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Macroeconomic Developments and Outlook

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Croatian National Bank
Trg hrvatskih velikana 3, 10000 Zagreb
Phone: +385 1 45 64 555
Contact phone: +385 1 45 65 006
Fax: +385 1 45 64 687

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General information on Croatia

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	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Area (square km)	56,594	56,594	56,594	56,594	56,594	56,594	56,594	56,594	56,594	56,594	56,594
Population (million) [a]	4.281	4.268	4.256	4.238	4.204	4.174	4.125	4.088	4.065	4.048	3.889
GDP (million HRK, current prices) [b]	338,846	335,627	336,771	335,831	344,580	356,617	373,080	391,289	412,770	380,123	438,560
GDP (million EUR, current prices)	45,579	44,647	44,467	44,014	45,282	47,363	50,010	52,776	55,677	50,461	58,287
GDP per capita (in EUR)	10,648	10,462	10,449	10,385	10,772	11,346	12,125	12,911	13,696	12,467	14,989
GDP - real year-on-year rate of growth (in %)	–0.1	–2.3	–0.4	–0.4	2.5	3.6	3.4	2.8	3.4	–8.6	13.1
Average year-on-year CPI inflation rate	2.3	3.4	2.2	–0.2	–0.5	–1.1	1.1	1.5	0.8	0.1	2.6
Average year-on-year HICP inflation rate	2.2	3.4	2.3	0.2	–0.3	–0.6	1.3	1.6	0.8	0.0	2.7
Current account balance (million EUR) [c]	–740	–778	–455	156	1,501	1,056	1,719	931	1,576	–268	1,022
Current account balance (as % of GDP)	–1.6	–1.7	–1.0	0.4	3.3	2.2	3.4	1.8	2.8	–0.5	1.8
Exports of goods and services (as % of GDP)	38.2	39.0	39.8	42.7	45.7	46.9	49.2	49.4	50.6	41.5	50.0
Imports of goods and services (as % of GDP)	39.9	40.5	41.8	43.1	45.5	45.8	48.5	50.2	51.0	48.6	52.7
External debt (million EUR, end of year) [c]	49,198	47,681	48,662	49,529	48,622	45,050	43,879	42,809	40,589	41,285	47,213
External debt (as % of GDP)	107.9	106.8	109.4	112.5	107.4	95.1	87.7	81.1	72.9	81.8	81.0
External debt (as % of exports of goods and services)	282.5	274.0	274.7	263.4	234.8	202.7	178.4	164.2	144.0	197.0	162.2
External debt service (as % of exports of goods and services) [d]	42.5	46.1	43.4	46.3	44.0	35.7	33.1	27.1	37.8	35.3	21.1
Gross international reserves (million EUR, end of year)	11,195	11,236	12,908	12,688	13,707	13,514	15,706	17,438	18,560	18,943	25,022
Gross international reserves (in terms of months of imports of goods and services, end of year)	7.4	7.5	8.3	8.0	8.0	7.5	7.8	7.9	7.8	9.3	9.8
National currency: kuna (HRK)											
Exchange rate on 31 December (HRK : 1 EUR)	7.5304	7.5456	7.6376	7.6615	7.6350	7.5578	7.5136	7.4176	7.4426	7.5369	7.5172
Exchange rate on 31 December (HRK : 1 USD)	5.8199	5.7268	5.5490	6.3021	6.9918	7.1685	6.2697	6.4692	6.6499	6.1390	6.6435
Average exchange rate (HRK : 1 EUR)	7.4342	7.5173	7.5735	7.6300	7.6096	7.5294	7.4601	7.4141	7.4136	7.5331	7.5242
Average exchange rate (HRK : 1 USD)	5.3435	5.8509	5.7059	5.7493	6.8623	6.8037	6.6224	6.2784	6.6223	6.6108	6.3636
Consolidated general government net lending (+)/borrowing (-) (million HRK) [e]	–26,584	–18,236	–18,436	–18,354	–11,736	–3,296	2,804	–116	969	–27,710	–12,438
Consolidated general government net lending (+)/borrowing (-) (as % of GDP) [e]	–7.9	–5.5	–5.5	–5.5	–3.4	–0.9	0.8	0.0	0.2	–7.3	–2.9
General government debt (as % of GDP) [e]	63.7	69.4	80.3	83.9	83.3	79.8	76.7	73.3	71.1	87.3	79.8
Long-term interest rates (annual, in %) [f]	6.54	6.13	4.68	4.05	3.53	3.47	2.77	2.17	1.28	0.83	0.45
Unemployment rate (ILO, persons above 15 years of age) [g]	13.7	15.9	17.3	17.3	16.2	13.1	11.2	8.4	6.6	7.5	7.6
Employment rate (ILO, persons above 15 years of age) [g]	44.8	43.2	42.1	43.3	44.2	44.6	45.8	46.9	47.7	47.2	47.8

