. Against such a backdrop, the developments in the prices of aforementioned services in Croatia were affected by the demand of not only domestic but also of foreign visitors amid the strong recovery of tourist activity (Figure 1.15).

3.4 Economic relations with foreign countries

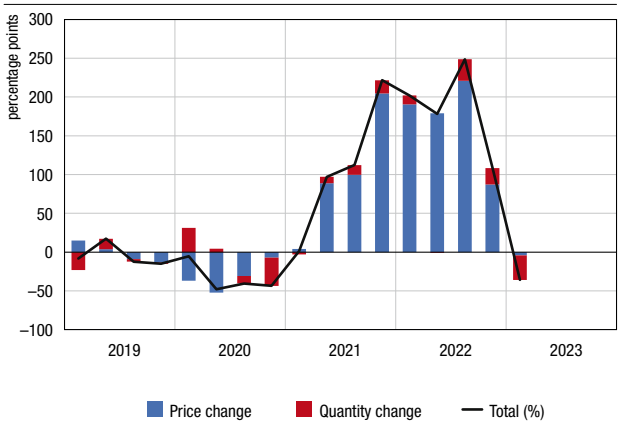
The terms of trade of Croatia, i.e. the ratio of import and export prices, deteriorated significantly in the past year due to the increases in the prices of energy and other raw materials on the global market, resulting in the deterioration of the balance in the trade of energy products from around 3% of GDP in 2021 to over 9% of GDP in 2022. This was the main factor contributing to the deterioration of the overall balance of the foreign trade in goods, i.e. the decrease in the current and capital account

surplus from 4.2% of GDP in 2021 to 1.0% of GDP in 2022. The recent easing of imported price pressures, mainly brought about by the decrease in the prices of energy on the global market, has had a significant impact on the improvement of terms of trade and the foreign trade of Croatia (Figure 3.4.2).

In the first three months of 2023, a noticeable annual increase in the exports of goods was recorded (14.0%), **while the rise in imports was a half of that figure** (6.9%), **resulting in a decline of the goods trade deficit** (of 1.8%). Favourable developments at the beginning of the year were supported by the decrease in the net imports of energy because the prices on the global market returned to levels before the Russian invasion of Ukraine (Figure 3.4.1). As regards the geographical structure, exports to euro area countries grew the most, particularly to Malta, Slovenia and Germany. Strong growth in exports to third-country markets was recorded, especially to the neighbouring countries of Serbia and Bosnia and Herzegovina. The rise in imports of goods was weak, almost fully resulting from the higher value of imports from the euro area, particularly Italy and Germany, while imports from EU countries that do not participate in the monetary union and third countries increased only slightly.

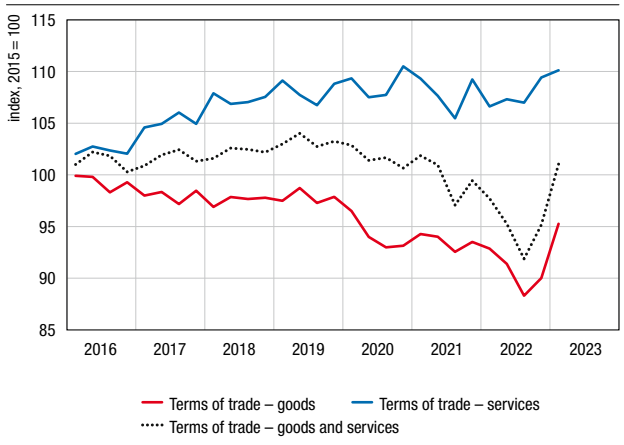
The beginning of the current year was marked by continued highly favourable tourism performance (Figure 3.4.3). Although the strong growth in revenues from exports of tourist services reflects the effects of the gradual lifting of epidemiological restrictions in 2022, it is also an indicator of strong demand for tourist services in the upcoming months and a likely increase in tourism revenues

Figure 3.4.1 Breakdown of the annual rate of change in the imports of energy



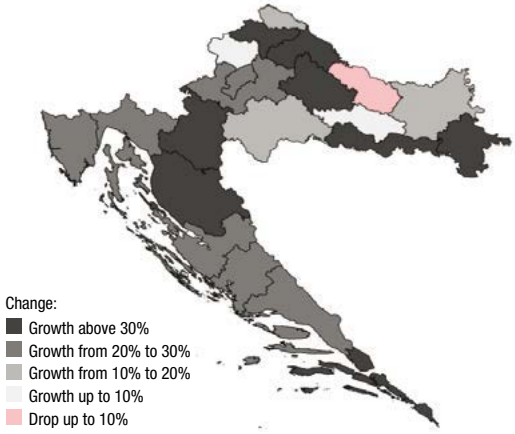
Sources: CBS and CNB calculations.

Figure 3.4.2 Terms of trade in goods and services



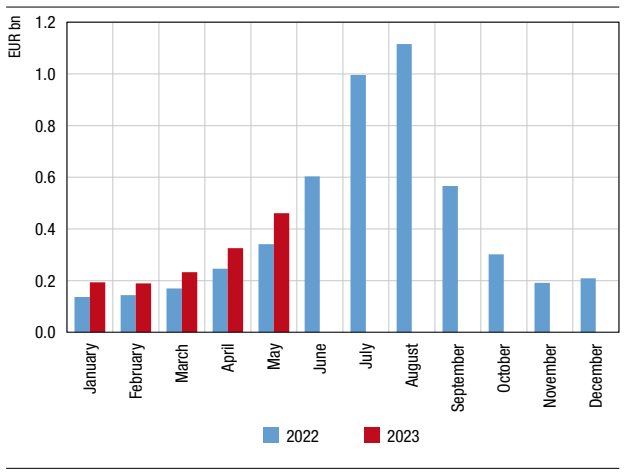
Sources: CBS and CNB calculations.

Figure 3.4.3 Annual change in the cumulative number of nights stayed from January to May 2023



Source: eVisitor.

Figure 3.4.4 Amount of fiscalised receipts in accommodation and food service activities



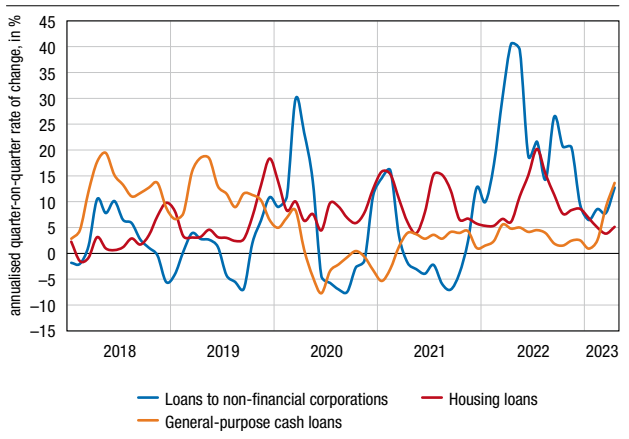
Source: Ministry of Finance.

that could additionally improve the current and capital account balance in 2023. Volume indicators of tourist arrivals and nights point to a sharp rise in the first five months of 2023 relative to the same period in 2022, with euro area guests contributing the most to the trend, particularly those from Germany, Slovenia, Austria and Italy. Observed by tourist destinations, a noticeable increase in the number of nights stayed was seen in Zagreb, while on the coast, Dubrovnik, Rovinj, Poreč and Split recorded exceptionally favourable results. Financial indicators also point to noticeably more favourable results in the earlier part of the year than in the same period last year (Figure 3.4.4), which, in addition to growing volume indicators, is attributable to price increases in the prices of accommodation and food and drink services.

3.5 Banking system

Interest rates on corporate loans increased in the second half of 2022 and at the beginning of 2023 on account of the spillover of the effects of monetary tightening, while interest rates on loans to households started slightly increasing only this year. The average interest rate on pure new loans to non-financial corporations reached 4.7% in April, up by 275 basis points from the period preceding the common monetary policy normalisation (Figure 3.5.9). With regard to lending to households, in April, the average interest rate on pure new general-purpose cash loans and housing loans reached 5.6% and 3.0% respectively, having gone up by 23 basis points and 51 basis points respectively from the average in the first quarter of 2022. Interest rates on pure new corporate time deposits have been increasing uninterruptedly since October last year, while interest rates on household deposits started slightly increasing only this year.

