Semi-annual Information

Semi-annual Information on the Financial Condition, the Degree of Price Stability Achieved and the Implementation of Monetary Policy in the Second Half of 2023

Zagreb, June 2024

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Summary

Summary

The past year was marked by Croatia's entry into the euro area and the Schengen area, by an ongoing relatively strong economic growth despite weak foreign demand and a gradual slowdown in inflation. September saw the end of the most severe monetary policy tightening cycle since the euro was introduced as a currency. Key ECB interest rate hikes spilled over to money market interest rates and led to an increase in borrowing costs for both households and corporates. Notwithstanding these conditions, the Croatian economy continued to grow at a much faster pace than the euro area average. This was largely due to a robust demand for tourist services and an expansionary fiscal policy associated with the use of EU funds, which reached a record-high level. This had a positive effect on income and drove up spending. The annual inflation rate recorded a noticeable decline in 2023, which also contributed to the increase in real income and boosted consumer optimism.

Even after joining the Eurosystem, the Croatian National Bank continued to manage its own financial assets, which consist of almost all the assets that made up net international reserves before euro area accession. The CNB also participates in the management of a portion of the international reserves it transferred to the European Central Bank at the beginning of 2023.

In 2023, the high capitalisation and ample liquidity of the banking system in the RC were paired with a strong growth in profitability.

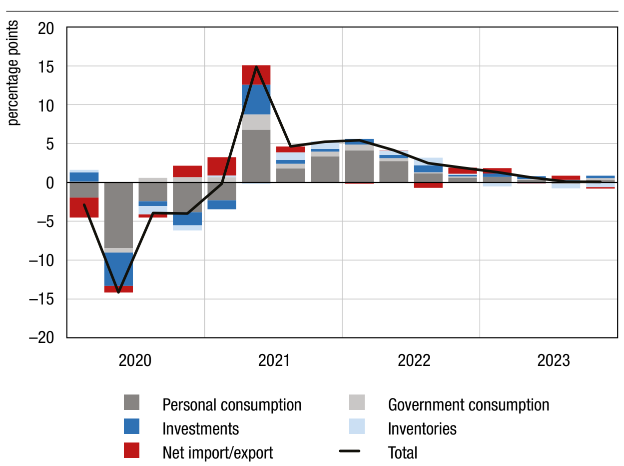
1 Euro area

1.1 Real and price movements

Economic growth in the euro area dropped markedly in 2023, to 0.4%, which is a substantial slowdown from the 3.4% recorded in 2022. The growth in euro area GDP in the whole of 2023 resulted from a high level of economic activity in the first half of the year, on top of the levels recorded the year before. However, economic conditions deteriorated towards the end of the year. Despite the resilient labour market and high levels of employment in 2023, the contribution of private consumption almost completely disappeared towards the end of the year as financing conditions worsened due to monetary policy tightening. Other GDP components also declined from the year before. Investments and government consumption slowed down noticeably amid growing financing costs and the energy crisis caused by the Russian invasion of Ukraine. Recovery in foreign demand was also weaker than expected, which especially holds true with regard to demand from China. Euro area economies were exposed to two shocks, that is, the rise in the prices for energy and the change in consumption patterns, with heterogeneous effects on individual member states and economic sectors. On the one hand, manufacturing recorded a further decline due to high costs of energy, as did real activity in those countries in which it plays a more important role in the economy. On the other hand, the services sector, supported by strong demand following the pandemic and a shift in consumer preferences, contributed to a more pronounced growth in those countries that rely more on this sector.

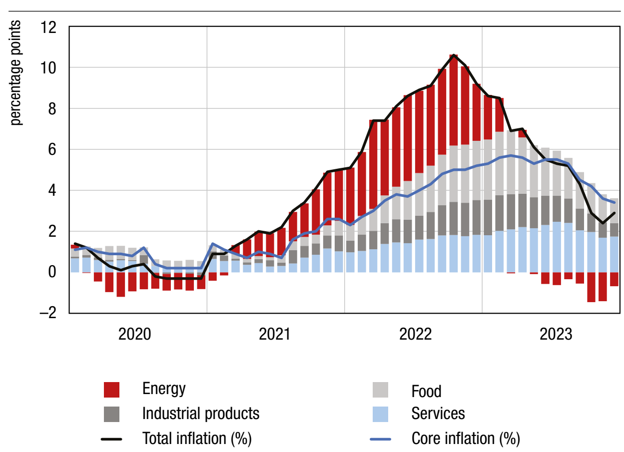
Euro area inflation peaked in October 2022, slowing down considerably in 2023. The average annual consumer price inflation in 2023 stood at 5.4%, considerably lower than the 8.4% recorded in 2022. Short-term indicators of headline and core inflation

Figure 1.1.1 Euro area real GDP growth
contributions by components



Source: Eurostat

Figure 1.1.2 Euro area inflation indicators
contributions by components



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

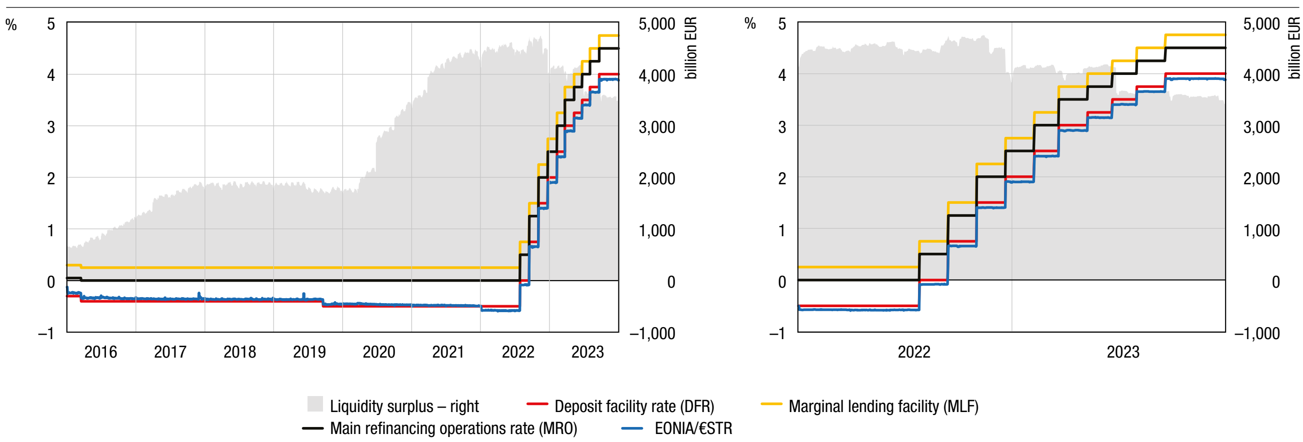
fell further and came close to their normal levels towards the end of the year. Inflation slowed down in 2023 due to the decline in the global prices of energy and other raw materials, the easing of pressures in the earlier stages of the price chain (this primarily concerns import prices and producer prices for intermediate goods and consumer goods), the normalisation of supply chains and the impact of monetary policy tightening, which led to a slowdown in demand. By contrast, domestic inflationary pressures on the cost side in the euro area rose amid increasing wage growth and a decline in labour productivity. The contribution of unit profits to domestic inflationary pressures decreased markedly in the second half of 2023, which suggests that profits managed to ease pressures stemming from the growing labour costs.

1.2 Monetary policy and financial markets

September 2023 saw the end of the most severe monetary policy tightening cycle since the euro was introduced as a currency. After ten successive increases in key interest rates, the meeting of the ECB Governing Council in October 2023 was the first that did not result in a decision to raise key interest rates. The meeting held in December ended with the same outcome. At both meetings, the Governing Council emphasized that the key interest rates were at levels that, maintained for a sufficiently long duration, would make a substantial contribution to the timely return of inflation to its target level. The Governing Council's future decisions will ensure that the key ECB interest rates are set at sufficiently restrictive levels for as long as necessary and will continue to follow a data-dependent approach.

The ECB started raising its key interest rates in July 2022. By the end of 2022, they had risen by 250 basis points[1], followed by a further 200 basis points in 2023. The ECB Governing Council decided to raise the deposit facility rate (DFR) (which is a relevant

Figure 1.2.1 Key ECB interest rates



Notes: DFR (deposit facility rate); MLF (marginal lending facility); MRO (main refinancing operations). The EONIA was replaced by the €STR in early 2022.
Source: ECB.

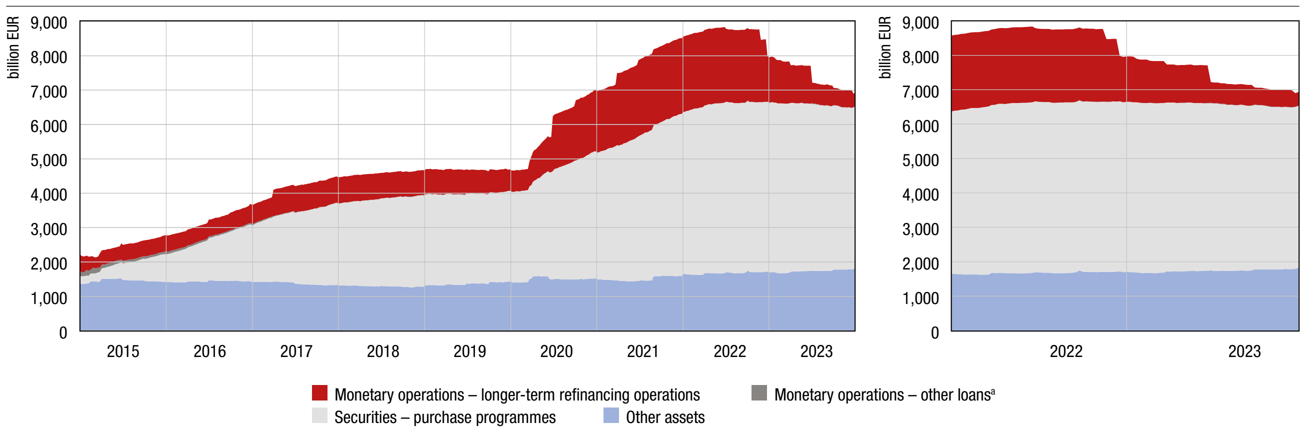
1 A basis point is one hundredth of one percentage point.

Eurosystem monetary policy instrument due to currently high liquidity surpluses) from –0.50% to 4.00%. The main refinancing operations (MRO) rate was raised from 0% to 4.50% and the marginal lending facility (MLF) rate was upped from 0.25% to 4.75%.

In addition to the standard monetary policy measures, the ECB reinforced the effects of interest rate increase by the gradual reduction of the Eurosystem balance sheet. The balance sheet reduction was mainly supported by banks' repayment of funds from the third series of targeted longer-term refinancing operations (TLTRO III) with early repayments being driven by the change in refinancing conditions of November 2022. The increase in bank funding costs through this instrument contributed to the transmission of policy rate increases to bank lending conditions. In addition, after ending the net asset purchases via the asset purchase programme (APP) in December 2021, as of March 2023, the Eurosystem stopped reinvesting part of principal payments from maturing securities, and at the meeting in June 2023 the Governing Council confirmed that as of July reinvestment would be stopped altogether. As for the pandemic emergency purchase programme (PEPP), the ECB's Governing Council at its meeting in November 2023 decided that it would continue reinvesting, in full, the principal payments from maturing securities during the first half of 2024. However, in the second half of the year the PEPP portfolio is to be reduced by an average of EUR 7.5bn monthly and at the end of 2024 reinvestments are to be discontinued.

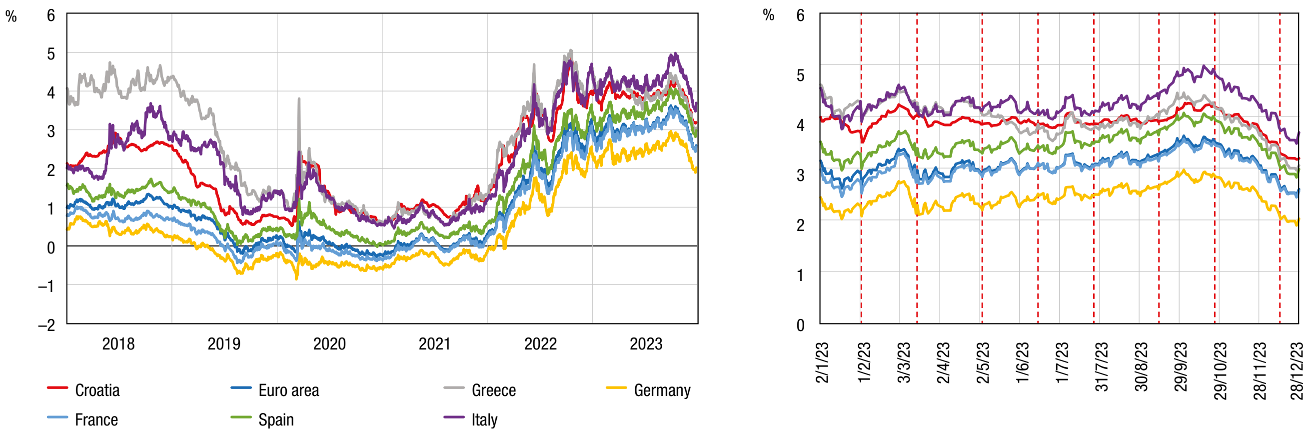
The increase in key ECB interest rates soon spilled over to money market interest rates. Following the last increase in key ECB interest rates in September 2023 of 0.25 percentage points, the €STR rose to 3.9% and held steady at approximately the same level thereafter. EURIBOR, representing interest rates with different maturities (up to 1 year) used in lending between the largest banks in the euro area, reflected the expected trends in key ECB interest rates. Due to persistent inflationary pressures and further monetary tightening, the three-month EURIBOR reached 3.9% in September. Thereafter, markets began to expect that there would be no more hikes in key ECB

Figure 1.2.2 Eurosystem balance sheet



[a] Other loans include: main refinancing operations, fine-tuning reverse operations, structural reverse operations, marginal lending facilities and credits related to margin calls.
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.
Source: ECB.

Figure 1.2.3 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, May, June, July, September, October and December.
Sources: Bloomberg, Eurostat and CNB calculations.

interest rates, and thus the three-month EURIBOR stabilised and remained virtually unchanged until the end of the year. At end-December, it was 1.8 percentage points higher than at the end of the previous year.

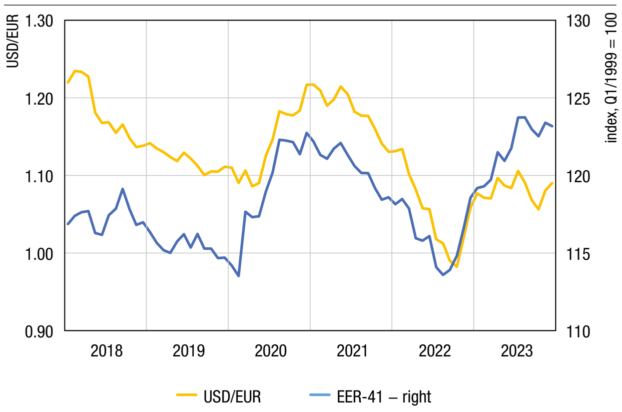
Government bond yields recorded a relatively wide amplitude of oscillations during the year, while in the last quarter they declined below the levels recorded at the end of the previous year. The euro area GDP-weighted average of long-term government bond yields stood at 2.6% at end-December, down by 68 basis points from the levels recorded at the end of 2022.

The euro appreciated slightly against the US dollar on the global foreign exchange markets in 2023. The euro began to recover relative to the US dollar towards the end of 2022, so that by July 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 further tightening of the ECB's monetary policy. From July to November the euro weakened against the US dollar continually, mostly due to the expectations that key interest rates in the USA could hold steady at an elevated level for a longer period of time since the US economy had proved to be more resilient than expected. The weaker euro area economic outlook created additional downward pressure on the euro. In November, expectations grew that because of the easing of inflationary pressures in the USA the Fed was close to the end of the cycle of upping its key interest rates, which reversed the trend, so that the USD/EUR exchange rate appreciated until the end of the year. The exchange rate of the euro against the US dollar hovered around an average value of USD/EUR 1.09 in December 2023, which is an appreciation of 3% relative to the level recorded in December 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 4%.