[a] The population estimate of the Republic of Croatia for 2000 is based on the 2001 Census and that for the 2001 – 2020 period on the 2011 Census. Data for 2021 are preliminary.
[b] The GDP data are presented according to the ESA 2010 methodology. Data for 2020 and 2021 are preliminary.
[c] Balance of payments and external debt data are compiled in accordance with the methodology prescribed by the sixth edition of the Balance of Payments and International Investment Position Manual (BPM6) and the new sector classification of institutional units in line with ESA 2010. Balance of payments and external debt data are based on the most recent available balance of payments data up to the third quarter of 2022 and data on the gross external debt position as at the end of September 2022.
[d] Includes principal payments on bonds, long-term trade credits and long-term loans (excluding liabilities to affiliated enterprises), as well as total interest payments (including FISIM), without interest payments on direct investment.
[e] Fiscal data is shown according to the ESA 2010 methodology.
[f] Average long-term government bond yield with a remaining maturity of about 10 years.
[f] Data for the 2007 – 2013 period are revised and therefore no longer comparable to data for the 2000 – 2006 period.
Sources: CBS, MoF and CNB.

Macroeconomic Developments and Outlook

1 Summary

The grimmer global economic outlook and pronounced inflationary pressures that prompted the worldwide rapid, sharp tightening of central banks' monetary policies and the worsening of financing conditions have increasingly started to affect the Croatian economy. Negative external shocks have so far had more of an impact on the manufacturing sector, which is more sensitive to high energy costs and more exposed to difficulties in global supply chains, while in the services sector the difficulties have been surmounted owing to buoyant demand after the lifting of most of the containment measures. In such conditions, the Croatian economy contracted only slightly in the third quarter of 2022 from the quarter before, while the annual growth rate of real activity slowed to 5.2%. Though the slowdown in the real annual dynamics is expected to continue in the fourth quarter, economic growth at the entire 2022 level might reach 6.3% owing to the very strong increase in the first half of the year. As the return of economic activity to the path of growth may not be expected until the second half of next year, GDP growth might decelerate sharply in 2023, to 1.4%. Inflation might accelerate considerably in 2022 (to 10.6%), due to the high prices of energy and other raw materials, global supply chain delays and intense demand in the services sector. With the gradual reduction of imported inflation and the prices of imported energy products and other raw materials, inflation might drop to 7.5% in 2023. Risks associated with economic growth and inflation projections are mostly tilted to the downside. The surplus in the current and capital account could decrease considerably in 2022, to 1.2% of GDP, mainly due to a marked increase in net exports of energy, and continue to edge down in 2023. Also, the first indications of growth in interest rates appeared, associated with the spillover effects of the sharp and concerted tightening of monetary policy by global central banks, which worsened financing conditions in international financial markets. As a result, yields on government debt securities continued to go up and corporate financing costs started to rise, while there have not yet been significant changes in financing terms for loans to households. The expected continued tightening of the ECB's monetary policy will lead to a further deterioration in financing conditions for the domestic economy. However, the intensity of the deterioration should be alleviated by the harmonisation of the set of CNB monetary policy instruments within the scope of the adoption of the euro at the beginning of 2023. The annual growth in total corporate financing continued its upward trend, largely due to rapid borrowing from domestic credit institutions, while the increase in household placements remained stable, with housing loans still accounting for the bulk of lending activity. Under the budget revision in October, the 2022 deficit was revised downwards (to HRK 7.1bn) from both the original target and the first revision in May, largely due to better-than-anticipated tax revenue collection. The public debt-to-GDP ratio was reduced to 70.4% in August, reflecting nominal GDP growth.