Figure 3.5.1 Lending momentum, corporates and households



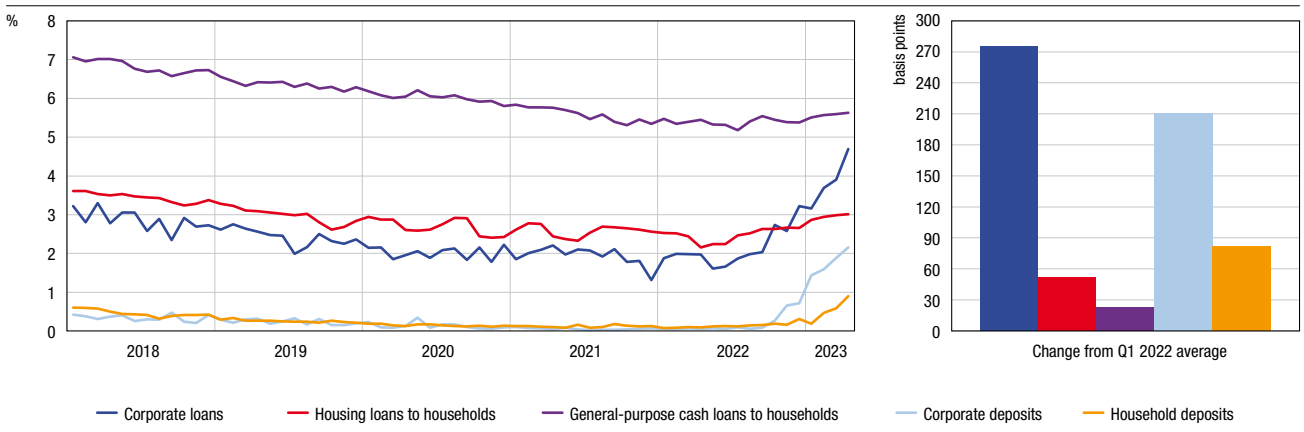
Note: Quarterly rate of change on an annual level (transaction-based).
Sources: CBS and CNB calculations.

Lending to the private sector continued to be quite strong despite higher borrowing costs. Loans to non-financial corporations went up by EUR 0.5bn in the first four months of 2023. However, this growth was weaker than in the same period of the previous year so at an annual level the growth in loans to this sector slowed down from 20.9% in December to a still relatively high 15.2% in April (Figure

3.5.6.). In the first four months of 2023, loans to the activity of electricity, gas, steam and air conditioning supply increased the most. In terms of loan purpose, syndicated loans and loans for working capital and investments visibly increased. Loans to households increased by EUR 0.4bn in the first four months of 2023. The major part of this increase came from general-purpose cash loans, while housing loans picked up moderately as well. Nevertheless, housing loans are expected to pick up substantially in the upcoming months, following a new round of the housing loans subsidy programme launched in mid-March. The annual growth in household loans accelerated moderately (from 5.9% in December to 6.3% in April), reflecting a rise in general-purpose cash loans (from 3.5% to 5.0%), while housing loans decelerated slightly (from 10.4% to 9.8%). The increase in the dynamics of lending in the segment of general-purpose cash loans is also clearly reflected by the indicator of short-term loan dynamics, a useful early indicator of a shift in trends (Figure 3.5.1).

Bank lending survey results also point to the tightening of financing conditions and a relatively stable demand for loans. Bank corporate lending standards continued to tighten at an intensity similar to that of the second half of the past year (Figure 3.5.5). This was mainly driven by banks' lower tolerance levels, worsened expectations related to overall economic trends and the outlook for the industry or the individual corporation. According to the results of the latest survey from this year's second quarter, banks expect the intensity of the tightening of lending standards to slacken. The decrease in corporate demand for loans was largely caused by the increase in interest rates and to an extent by lower needs for financing investments, as well as for inventories and working capital (Figure 3.5.4). Banks expect growth in corporate demand for loans in the second quarter of 2023. Lending standards to households also continued tightening, for housing loans more intensively than over the previous quarter, while for consumer and other loans the intensity was only slightly weaker than in the previous quarter. The factors contributing to the tightening in lending standards are risk perception, that is, unfavourable expectations regarding overall economic trends, as well as housing market prospects for housing loans and borrowers' creditworthiness and collateral risk for consumer and

Figure 3.5.2 Interest rates on pure new loans and time deposits of corporates and households

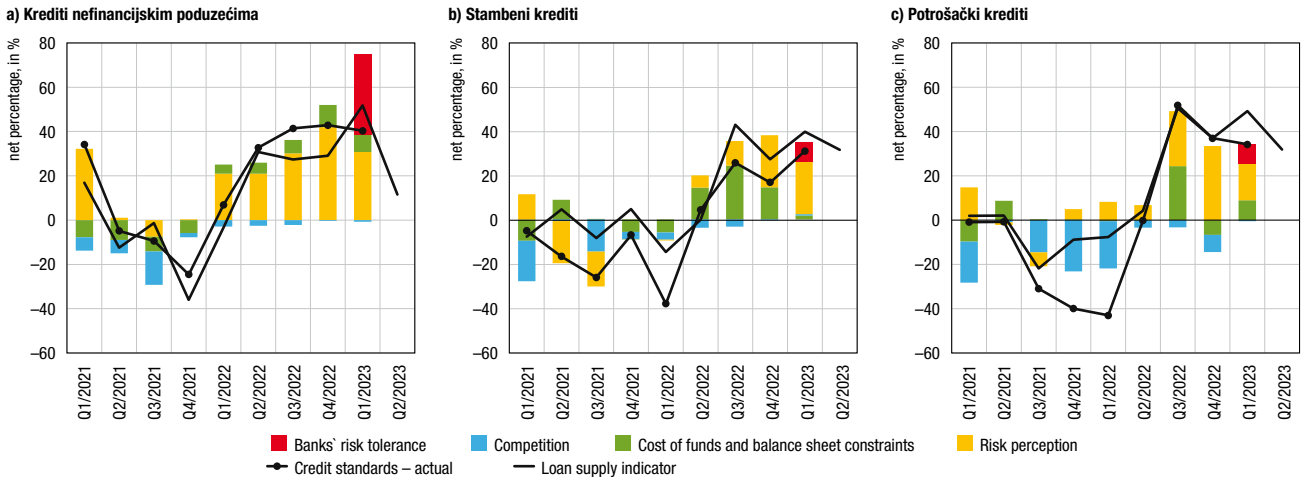


Note: Data up to December 2022 refer to loans and deposits in kuna, in kuna with a currency clause in euro and in euro, and from January 2023 to loans and deposits in euro.
Source: CNB.

other loans. In the second quarter of 2023, banks expect household lending standards to continue tightening; however, less intensively than in the first quarter. At the same time, the demand of households for housing loans decreased, primarily due to the deterioration in housing market prospects, but also due to interest rate growth. On the other hand, demand for consumer loans increased as a result of growing income and consumer optimism, which spur the purchase of durable goods. In the second quarter of 2023, banks expect demand for both types of loans to increase, with the demand for housing loans being additionally spurred by a new round of housing loan subsidies.

Strongly increasing on the eve of the euro introduction, deposits of domestic sectors[4] with banks strongly decreased at the beginning of 2023, largely due to the refinancing of maturing public debt in the domestic market. Total deposits of domestic sector went down by EUR 2.7bn in the first four months of 2023 (Figure 3.5.5). In the deposit structure, overnight deposits decreased by EUR 3.7bn and time deposits increased by EUR 0.9bn. The transition of funds from overnight to time deposits due to the rise in interest rates on time deposits was particularly pronounced in the corporate sector, which reduced their overnight deposits by EUR 2.5bn and increased their time deposits by EUR 1.3bn. Households and other non-banking financial institutions also reduced their overnight deposits in the equal amounts of EUR 0.6bn. However, this sector also recorded a decrease in time deposits, of EUR 0.5bn, while other non-banking financial institutions increased their time deposits by EUR 0.2bn. The decline in deposits was largely brought

Figure 3.5.3 Bank lending survey – BLS
lending standards and factor contributions