Borrowing costs for households and corporates continued their upward trend in

2023 due to the increase in key ECB interest rates, while credit activity weakened. At the euro area level, the average interest rate on pure new loans to non-financial corporations and housing loans to households rose to 5.12% and 4.06% respectively in December, up by 167 and 110 basis points respectively from the end of 2022. The rise in interest rates was accompanied by a slowdown in lending activity. Lending dynamics was considerably weaker in the segment of lending to non-financial corporations than in the segment of household lending. This discrepancy is also associated with the base effects of the very strong corporate lending last year due to an increased need for the financing of working capital amid the rise in the prices of energy and raw materials. Overall, lending activity remained subdued and was much weaker than in 2022.

Figure 1.2.4 USD/EUR exchange rate and the nominal effective exchange rate of the euro



Notes: 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.

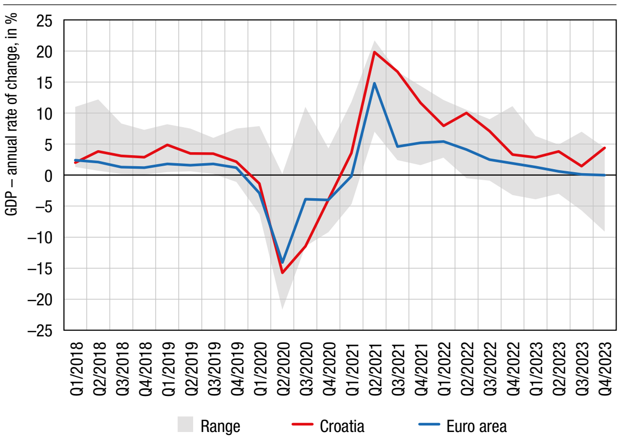
2 Croatian economy

2.1 Real developments

After the strong economic recovery in 2021 and 2022, favourable economic developments continued into 2023, which is particularly relevant in the light of unfavourable developments in the external environment and in some of Croatia's major trading partners. The faster growth of the Croatian economy than that of the euro area and the EU average also points to the continuation of economic convergence, after GDP per capita (adjusted for price differences) reached 73% of the EU average in 2022. The ongoing expansion of economic activity was driven by the sustained high demand for tourism-related services, expansionary fiscal policy, intensified use of EU funds and consequently by the strong construction activity and robust real estate market. As a result, labour market developments remained favourable. Combined with the decline in inflation, this led to an increase in real income and gave a boost to consumer optimism and private consumption. The first half of the year was marked by a relatively strong growth of economic activity, with a contribution from all components except for exports of goods, which declined noticeably. Economic activity weakened over the summer months due to a slowdown in domestic demand and a decline in the exports of services on an annual basis. It picked up again at the end of the year on a quarterly level, largely due to the increase in private and government consumption and owing to the gradual recovery in the exports of goods and a continued growth in the exports of services. At the end of last year, the annual GDP growth rate reached 4.4%. At the level of 2023 as a whole, real GDP increased by 3.1% on average.

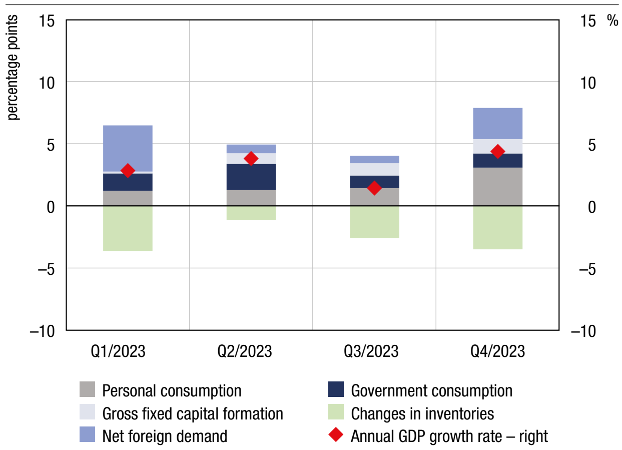
Real annual growth in 2023 largely stemmed from a robust domestic demand,

Figure 2.1.1 Trends in economic activity in Croatia and the euro area



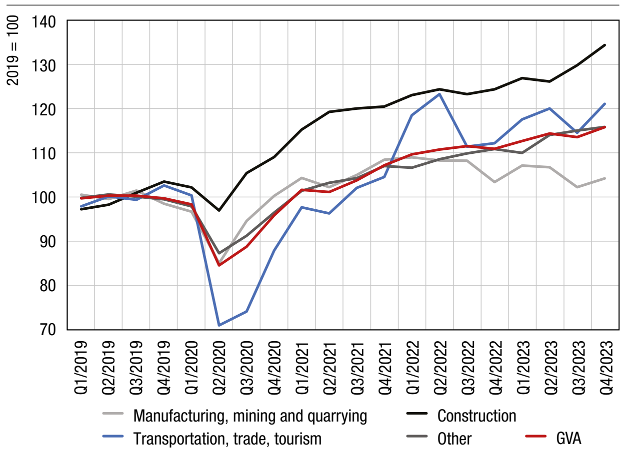
Note: The figure shows the range of values of real GDP growth of individual euro area Member States.
Sources: CBS and Eurostat.

Figure 2.1.2 Contributions to the change in real economic activity



Source: CBS.

Figure 2.1.3 Gross value added in Croatia by activities



Note: "Tourism" refers to accommodation and hospitality activities.
Source: CBS.

especially from private consumption. Positive trends in private consumption may be attributed to the ongoing growth in employment, the recovery in real wages and the rise in consumer optimism. Government consumption and investments rose sharply. The rise in government investments partly stemmed from projects co-financed from EU funds. In addition to domestic demand, the growth was also propelled by services exports, largely due to the continuation of favourable developments in tourism, while exports of goods declined on an annual basis due to weak foreign demand, so that total exports of goods and services decreased from the year before. Apart from goods exports, the decline in the previously accumulated inventories also made a negative contribution to growth, which resulted in a reduced need for imports. However, despite the drop in exports, net exports made a positive contribution to growth in 2023.[2]

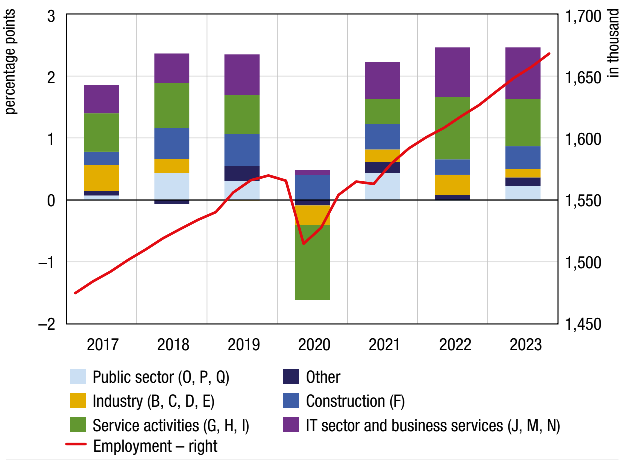
Observing the trends in economic activity by its main activities, growth was largely supported by the upswing in the services sector, which was relatively broadly based. Accordingly, growth was recorded in activities related to trade and tourism, the real estate market, information and communication activities and public services. Growth was also seen in construction activities, which is consistent with the relatively strong rise in investment activity and residential construction. On the other hand, agricultural production was almost stagnant, while manufacturing activity declined, which can be associated with weak foreign demand and exports of goods. It should be noted that the annual increase in total gross value added (GVA) in 2023 lagged behind the growth in GDP and stood at 2.3%, as a result of a considerable positive contribution to GDP growth from net indirect taxes (taxes on products less subsidies on products).

2.2 Labour market

Labour market in 2023 was marked by a continued rise in employment and a further drop in unemployment, as well as by a strong rebound in nominal gross wages. The number of employed persons rose by 2.5% in 2023. Broken down by the NCA, the largest contribution to growth in employment came from business services and IT, trade, accommodation and transport and construction. The growth of employment was largely spurred by the employment of third-country workers (from non-EU countries) and by hiring pensioners on a part-time basis. Unemployment continued its downward path in

2 It should be noted that the inventories series includes statistical discrepancies arising between the expenditure and the production GDP calculation methods, and should therefore be interpreted with caution.

Figure 2.2.1 Employment by NCA, seasonally adjusted data, contributions to the annual rate of change and total employment



Note: NCA means the National Classification of Activities.
Source: CPII (seasonally adjusted by the CNB).

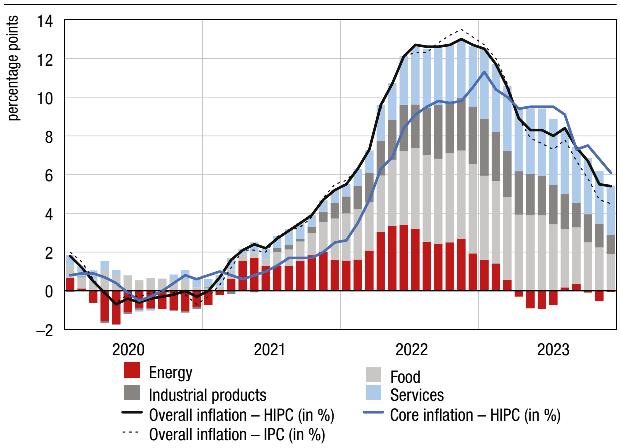
2023, and the registered unemployment rate fell to 6.2% of the labour force (from 6.7% in 2022). The ILO unemployment rate averaged at 6.1%, as against the 7% recorded in 2022. Wages increased sharply in 2023 due to a robust labour demand and workers' attempts to offset accumulated losses in purchasing power due to rising inflation. The average nominal gross wage in 2023 rose by 14.4% on an annual basis, with an equally sharp rise in wages in both public and private sectors. Nominal net wages increased by 12.6% (7% in 2022), while real net wages rose by 4.2% (after having fallen by 3.4% in 2022).

2.3 Price developments

Inflation decelerated perceptibly in 2023, having surged in 2022 to the highest level in the last 29 years. The average annual rate of inflation in Croatia measured by the harmonised index of consumer prices fell from 10.7% in 2022 to 8.4% in 2023. The intensity of inflation slowdown is even more pronounced when observing year-end results – inflation decreased from 12.7% in December 2022 to 5.4% in December 2023. The slowdown in inflation was driven by the gradually waning effect of the considerable increase in the prices of numerous goods and services in 2022 (base effects), against the background of the substantial deceleration in the current price rises. The easing of current inflationary pressures was particularly accentuated following the end of the peak tourist season amid the fading impact of past shocks (increases in the prices of energy, food raw materials and other raw materials, supply chain disruptions, increased demand due to the reopening of the economy following the pandemic). Even though Croatia joined the euro area at the time of elevated inflation, in line with expectations, the introduction of the euro had a relatively modest and one-off impact on total inflation, concentrated in the services sector.

Price growth for all major inflation components slowed down in 2023. Energy price inflation went down from 14.7% in December 2022 to –0.5% in December 2023 owing to the decrease in the prices of refined petroleum products, while the

Figure 2.3.1 Inflation indicators in Croatia
contributions by components



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

administered prices of electricity and gas for households remained unchanged. Inflation in the prices of food (including beverages and tobacco) fell to 6.5% in December 2023 (from 16% in December 2022), owing to, among other things, the spillover of lower prices of energy, fertilisers and food raw materials on the global market and the slowdown in the rise of food prices in Croatia's main trading partners. Additionally, lower commodity prices on the global market, normalisation of global supply chains and slower annual growth of industrial producer prices on the domestic market led to a relatively steady slowdown in industrial goods inflation over the course of last year. Having reached 11.2% in December 2022, industrial goods inflation receded to 3.7% in December 2023. Services inflation slowed down only slightly, from 9.9% in December 2022 to 8.1% in December 2023, which was most prominent after the peak tourist season was over. Services inflation was largely affected by the sizeable rise in the prices of catering and accommodation services as a result of the spillover of earlier increases in costs, especially of energy and food raw materials, the rise in wages, the robust demand for the above services and the convergence of these prices to the average level in the euro area.

Despite its slowdown, core inflation remained relatively elevated. Core inflation (excluding energy and food prices), which fell from 10.5% in December 2022 to 6.1% in December 2023, declined considerably slower than headline inflation. Other indicators of core inflation, which exclude certain volatile components, also went down in 2023, even though they still remained elevated relative to their long-term average levels. Relatively high levels of core inflation mainly reflected domestic inflationary pressures arising from the robust labour market, that is, from wage growth (to compensate for purchasing power decline caused by previous price increases) and solid domestic demand, as well as the strong demand of foreign visitors for travel-related services. Having peaked in the first quarter of 2023, the contribution of unit profits to domestic inflationary pressures declined steadily in the remaining part of the year, which suggests that profits were able to cushion inflationary pressures coming from the growth in labour costs.

Short-term consumer and corporate inflationary expectations also declined. Even though consumer perception of inflation in the past twelve months remained elevated, consumer inflationary expectations in the next twelve months decreased considerably relative to the peak levels recorded in mid-2022. In addition, firms' expectations about price trends in the next three months also declined. Corporate short-term inflationary expectations in industry returned in the second half of 2023 to approximately their average level in the 2017 to 2019 period, while corporate expectations in the services sector remained elevated relative to the pre-pandemic period.

Box 1 Profits, markups and inflation in Croatia

Strong acceleration of inflation in 2022 prompted the question of the extent to which corporate profits and markups contributed to inflationary pressures. The contribution of unit profits to GDP deflator growth in 2022 was bigger than it had been for quite a long time before and exceeded the contribution of unit labour costs and taxes. By contrast, in 2023, the contribution of unit profits declined in line with expectations formed in the light of the policy of corporates to keep stable markups amid the conditions of a decrease in the prices of raw materials and energy, while the contribution of unit labour costs were increasing. Profit margins of non-financial corporations in Croatia, after having fallen in 2020, had by 2022 returned close to the 2019 level. Econometric estimates of markups point to a similar conclusion. Keeping markups at a relatively stable level seemingly eliminates corporate profits as one of the potential determinants of inflation. In the conditions of a pronounced rise in the costs of intermediate goods, which is much faster than economic activity and wage growth, stable markups are actually consistent with a noticeable increase in corporate profits and a large contribution of unit profits to GDP deflator growth. And amid removal of the remaining bottlenecks in production chains and falling prices of raw materials, corporate profits may serve as a buffer for the inflationary effects of a surge in labour costs.

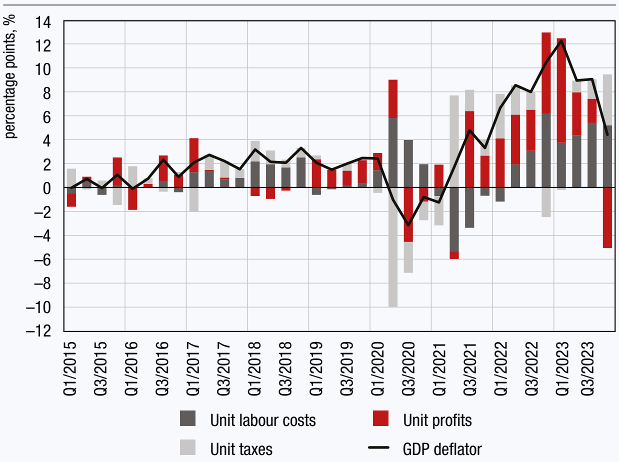
Strong acceleration of inflation on a global level in 2022 prompted a discussion on the relationship between corporate markups and developments in inflation. Regardless of the ultimate cause, to the extent that it is not “imported”, inflation is necessarily reflected in the growth of nominal wages, profits or taxes. This raises the question of the extent to which corporate profits or markups contribute to domestic inflationary pressures, particularly if we bear in mind that inflation has reached very high levels and has proven to be much more persistent than initially expected. This box examines the developments in price and profit margins of non-financial corporations in Croatia and attempts to delve deeper into their relationship.

The GDP deflator is one of the indicators used to monitor price developments, even though it differs conceptually from the (harmonised) index of consumer prices. In contrast with the consumer price index, which monitors the prices of goods and services consumed by the households, the GDP deflator includes the prices of all final products and services produced by the domestic economy, regardless of whether they are intended for domestic consumption (final or investment) or export. Also, while import prices are included in the consumer price index, the calculation of the GDP deflator excludes the imports deflator so the GDP deflator is one of the common indicators of domestic price pressures. The increase in the GDP deflator of 8.6% in 2022 shows that inflationary pressures that year were only partially of an imported nature and the harmonised consumer price index rose by 10.7%, somewhat faster than the GDP deflator. In 2023, GDP deflator growth slowed down slightly to 8.5% and consumer price inflation decelerated to 8.4%.