Increasing global geopolitical uncertainty accompanied by the leap in the prices of raw materials and energy has affected the Croatian economy. Real GDP was 0.4% lower in the third quarter of 2022 than in the previous quarter, the first decrease on a quarterly basis since the pandemic recession of mid-2020. The quarterly drop reduced the annual growth rate of GDP to 5.2%, from 8.7% in the quarter before. Real GDP grew largely on account of the rise in total exports, with the contributions of goods and services exports being almost the same. All domestic demand components also made a positive contribution to growth, with the highest growth rate seen in household consumption. By contrast, a negative contribution came from the stocks category (including statistical discrepancy). In line with stronger domestic and foreign demand, exports of goods and services also went up in the third quarter. High-frequency economic indicators, available mostly for October, indicate that real GDP growth continued to lose steam in the fourth quarter of the year. As a result, total GDP in the whole of 2022 might increase by 6.3%, having grown by a high 13.1% in 2021. All components of domestic and foreign demand are expected to grow in the current year. As regards domestic demand components, household consumption could give the strongest boost to total growth, with a substantial positive contribution also expected to come from gross fixed capital formation. GDP growth might slow down further in 2023, to 1.4%. Mean estimated and projected values for the projection period are expected to be more exposed to negative risks. The prolonged period of geopolitical instability and its possible further escalation might have an adverse impact on global and especially European economic activity, which would be reflected negatively in the domestic economy as well. The ensuing rise in the prices of energy and raw materials could dampen real disposable income even more. The potential, though not very likely, resurgence of the pandemic poses additional negative risk. The mentioned risks and the associated heightened uncertainty will have an unfavourable impact on investment decisions of business entities in the upcoming period. On the other hand, a significant withdrawal of resources available to Croatia from the EU funds is expected in the projection period, posing both a positive risk (more intensive use than expected) and a negative risk (insufficient absorption capacities). A positive risk also arises from the potential de-escalation of the situation in Ukraine, which could mitigate the lingering supply chain disruptions.

Unfavourable economic movements have so far had no significant impact on labour market developments. In the third quarter, total employment rose by 0.5% from the previous quarter, with the number of employed persons in the private sector increasing and the number of employed persons in the public sector decreasing. Employment growth was also driven by employment of third-country workers (from non-EU countries) and increased employment of retirees on a half-time basis. Following the 2.2% increase in employment in 2021, the number of employed persons could grow by 2.5% in 2022 at the level of the whole year. Such movements will support the decline in unemployment, so that the ILO unemployment rate could drop to 6.9% of the labour force in 2022 (from 7.6% in 2021). The rise in the number of employed persons is expected to decelerate perceptibly in 2023, while the unemployment rate could drift lower. Although the average nominal gross wage could increase by 8.7% in 2022, its real value might decrease. In 2023, the increase in nominal wages is expected to decelerate, while real wages should rise slightly.

As consumer price inflation accelerated noticeably in the first ten months of this year, the estimated inflation rate in the whole of 2022 was raised considerably, to 10.6% (from 2.7% in 2021, measured by the harmonised index of consumer prices). The sharp pick-up in inflation was due to various factors. The high prices of energy products and food and industrial raw materials in the world market have gradually spilled over to domestic producer and consumer prices. Pressures arising from delays in global supply chains, despite the recent abatement, also pushed prices up. Inflation acceleration was also driven by the strong demand for services following the lifting of containment measures, which is largely associated with non-resident demand for tourism services in conditions of higher input costs, the shortage of qualified labour and the rise in wages in the hotels and restaurants sector. By contrast, price caps on some energy products and basic food products softened the intensity of inflation growth. Inflation is expected to slow down to 7.5% in 2023, largely due to the effect of the base period (the waning effect of the sharp increase in the prices of numerous goods and services in 2022) on the annual inflation rate in 2023. The slowdown of inflation should be mostly driven by the easing of imported inflationary pressures, which should be also aided by the expected fall in the prices of crude oil and other raw materials on the futures markets. However, risks to the inflation projection remain pronounced, with prevailing risks that could push inflation higher than anticipated, which means that the return to low and stable inflation rates could take longer than expected. Higher inflation could stem from steeper than currently expected prices of energy and other raw materials, while stronger than projected growth in wages might reinforce the build-up of domestic inflationary pressures. Furthermore, despite the recent signs of the easing of supply chain disruptions, their renewed intensification might give an additional boost to the prices of some semi-finished and finished products.