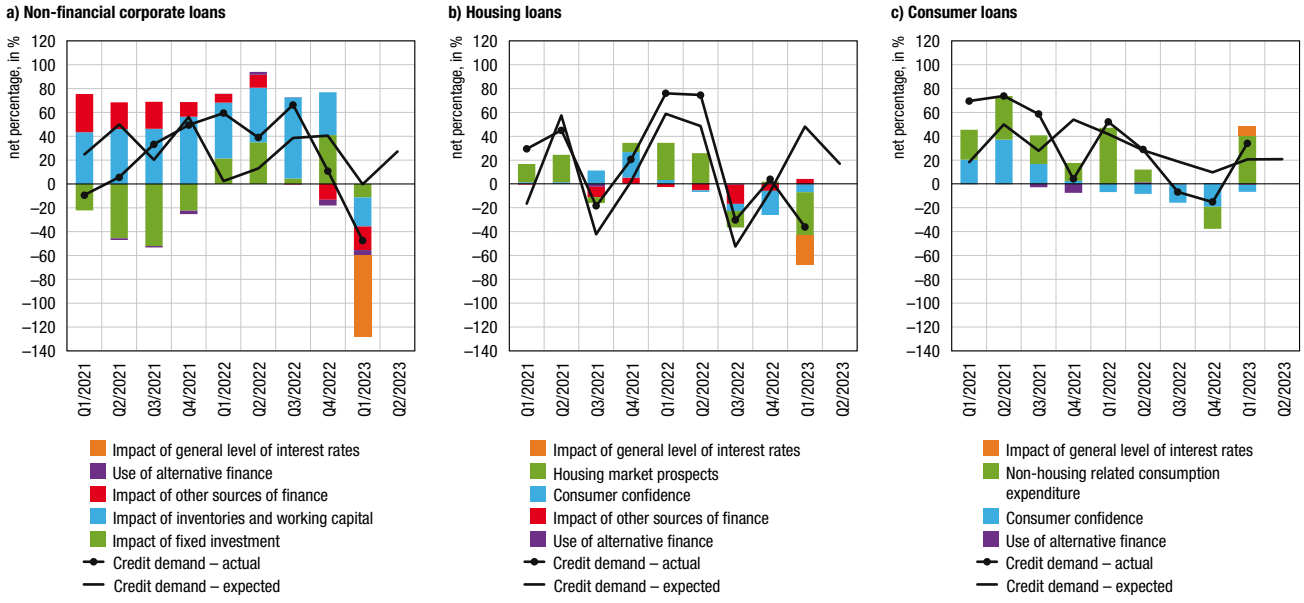
Note: Cost of funds and balance sheet constraints are the unweighted average of the Impact of capital position, Impact of ability to access market financing and Impact of liquidity position. Competition is the unweighted average of Impact of bank competition, Impact of non-bank competition and Impact of market financing competition. Risk perceptions are the unweighted average of Impact of general economic activity, Impact of industry or firm specific situation and Impact of risk on the collateral demanded.
Source: CNB.

Note: Risk perceptions are the unweighted average of Impact of general economic activity, Housing market prospects and Borrowers' creditworthiness. Competition is the unweighted average of Impact of bank competition and Impact of non-bank competition.
Source: CNB.

Note: Risk perceptions are the unweighted average of Impact of general economic activity, Borrowers' creditworthiness and Impact of risk on the collateral demanded. "Competition is the unweighted average of Impact of bank competition and Impact of non-bank competition.
Source: CNB.

4 Domestic sectors exclude the general government.

Figure 3.5.4 Bank lending survey – BLS
demand change and factor contirbutions



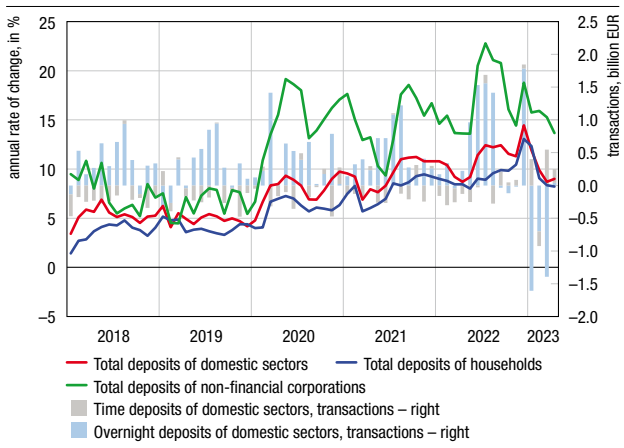
Notes: Impact of other sources of finance are the unweighted average of Debt restructuring and Impact of mergers and acquisitions and corporate restructuring. Use of alternative finance is the unweighted average of Impact of internal financing, Impact of loans from other banks, Impact of loans from non-banks, Impact of debt securities issuance and Impact of equity issuance.
Source: CNB.

Notes: Financing needs equal Non-housing-related consumption expenditures. Use of alternative finance is the unweighted average of Impact of internal financing out of savings, Impact of loans from other banks and Impact of other sources of finance.
Source: CNB.

Notes: Use of alternative sources of financing is the unweighted average of Household savings, Loans from other banks and Other sources of financing.
Source: CNB.

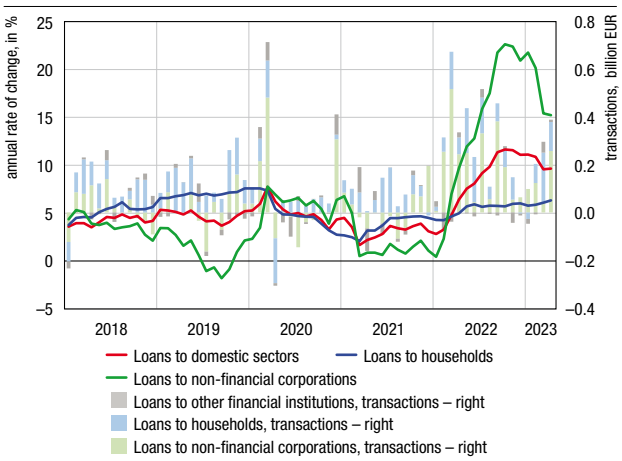
about by the bond issue in the domestic capital market, by which the government collected funds to refinance the international bond with maturity early in April 2023. In the first round of subscription, which was intended for citizens, the allocated amount of the subscription of government bonds was EUR 1.3bn, while in the second round of subscription at the beginning of March further EUR 0.5bn was allocated.

Figure 3.5.5 Deposits
transactions and annual transaction-based rates of change



Notes: Total deposits include overnight and time deposits. Deposits of domestic sectors exclude deposits of the general government.
Source: CNB.

Figure 3.5.6 Loans
transactions and annual transaction-based rates of change



Note: Loans to domestic sectors exclude loans to the general government.
Source: CNB.

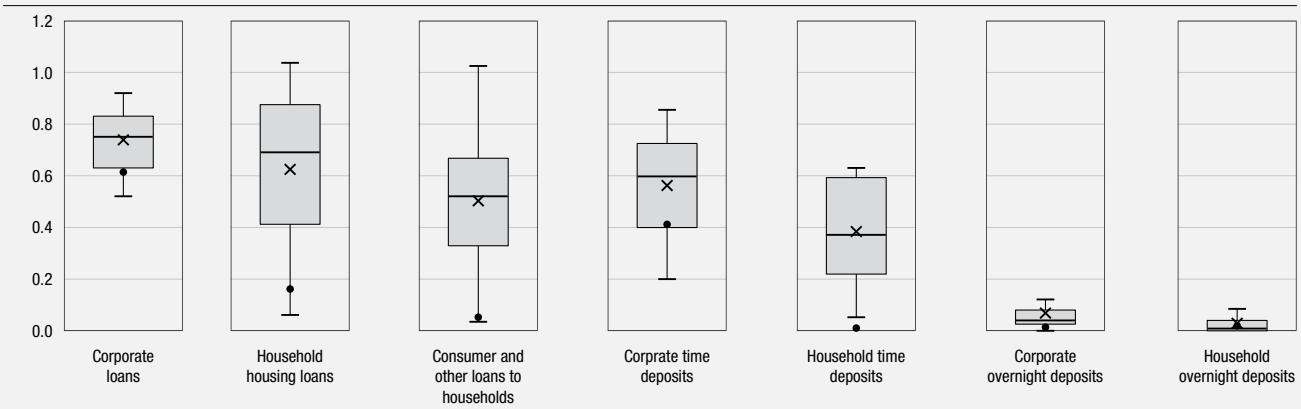
Box 2 Transmission of ECB interest rates to bank interest rates in Croatia

The intensity of the transmission of the increase in the key ECB interest rates to bank interest rates is affected by numerous factors resulting in differences in the transmission among euro area countries but also across different banks of individual countries. The key factors moderating the intensity of transmission in Croatia vis-à-vis other euro area countries that can be singled out are the decline in the risk premium resulting from joining the euro area, ample liquidity surplus, stable and growing deposit base, relatively low loan-to-deposit ratio, as well as a small share of variable interest rates when loans are granted. With regard to differences among banks in Croatia, analysis has shown that systemically important banks increased interest rates on corporate loans, housing loans to households and corporate time deposits more strongly than other banks. On the other hand, there is no significant difference among systemically important and other banks in the transmission of key interest rates on consumer loans to households or household time deposits.

The ECB's monetary policy tightening cycle, started in mid-2022, was swiftly transmitted to lending and borrowing rates. The increase in key ECB interest rates by 3.75 percentage points in the period from July 2022 to May 2023, the fastest in euro area history, was almost entirely transmitted to money market interest rates. While changes to key interest rates are swiftly and strongly transmitted to the money market, their impact on lending and borrowing rates across credit institutions of euro area counties has been delayed and incomplete.