The decomposition of the change in the GDP deflator[1] shows that its growth in 2022 was mostly driven by unit profits, whose contribution was much bigger than the long-term average and largely exceeded the contribution of unit labour costs (Figure 1). Such developments reflect a growth of unit profits faster than that of unit labour costs, which resulted in a higher share of profits (approximated, for the sake of simplicity, by gross operating surplus and mixed income) in GDP (Figure 2). After a strong acceleration in 2022, the growth in unit profits peaked at the beginning of 2023 and in the second and third quarter of 2023, the contribution of unit profits to GDP deflator growth decreased and it became negative in the last quarter of 2023. The decline in the contribution of unit profits in 2023 was to be expected if corporate pricing policy aimed at keeping stable markups is taken into consideration, amid the conditions of decreased prices of raw materials and energy, as well as imported intermediate goods. On the other hand, the contribution of unit labour costs in 2023 was bigger than in the previous year, so that the total GDP deflator grew mostly on account of unit labour costs in 2023.

The increase in unit profits does not necessarily mean that corporates increased markups and profit margins. Markup is defined as the price to marginal cost ratio, while profit margins are the profits[2] to sales ratio. Markups are often used as an indicator of

Figure 1 Decomposition of GDP deflator growth



Sources: Eurostat and CNB estimates.

Figure 2 Structure of nominal GDP according to income approach

Note: Average of the last four quarters.
Source: Eurostat.

1 The components of income approach to nominal GDP is used, with both the nominal GDP and its three components being divided by real GDP to arrive at, on the one hand, the GDP deflator, and on the other (1) unit labour costs (more precisely, the nominal compensation of employees to real GDP ratio), (2) unit profits (more precisely, the gross operating surplus and gross mixed income to real GDP ratio) and (3) unit taxes (more precisely, the taxes net of subsidies to real GDP ratio).

2 Three standard definitions of profits are used in this box: net profits after tax, EBITDA and operating profits. EBITDA is defined as operating income minus operating expenses plus depreciation and operating profits equal income from sale minus employee costs and material costs. It should be borne in mind that annual financial statements of corporates are available with a much bigger time lag than the national accounts.

corporate market power because they show the extent to which a firm may charge a price above the marginal cost of its product. Profit margins are an indicator of corporate profitability, i.e., profits per unit of sales. Markups and profit margins may differ, with the treatment of fixed costs being one of the key differences between them. For instance, a firm with high fixed costs must have high markups to generate any profit at all. Similarly, the share of profits in value added that is measured in national accounts[3], differs conceptually from markup indicators and this may result in a divergence between markup indicators and the profit share in GDP. Thus, when the costs of intermediate goods grow faster than labour costs, as was the case recently, the share of profits in GDP may rise even if markups are stagnant or falling (Hahn, 2023). Therefore, to arrive at a conclusion on the impact of corporate pricing policy on inflation, it is also necessary to assess the developments in corporate price and profit margins.

Econometric estimates of markups based on reports of non-financial corporations[4] in Croatia do not suggest a significant increase in 2022 relative to 2019, and the same is true of developments in profit margins. Markups need to be econometrically estimated because data on prices and marginal costs of corporates are not available. To do so we used the standard econometric model designed for markup estimation (De Loecker and Warzynski, 2012[5], De Loecker et al., 2021[6]). Twelve different versions of the model were estimated, all pointing to a similar conclusion: markups rose after a sharp fall in pandemic 2020[7], but only to reach their 2019 level. The estimates of percentage change in markups from 2019 based on different models thus range from an increase in markups of 2% to a decrease of 2.5% and the median model (–0.6%) and the average of all models (–0.5%) show a small fall in markups (Figure 3). Profit margins moved in parallel with markups (Figure 3).

Even with relatively stable markups, firms increased the nominal value of their profits significantly, as seen in the growth of the contribution of unit profits to the GDP deflator. In 2022, total corporate profits[8] rose steeply from 2019 (net profits 63%, EBITDA 42% and operating profits 34%[9]), greatly outpacing labour costs (22%), which

3 According to data available in the national accounts, profits are approximated by a category of gross operating surplus and mixed income, which also comprises some elements that would not be considered profits in a narrow sense (Haskel, 2023, Hahn, 2023). Hahn, E. (2023): How have unit profits contributed to the recent strengthening of euro area domestic price pressures?, May 2023, Haskel, J. (2023): *What's driving inflation: wages, profits, or energy prices?*, Speech given at the Peterson Institute for International Economics, Washington DC, 25 May 2023.

4 Only non-financial corporations (hereinafter: corporates, firms) are analysed in the box while financial institutions are excluded.

5 De Loecker, J. and Warzynski, F. (2012): Markups and firm-level export status, American economic review, 102(6), 2437 – 2471.

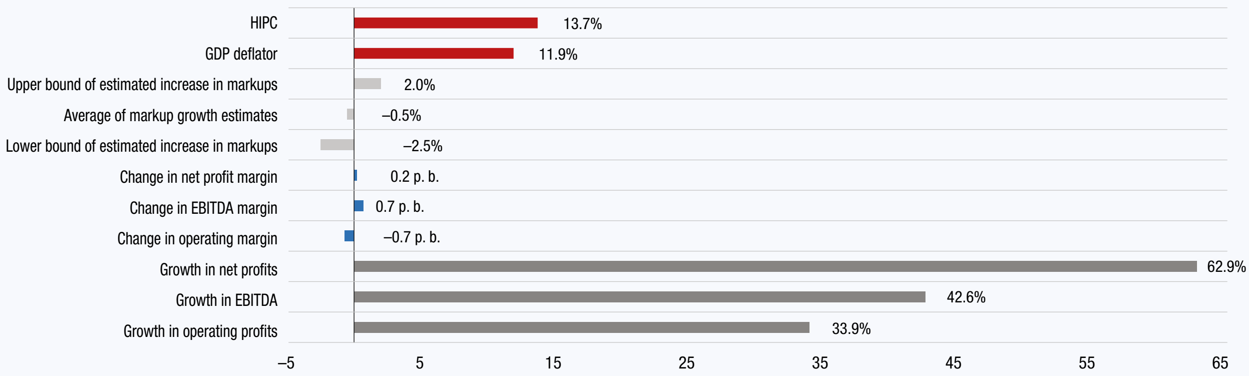
6 De Loecker, J., Eeckhout, J. and Unger, G. (2020): The rise of market power and the macroeconomic implications, The Quarterly Journal of Economics, 135(2), 561 – 644.

7 Note should be taken that markup estimates in 2020 and 2021 were probably influenced by government support to the economy, which made it possible for corporates to have much higher labour costs than they would have had if there had been no government support. Markups in 2020 and 2021 were probably higher than model estimates so Figure 3.3 shows only the percentage difference in markups and profit margins between 2022 and 2019.

8 The analysis excludes firms not reporting at least one of the following items: employment, employee costs, assets, tangible assets and sales. The sample also excludes firms reporting one of the listed items equal to zero. Also excluded are all activities the first two digits of which are greater than 82 such as public administration, defence, education, health, etc. These criteria are used in all the calculations in this box.

9 Relative to 2021, net profits rose by 23%, EBITDA by 27%, operating profits by 25% and employee costs by 14%.

Figure 3 Changes in price and profit margins of corporates in Croatia, 2022 relative to 2019



Notes: p.p. – percentage points. The figure shows the percentage change of markups estimated using various models and the change in different corporate profit margin definitions in 2022 relative to 2019. Twelve different models of markups were estimated based on De Loecker and Warzynski, 2012 and De Loecker et al., 2021. Corporate-level margins were aggregated to the level of the entire economy with shares of sale of an individual corporate in total sale and the percentage change was calculated relative to 2019.
Sources: FINA and authors' estimates.

is in line with the seemingly contradictory indicators pointing to an increase in the share of profits in the national accounts statistics and constant corporate markups. Colonna et al. (2023)[10] and Hahn (2023) have demonstrated, using different indicators of corporate profits, that similar developments were present in some euro area countries, i.e. that the nominal value of profits rose sharply even with relatively stable markups. Amid strong cost pressures, stable profit margins and markups indicate that corporates raised their product prices at an intensity similar to their cost growth, which greatly outpaced GDP growth. This led to a surge in the nominal amount of profits and their share in GDP.

It appears that corporates have not fully transferred the increase in input prices to buyers, but have left part of the increase to be shouldered by employees whose wages grew slower than the costs of intermediate goods and sales, thus helping corporates to preserve their markups. As shown previously, the average markups and profit margins of corporates have been relatively stable over the past years. However, the shares of the costs of different production factors in sales have changed considerably (Figure 4). Thus, after 2020, the costs of intermediate goods to sales ratio rose steeply, suggesting that corporates raised their product prices at a pace that was slower than the growth of their input costs. At the same time, employee costs rose even slower than the costs of intermediate inputs and sales, with the ratio of employee costs to sales falling. This points to the conclusion that corporates maintained relatively stable markups by splitting the burden of higher costs of intermediate goods between employees and buyers[11].

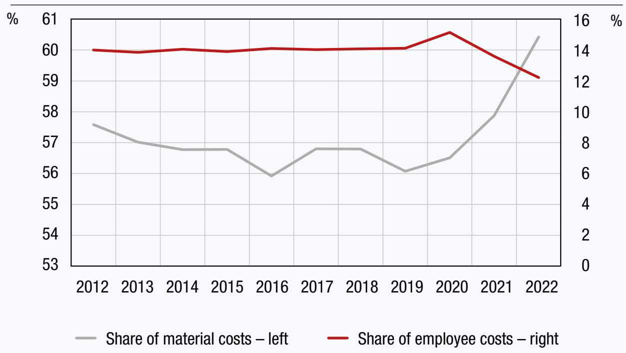
The observed corporate behaviour is in line with the simple pricing policy of stable markups, but further research is needed to establish the determinants of prices,

10 Colonna, F., Torrini, R. and Viviano, E. (2023): The profit share and firm mark-up: how to interpret them? Banca D'Italia Occasional Paper No. 770, May.

11 According to economic theory, the developments in the costs of variable inputs to sales ratio are inversely proportional to developments in markups, provided there have been no recent big changes in production technology (De Loecker and Warzynski, 2012, De Loecker et al., 2021). In addition, assuming labour and intermediate inputs are variable production factors, the developments in the shares of their costs in sales are inversely proportional to developments in markups.

markups and profits. On the one hand, corporates were faced with a sharp increase in input prices, which increased costs and diminished profitability. On the other hand, supply bottlenecks, product shortages and robust domestic and foreign demand have made it easier for firms to raise the prices of their products and make up for the higher input costs. Amid such a widespread increase in costs and prices, it was difficult for consumers to assess whether individual price increases were justified and they probably had few opportunities and little propensity to switch to other producers or traders. Wage rigidity also helped corporates to alleviate cost increases and maintain markups. Aggregate demand remained robust as households decreased their savings rate and foreign demand for services also made a big contribution. To estimate the exact contribution of each of these elements, one would need to estimate the demand elasticity, measure the firm production structure and the effects of uncertainty, which all require much more detailed data than those available currently. An important factor is the relative strength of the numerous shocks that hit the economy in the past years and their effect on inflation, which is the subject of a growing number of research studies throughout the world.

Figure 4 Developments in determinants of corporate markups



Notes: The figure shows the weighted average of the share of employee costs and costs of intermediate goods in sale. The costs of intermediate goods are defined as the sum of material costs and the costs of sold goods in line with literature on markups (De Loecker and Warzynski, 2012, De Loecker et. al., 2021). Namely, the subitem of material costs called other external costs, also comprise many other costs that may be classified as fixed and not variable costs, and are therefore excluded from the analysis.
Sources: FINA and CNB estimates.

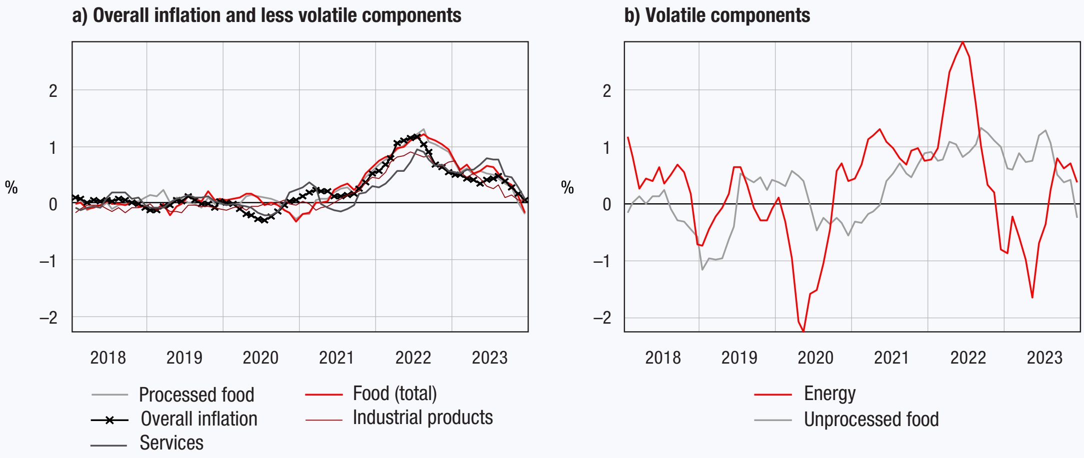
As the remaining bottlenecks in production chains are being eliminated and prices of raw materials are falling, we can expect a further decline in the contribution of unit profits to GDP deflator growth. Profits could serve as a “buffer” against price pressures generated by employees seeking to offset the fallen purchasing power of wages due to the general price increase. However, any corporate effort to avoid a considerable fall in profits might lead to an increase in markups, in which case there would be a risk of inflation outpacing current expectations.

Box 2 The role of base effects in the slowdown of consumer inflation

After consumer inflation accelerated almost continuously from –0.3% in December 2020 to 13% in November 2022, the opposite trend was observed in the past 13 months, during which inflation slowed down to 5.4% in December, thus remaining at an elevated level. However, current (or contemporaneous) inflationary pressures are only reflected with a lag in the annual inflation rate, which shows the overall change in the level of prices throughout the previous year. Also, the change in the annual inflation rate depends not only on current inflation but also on the statistical "base effects", i.e. on possible unusually strong changes in prices a year ago. All components of current monthly inflation have been at usual average levels since autumn. If current pressures remain at their current low level, the annual inflation rate will decline due to the gradual drop out of elevated monthly inflation rates (recorded up to autumn 2023) from the calculation. Due to these base effects, Croatia's annual inflation might fall below 3% by the end of 2024. Such a mechanical projection is subject to risks that may be reflected in a rise in current inflation, which would to some extent offset favourable base effects. Base effects often determine the change in the annual inflation rate across the euro area as well. The acceleration of inflation in December 2023 (to 2.9% from 2.5% in November) almost entirely reflects unfavourable base effects, in particular energy prices.

Although the annual inflation rate was still elevated towards the end of 2023, despite a considerable decrease over that year, indicators of current inflation suggest a significant easing of inflationary pressures. The annual inflation rate declined over the past year from its peak of 13% in November 2022 to 5.4% in December 2023. This level remains well above long-term averages and is often interpreted by the public as an indicator of continuing inflationary pressures**.** However, the annual inflation rate tracks changes in current inflationary pressures with important delay as it aggregates the change in the price level over the past twelve months. For that reason, current inflationary pressures are often analysed on the basis of monthly inflation rates, which are mostly averaged over a few months (usually 3 or 6 months) in order to reduce volatility and are then annualised (see Methodological framework A: Calculating inflation). The six month average of month-over-month (MoM) inflation rates, for example, peaked in mid-2022, approximately half a year before the peak of the annual inflation rate. By the end of 2023, it again returned closer to normal values, suggesting a significant easing of current inflationary pressures (Figure 1, panel a)). Individual components of consumer inflation followed the profile of the aggregate indicator – services, industrial products and processed food, after an exceptionally long period of sharp increase, all came much closer to or have already reached the usual values (Figure 2, panel a)). Energy inflation and unprocessed food inflation, on the other hand, are both influenced by the highly volatile commodity markets and thus deviate from trend values more strongly. Nevertheless, in recent months they also returned close to their usual levels (Figure 2, panel b)).