The surplus in the current and capital account could decrease considerably in 2022, to 1.2% of GDP, as against 4.2% of GDP in 2021. More specifically, despite the strong growth in the surplus in the international trade in services, in particular revenues from tourism, and the considerable growth in the total surplus in the secondary income and capital transaction accounts caused by the greater use of EU funds and bigger net inflows from personal remittances from abroad, the overall balance in the current and capital account could deteriorate noticeably, primarily due to the sharp increase in the trade in goods deficit. This might be largely due to the rise in net imports of energy products caused by the price shock in the global markets. The surplus in the current and capital account is expected to decline further in 2023, to 1.0% of GDP, despite the expected peak of disbursements of EU funds. Specifically, the following year is the deadline for the disbursement of funds from the several-year financial envelope for the 2014 to 2020 period and of funds from the EU Solidarity Fund to be used for the reconstruction of earthquake-hit areas. In addition, the use of funds under the National Recovery and Resilience Plan, financed from the EU recovery instrument (Next Generation EU) is expected to intensify. As regards foreign capital flows, net capital outflows are expected to continue in the projection period, though at a perceptibly slower pace than in the previous years, with the steady improvement in

Table 1.1 Summary table of projected macroeconomic measures

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
National accounts (real rate of change, in %)												
GDP	–2.3	–0.4	–0.4	2.5	3.6	3.4	2.8	3.4	–8.6	13.1	6.3	1.4
Personal consumption	–2.4	–1.6	–2.5	0.2	3.1	3.2	3.3	4.0	–5.1	9.9	5.9	1.2
Government consumption	–1.1	0.4	1.0	–1.0	1.1	2.2	2.3	3.1	4.3	3.0	2.2	2.5
Gross fixed capital formation	–4.5	1.0	–2.3	8.2	5.0	1.6	3.9	9.0	–5.0	4.7	5.6	3.2
Exports of goods and services	–1.5	2.5	7.3	10.3	7.0	6.9	3.7	6.8	–23.3	36.4	25.4	–0.5
Imports of goods and services	–2.4	3.2	3.5	9.4	6.5	8.4	7.5	6.6	–12.4	17.6	26.1	0.3
Labour market												
Number of employed persons (average rate of change, in %)	–1.2	–1.5	–2.0	0.7	1.9	1.9	2.3	2.3	–1.2	2.2	2.5	0.4
Registered unemployment rate	18.9	20.2	19.6	17.0	14.4	11.6	9.2	7.6	8.9	8.0	7.0	6.9
ILO unemployment rate	15.9	17.2	17.3	16.2	13.1	11.2	8.4	6.6	7.5	7.6	6.9	6.8
Prices												
Consumer price index (average rate of change, in %)	3.4	2.2	–0.2	–0.5	–1.1	1.1	1.5	0.8	0.1	2.6	10.5	7.5
Harmonised index of consumer prices (average rate of change, in %)	3.4	2.3	0.2	–0.3	–0.6	1.3	1.6	0.8	0.0	2.7	10.6	7.5
External sector												
Current account balance (as % of GDP)	–1.7	–1.0	0.4	3.3	2.2	3.4	1.8	2.8	–0.5	1.8	–1.4	–2.1
Current and capital account balance (as % of GDP)	–1.4	–0.8	0.8	4.0	3.7	4.4	3.0	4.5	1.6	4.1	1.2	1.0
Gross external debt (as % of GDP)	106.8	109.4	112.5	107.4	95.1	87.7	81.1	72.9	81.8	81.0	73.3	67.3
Monetary developments (rate of change, in %)												
Total liquid assets – M4	3.6	4.0	3.2	5.2	4.7	2.1	5.5	2.9	9.3	10.7	10.3	
Total liquid assets – M4[a]	3.5	3.8	2.4	4.6	5.3	3.2	6.1	3.5	9.1	10.4	9.6	
Credit institution placements to the private sector	–5.9	–0.5	–1.6	–3.0	–3.7	–1.2	2.0	2.8	3.9	3.0	10.5	
Credit institution placements to the private sector[a]	–1.2	0.8	–1.5	–2.3	1.1	2.9	4.4	4.2	3.9	3.9	10.7	
Credit institution placements to corporates[a]	–1.5	1.8	–3.7	–3.0	3.2	2.5	1.9	0.4	5.6	2.3	22.0	
Credit institution placements to households[a]	–1.1	–1.2	–0.7	–1.8	0.5	4.0	6.2	7.4	2.1	4.5	5.3	