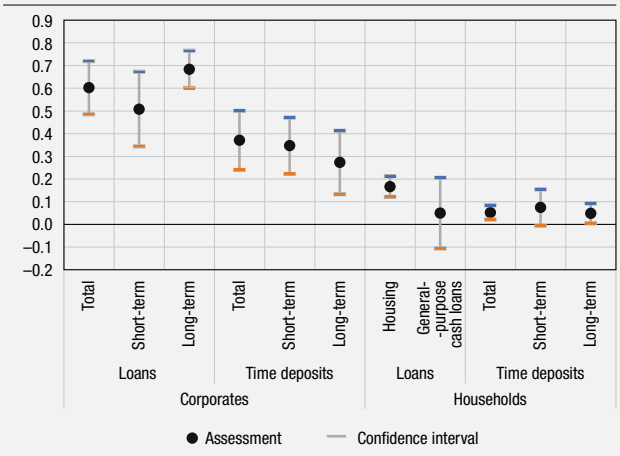
Interest rate transmission among different countries, sectors and instruments has been heterogeneous (Figure 1.1.). Interest rates to the corporate sector have increased more strongly than interest rates to households, as well as lending rates compared

Figure 1.1 Transmission of the change in EURIBOR to bank interest rates in euro area countries



Note: January 2022 to March 2023; horizontal lines depict minimum and maximum values, values for 25th percentile, median and 75th percentile, while x's represent average values for all euro area Member States and black dots depict average values for Croatia.
Sources: ECB and CNB calculations.

Figure 1.2 Transmission of change in EURIBOR to bank interest rates in Croatia



Note: January 2022 to March 2023; panel analysis with fixed effects for banks
Source: CNB.

to deposit rates. On average, 74% of the increase in the three-month EURIBOR over the last year has been transmitted to corporate lending rates in the euro area, while transmission to housing (consumer) loans to households has been slightly weaker, totalling 63% (51%). Lower susceptibility has been registered in interest rates on corporate and household time deposits (57% and 39%, and especially in overnight deposits (7% and 3%).

The impact of euro area monetary policy tightening is visible in Croatia as well. However, the intensity of the transmission of tightened financing conditions is among the weakest in the euro area (Figure 1.1.). The strongest transmission of the change in EURIBOR (68%) has been recorded in interest rates on long-term corporate loans, while in other segments it was much weaker, especially in relation to household time deposits (Figure 1.2). The transmission of the increase in key ECB interest rates to interest rates of Croatian banks has been postponed and mitigated by the effects of the adoption of the euro. The reduction in sovereign risk, which indirectly affects the interest rates banks charge their clients, is one of the important channels through which the adoption of the euro has mitigated the intensity of the interest rate growth. Croatia's joining of the euro area almost completely eliminated currency risk for domestic bank clients, so immediately after the EU Council adopted the official decision enabling Croatia to join the euro area, rating agencies upped Croatia's credit rating by two grades. In addition, the alignment of monetary policy instruments reduced the regulatory cost of bank intermediation, since the reserve requirement rate went down from 9% to 1% and the obligation to maintain minimum required foreign currency claims was completely repealed. All of this significantly increased free funds in Croatian banks, which have reached almost 20% of total banking system assets at the beginning of this year. Additional factors are that banks have a stable and growing deposit base, relatively low loans to deposits ratio, as well as a low share of variable interest rates among newly-granted loans, which is reflected in their policy of setting interest rates.

The transmission of the change in key interest rates to market rates also varies among different domestic banks. For example, systemically important banks met the 100-basis point increase in the EURIBOR by raising interest rates on corporate loans more strongly (some 55 basis points) than other banks (some 23 basis points), this effect being more prominent for long-term loans. Differences are also present in the setting of interest rates on corporate time deposits, as well as determining interest rates on housing loans to households. On the other hand, there are no substantial differences between systemically important and other banks in the transmission of the increase in key interest rates on household consumer loans or household time deposits (Table 1).

Table 1.1 Differences in the transmission of key interest rates to market interest rates between systemically important and other banks

	Interest rates on corporate loans	Interest rates on corporate time deposits	Interest rates on household housing loans	Interest rates on general-purpose cash loans to households	Interest rates on household time deposits
Systemically important banks	0.5550*** (0.0788)	0.4194*** (0.0700)	0.1821*** (0.0254)	0.0879 (0.0688)	0.0539** (0.0217)
Other banks	0.2272*** (0.0575)	0.1154** (0.0501)	0.0752* (0.0428)	−0.0521 (0.0528)	0.1105*** (0.0381)

Note: Dependent variables in the panel modal are individual types of interest rates, while independent variables include the interaction between EURIBOR and bank characteristics relevant for interest rate transmission; the model is estimated on the sample from January 2022 to March 2023; it includes fixed effects for banks and quarters; standard errors are displayed in the brackets.
* Statistical significance at the level of 10%, ** Statistical significance at the level of 5%, *** Statistical significance at the level of 1%.
Source: CNB.

Table 1.2 Determinants of differences in the transmission of key interest rates among banks

	Interest rates on corporate loans	Interest rates on corporate time deposits	Interest rates on household housing loans	Interest rates on general-purpose cash loans to households	Interest rates on household time deposits
EURIBOR x Share in total assets	0.0220*** (0.0054)	0.0117** (0.0045)	0.0041 (0.0025)	0.0043 (0.0052)	−0.0031 (0.0022)
EURIBOR x Share of liquid assets in total assets	−0.0014 (0.0077)	0.0036 (0.0062)	0.0037 (0.0032)	0.0021 (0.0036)	−0.0040 (0.0025)
EURIBOR x Share of deposits in total sources of funds	−0.0089 (0.0053)	−0.0091* (0.0048)	0.0005 (0.0025)	−0.0018 (0.0011)	−0.0066* (0.0033)
EURIBOR x Indicators of stable sources of funding	−0.0177** (0.0083)	−0.0212*** (0.0062)	−0.0006 (0.0037)	0.0024 (0.0046)	0.0039 (0.0063)
EURIBOR x Loan-to-deposit ratio	0.0026 (0.0045)	−0.0007 (0.0044)	−0.0028 (0.0020)	−0.0006 (0.0021)	0.0045* (0.0024)
EURIBOR x ROA	−0.0298 (0.0490)	−0.0391 (0.0471)	0.0159 (0.0108)	−0.0138 (0.0215)	−0.0024 (0.0154)
EURIBOR x ROE	−0.0055 (0.0055)	−0.0065 (0.0044)	0.0015 (0.0014)	−0.0023 (0.0025)	−0.0005 (0.0015)
EURIBOR x Net interest margin	−0.1065 (0.0893)	−0.0696 (0.0530)	−0.1230** (0.0449)	−0.0166 (0.0253)	0.1146** (0.0406)
EURIBOR x Cost efficiency indicator	−0.0101*** (0.0025)	−0.0013 (0.0031)	−0.0028* (0.0014)	−0.0035* (0.0019)	−0.0007 (0.0013)
EURIBOR x Tier 1 capital ratio	0.0117 (0.0098)	0.0131 (0.0086)	0.0065** (0.0030)	0.0122** (0.0051)	−0.0077* (0.0041)
EURIBOR x Share of non-performing in total loans	−0.0322*** (0.0078)	−0.0243*** (0.0080)	−0.0071 (0.0064)	0.0015 (0.0089)	0.0053 (0.0049)

Note: Dependent variables in the panel modal are individual types of interest rates, while independent variables include the interaction between-EURIBOR and bank characteristics relevant for interest rate transmission; the model is estimated on the sample from January 2022 to March 2023; it includes fixed effects for banks and quarters; standard errors are displayed in the brackets.
* Statistical significance at the level of 10%, ** Statistical significance at the level of 5%, *** Statistical significance at the level of 1%.
Share in total assets (average 5%, std. dev. 7.7%), share of liquid assets in total assets (average 26.3%, std .dev. 12.0%), share if deposits in total sources of funds (average 73.3%, std. dev. 9.7%), indicator of stable sources of funding (average 69%, 18.4%), loan-to-deposit ratio (average 66,.%, std. dev. 14%), return on assets (average 0.6%, std. dev. 1.1%), return on equity (average 6.7%, std. dev. 10.2%), net interest margin (average 2,4%, std. dev. 0.7%), cost efficiency indicator (average 80.9%, std. dev. 5.6%), tier 1 capital ratio (average 20%, std. dev. 5.6%), share of non-performing loans in total loans (average 6.8%, std. dev. 4.4%).
Source: CNB.