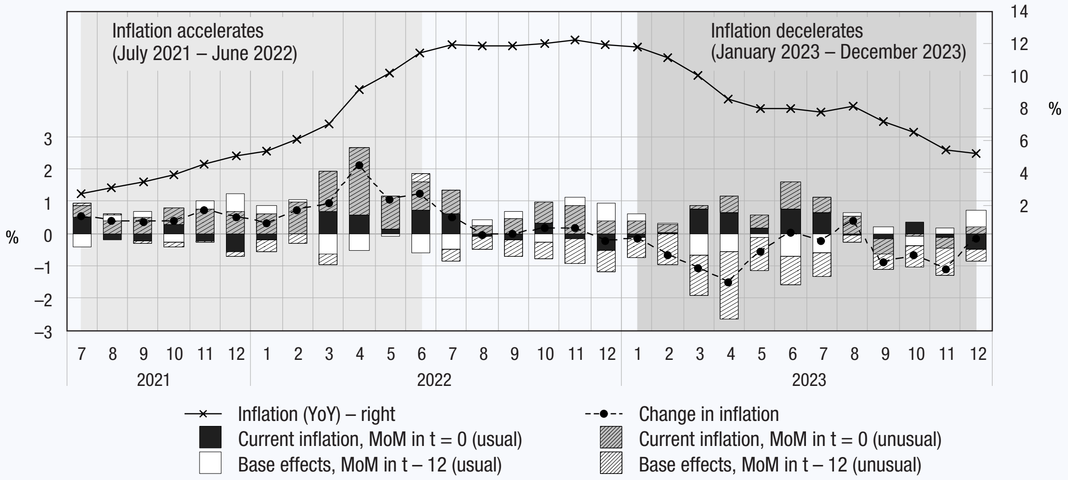
Figure 1 Deviations of month-on-month (MoM) inflation from normal developments



Note: Data in the figures refer to six-month moving averages of the contribution of unusual developments to the monthly rate of change.
Source: CNB.

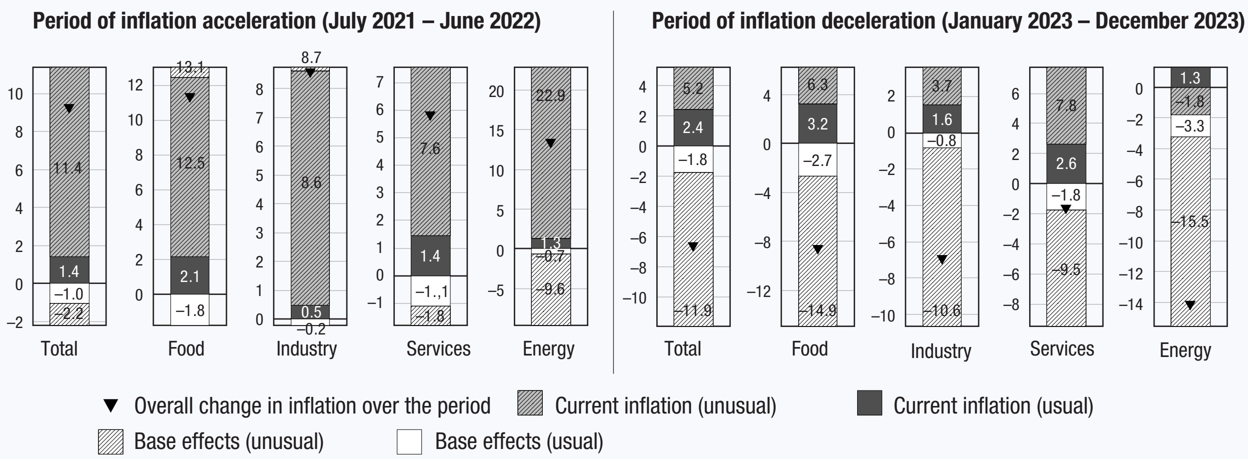
Inflation fell considerably in the preceding year due to the fading out of the base effects related to significant price increases in 2022, particularly in the first half of the year. Whereas the annual rate of inflation is a slow-moving measure by definition, its change – which is often in the focus of public interest – in addition to change in month-over-month inflation, reflects the monthly change in prices in the same month of the previous year, i.e. base effects (a detailed definition and methodology for the calculation of base effects are shown in Methodological framework B). The decomposition of changes in inflation based on the described methodology leads to the conclusion that developments in the annual inflation rate in the previous two and a half years were mostly determined by the substantial price increases seen between mid-2021 and mid-2022 (Figure 2). From July 2021 to June 2022, annual inflation *accelerated* sharply (full line, grey shaded area) and increased by almost 10 percentage points in total. This increase resulted from a strong contribution of the unusually high current inflation (grey striped bars), which amounted to approximately 11 percentage points over the period under review. On the other hand, base effects in that period did not significantly mitigate the rise in annual inflation (Figure 3, left panel). Similar developments were also observed for all the main subcomponents of inflation in that period, which picked up speed under the dominant influence of current inflation. The only exception to some extent is energy price inflation, due to a faster and sharper increase in energy prices and then their more rapid fall. As a result, the negative base effects are much more pronounced for energy than for other components (Figure 3, left panel, Energy). From December 2022 onwards, annual inflation has *decelerated* mainly due to negative base effects, i.e. the gradual exclusion of unusually high month-on-month inflation rates in 2022 from the calculation of the annual inflation rate (white striped bars). Despite the still elevated current inflation (the contribution of unusually high current inflation exceeded 5 percentage points), high negative base effects led to a slowdown in the annual inflation rate. Inflation slowed down by approximately 7 percentage points in that period, with the negative effects reducing overall inflation by as much as 12 percentage points (Figure 3, right panel). Findings similar to those for overall inflation also apply to all the main subcomponents.

Figure 2 Importance of base effects and current inflation for overall consumer inflation



Source: CNB.

Figure 3 Cumulative effects of current inflation and base effects on the annual inflation rate

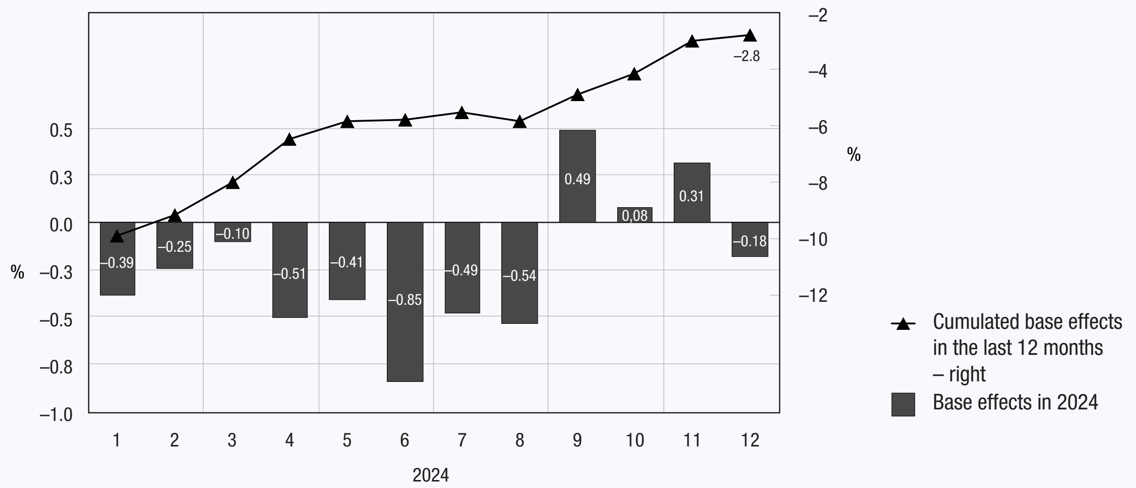


Source: CNB.

If current (Month-over-Month) inflation remains at present low levels, that is, unless some new disruptions in global markets occur or domestic inflationary pressures build up, base effects will significantly reduce the annual inflation rate this year. The waning of the base effects of elevated current inflation in 2023 should gradually slow down the annual inflation rate in Croatia up to September 2024. By December 2024, the cumulative base effects of unusually steep price hikes in the first nine months of 2023 will contribute 2.8 percentage points to the decline in annual inflation during 2024 (Figure 4). The said negative contribution to the annual inflation rate reflects the above-average high current inflation in the period from January to September 2023 (Figure 2, grey striped bars), which will disappear from the calculation of the annual inflation rate only towards the end of 2024. Assuming that current inflation remains at normal levels, to which it has converged in recent months after a long time, annual inflation could drop below 3% by the end of 2024 from 5.4% in December 2023. However, such a mechanical projection is subject to numerous risks and uncertainties that may affect current inflation in the coming months. Should current inflation pick up from present low levels, this could somewhat offset the impact of favourable base effects.[1]

As a result of base effects, euro area inflation accelerated to 2.9% in December, raising the issue of slowing inflation towards the target level. In contrast to Croatia, where inflation slowed down from 5.5% in November to 5.4% in December, inflation in most euro area countries, including Germany and France, accelerated noticeably. In the euro area as a whole, inflation thus picked up from 2.4% in November to 2.9% in December (Figure 5, panel a)), which was in some cases misinterpreted as a new wave of price increases. However, the acceleration of inflation in the euro area was expected

Figure 4 Base effects in 2024

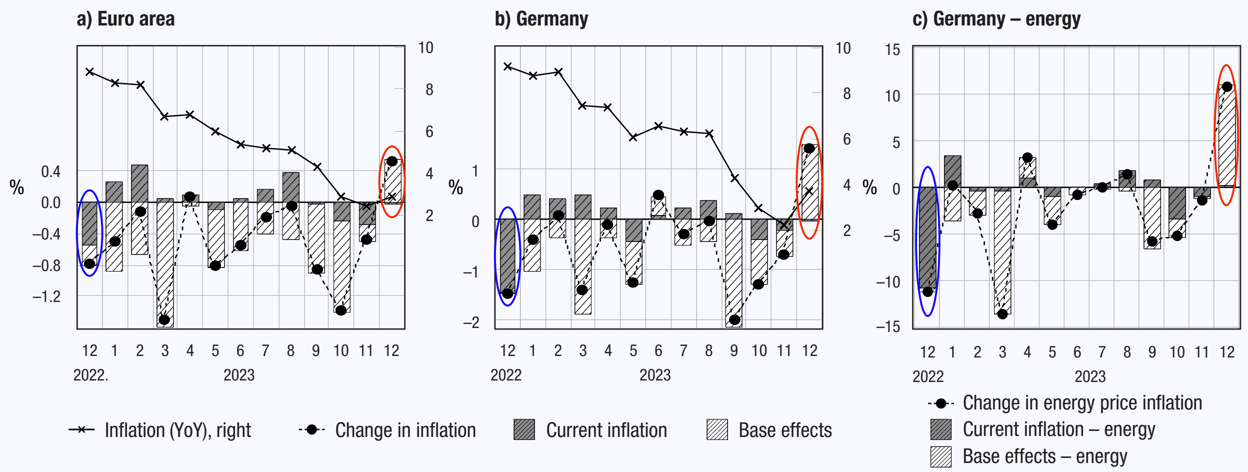


Source: CNB.

1 For more information on the factors that might affect the maintenance of current inflation at above-average levels, albeit lower than in 2022 and 2023, see Macroeconomic Developments and Outlook No. 15, pp. 59 – 61.

in December and fully reflects the unfavourable base effects, particularly as a result of the fall in energy prices (Figure 5, panel c)). More specifically, the monthly decrease in the prices of refined petroleum products was much more pronounced in December 2022 than in December 2023. In addition, a large number of euro area countries introduced measures to contain rising energy prices for households in December 2022. This monthly decrease in energy prices affected the annual inflation rate from December 2022 to November 2023, after which it ceased to affect the annual inflation rate in December 2023, which thus rose perceptibly.

Figure 5 Contribution of current inflation and base effects to changes in inflation in selected countries



Note: Current inflation and base effects have been adjusted for normal developments, which are relatively stable and do not have a significant impact on annual inflation.
Sources: Eurostat and authors' calculations.

Methodological framework A: Calculating inflation

The most frequently commented measure of inflation that central banks target is the *annual rate of change in consumer prices* – the total change in the level of consumer prices over the last 12 months (year-over-year, YoY). This inflation rate is well approximated by the sum of *monthly* price changes (month-over-month, MoM) over the previous 12 months:

$$\pi_t = \frac{p_t - p_{t-12}}{p_{t-12}} = (approximation) = \log(p_t) - \log(p_{t-12}) = \log\frac{p_t}{p_{t-1}} + \log\frac{p_t}{p_{t-2}} + ... + \frac{p_t}{p_{t-2}} =$$
$$(approximation = \frac{p_t - p_{t-1}}{p_{t-2}} + ... + \frac{p_{t-11} - p_{t-12}}{p_{t-12}}$$

where π_t is the annual inflation rate and is the level of the price index. The logarithmic approximation is more accurate for lower inflation rates. In normal times, annual inflation is at around 2% (more precisely, it averaged 2.2% between 2000 and 2019), which is the inflation rate targeted by central banks. However, consumer inflation deviated significantly from its usual values since the end of 2021, rising to 13% in November 2022, after which it started to decelerate.

Methodological framework B: What are base effects and how are they calculated?

Changes in the annual inflation rate, currently reflecting a slowdown, are influenced by monthly changes in prices in the current month ("current inflation") and monthly changes in prices in the same month of the previous year ("base effects"). The change in inflation between two consecutive months may be expressed as the difference between current inflation and base effects:

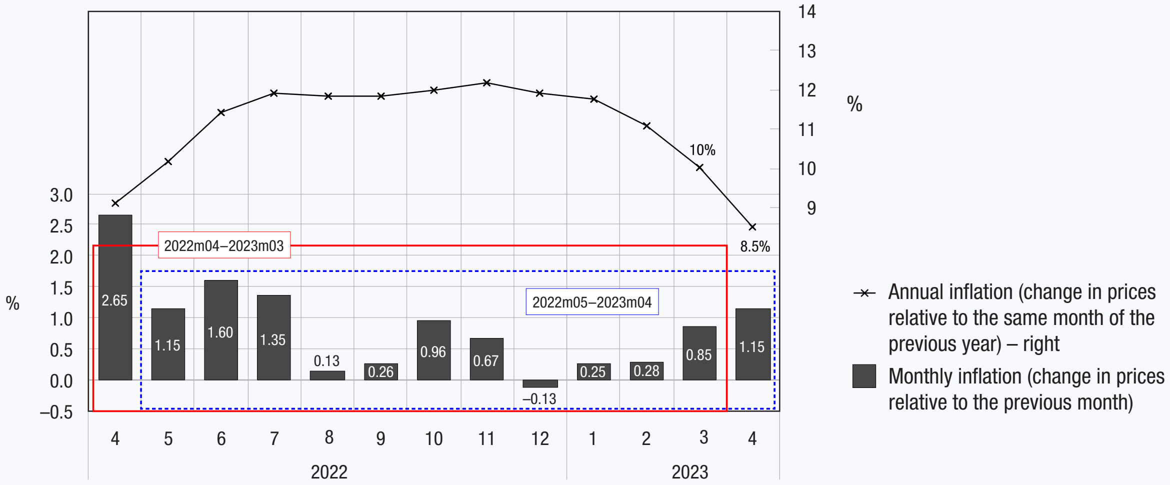
$$\pi_t - \pi_{t-1} = \log(p_t) - \log(p_{t-12}) - (\log(p_{t-1}) - \log(p_{t-13})) = \log\frac{p_t}{p_{t-1}} - \log\frac{p_{t-12}}{p_{t-13}}$$

The base effect is identical to current inflation from the same month of the previous year.

The annual inflation rate for two successive periods: March (red rectangle in Figure x) and April (blue rectangle in Figure x) of 2023 differs only in these two monthly rates of price change. The other monthly rates, from May 2022 to March 2023 are common for both rates, and are thus included in both the red and the blue rectangles. In the calculation of the April rate, the most recent monthly inflation rate (1.15%) is added to the year-over-year rate for the preceding period, while the monthly rate in the same month of the previous year is excluded (2.65%). The year-over-year rate in April (8.5%) will be lower than in March (10%) precisely by the difference between monthly rates in April 2023 and April 2022: 1.15% – 2.65% = – 1.5%. Generally, any of these two monthly rates – current inflation or base effects – can determine the direction and intensity of change in annual inflation from March to April. This means that the change in the annual rate with current price movements (in t = 0), which are most frequently commented, also reflects the change in prices in a relatively distant past of a year ago (in t – 12). For example, retail prices may rise relatively strongly from the previous month, but at the same time, annual inflation may fall rapidly due to base effects. This is precisely the case in the chosen example, with annual inflation declining due to "base effects" despite the fact that consumer prices grew increasingly rapidly over the last few months of the period under review (monthly rates since January are positive and rising). The significance of base effects sometimes makes it difficult to interpret inflation changes, so it is useful to separate it from current price changes.