[a] Rates of change are calculated on the basis of data on transactions (see Annex 1 Introduction of data on transactions in monetary developments analysis in the CNB Bulletin No. 221).
Sources: CBS, MoF and CNB.

relative indicators of external debt.

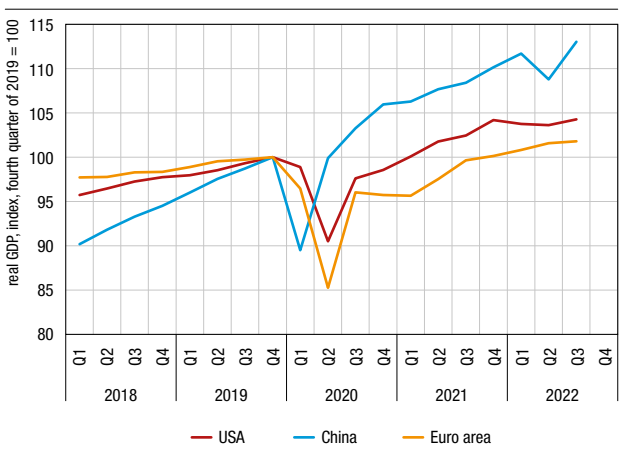
High and rising inflation amid geopolitical and economic uncertainty brought about a faster and sharper tightening of many central banks' monetary policies than previously expected. Against such a backdrop, financing conditions in global financial markets deteriorated further, which was reflected in the ongoing rise in market yields on government debt securities. Also, corporate financing costs started to rise, while there have not yet been significant changes in financing terms for loans to households. In the course of the third quarter, the standards of lending to corporates and households tightened, demand for corporate loans grew vigorously, while household demand for loans dampened. Although Croatia will join the euro area at the beginning of 2023 against the backdrop of the ECB's monetary tightening cycle, adjustments of the reserve requirement rate and the rate of the minimum required foreign currency claims to the ECB's set of instruments will lead to a sharp increase in banks' free reserves, as well as alleviate and slow down any further deterioration in financing conditions in the domestic market. The annual growth in total corporate financing continued its upward trend, largely due to the increased borrowing from domestic credit institutions. The annual growth of household placements remained stable in the second half of the year, with housing loans still accounting for the bulk of lending activity. The kuna/euro exchange rate was stable and there was no need for foreign exchange interventions of the CNB. Occasional appreciation pressures during the summer months, which were driven by the successful tourist season and the consequent larger supply of foreign exchange, were dampened by occasional corporate demand for foreign exchange, in particular in the energy sector due to the higher prices of raw materials and energy products. Market expectations were further anchored by Croatia's participation in the European Exchange Rate Mechanism and the expected introduction of the euro.

As regards fiscal developments, according to the budget revision adopted in October, the general government deficit might stand at HRK 7.1bn in 2022, down from HRK 12.0bn under the original plan and HRK 13.4bn under the first revision of May. The budget performance expected under the first budget revision in 2022 reflected the impact of the April anti-inflation package of measures on the budget balance, as well as the potential adverse effect of the escalation of geopolitical tensions at that time on economic developments. While the government adopted the second package of anti-inflation measures in September, which had a negative effect on the general government balance, the projected deficit was revised downwards under the second revision in October. This mostly reflects better-than-anticipated inflows of tax revenues, associated mostly with favourable cyclical developments and the rise in the general price level. As regards public debt, nominal GDP growth led to a decline in the public debt-to-GDP ratio in August, to 70.4%, from 78.4% at the end of 2021.