The intensity of interest rate transmission is also affected by other characteristics of individual banks, such as their business model, efficiency or capital adequacy. Poorer asset quality and higher share of stable sources of funding weaken the transmission of the increase in key interest rates to interest rates of banks on corporate loans, especially long-term loans and corporate time deposits (Table 1.2). Interest rates on corporate loans increase as cost efficiency indicators go down. In addition, the intensity of

interest rate transmission to corporate time deposits is weaker in banks that rely more strongly on deposits in their overall sources of funding. As for the household segment, poorer capitalisation is found to be the determinant that weakens interest rate transmission to housing and consumer loans to households. Ultimately, the level of net interest margin of an individual bank weakens interest rate transmission to housing loans but increases transmission to long-term time deposits of households.

In conclusion, the intensity of the transmission of the increase in the key ECB interest rates to bank interest rates is affected by numerous factors resulting in differences in the transmission among euro area countries but also across different banks of individual countries. The key factors moderating the intensity of transmission in Croatia vis-à-vis other euro area countries that can be singled out are the decline in the risk premium resulting from joining the euro area, ample liquidity surplus, stable and growing deposit base, relatively low loan-to-deposit ratio, as well as a small share of variable interest rates when loans are being granted. With regard to differences among banks in Croatia, analysis has shown that systemically important banks increased interest rates on corporate loans, housing loans to households and corporate time deposits more strongly than other banks. On the other hand, there is no significant difference among systemically important and other banks in the transmission of key interest rates to consumer loans to households or household time deposits.

Box 3 Loan supply shocks and economic activity in Croatia

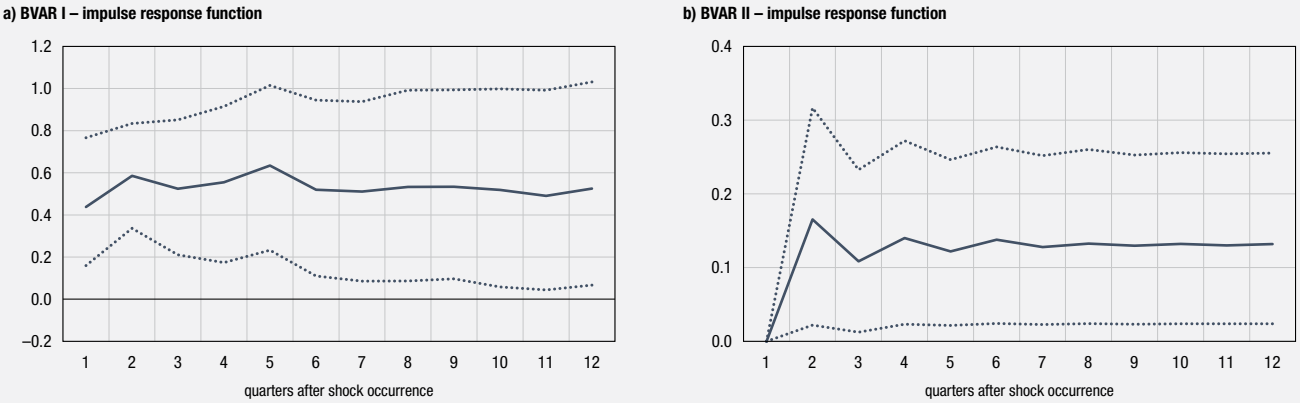
It is important to understand the intensity and the effects of loan supply shocks because they can amplify the effects of the monetary policy on the economy. The effect of loan supply shocks on the Croatian economy has been assessed with the help of three different methodologies, two of which are based on the analysis of the macroeconomic effects of loan supply shocks on GDP and inflation while one is directed at the analysis of the effects of loan supply shocks at the microeconomic level, that is, at activity indicators and prices at the level of individual companies. The two different macroeconomic principles point to a statistically significant impact of loan supply shocks on GDP developments. While the direction of the impact of loan supply shocks on GDP is unambiguous, loan supply shocks affect inflation through multiple channels which can operate in different directions.

The tightening of lending standards indicated by the results of the bank lending survey (BLS) and short-term disruptions caused by the collapse of two regional US banks and a large Swiss bank in March this year have again brought to the foreground the issue of the effects of loan supply shocks on the euro area economy. Loan supply shocks can be defined as banks themselves limiting loan supply, which can be caused by different factors such as strong outflow of deposits, loss of credit lines or market access, changes in risk perception or tolerance levels by banks' management boards, market competition, etc.

It is important to understand the intensity and the effects of loan supply shocks because they can amplify the effects of monetary policy on the economy. For instance, in the current circumstances, the ECB has been stimulating commercial banks to increase their interest rates by raising its own key interest rates, which is expected to reduce demand for loans and consequently slow down consumption and investments, and ultimately lower inflation (the mechanism is often called the interest rate channel of monetary transmission). Nevertheless, if banks tighten financing conditions under the influence of monetary policy, leading to a decrease in demand for loans, while simultaneously deciding to additionally limit the supply of loans, this can slow down consumption and investments more strongly and consequently lower inflation more than is desired, that is, lead to inflation undershooting in the medium term.

Croatian banks were not exposed to the stress in financial markets in the aftermath of the bank collapse in the US and Switzerland, and for the time being the BLS does not indicate an uncommonly strong tightening in lending standards of Croatian banks given the intensity of change in monetary policy (See Figure 3.5.5). The effect of loan supply shocks on the Croatian economy has been assessed with the help of three different methodologies, two of which are based on the analysis of macroeconomic effects of loan supply shocks on GDP and inflation while one is directed at the analysis of the effects of loan supply shocks at the microeconomic level, that is, at activity indicators and prices on the level of individual companies.

Figure 3.1 Effect of loan supply shock on GDP

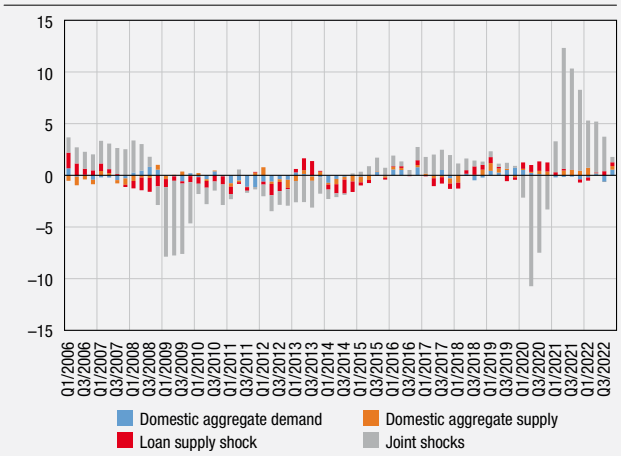


Note: The BVAR I model includes real GDP growth, price growth, growth in loans to non-financial corporations and change in the spread between the deposit and lending rates to non-financial corporations. With the help of sign restriction and zero restrictions (assuming the block exogeneity), the loan supply shock is defined as a shock that increases GDP and bank lending activity and decreases funding costs. BVAR II includes BLS indicator, real GDP growth and price growth, whereby the model is identified by the recursive approach.

Source: CNB calculation.

The two different macroeconomic principles point to a statistically significant impact of loan supply shocks on GDP developments (Figure 3.1.). In the first approach, the macroeconomic effects of loan supply shocks were identified with the help of sign restriction on the impulse response function in the structural BVAR model of a small and open economy (BVAR model I)[5]. In the second approach, the loan supply shock is identified on the basis of the methodology deriving from the "cleaning" of BLS results of different bank-specific factors and those dependent on macroeconomic factors that can affect lending standards. This procedure is used to assess the "clean" BLS Loan Supply Indicator, which indicates uncommon changes in lending conditions. This alternative indicator of loan supply shock is included in the BVAR model, like the first variant, in order to examine the macroeconomic effects (BVAR II).[6] Both approaches show that loan supply shocks significantly affect GDP developments in Croatia. However, historic decomposition results show that the contribution of loan supply shocks to GDP developments in Croatia is not particularly strong, although

Figure 3.2 Contributions of shocks to GDP developments (BVAR I model)