In order to be able to properly interpret the relative importance of base effects and current price changes for annual inflation, it is necessary to distinguish "normal", expected, developments in monthly inflation rates from "unusually" strong price changes. When monthly rates for the same month during the year are very similar or the same, for example, because of pronounced seasonality of prices and the absence of price shocks (e.g. strong changes in raw material or energy prices under the impact of geopolitical instability or weather events), annual inflation will not change much from month to month. Had the monthly rates been identical in April 2022 and April 2023, i.e. had they been exclusively influenced by normal developments, annual inflation in Figure x would not have changed from March to April. However, current inflation in April 2022 was influenced by unusually strong shocks, which is why it

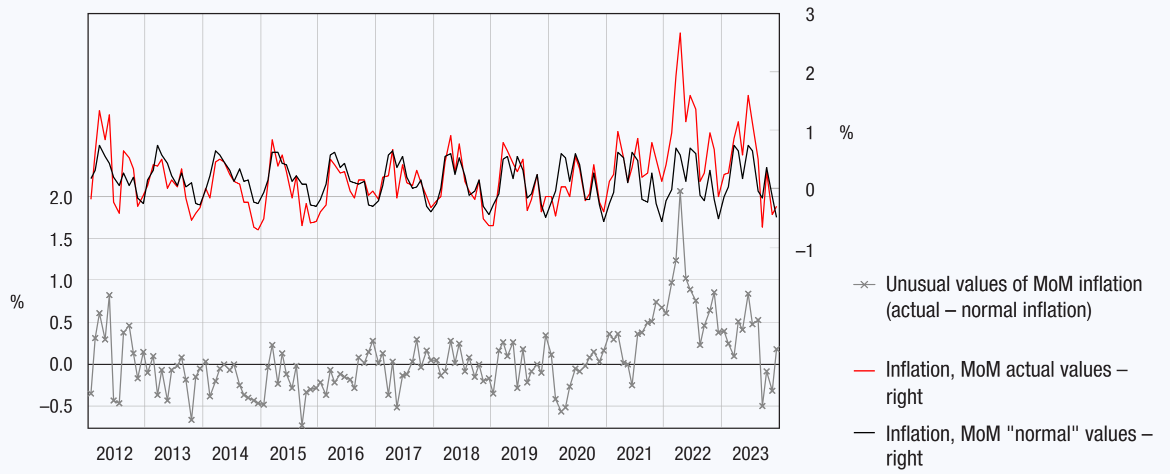
Figure 6 Impact of current inflation and base effects on annual consumer price inflation



Note: The annual inflation rate was approximated by the difference in the logarithms of price indices.
Sources: Eurostat and authors' calculations.

significantly exceeded normal values. This also resulted in a large impact of base effects on inflation, i.e. a decrease in annual inflation in April 2023. Thus, any unusually strong increase in current inflation is reflected in a sharp acceleration in annual inflation rates and, after a year, a sharp slowdown in current inflation. The identification of the

Figure 7 Monthly inflation: actual values, normal values and deviations from normal values



Source: CNB.

unusual dynamics of monthly inflation is therefore crucial for separating the impact of base effects and current developments on the change in annual inflation.

Normal developments may be associated with seasonal fluctuations in inflation, while the unusual values are deviations from these fluctuations. The usual component of the monthly inflation rate was estimated on the basis of the trend (ten-year moving average) and the seasonal component obtained using the ARIMA X12 method (Figure y). The seasonal component refers to a monthly rate of change in prices that is specific for a particular month, due to which the monthly inflation rate deviates from its trend. The seasonal component includes, for example, the summer (June/July) and the winter (December/January) seasonal fall in the prices of clothing and footwear, the seasonal increase in the prices of accommodation services over the summer months, etc. The remaining part of the monthly rate of change refers to unusual factors and includes everything that cannot be explained by the trend and seasonal components.

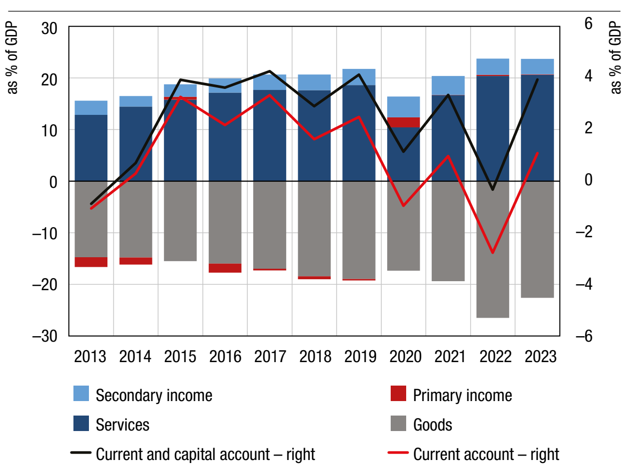
2.4 Economic relations with foreign countries

Falling energy prices and growing tourism revenues, paired with the increased net inflows of funds from the EU budget, had a positive effect on Croatia's balance of payments in 2023. Total current and capital account balance reached 3.9% of GDP in 2023, which is a significant improvement from the slightly negative balance in the previous year and also one of the best historical results. In 2023, the current account ran a surplus of 1.1% of GDP due to a marked reduction in the foreign trade deficit, that is, owing to the decrease in the value of net imports of energy resulting from the fall in energy prices on the global market. However, if trade in energy is excluded, the annual growth in goods exports was slower than that in goods imports (3.9% relative to 6.2%) in 2023, and the foreign trade deficit thus increased by 10.1%. The balance improved also on account of the increase in net exports of services, largely revenues from tourist consumption by foreign tourists, which rose by 11.3% on an annual basis and reached a record high of EUR 14.6bn. Exceptionally good tourist performance came from the rise the number of arrivals and nights stayed by foreign tourists, especially before and after the peak season, and was even more driven by the rise in the prices of catering and accommodation services. The surplus in the secondary income account also rose owing to a strong inflow of personal transfers, while net inflows from EU funds peaked (3.9% of GDP). On the other hand, the surplus in the primary income account decreased noticeably due to increased outflows of funds abroad stemming from compensation to non-residents employed in Croatia and the increase in expenditures on equity investments in Croatia, largely due to increased profitability of banks in foreign ownership.

The financial account of the balance of payments saw a net outflow of capital in 2023, largely as a result of the continued deleveraging of domestic sectors. A net outflow of EUR 5.5bn was recorded only in the other investment account, which reflects the ongoing deleveraging of domestic sectors vis-à-vis other countries. The account of portfolio investment showed a net inflow of funds owing to the change in the investment strategy for central bank non-monetary financial assets following the entry into the euro area. Direct investment inflows in Croatia were considerably lower than last year which saw exceptionally high investments in a holding company. Their structure was dominated by investments in real estate, information and communication activities, energy and trade. Foreign investments by domestic firms rose considerably, especially in the pharmaceutical industry.

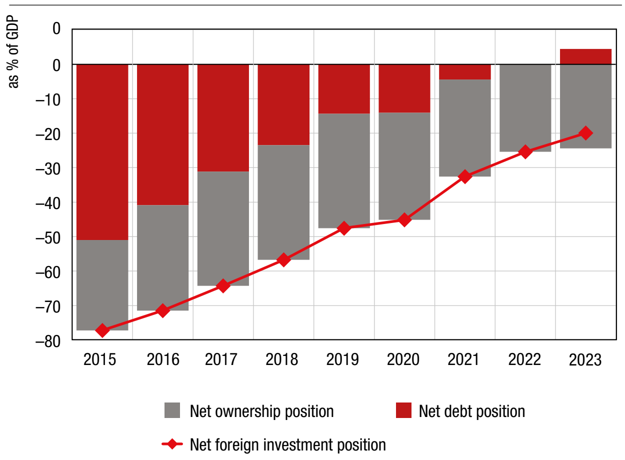
The current and capital account surplus aided the deleveraging of domestic

Figure 2.4.1 Current and capital accounts of the balance of payments



Sources: CNB and CBS.

Figure 2.4.2 International investment position



Sources: CNB and CBS.

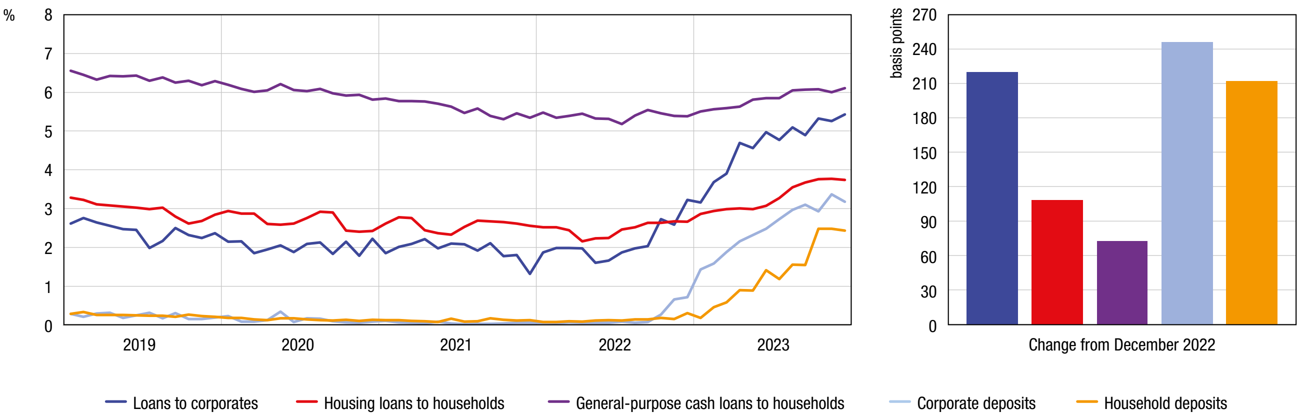
sectors, which contributed to a substantial improvement in the net international investment position. The gross external debt position stood at EUR 63.9bn or 83.7% of GDP at the end of 2023, having gone up by EUR 14.2bn (10.8% percentage points of GDP) from the end of 2022. The rise in gross external debt mainly reflects the increased liabilities of the central bank, while other domestic sectors recorded a decrease in gross external debt. The rise in gross liabilities of the central bank stems from the application of accounting rules relating to the recording of receivables and liabilities from the euro banknotes issued within the Eurosystem and has no effect on the central bank's net external position. Therefore, Croatia's net external debt, which also takes account of the changes in foreign assets of domestic sectors, went down by EUR 3.4bn (4.6 percentage points of GDP) and stood at –3.4% of GDP at end-2023, and thus supported the improvement of total net international investment position, which rose from –25.3% of GDP at end-2022 to –21.9% at end-2023. The net equity position held relatively stable in 2023 at the level of –25.5% of GDP.

2.5 Banking system

ECB monetary policy tightening continued to push the costs of financing of corporate and household sectors in banks operating in Croatia upwards. The pass-through of the increase in key ECB interest rates was particularly reflected in the rising borrowing costs of corporates. The average interest rate on pure new loans to non-financial corporations rose by 220 basis points from the end of 2022 and reached 5.4% in December 2023. Movements in interest rates on corporate loans in Croatia were similar to movements of the average interest rate in the euro area. The costs of household financing rose at a much slower pace, while in December the average interest rate on pure new housing loans and general-purpose cash loans reached 3.7% and 6.1% respectively, having gone up by 108 and 73 basis points respectively from the previous year. Croatian households borrowed at interest rates that were lower than the average interest rate in the euro area. In addition, the results of the bank lending survey suggest the tightening of credit standards for corporates and households in 2023. Banks reported that the tightening largely stemmed from the negative risk perception associated with the outlook for industry or individual firms, as well as worsened expectations regarding general economic developments, a lower risk tolerance of banks, higher costs of funding sources and balance sheet constraints.

Banks' funding costs also rose, mainly due to the rise in interest rates on corporate and household time deposits. In late 2022, banks started increasing interest rates on corporate time deposits, which continued into 2023, especially at the beginning of the year, in an attempt to increase the attractiveness of deposits as opposed to other alternative forms of investment. On the other hand, the beginning of the last quarter of 2023 saw a substantial increase in the average interest rate on time deposits of households, which was influenced by offers made by some banks which attempted to attract deposits from other banks by raising interest rates. However, this changed soon, as in November and December bank clients were more inclined to accept lower interest rates from their banks instead of turning to banks offering better time deposit terms. The average interest rate on pure new household time deposits thus stood at 2.4% at end-2023, up by 212 basis points from the end of the previous year, and approached the increase in interest rates on corporate time deposits which amounted 246 basis points in the same period. Interest rates on time deposits in Croatia rose at a slower pace than those in the euro area, especially in the household sector.

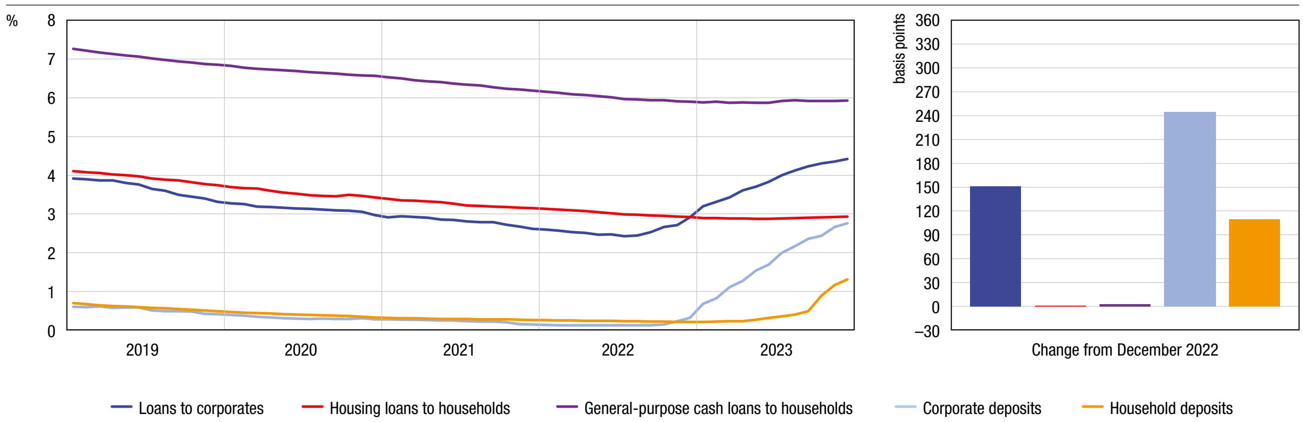
Figure 2.5.1 Interest rates on pure new loans and time deposits of corporates and households



Notes: Data up to December 2022 refer to loans and deposits in kuna and currencies indexed to the kuna and euros and currencies indexed to the euro, and from January 2023 to loans and deposits in euros and currencies indexed to the euro. The data refer to loans contracted for the first time, i.e. time deposits for the first time, with term deposits up to one month being excluded.
Source: CNB.

The rise in interest rates on new loans and deposits gradually spilled over to existing loans and deposits. The increase was particularly prominent in interest rates on existing corporate loans, mostly because of the widespread use of the EURIBOR as the reference parameter in loans with variable interest rates (at end-2022, around 50% of corporate loans were loans with variable interest rates, and around 70% of them were tied to the EURIBOR). On the other hand, interest rates on existing household loans have not yet started rising, due to several factors: the longer average loan maturity, a considerable representation of fixed interest rates (at end-2022, around 70% of loans were loans with a fixed interest for a period longer than one year, while around 40% of loans were loans with a fixed interest for a period longer than ten years or were even fixed until maturity), the domination of the national reference rate (NRR), accounting for around

Figure 2.5.2 Interest rates on existing loans and time deposits of corporates and households



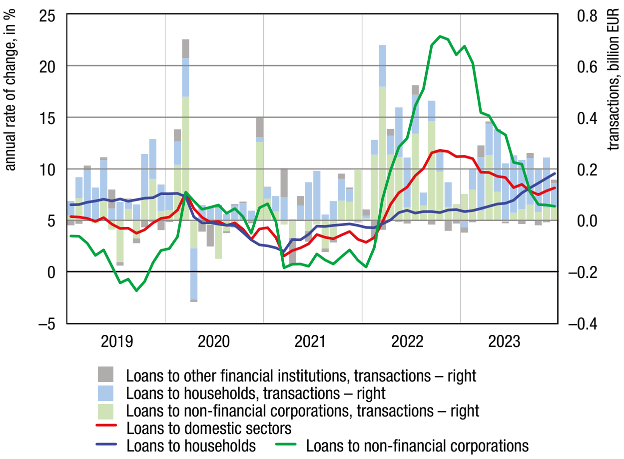
Source: CNB.

two-thirds of the reference parameters, and legal restrictions on the level of interest rates on variable interest rate loans.