2 Global developments

Having almost returned to the pre-pandemic growth path, the global economy slowed down suddenly after the Russian invasion on Ukraine. In the months that followed, the negative effects of the war spilled over to the global economy, reflected in the sharp increase in the prices of energy and other raw materials, particularly hitting European countries, where they were exacerbated by the high uncertainty regarding Russian energy supplies. On the other hand, difficulties in global supply chains continued to ease, notwithstanding occasional closures of Chinese trade and production zones as a result of a very restrictive containment policy. In such conditions, the Chinese economy contracted sharply in the second quarter, but rebounded already in the third. As most containment measures were lifted in other countries in the meantime, the services sector recovered rapidly, thus contributing to better-than-expected performance in the second and third quarters. With more pronounced spillover of the prices of energy and other raw materials to final goods and services, consumer price inflation continued to rise rapidly and, in many countries, reached levels not seen for several decades. This led to monetary policy tightening and, coupled with reduced risk appetite, a severe deterioration in global financing conditions.

Figure 2.1 Economic activity in selected markets

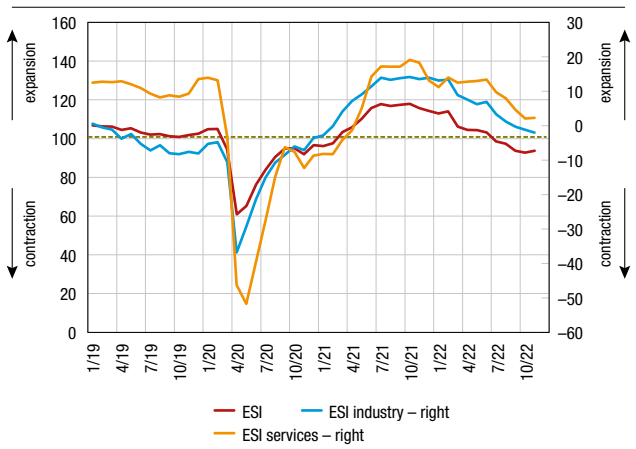


Sources: Eurostat, BEA and NBS.

The US economy contracted slightly in the first half of 2022, but returned to an upward trajectory in the third quarter (Figure 2.1). However, the 0.6% growth rate in the third quarter may be attributed largely to the sharp contraction in imports of goods and services, which, paired with the steady rise in exports, made the biggest contribution to GDP growth. On the other hand, private sector investment continued to dwindle amid elevated uncertainty and increasingly less favourable financing conditions. Influenced by high inflation, the growth in personal consumption also lost momentum, with spending on durable goods falling steadily, while consumption for services rebounded strongly following the almost complete lifting of epidemiological measures. The labour market remained very robust, with the unemployment rate down to 3.7% of the labour force in October. Government consumption made a positive if slight contribution to economic growth in the third quarter, despite the phasing out of most support measures introduced during the pandemic. The US annual inflation peaked in June (9.1%), but dropped to 7.7% by October, while core inflation stabilised at slightly above 6%.

Notwithstanding the elevated uncertainty, particularly

Figure 2.2 Euro area confidence indicators



Note: Data are up to November 2022.
Source: Eurostat.

surrounding energy supplies, and mounting price pressures, the euro area economy continued to expand in the third quarter, albeit at a very modest rate of 0.2%. On the one hand, the lifting of most epidemiological measures from the beginning of the year added to the recovery of the services sector, which was particularly observed in the tourism activity over the summer months. At the same time, the production sector operated under the growing pressure of rising energy costs and persistent supply chain difficulties, particularly in gas supply. The dynamics of economic activity in EU member states was uneven in recent quarters due to their structural differences. Countries with a large share of services in GDP, such as Italy, Spain and the Netherlands, performed much better than Germany, which mostly held steady or grew only marginally from the beginning of the year. Early economic indicators suggest that unfavourable trends continued at the beginning of the fourth quarter (Figure 2.2). In October, the Economic Sentiment Indicator (ESI) declined further from already low levels, with the services sector showing more signs of the fall in optimism already evident in the production sector. Nevertheless, confidence improved mildly in November, for the first time since the onset of the war in Ukraine, but stayed much below its usual level. Inflation in the euro area has surged from the beginning of the year, reaching 10.7% on an annual basis in October. Although energy and food prices were the biggest contributors, the annual rise in other consumer prices also accelerated, to 5% in October.