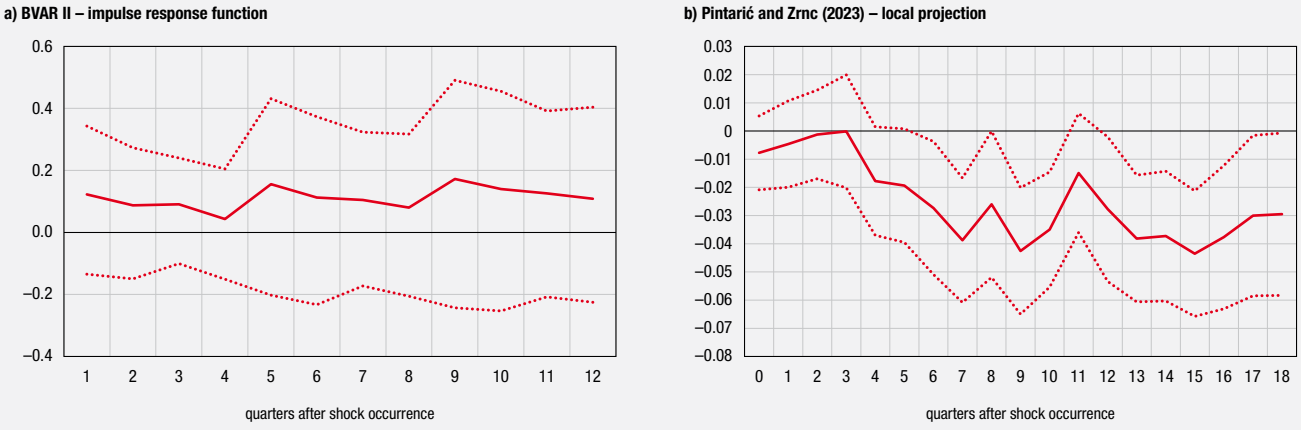


Source: CNB calculation.

5 Based on Gambeti, L., and Musso, A. (2014), *Loan supply shocks and the business cycle*, Working Paper No. 1469, European Central Bank and Mandler, M., and Scharnagl, M. (2020), *Bank loan supply shocks and alternative financing of non-financial corporations in the euro area*, The Manchester School.

6 Employing the methodology shown in Bassett, W. F., Chosak, M.B., Driscoll J.C., and Zakrajšek, E. (2012), *Changes in bank lending standards and the macroeconomy*, Federal Reserve Board te Altavilla, C., Darracq-Paries, M., and Nicoletti, G. (2015), *Loan supply, credit markets and the euro area financial crisis*, Working Paper No. 1861, European Central Bank.

Figure 3.3 Effect of loan supply shock on prices



Source: CNB calculation.

it has been slightly stronger during periods when the financial cycle picks up (e.g. 2007) and during recession (2008/2009, 2012) (red columns in Figure 3.2).

While the direction of the impact of loan supply shocks on GDP is unambiguous, loan supply shocks affect inflation through multiple channels that can operate in different directions. For example, a negative loan supply shock leads to a fall in aggregate demand (GDP), which ultimately results in deflationary pressures (aggregate demand channel). On the other hand, a negative loan supply shock may increase corporate financing costs, which companies can pass through to consumers by increasing prices due to the need for additional liquidity (cost channel). Therefore, results often found in the literature indicate that the effect of a loan supply shock on prices at the macroeconomic level is not significant.[7] The results of the mentioned BVAR models also indicate that loan supply shocks do not have a significant impact on prices (Figure 3.3.a). On the other hand, a statistically significant impact of loan supply shocks on prices can be observed at the microeconomic level[8], in line with the operation of the cost channel (Figure 3.3.b).

7 E.g. Gambeti, L., and Musso, A. (2014), *Loan supply shocks and the business cycle*, Working Paper No. 1469, European Central Bank and Bassett, W. F., Chosak, M.B., Driscoll J.C., and Zakrajšek, E. (2012), *Changes in bank lending standards and the macroeconomy*, Federal Reserve Board.

8 Analysis on a microeconomic level was conducted in the research by Pintarić, M., and Zrnc, J. (2023.), *Loan supply and prices*, 29. Dubrovnik Economic Conference, Croatian National Bank.

4 Projections for Croatia

4.1 Baseline assumptions

According to the assumptions on which the CNB's June projection is based, elevated inflationary pressures and subdued economic activity are expected in surrounding countries. Prices of energy, most notably of gas and electricity, are expected to remain at levels noticeably lower than those recorded in 2022 and below those assumed in the March projection, but still above long-term historical averages throughout the entire projection horizon. Specifically, over the past several months, prices of gas and electricity stood at levels somewhat lower than those expected earlier, and under the assumption of a continued decline, in line with recent forward agreements, they could, on average, be around 15% to 10% lower throughout the projected period than anticipated earlier. Crude oil prices are also lower and are expected to decline further over the projection horizon from an average of USD 78 per barrel in 2023 to USD 70 per barrel in 2025. Prices of other raw materials are also expected to decrease gradually, particularly those of food raw materials. Since the prices of food raw materials in March and April were lower than earlier expected, a more pronounced drop in their prices is currently expected in the course of 2023 than in the previous projection (–13.6% versus –6.6%). As regards industrial raw materials (metal), due to the still weak global demand, prices are expected to decline more significantly in the current year, but also to grow moderately in the upcoming years relative to the March projection. In addition, a somewhat stronger exchange rate of the euro versus the US dollar could additionally mitigate imported inflationary pressures related to the prices of energy and other raw materials.

Better performance seen in early 2023 slightly improved expectations regarding global economic activity in 2023, and the global economy is expected to grow at a similar pace throughout the remaining part of the projection horizon. Global GDP (excluding the euro area) is expected to grow at a rate of 3.1% in 2023 and 2024, with somewhat more favourable current year expectations for China, which, after having lifted strict pandemic-related restrictions, has been recovering at a faster pace than earlier expected. Despite performing better than previously anticipated at the beginning of the year, expectations for the US by the end of the current year deteriorated slightly under the assumption of somewhat more pronounced negative effects of tightened financing conditions on real activity. Global trade is expected to continue to grow stronger. However, since the growth in global trade weakened significantly towards the end of 2022, due to the base effect, the expected rate of growth of global imports in 2023 dropped, which may point to weaker foreign demand for goods and services from the euro area and Croatia.

Expectations for the euro area did not change significantly from the last projection, with expectations for economic growth for 2023 corrected slightly downwards and those for inflation slightly upwards. According to the most recent ECB projections, the expected level of overall inflation in the euro area in 2023 has been raised to 5.4% (0.1 p.p. more than in the ECB March projection), with lower prices of energy only

Table 4.1 Projection assumptions regarding the international environment and prices of raw materials

		Current projection				Deviations from the previous projection			
		2022	2023	2024	2025	2022	2023	2024	2025
International environment									
Global economic growth (excl. EA)		3.3	3.1	3.1	3.3	0.0	0.1	–0.1	0.0
USA		2.1	1.0	0.6	1.6	0.0	–0.1	–0.3	–0.1
China		3.0	6.0	4.7	4.5	–0.1	0.9	–0.2	0.0
Global trade		5.3	1.3	3.4	3.4	–0.4	–1.3	0.0	–0.1
Foreign demand (EA)		6.3	0.5	3.1	3.1	0.0	–1.6	0.0	–0.1
Foreign demand (HR)		7.6	1.9	3.4	3.4	0.3	–1.1	0.1	–0.2
Prices of raw materials									
Prices of oil	USD		78.0	72.6	70.4	0.0	–4.6	–5.2	–3.5
	EUR		72.0	66.9	64.8	0.0	–4.6	–5.4	–3.8
Prices of electricity	EUR/MWh		122.0	152.0	122.7	0.0	–36.4	–11.8	–5.8
Prices of gas	EUR/MWh		42.4	51.9	46.5	0.0	–16.0	–9.6	–4.4
Prices of raw materials (excl. energy) % of change	USD		–11.5	–2.0	1.3	0.0	–5.1	–2.2	0.1
prices of food raw materials	USD	17.8	–13.6	–7.6	–1.2	0.0	–7.0	–0.5	2.9
prices of other raw materials	USD	–1.3	–10.0	2.3	3.1	0.0	–3.7	–3.7	–2.2
Euro area									
Economic growth		3.5	0.9	1.5	1.6	–0.1	–0.1	–0.1	0.0
Inflation		8.4	5.4	3.0	2.2	0.0	0.1	0.1	0.1

Note: Projection assumptions refer to the ECB June projection cycle (June BMPE) and were concluded as at 23 May 2023.
Source: ECB.

partly offsetting the higher-than-expected increase in the prices of food and other components of the consumer basket. Lower expectations regarding core inflation mainly reflect the higher values seen at the beginning of the year and the increasingly pronounced labour market pressures, which could slow down the return of inflation to its target level. The projected economic growth of the euro area in 2023 has been corrected downwards from the past projection only slightly, mainly due to the somewhat stronger negative effect of tightened financing conditions, so that it now stands at 0.9%, while later on, it could pick up to 1.6% in 2024. The gradual strengthening of economic growth should be driven by the drop in energy prices, stronger foreign demand, reduced uncertainty and the recovery of real income supported by the strong labour market, while monetary policy tightening, worsened financing conditions and gradual withdrawal of fiscal support could suppress it.