Higher borrowing costs and tightening of credit standards resulted in subdued lending to firms, while loans to households continued to grow relatively strongly. Loans to corporates rose by EUR 0.9bn (transaction-based) in 2023, which is slightly more than one-third of growth recorded in the previous year. Working capital loans and investment loans to the energy sector and investment loans to the construction sector rose the most. Observed on an annual level, the growth of loans to corporates decelerated from a high 21.1% in December 2022 to 6.4% (transaction-based) in December 2023. On the other hand, loans to households increased by EUR 1.9bn in 2023, with slightly over one half of the growth being accounted for by housing loans (EUR 1.0bn), which mostly grew during the summer months owing to the government's housing loans subsidy programme. In addition, general-purpose cash loans recorded a sharp growth of EUR 0.8bn. According to the bank lending survey, this was driven by an increased demand for durable consumer goods amid boosted consumer optimism and favourable labour market developments. Total household loan growth accelerated on an annual level from 6.0% in December 2022 to 9.5% in December 2023, owing to a fast acceleration in the growth of general-purpose cash loans, from 3.5% to 11.1%, while the growth in housing loans was more moderate, having decelerated from 10.5% to 9.9%.

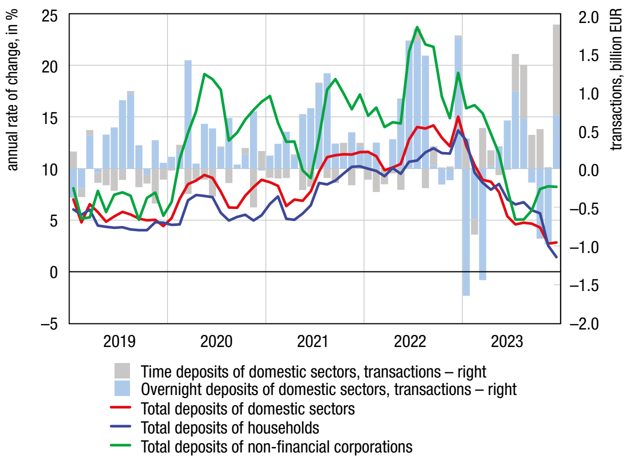
The growth of deposits slowed down substantially in 2023 as a result of the resupply of cash following the introduction of the euro, while the rise in interest rates reversed the trend of the years-long fall in the share of time deposits in total deposits. Total deposits of domestic sectors (excluding the general government) rose in 2023 by EUR 1.6bn, which accounts for only one-fifth of the growth recorded in 2022. A slower increase in deposits was influenced by the supply of euro cash to domestic sectors at the beginning of the year. On the other hand, in 2022, especially towards the end of the year, deposits grew due to the inflow of kuna cash to banks ahead of joining the euro area. Spurred by

Figure 2.5.3 Loans
transactions and annual rate of change, transaction-based



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

Figure 2.5.4 Deposits
transactions and annual rates of change, transaction-based



Note: Deposits of domestic sector exclude general government deposits.
Source: CNB.

the rise in interest rates, the structure of total deposits saw an increase in time deposits (by EUR 4.1bn) and a decrease in overnight deposits (by EUR 2.5bn). Corporate deposits started going up significantly from the end of 2022, a trend which continued into 2023, when time deposits rose by EUR 2.6bn, and overnight deposits decreased by EUR 1.3bn. Changes in the structure of household deposits began at the beginning of the last quarter of 2022, when time deposits recorded a substantial growth. Following the increase in overnight deposits of EUR 1.1bn and a decrease in time deposits of EUR 0.5bn during the first nine months last year, time deposits rose by EUR 1.4bn, while overnight deposits dropped by almost the same amount in the last quarter.

Box 3 The impact of the ECB's monetary policy on interest rates

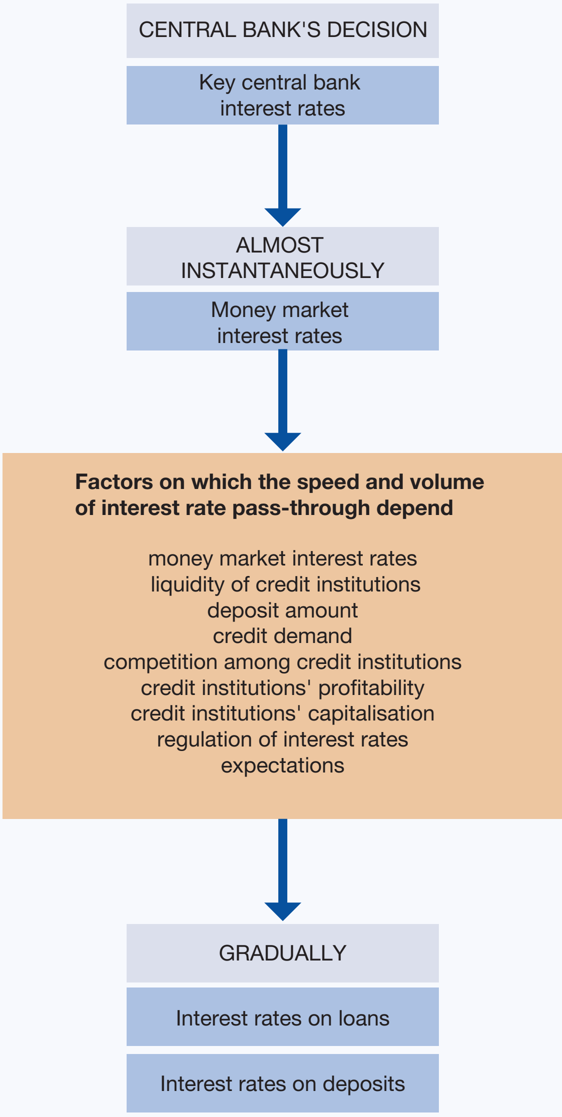
The CNB, as part of the Eurosystem, participates in the creation of the common monetary policy based on the policy of managing key interest rates and also implements it in Croatia. When the ECB's Governing Council, of which the Governor of the CNB is a member, changes key interest rates, this affects, to a greater or lesser extent, lending interest rates, interest rates on deposits with credit institutions and prices and/or yields of other investment instruments and, indirectly, the entire economy. Thus, although the ECB does not set the interest rates applied to corporate and household loans and deposits, the ECB's interest rates do have an indirect impact on market interest rates.

The ECB's Governing Council discusses monetary policy every six weeks, setting three interest rates: the rate for credit institutions' overnight deposits with the central bank, the rate on the main refinancing operations and the rate on the marginal lending facility. The MRO rate defines the cost of borrowing by credit institutions from the central bank for one week. If credit institutions need money overnight, they can use the marginal lending facility, which is subject to a higher interest rate. In the current conditions of exceptionally high liquidity for the market, out of the three mentioned rates, the interest rate on credit institutions' overnight deposits with the central bank is the most relevant.

A change in official central bank interest rates has a quick and direct impact on money market interest rates, i.e. interest rates in interbank trading in money by credit institutions. However, while the pass-through of key interest rates to the money market is almost complete and instant, the pass-through to interest rates on other loans and deposits is indirect and only gradual, over a certain period of time. Namely, a rise in financial market interest rates could encourage corporations and households to withdraw deposits from banks with relatively low deposit interest rates and invest them in alternative financial instruments such as bonds or money market fund shares, so banks need to raise deposit rates in order not to lose the deposit base. In such conditions, corporations and households also transfer deposits to banks with relatively higher interest rates, so that competition among banks additionally spurs the increase in the general level of interest rates. Furthermore, in the conditions of large excess liquidity that banks deposit with Eurosystem central banks and receive interest on them, the interest rate on overnight deposits determines the opportunity cost for banks of placing funds for some other purpose as well as the minimum return that banks will require when granting some types of loans. Finally, money market interest rates (e.g. EURIBOR), which are affected by the ECB's monetary policy, are used as reference rates for calculating the interest rate on new loans.

The speed and the volume of interest rate pass-through may differ visibly because credit institutions determine their discretionary interest rates on deposits and loans under the influence of numerous factors, of which monetary policy is only one. Such factors may include competition, expectations, credit demand, regulation of interest rates, profitability of credit institutions and their capitalisation, etc. All this may affect

Figure 1 Pass-through of key central bank interest rates to interest rates in the economy



differences in the volume and speed of pass-through of key interest rate changes to the financial market among countries and over time.

In addition to all of the above, it is necessary to distinguish the impact of the key ECB interest rates on existing loans and on new loans. In the case of existing loans, interest rate movements are regulated by the existing loan agreement. For example, if a fixed rate is agreed over the entire repayment period, movements in ECB and market rates will have no impact on the cost of loan repayment. On the other hand, in the case of loans with a variable interest rate, the cost of financing depends on the movement of the reference parameter agreed when the loans are granted, such as the national reference rate (NRR) or EURIBOR. In such cases, changes in key ECB interest rates also affect the cost of existing loans, which may differ significantly according to the agreed reference parameter for interest rate change. Thus, for example, in 2022 and 2023, the six-month euro NRR1 increased by only 0.1 percentage point, while the six-month EURIBOR increased by 4.4 percentage points at the same time.

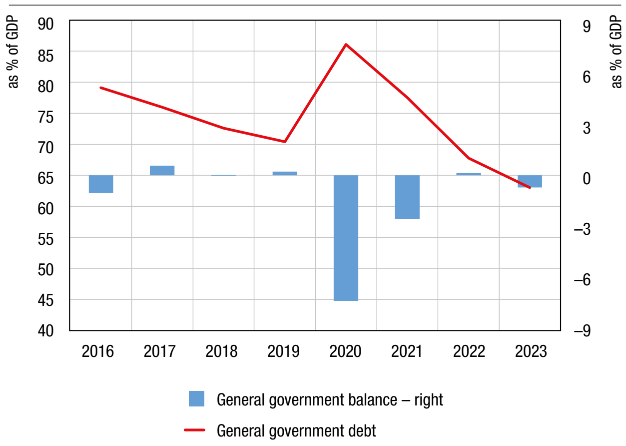
Credit institutions set financing conditions for new loans by taking into account a number of the mentioned factors and bearing in mind that these conditions also affect the amount of loans applied for. Nevertheless, the freedom of credit institutions to set interest rates on new and existing loans is limited by a number of legal provisions.

2.6 Fiscal developments

General government budget ran a deficit in 2023, while the public debt-to-GDP ratio continued its downward trend. According to the internationally comparable methodology of the European System of National and Regional Accounts (ESA 2010), the general government budget ran a deficit of 0.7% of GDP in 2023, which is a deterioration from the surplus recorded in 2022 (0.1% of GDP). Amid real growth and persistent inflationary pressures, the general government debt-to-GDP ratio fell on an annual basis despite the rise in the level of general government debt.

A slight deterioration in the general government budget balance in 2023 reflects a stronger annual growth of budgetary expenditure (19.4%) than of revenues (17.4%). On the expenditure side, the perceived surge in government investments was largely associated with the positive impact of greater inflows from EU funds, although this expenditure category has had a neutral impact on the budget balance. Total expenditures also grew on account of expenditures for social benefits, which largely reflected trends in pension expenditures (influenced by pension indexation) and the payment of allowances to protect pensioners' standard of living. Expenses on employees also made a positive contribution to the annual increase recorded on the expenditure side of the budget. The revenue side of the budget showed a sharp increase in revenues from indirect taxes, which was due to a favourable effect of personal and tourist consumption. Although to a smaller extent, the annual increase in revenues was also spurred by revenues from direct taxes, reflecting the positive effect of firms' business performance. Favourable labour market trends contributed to the annual rise in social contributions.

Figure 2.6.1 Fiscal indicators



Source: CBS and CNB.

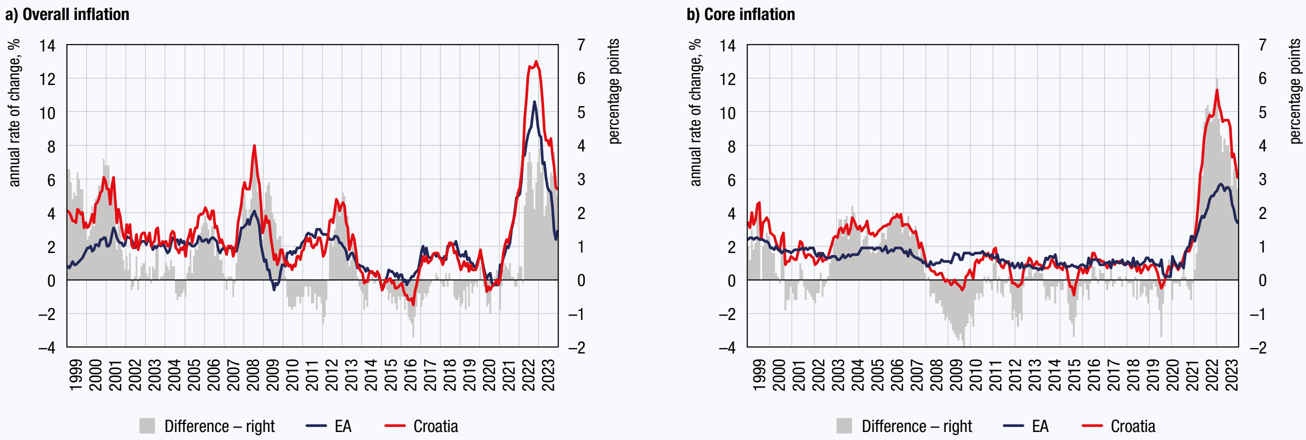
Despite a slight deterioration in the general government budget balance, the increase in real economic activity and the GDP deflator resulted in a considerable decrease in the public debt-to-GDP ratio on an annual level. The relative indicator of public debt at the end of 2023 stood at 63.0% of GDP, which corresponds to an annual decrease of 4.8 percentage points.

Box 4 Inflation differential between Croatia and the euro area average

In 2023, inflation in Croatia was noticeably higher than the average inflation in the euro area. Contributions were made by all of its main components, primarily by inflation in the prices of services and food. Higher inflation in Croatia than the euro area average was, among other things, attributable to a sharp increase in non-resident tourist demand, accelerated economic activity and personal consumption, stronger growth in the costs of labour, the differences in the consumer basket structure with a larger share of food, as well as price convergence to the euro area average. Despite inflation higher than that at the level of the entire euro area, the cumulative increase in the general level of consumer prices in Croatia from mid-2021 to end-2023 was the second lowest among the Central and Eastern European countries. The decrease in the inflation differential between Croatia and the euro area average is expected to continue in 2024 and 2025.

Croatia's consumer price inflation (measured by the harmonised index of consumer prices, HICP) had for a long time largely followed trends at the level of the entire euro area. With relatively small deviations in the long term, both overall and core inflation (measured by the HICP excluding energy, food, alcohol and tobacco) in Croatia and at the level of the entire euro area were almost equal. However, in 2022, inflation in Croatia accelerated more than the average inflation in the euro area[1], resulting in a

Figure 1 Trends of inflation in Croatia and the euro area



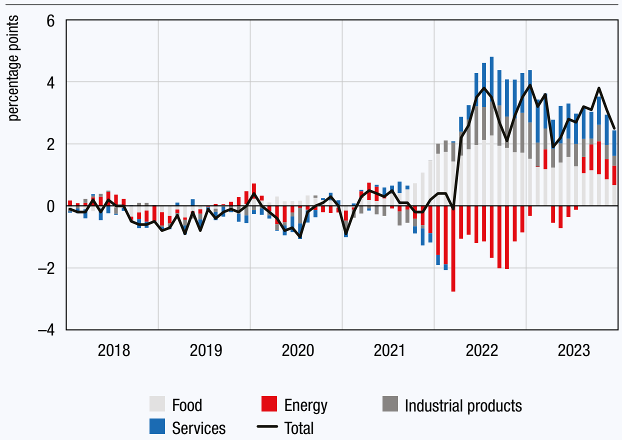
Sources: Eurostat and CNB calculations.

1 For more details on the inflation differential in 2022, see Box 3 Why is inflation higher in Croatia than in the euro area?, Macroeconomic Developments and Outlook No. 13, December 2022.

considerable increase in the inflation differential, which remained elevated in 2023 as well (Figure 1). The difference between inflation in Croatia and the euro area average thus stood at 3.5 percentage points in December 2022 and 2.5 percentage points at the end of 2023. The difference between core inflation in Croatia and the euro area average fell from 5.3 percentage points in December 2022 to 2.7 percentage points in December 2023.[2]

An analysis of the difference between the contributions of the main components of overall inflation in Croatia and those at the entire euro area level (Figure 2) shows that Croatia's inflation was higher in December 2023 primarily because of the contribution of services and food prices (including alcohol and tobacco prices). Energy prices accounted for only slightly lower difference after the contribution of energy prices in 2022 was lower in Croatia than in the euro area. In 2022, the growth in energy prices in Croatia was slower than that of the euro area average[3], and then, in 2023, the annual drop in energy prices was less pronounced in Croatia when compared with the euro area average. The difference in the contribution of industrial products between Croatia and the euro area average was the smallest in December 2023.

Figure 2 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 differences between the contributions of individual components are the result of the different trends in their prices and/or their different shares in the consumer basket, which reflect variations in consumer preferences. Thus, food accounts for a larger share in the consumer basket in Croatia than the euro area average (Table 1), which, among other things, may be attributed to the lower degree of Croatian economic development and the relatively high level of food product prices. By contrast, the share of services in the consumer basket is smaller in Croatia than in the euro area as a whole. However, although services as a whole account for a smaller share of the consumer price basket in Croatia relative to the euro area average, this is not the case withaccommodation services, for example[4].

2 If the average annual rates of overall and core inflation in Croatia and at the level of the entire euro area are observed, the difference between overall inflation increased from 2.3 percentage points in 2022 to 3.0 percentage points in 2023, and the difference between core inflation rose from 3.7 to 3.9 percentage points.

3 The slower growth of energy prices in 2022 in Croatia can be attributed to measures implemented by the Croatian government to limit their growth, Croatia's relatively low dependence on imports of energy products from Russia and the fact that the opening of the LNG terminal enabled an alternative supply chain of natural gas. Household prices of natural gas and electricity increased less than prices charged to enterprises.

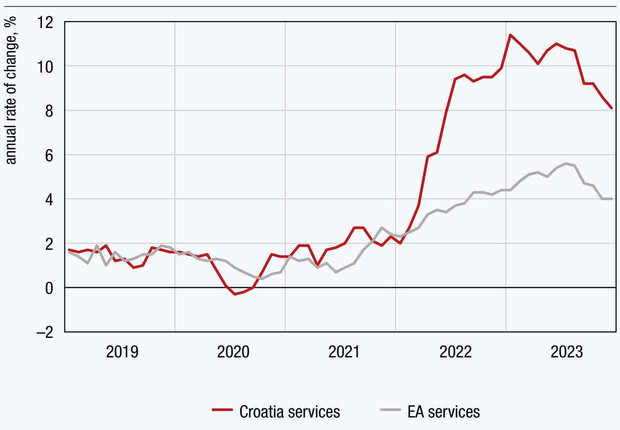
4 A relatively high share of accommodation services in Croatia reflects the spending of non-residents in the domestic territory, which is covered by the harmonised index of consumer prices. In contrast, the share of accommodation services in the national index of consumer prices is smaller standing at 0.7% in 2023.

Table 1 Structure of the harmonised index of consumer prices, 2023

in %	Croatia	euro area
Energy	12.9	10.2
Food	29.1	20.0
Processed food	23.2	15.5
Unprocessed food	5.9	4.5
Core inflation	58.0	69.8
Industrial products	26.4	26.3
Services	31.6	43.5
Hotel and restaurant services	7.0	8.4
Accommodation services	4.4	2.1
Housing services	2.5	9.5
Other services	17.7	23.5

Source: Eurostat.

Figure 3 Services price inflation



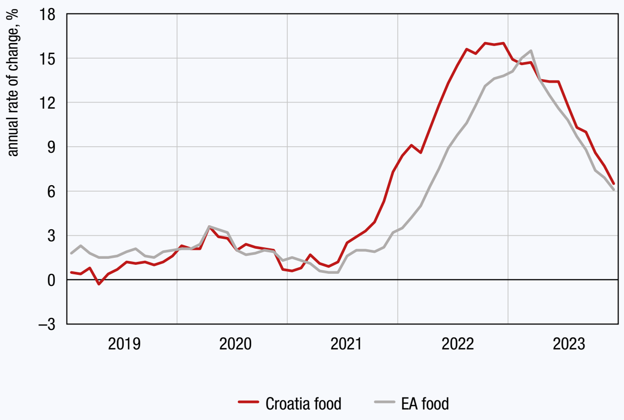
Source: Eurostat.

In December 2023, the annual growth of services prices in Croatia stood at 8.1%, twice as fast as the euro area average (Figure 3).[5] The prices of accommodation and hotels and restaurants accounted for almost the whole difference between the contributions of services prices to overall inflation in Croatia and the euro area average. The annual growth of hotel and restaurant services prices in Croatia was more than twice as fast as that at the level of the entire euro area (13.4% as against 5.5%) and the fastest among all euro area member states. Similarly, the annual growth of accommodation prices in Croatia was twice as fast as that at the level of the entire euro area (11.7% relative to 5.8%) and the second fastest in the euro area. The impact of the faster growth of services prices on the divergence in inflation between Croatia and the euro area average was alleviated due to their smaller share in the consumer basket in Croatia (Table 1). In other words, the contribution of services prices to overall inflation in Croatia would have been even bigger if their share in the consumer basket in Croatia had been closer to the euro area average, at least for services as a whole. As regards accommodation prices, their higher contribution to overall inflation in Croatia than that of the euro area average also reflects a faster increase in the prices and a larger share in the consumer basket in Croatia.

As regards food prices, their annual growth in Croatia in 2023 largely followed the euro area average and in December 2023 stood at 6.5%, or only 0.4 percentage points higher than at the level of the entire euro area (Figure 4). Accordingly, the higher contribution of food prices to overall inflation in Croatia relative to the euro area average in 2023 mainly reflected the larger share of food in the consumer basket in Croatia. By contrast, in 2022, the difference between food price inflation in Croatia and the euro area average was much more pronounced and the difference in the

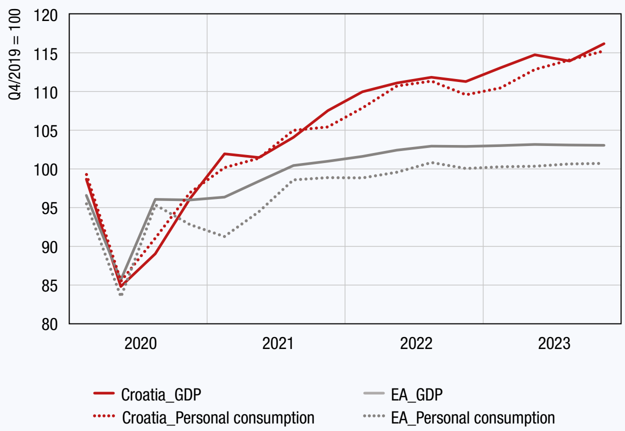
5 For more details on services price inflation, see Box 1 Recent developments in the inflation of service prices, Macroeconomic Developments and Outlook No 14, June 2023.

Figure 4 Food price inflation



Source: Eurostat.

Figure 5 Level of real GDP and personal consumption



Sources: Eurostat and CNB calculations.

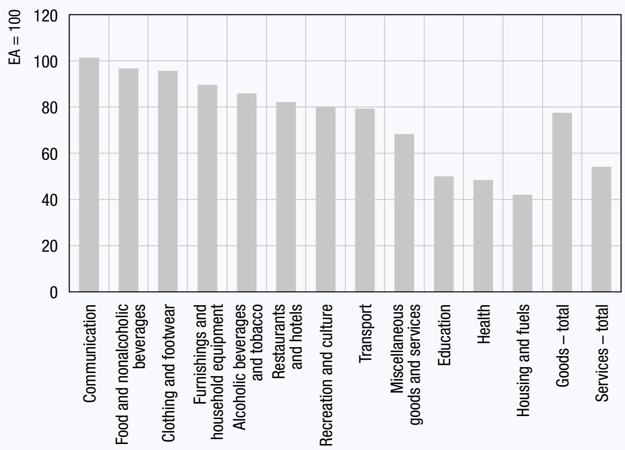
contributions of food prices to overall inflation in Croatia relative to the euro area average also reflected a faster increase in food prices and a larger share of food in the consumer basket.

High inflation in Croatia relative to the euro area average reflects the impact of various factors. In addition to the mentioned differences in the consumer basket (with the higher share of food and accommodation prices), higher inflation in Croatia is largely driven by the strong non-resident demand for tourism services, as well as by a stronger economic recovery accompanied by a more pronounced growth of personal consumption in Croatia than in the euro area as a whole (Figure 5). The divergence in inflation was also influenced by the faster growth of unit labour costs in Croatia than

Figure 6 Nominal unit labour cost

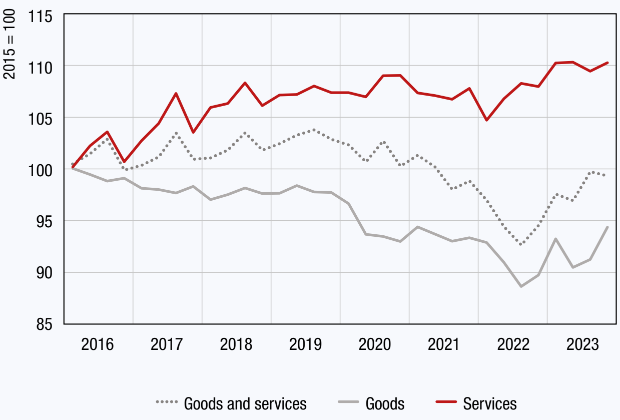
Source: Eurostat.

Figure 7 Price levels in the main categories of the consumer basket in Croatia, 2022



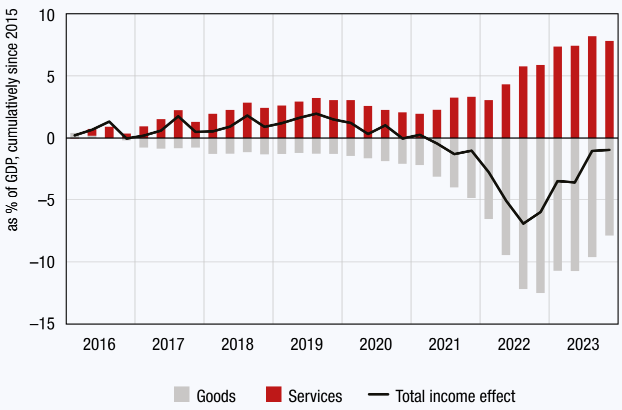
Source: Eurostat.

Figure 8 Terms of trade in Croatia



Note: Terms of trade refer to the ratio of import and export prices.
Sources: Eurostat and CNB calculations.

Figure 9 Income effect of terms of trade



Note: Income effect of terms of trade is calculated by weighting changes of export and import prices with the corresponding values of export and import of goods and services expressed as a percentage of GDP.
Sources: Eurostat and CNB calculations.

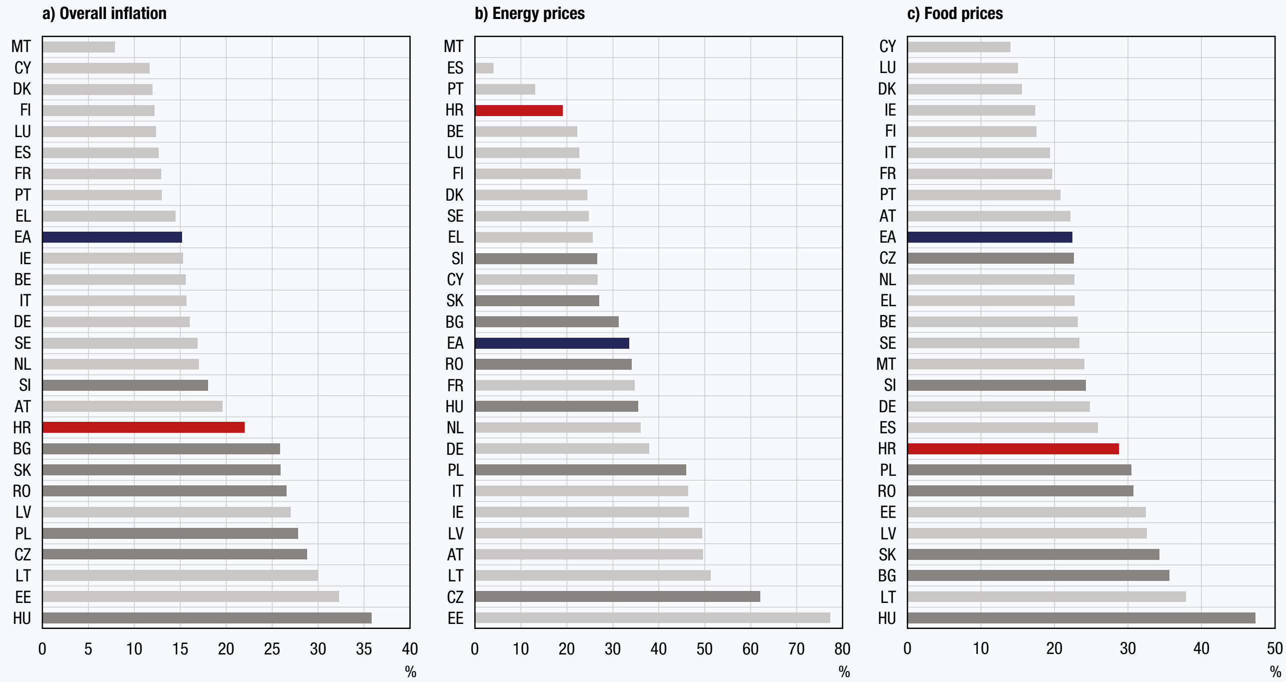
at the entire euro area level (Figure 6) due to the stronger growth of compensation per employee, which was only partially offset by more favourable trends in labour productivity in Croatia than at the level of the entire euro area.

Also, the impact of long-term factors, that is, the process of price convergence should not be disregarded as the level of the prices of goods and, in particular of services in Croatia mostly lags behind the price levels recorded in the more developed euro area member states (Figure 7). The latest available data for 2022 show that the price levels of almost all sub-components were noticeably lower than the euro area average, while the food price level was close to the average, and the level of the prices of communication services slightly exceeded the euro area average. On the other hand, the effect of the adoption of the euro was relatively weak, one-off and concentrated in service activities, in line with the experiences of other countries that adopted the common currency, amid much less challenging circumstances in terms of inflationary pressures, so that it cannot explain the inflation differential to any very significant extent.

The faster growth in domestic consumer prices, in particular in the segment of tourism-related services, is reflected in the faster rise in export than in import prices. The pronounced growth of export prices of services in the post-pandemic period to a large extent offset the negative effects of high import prices of energy, which resulted in an improvement in the terms of foreign trade (Figure 8) and a positive income impact on international trade, that is, an improvement in the balance of foreign trade in goods and services (Figure 9).

Despite the rapid growth in inflation in Croatia relative to the euro area average in 2022 and 2023, the cumulative increase in the general level of consumer prices from June 2021 to the end of 2023 was the second lowest among Central and Eastern European countries, higher only than that of Slovenia (Figure 10). With regard to the cumulative increase in the prices of individual components, the growth of the consumer prices of energy in Croatia was among the lowest in the whole of the European Union,

Figure 10 Cumulative price growth from June 2021 to December 2023



Source: Eurostat.

while the cumulative increase in food prices in Croatia was among the lower ones in the group of the Central and Eastern European countries.

Finally, the year 2024 is expected to see a slowdown in inflation both in Croatia and in the euro area as a whole as well as a lower inflation difference. According to the projections of the Croatian National Bank and the European Central Bank from March 2024, the difference in the average annual overall inflation rate between Croatia and the euro area average could decrease from 3.0 percentage points in 2023 to 1.2 percentage points in 2024 and to 0.4 percentage points in 2025.

3 Financial asset management

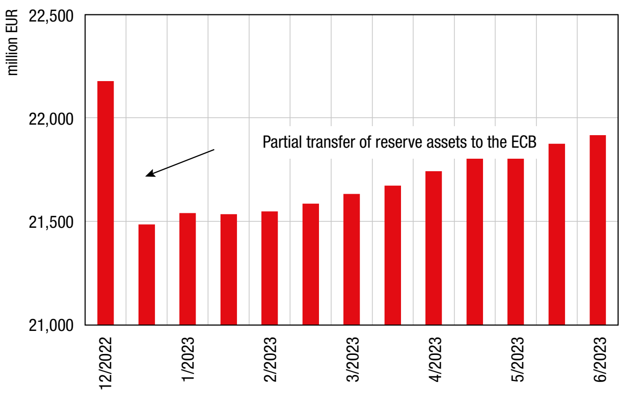
3.1 Financial assets in 2023

As at 31 December 2023, financial assets totalled EUR 21,915.7m[3], comprising assets denominated in the euro worth EUR 19,435.9m (88.1%) and assets denominated in US dollars and other currencies amounting to EUR 2,479.7m (11.3%). These financial assets account for almost all assets of the Croatian National Bank that made up net international reserves before Croatia joined the euro area.