4.2 Macroeconomic variable projections

In 2023, a lower increase in real GDP is expected than in the past two years, reflecting the waning of the effects of recovery from the pandemic recession, monetary policy tightening and shocks related to the war in Ukraine (Figure 4.2.1.). The estimated rate of 2.9% is still noticeably higher than that expected earlier and reflects the resilience of the domestic economy to external shocks and tightened financing conditions. This economic outlook is also supported by the continued redirection of demand from goods to services.

Table 4.2.1 Key macroeconomic variable projections
annual rates of growth

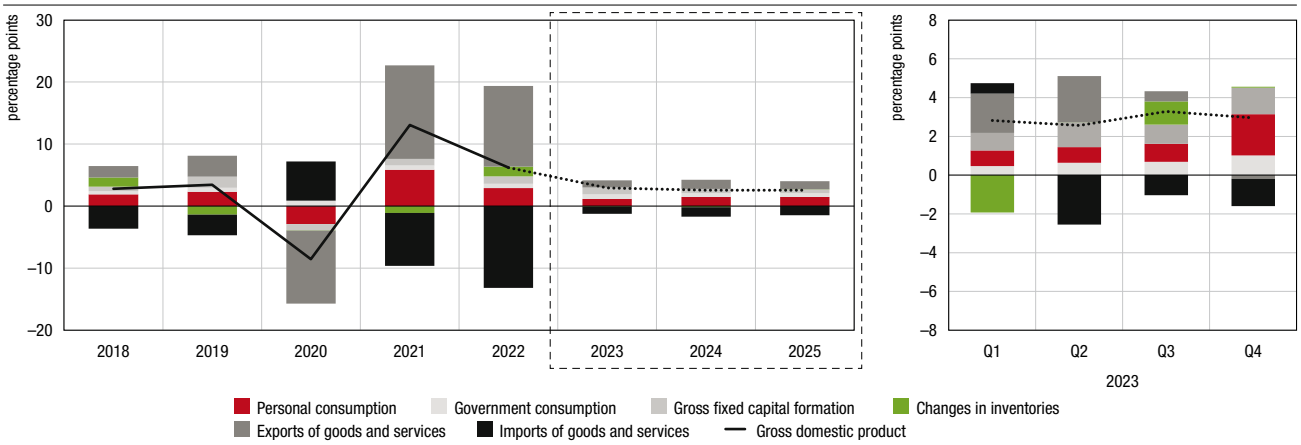
	2022	2023	2024	2025
Real GDP	**6.2**	**2.9**	**2.6**	**2.6**
Personal consumption	5.2	2.0	2.6	2.6
Government consumption	3.2	3.4	2.9	2.7
Capital investments	5.8	5.5	3.1	3.2
Exports of goods and services	25.4	1.9	2.5	2.2
Imports of goods and services	25.0	1.8	2.4	2.4
Contributions to GDP growth[a]				
Domestic demand	4.8	3.0	2.8	2.7
Exports of goods and services	13.0	1.2	1.5	1.3
Imports of goods and services	–13.2	–1.2	–1.5	–1.5
Inventories	1.6	–0.1	–0.2	0.0
Labour market				
Change in employment	2.5	1.5	1.2	1.3
Unemployment rate (ILO)[b]	7.0	6.5	6.1	5.8
Nominal gross wage	7.9	11.7	6.3	4.3
Real gross wage	–2.5	3.7	2.3	1.9
Unit labour cost	4.0	10.1	4.8	3.0
Inflation (HICP)				
Total	**10.7**	**7.7**	**3.9**	**2.3**
HICP excl. energy and food	7.6	8.3	4.5	2.4
Food	12.9	10.6	4.5	2.4
Energy	19.2	–1.5	–0.4	1.6

[a] in percentage points
[b] as % of labour force
Note: Table 4.2.1 provides a summary of estimated and projected values of key variables for Croatia resulting from the inclusion of baseline assumptions and historical results in short-term and medium-term macroeconomic models used by the Croatian National Bank, subject to corrections of model estimations based on the judgement of experts for individual economic areas.
Sources: CBS, Eurostat and CNB estimations and projections.

Available high-frequency indicators and expected developments in the second half of the year point to the conclusion that all GDP components could contribute to real growth in 2023. One of the main generators of growth in 2023 could be the exports of services. Demand for tourist services could result in the further growth in the real exports of services, which had by 2022 already significantly exceeded pre-pandemic levels. Investment activity is expected to remain strong, with the increase in private investments likely to trend down, following exceptionally good results in 2022, due to increased costs of financing of non-financial corporations and costlier housing loans. General government investment activity could strengthen significantly in 2023 owing to the utilisation of larger amounts of EU funds. Favourable developments could be recorded in personal consumption as well, for 2023 is expected to bring intensified wage increases and real income recovery. The continued application of fiscal measures adopted with the aim of mitigating negative effects of growing consumer prices is facilitating the increase in disposable income. Despite the aforementioned factors, the increase in personal consumption could be dampened by the desire of households to rebuild their current savings, which shrank substantially in 2022 amid the decline in real income and the still relatively weak consumer confidence. In the same way, exports of goods could decline further, taking into account available performance data, the decelerated growth in the demand of the main trading partners and the less favourable price competitiveness, so that the contribution of net foreign demand to total growth could be slightly negative.

Over the next two years, economic growth is expected to slow down slightly to an average of 2.6%. Investment activity growth could continue to slow down, which primarily reflects the slower growth in public investments after their expected strong acceleration in 2023. Private investments could see a somewhat stronger growth than in the current year, but household investments in residential real estate could remain relatively subdued, having in mind the growing expenses of housing loans and the increasing attractiveness of alternative forms of investment. Government consumption and exports

Figure 4.2.1 GDP and GDP components, contributions



Sources: CBS and CNB estimations and projections.

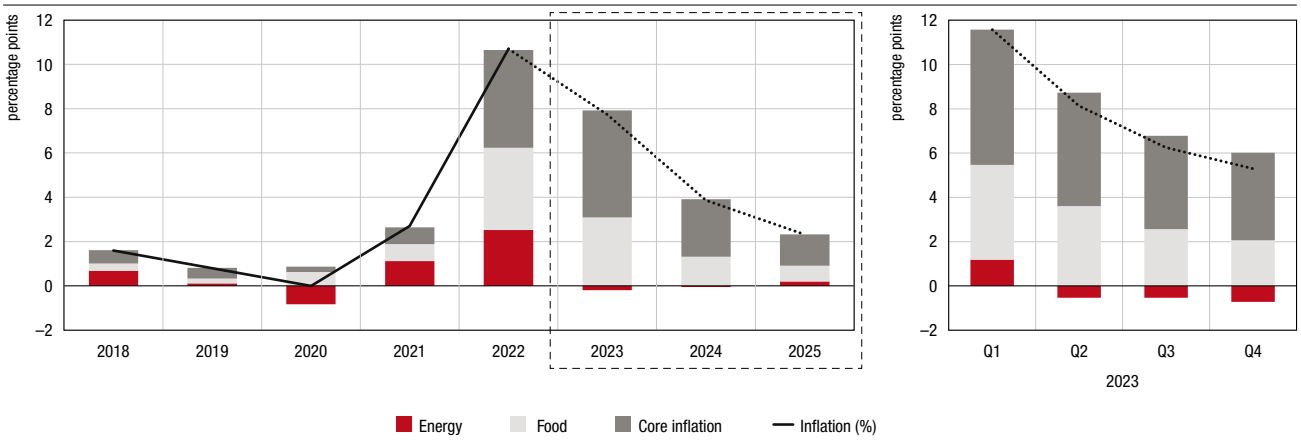
of services are expected to grow at a slower pace due to exceptionally favourable trends seen in tourism after the relaxation of containment measures in the past two years. On the other hand, the growth in the exports of goods could intensify, supported by the disappearance of price shocks and the strengthening of foreign demand. Personal consumption could pick up amid expected favourable labour market developments and a further decrease in the unemployment rate, which is already at a historical low.

Risks to economic growth appear balanced. Negative risks stem from a prolonged duration of the war in Ukraine and the still-present geopolitical tensions, whose escalation could result in a pronounced slowdown of the global economy, and subsequently, in a recession in particular economies, which could, ultimately, have an unfavourable effect on the Croatian economy. In addition, tightened financing conditions aimed at combating high inflation could start to spill over more substantially to economic developments in Croatia. On the other hand, the introduction of the euro and the admission into the Schengen area could have a favourable effect on the volume of and financial indicators in tourism, international trade and investments. Finally, favourable labour market developments could result in stronger domestic demand relative to current projections.

Inflationary pressures are expected to weaken gradually in Croatia in 2023, so that HICP inflation could slow down from 10.7% in 2022 to 7.7% (Figure 4.2.2.). Inflation slowdown, which began towards the end of 2022, could continue until the end of 2023, so that the inflation could decelerate from two-digit levels in the first quarter to around 5% in the last quarter of 2023.

The slowdown in inflation could primarily be a result of lower energy prices, considering the built-in assumption that the price of energy, after an increase of 19.2% in 2022, could drop by 1.5%. Expectations of lower demand for crude oil on the global market resulted in a decline in crude oil prices on the futures markets in 2023, which should be reflected in prices of refined petroleum products lower than those recorded last year. The drop in the prices of refined petroleum products also reflects the

Figure 4.2.2 Projection of harmonised index of consumer prices



Sources: Eurostat and CNB estimations and projections.

disappearance of the statistical effect of the base period, i.e., the strong increase in the prices of refined petroleum products in 2022. Similarly, the annual growth in the prices of gas and electricity for households could slow down significantly due to the waning of the effects of the increase in their prices in April 2022, while the government of Croatia implemented a fourth package of measures by which the administered prices of gas and electricity should remain unchanged at least until March 2024 and September 2023, respectively.

The annual growth in the prices of food could decelerate too, although to a smaller extent than the growth in the prices of energy – from 12.9% in 2022 to 10.6% in 2023. Although the annual growth in the prices of food was strong in the first four months of 2023, the recent significant decline in the prices of energy and food raw materials on the global market and the easing of pressures on the supply side are contributing gradually to the decrease in food producer prices. This could, with a certain lag, have a significant impact on the slowdown in the annual rise in food consumer prices. Also worth noting is the favourable statistical effect of the base period, stemming from the noticeable increase in food prices throughout the almost entire course of 2022.

In contrast to the assumed slowdown in the annual rise in prices of energy and food, core inflation could pick up slightly, from 7.6% in 2022 to 8.3% in 2023. Core inflation started to pick up significantly in the second quarter of 2022 under the influence of the supply chain disruptions still present at the time and the increased demand (particularly due to tourism) and peaked in January of the current year, when prices of some particular services also increased immediately after the adoption of the euro. A high level of inflation was therefore transmitted to 2023, which will greatly determine the average rate of growth at the level of the whole year, despite the expected slowdown in the rest of the year, particularly amid normalised supply chains and the stronger effect of monetary tightening.

Over the remainder of the projection horizon, the average annual rate of

Table 4.2.2 Deviations from the CNB projection of March 2023

	2022	2023	2024	2025
Real GDP				
June 2023	6.2	2.9	2.6	2.6
March 2023	6.3	1.5	2.8	2.6
difference (p. p.)		**1.4**	**–0.2**	**0.0**
Inflation (HICP)				
June 2023	10.7	7.7	3.9	2.3
March 2023	10.7	7.0	3.8	2.2
difference (p. p.)		**0.7**	**0.1**	**0.1**

Sources: CBS, Eurostat and CNB estimations and projections

inflation is expected to slow down to 3.9% in 2024 and 2.3% in 2025. Against the backdrop of a complete return of supply chains to normal and a lower increase in demand amid elevated interest rates, inflation slowdown could mostly reflect the developments in core inflation. In the same way, the slowdown in overall inflation could also be a result of the drop in the annual growth in food prices, while the annual rate of change in energy prices could remain low. Consequently, overall inflation is expected to return to target level in the medium term.

Risks related to inflation projection are still elevated, but are gradually becoming more balanced. Inflation could be higher than anticipated in the case of higher prices of energy and other raw materials on the global market, for example due to a more pronounced effect of the re-opening of China. Another risk that could cause higher inflation is the possibility that wage growth exceeds current expectations or that corporations attempt to maintain high profits by passing on higher labour costs to the prices of their products and services. On the other hand, a lower-than-anticipated inflation could result from lower prices of energy and other raw materials on the global market in the case of an economic downturn or recession, which could be reflected in weakened demand for a great number of goods and services and, consequentially, lower inflation. Stronger effects of monetary policy tightening could also result in lower consumer price inflation, both directly via the cooling of demand due to higher interest rates in Croatia and indirectly if it causes lower-than-expected inflation in Croatia's main trading partners.

Compared to the CNB March projection, economic growth for 2023 has been revised upwards, and for 2024 slightly downwards (Table 4.2.2). The March projection anticipated relatively subdued economic activity in the first half of the year, but available indicators point to robust expansion that could continue in the remainder of the year. All components except exports of goods have been corrected upwards. Since the performance in the first half of the current year was more favourable than previously expected, the spillover effect on GDP developments in 2024 is expected to be smaller.

Inflation is currently expected to decline at a pace slower than that expected in the March projection, so that in 2023, it could be 0.7 percentage points higher as a result of a more pronounced increase in the prices of food and higher core inflation than previously anticipated. Despite the gradual slowdown in the annual increase in food prices and core inflation, recent values exceeded expectations from the previous projection, which points to the continued persistence of inflation. Projection of overall inflation in the remainder of the projection horizon has been revised slightly upwards. In addition, expectations regarding the growth in personal consumption and wage growth have also been corrected upwards relative to the March projection.

Abbreviations and Symbols

Abbreviations

APN	– Agency for Transactions and Mediation in Immovable Properties
APP	– Asset Purchase Programme
BEA	– U. S. Bureau of Economic Analysis
BLS	– bank lending survey
BMPE	– Broad Macroeconomic Projection Exercise
bn	– billion
BVAR	– Bayesian vector autoregression model
CBS	– Croatian Bureau of Statistics
CES	– Croatian Employment Service
CNB	– Croatian National Bank
CPI	– consumer price index
CPII	– Croatian Pension Insurance Institute
DFR	– deposit facility rate
EA	– euro area
EC	– European Commission
ECB	– European Central Bank
EER-41	– nominal effective exchange rate index of the euro against 41 major trading partners of the euro area
ESI	– Economic Sentiment Indicator
€STR	– euro short-term rate
EU	– European Union
EURIBOR	– Euro Interbank Offered Rate
Fed	– Federal Reserve System
G7	– advisory forum consisting of seven major industrial countries of the world
GDP	– gross domestic product
GSCPI	– Global Supply Chain Pressure Index
HICP	– Harmonised Index of Consumer Prices
HWWI	– Hamburgisches Weltwirtschaftsinstitut
HZZO	– Croatian Health Insurance Fund
ILO	– Intrenational Labour Organization
IMF	– International Monetary Fund
Ina	– Industrija nafte d.d.
ind.	– industrial
LSI	– loan supply indicator
m	– million
MLF	– medium-term lending facility
MoF	– Ministry of Finance
MRO	– main refinancing operations rate
Mwh	– megawatt hour

NCA – National Classification of Activities
NDA – net domestic assets
NFA – net foreign assets
OECD – Organisation for Economic Co-operation and Development
OPEC+ – Organisation of the Petroleum Exporting Countries
PEPP – Pandemic Emergency Purchase Programme
PMI – Purchasing Manager Index
pp – percentage points
Q – quarter
RC – Republic of Croatia
SDR – special drawing rights
SMA – Survey of Monetary Analysts
SPF – Survey of Professional Forecasters
thous. – thousand
TLTRO III – third round of targeted longer-term refinancing operations
TPI – Transmission Protection Instrument
UBS AG – United Bank of Switzerland
UNCTAD – United Nations Conference on Trade and Development
USA – United States of America
VAT – value added tax

Three-letter currency codes

CHF – Swiss franc
CNY – Yuan Renminbi
EUR – euro
GBP – pound sterling
JPY – yen
USD – US dollar
XDR – special drawing rights

Two-letter country codes

AT – Austria
BE – Belgium
BG – Bulgaria
CY – Cyprus
CZ – Czech Republic
DE – Germany
DK – Denmark
EE – Estonia
ES – Spain
FI – Finland
FR – France
GB – Great Britain

GR	– Greece
HR	– Croatia
HU	– Hungary
IE	– Ireland
IT	– Italy
LT	– Lithuania
LV	– Latvia
MT	– Malta
NL	– The Netherlands
PL	– Poland
PT	– Portugal
RO	– Romania
SI	– Slovenia
SK	– Slovakia
UK	– United Kingdom

Symbols

–	– no entry
....	– data not available
0	– value is less than 0.5 of the unit of measure being used
a, b, c,...	– indicates a note beneath the table and figure
*	– corrected data
()	– incomplete or insufficiently verified data

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