Financial assets edged down by EUR 261.4m (1.2%) in 2023, largely due to the transfer of a smaller portion of international reserves to the European Central Bank. In accordance with the obligations assumed, in early 2023 the CNB transferred a portion of the reserves to the ECB, worth EUR 639.9m. In accordance with the ECB's requirements, 85% of the amount was transferred in US dollars, and the remaining 15% was transferred in gold. The transfer of the portion in gold, worth EUR 96m or 56,256.29 ounces of gold, was made in so-called unallocated monetary gold obtained from the Bank for International Settlements. All Eurosystem national central banks, including the CNB, participate in the activities related to the management of the portion of reserves transferred to the ECB. Also, with regard to transferred international reserves, the CNB kept an equivalent amount of claims on the ECB on the assets side of its balance sheet.

In addition to the obligation to transfer a minor portion of the reserves to the ECB, after the accession to the euro area, the CNB started to apply the Eurosystem's financial asset management framework with respect to the remaining CNB financial assets. This primarily entailed the implementation of the Agreement on Net Financial Assets (ANFA). ANFA sets out the ceiling for net financial assets that a central bank is entitled to manage without interfering with monetary policy implementation. In addition, the CNB is also obligated to take account of the ECB Guideline on domestic asset and liability management operations (DALM), while the prohibition of monetary financing laid down by Article 123 of the Treaty on the

Figure 3.1.1 Monthly changes in CNB financial assets in 2023
end of period



Source: CNB.

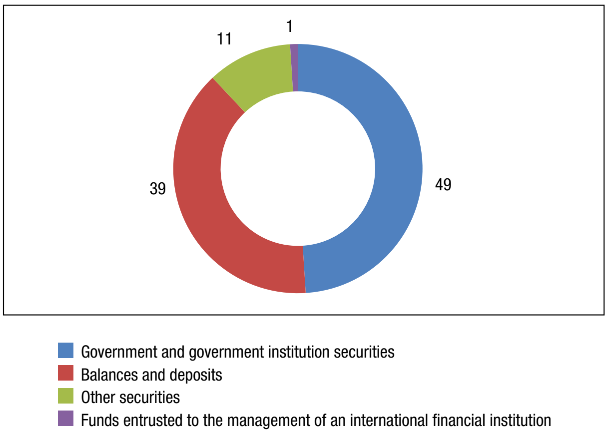
3 This amount excludes Croatian bonds purchased during the COVID-19 pandemic under the bond purchase programme, which ceased to be part of CNB's monetary assets following Croatia's entry to the euro area. The nominal value of that portfolio as at 31 December 2023 was EUR 1,836.3m.

Functioning of the European Union, which is supervised by the ECB, has been in force since Croatia's accession to the EU.

3.2 Financial assets investment structure

At the end of 2023, the largest share in the structure of financial assets investment was accounted for by investments in government and government institution securities, followed by investments in deposits and funds in the account and other securities (Figure 4.2). A portion of financial assets was also made up of sustainable ESG (environmental, social, governance) investment, including investment in green bonds, social bonds and sustainability bonds. The share of ESG investments in total financial assets stood at 7.5% at the end of 2023[4].

Figure 3.2.1 Investments in the safest instruments accounted for the largest share in the structure of financial assets investment
shares in percentages, at the end of 2023



Note: The shares of instruments in the structure are rounded to the nearest whole number.
Source: CNB.

CNB's financial assets are invested in instruments with investment grade ratings, with limitations regarding investments in individual financial institutions and countries or in individual financial instruments, which diversifies credit risk. At the end of 2023, about 74% of financial assets were invested in the safest investments – instruments by issuers within the two highest credit rating categories, BIS instruments or funds in the account.

3.3 Financial markets and financial asset management results in 2023

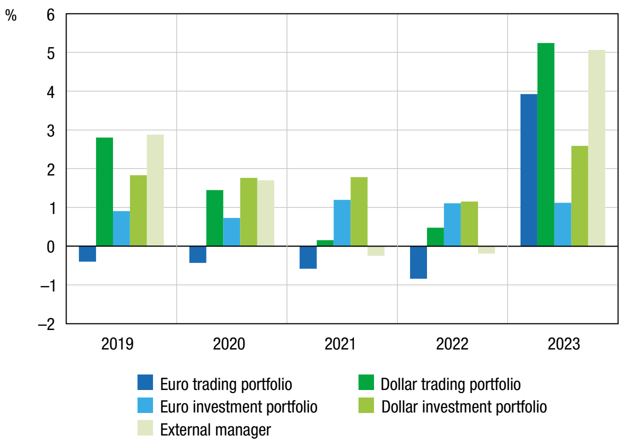
Financial markets in 2023 were marked by the continued cycle of hikes in key interest rates of leading central banks, which was halted towards the end of the year, as well as by ongoing changes in investors' expectations which led to severe market fluctuations. At the end of the year, the key ECB interest rates rose by 450 basis points from the levels recorded prior to the monetary policy tightening that started in 2022. Over the same period, the Fed upped its key rates by 525 basis points. This ended a ten-year period of historically low interest rates, which were also negative in the case of euro rates. Throughout this period, the CNB made a number of strategic and tactical decisions, and thus managed to maintain positive earnings from managing its financial assets, that is, the former international reserves, while it also strengthened financial risk buffers.

Even though at a certain point yields reached their highest level since 2007, they had decreased by the end of the year. An additional strain was inflicted on bond markets by

4 The Climate Report contains a climate-related disclosure regarding CNB financial assets.

an inverted yield curve, which meant that long-term investments carried lower yields than short-term investments. The banking turmoil in the USA, followed by the rescue of Credit Suisse, caused a large stress and volatility on the market over the first half of the year, even though markets suffered no lasting consequences on account of these events. Geopolitical risks associated with the existing and new global conflicts also severely affected the volatility in the prices of financial instruments and commodities in 2023. Equity markets, led by the technological sector, recorded outstanding results in 2023, while the US dollar weakened slightly against the euro.

Figure 3.3.1 Financial asset portfolios had adequate rates of return
year-on-year rates of return



Source: CNB.

Against the backdrop of the extremely volatile financial market conditions, income generated from the management of financial assets in 2023 reached a record high of EUR 611.2m, which is an increase of EUR 447.0m from the year before. The rate of return on the portfolio of financial assets also rose in 2023 from the levels recorded in previous years (Figure 4.3). Investment decisions were made by taking into account the Eurosystem's overall financial asset management framework, in view of the fact that some rules, obligations and guidelines impact the possibility and profitability of some investments.

4 Business operations of credit institutions

4.1 System structure

At the end of the year, there were 20 credit institutions operating in Croatia (19 banks and one housing savings bank) but during the year Hrvatska poštanska banka merged with Nova hrvatska banka.[5] In addition, there was one branch of an EU credit institution operating in the country, BKS Bank AG, Main Branch Croatia, while more than 250 institutions from the EU and the European Economic Area had notified the CNB of their intentions regarding the direct provision of mutually recognised services in the territory of the Republic of Croatia.

This merger affected the structural characteristics of ownership. Although the said merger reduced the number of credit institution in majority state ownership from three to two, the share of their assets in total bank assets increased noticeably – from 8.0% to 9.3%. In addition, the share of credit institutions in the majority ownership of foreign shareholders went down slightly, but remained dominant (87.4% of total banking system assets)

4.2 Performance indicators of credit institutions

Total banking system assets increased by EUR 2.6bn in 2023 (3.5%) to a record total of EUR 78.6bn.[6] F

inancing sources increased as a result of the acceptance of deposits, although deposits were under downward pressure after the conversion of the kuna to the euro at the beginning of the year and due to investments (primarily of households) in government securities. All sectors save the financial sector grew. In contrast to the previous year, deposits in current accounts went down, while the largest share of the increase in deposits was related to deposits with agreed maturities – both developments were a result of the growth in bank interest rates on time deposits (primarily deposits of non-financial corporations and at the end of the year on those of households), motivating depositors to opt for fixed-term deposits.

On the assets side loans increased by EUR 2.8bn (6.6%), which is more than the growth of total assets, and the difference refers to the reduction in the cash of credit institutions. The predominant share of the lending activity was directed at households and was practically entirely related to housing loans but also to general-purpose cash loans (which started growing again at a more significant rate after the pandemic). The growth of the rest of the loan portfolio was related to financial institutions and non-financial corporations, while banks financed the government by investing in government bonds.

5 The merger was completed on 3 July 2023.
6 This was the lowest growth rate in the last five years. However, it needs to be taken into consideration that 2022 saw a considerable rise in the balance sheet due to preparations for the introduction of the euro. See Chapter 7 of the CNB's Annual Report for 2022.

The asset quality of credit institutions continued improving. The uninterrupted decline in non-performing loans paired with the increase in total loans led to a continued decline in the share of NPLs in total loans to 2.6%, which was still less favourable than the EU average (1.8%). The decline in NPLs predominantly reflected their decrease in the portfolio of loans to non-financial corporations, and, at a slightly slower pace, in the portfolio of household loans, so the shares of NPLs in these sectors continued to improve (reaching 5.1% and 4.2% respectively).

The positive development in the non-performing share of the credit portfolio is contrasted with the situation in the performing share of the credit portfolio that is still not in default. The level of credit risk in this share of the portfolio is still higher than before the period of the COVID-19 pandemic and even grew in 2023. This was primarily affected by increased risk in the portfolio of loans to non-financial corporations, especially in the energy supply activity.

The said decrease in cash, resulting primarily from the decrease in funds in the settlement accounts with the CNB only slightly adversely affected the system liquidity indicators, which remained very high. The liquidity coverage ratio was 238.1%, much above the prescribed minimum of 100%. Structural liquidity measured by the Net Stable Funding Ratio averaged 173.4% since the requirements for stable funding sources in the light of the increase in loans are predominantly supported by the increase in deposits of households and non-financial corporations.

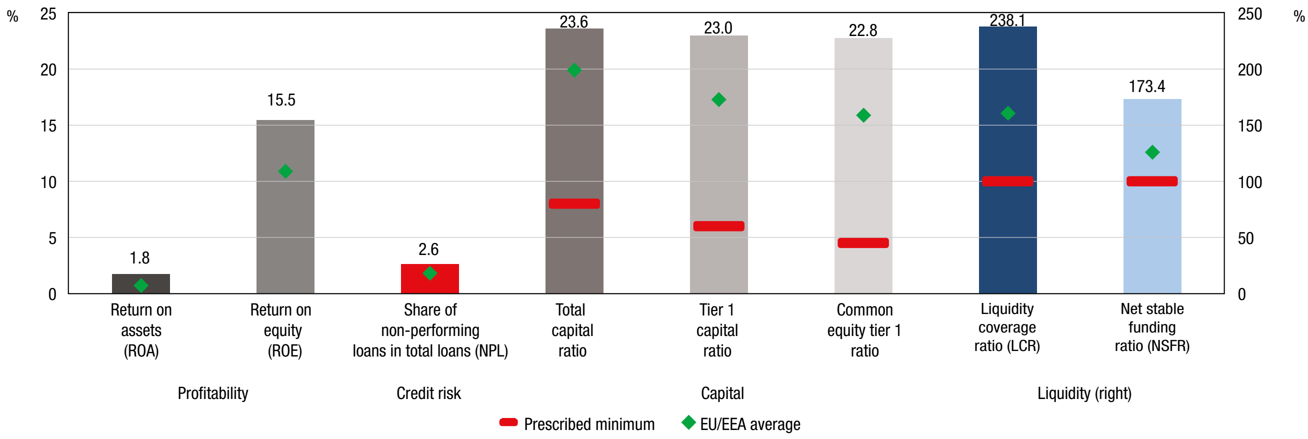
The change in the manner in which this liquidity surplus is used had a much more important effect than the reduction in cash funds. Namely, in 2023 banks regularly made use of the CNB's overnight deposit facility for funds in the settlement account.[7] At the end of the year, almost the entire amount of funds in the account with the CNB was used in the overnight deposit facility, equalling 21% of the total assets of credit institutions, which had a key influence on system profitability.

Banking system profits almost doubled from 2022 – credit institutions generated a record EUR 1.4bn, which translates to an annual growth rate of 91.7%. This raised the value of profitability indicators to very high levels – the return on assets (ROA) totalled 1.8% and the return on equity ROE 15.5%. The greatest impact on the increase in profit came from the strong growth in interest income after more than a decade of continued decline. The greatest individual impact on the growth of interest income came from the said overnight deposits with the CNB. However, credit institutions managed to increase their interest income from other sources as well. The growth in deposit interest rates and the attraction of deposits led to a rise in interest expenses. However, it lagged considerably behind the growth in interest income, which ultimately resulted in a high growth of net interest income (63.3%).

Other types of income did not materially impact business results: net income

7 Overnight deposit is a category of standing facility offered within the scope of Eurosystem monetary policy operations, the access to which is enabled by the CNB in line with the objectives and the general stance of the ECB's monetary policy. The overnight deposit is subject to a previously set interest rate regularly determined by the Governing Council of the ECB. At the end of December 2023 the applied rate was 4.00% (Source: ECB).

Figure 4.2.1 Key banking system indicators, as at 31 December 2023



Note: Data on the average of banks in the European Union and the European Economic Area refer to the end of Semptember 2023.
Sources: CNB and EBA.

from fees and commissions increased only slightly, while other non-interest income decreased, primarily as a consequence of the introduction of the euro and the consequently lower income from foreign exchange trading. General operating expenses increased as well, but at a much slower rate than total operating income, consequently improving the cost efficiency of the banking system.

Banking system capitalisation remained high, although the total capital ratio went down from 24.8% to 23.6%. This decline was primarily a result of dividend payouts from retained earnings (which reduced regulatory capital) and the mentioned lending activities (which increased risk exposure). The reduction in capital available to cover unexpected losses was additionally affected by the fact that credit institutions started setting aside capital to finance the countercyclical capital buffer.[8] However, the said capital ratio remained among the highest among EU member states, while nine credit institutions, which accounted for three quarters of the total system assets, boosted the total capital rate higher than 20%.

4.3 Business operations of credit unions

There were no status changes in the system of credit unions at the end of 2023. Sixteen credit unions had assets of EUR 86.3m, up 3.6% from 2022. Total assets of credit unions are equivalent to 0.1% of the assets of all credit institutions.

8 Since March 2023, the countercyclical capital buffer rate applicable in the territory of the RC is 0.5% of the total amount of risk exposure, up from 0%.

Abbreviations and symbols

Abbreviations

bn	– billion
b.p.	– basis points
BEA	– U. S. Bureau of Economic Analysis
BOP	– balance of payments
c.i.f.	– cost, insurance and freight
CBRD	– Croatian Bank for Reconstruction and Development
CBS	– Central Bureau of Statistics
CDS	– credit default swaps
CEE	– Central and Eastern European
CEFTA	– Central European Free Trade Agreement
CES	– Croatian Employment Service
CHF	– Swiss franc
CHIF	– Croatian Health Insurance Fund
CHY	– Yuan Renminbi
CICR	– currency-induced credit risk
CPF	– Croatian Privatisation Fund
CPI	– consumer price index
CPII	– Croatian Pension Insurance Institute
CM	– Croatian Motorways
CNB	– Croatian National Bank
CR	– Croatian Roads
EBA	– European Banking Authority
EC	– European Commission
ECB	– European Central Bank
EEA	– European Economic Area
EFTA	– European Free Trade Association
EMU	– Economic and Monetary Union
EU	– European Union
EUR	– euro
excl.	– excluding
f/c	– foreign currency
FDI	– foreign direct investment
Fed	– Federal Reserve System
FINA	– Financial Agency
f.o.b.	– free on board
GDP	– gross domestic product
GVA	– gross value added
HANFA	– Croatian Financial Services Supervisory Agency

HICP	– harmonised index of consumer prices
HRK	– kuna
HUB	– Croatian Banking Association
incl.	– including
IMF	– International Monetary Fund
JPY	– Japanese yen
m	– million
MIGs	– main industrial groupings
MM	– monthly maturity
MoF	– Ministry of Finance
NBS	– National Bureau of Statistics of China
NCA	– National Classification of Activities
n.e.c.	– not elsewhere classified
OECD	– Organisation for Economic Co-Operation and Development
OG	– Official Gazette
R	– Republic
ROA	– return on assets
ROE	– return on equity
o/w	– of which
PPI	– producer price index
Q	– quarter
RR	– reserve requirement
SDR	– special drawing rights
SE	– South-East
SGP	– Stability and Growth Pact
SITC	– Standard International Trade Classification
USD	– US dollar
VAT	– value added tax
ZSE	– Zagreb Stock Exchange
ZMM	– Zagreb Money Market

Symbols

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

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