Croatia's main trading partners

The majority of Croatia's main trading partners recorded economic slowdown in the first half of 2022. Among euro area partners, economic growth decelerated most in countries with strong manufacturing sectors. Economic developments were somewhat more favourable in trading partners from Southeastern Europe, since these countries are less integrated into and less sensitive to global supply chain disruptions. Also, they are less severely affected by the war as their direct exposure to the Russian and Ukrainian markets is relatively limited.

Prices, exchange rates and monetary and fiscal policy

After growing vigorously in the first half of 2022, energy prices mostly dropped in the months that followed, but remained at historically high levels. Oil prices spiked in the first days of the war in Ukraine, periodically reaching USD 130 per barrel, and returned to similar levels in June, following the European Union's partial embargo on Russian oil. They were extremely volatile in the following months, falling to around USD 90 per barrel by the end of November. The decline in prices was attributable to the weakening of global economic prospects, which outweighed the limitations on the supply side. Gas prices in the European market hit a record high of around EUR 300/MWh in August, with the complete halt of Russian gas supplies via the Nord Stream 1 pipeline. However, prices had dropped sharply by November, to around EUR 100/MWh, owing to the efforts of EU countries to fill gas storage sites and secure sufficient supplies from alternative sources, and to achieve energy savings.

After spiking in February and March in response to the war in Ukraine, non-energy raw material prices also followed a downward trend, but remained about one third higher than in the pre-pandemic period. From March to October 2022, they decreased by one fifth, on average, with prices of metal dropping the most, while prices of agricultural and food raw materials fell slightly less. The drop in the prices of metal is largely attributable to the grimmer prospects for global economic growth accompanied by sustained limitations on the supply side that keep prices relatively high in historical terms. As for agricultural and food raw materials, the sharpest fall was seen in the prices of raw materials largely produced in Russia and Ukraine, such as cereals and oil seeds, which was due to the removal of barriers to their exports from Ukraine and a slump in global demand.

The mounting of inflationary pressures from the beginning of 2022 was followed by an intensified reduction of the monetary stimuli introduced during the pandemic, leading to the faster tightening of monetary policy. The fastest tightening of monetary policy was that of the Fed, which lifted the benchmark interest rate by a total of 3 percentage points from the beginning of the year, first by 0.25 percentage points in February, then by 0.5 percentage points in May and by another 0.75 percentage points in each of June, July and August. The ECB also continued to reduce monetary stimuli. It first abolished the pandemic emergency purchase programme (PEPP) in March and then its asset purchase programme (APP) in June, and started to increase its interest rates in July, raising them on three occasions by the end of November, by a total of 2 percentage points.

Developments in the global foreign exchange market during a large part of 2022 mostly reflected the expectations regarding a faster normalisation of the US monetary policy relative to other large economies, together with geopolitical uncertainty and steep energy prices. Against this backdrop, the US dollar strengthened against the euro by a high 12% from the beginning of the year to end-November. With regard to other currencies, the euro weakened slightly against the Swiss franc, but strengthened against the pound sterling and even more against the Japanese yen.

Projected developments

Expectations for global economic growth were again revised downwards from previous projections due to the widespread inflationary pressures and unfavourable financing conditions that, paired with elevated uncertainty, particularly regarding energy supply, have discouraged investments and consumption. Monetary policy in major economies is expected to tighten even more in the period ahead in response to the still strong inflationary pressures. In turn, this will further worsen global financing conditions, particularly for emerging market countries. Amid a slump in global demand, the prices of energy and other raw materials are expected to decrease further in the projection period.

With regard to real developments in the global economy, in

its October projections, the IMF did not change its expectations for 2022 (3.2%), because of somewhat better results over the summer months, but further cut its growth projections for 2023, to 2.7% (Figure 2.3). The IMF expects that one-third of the world economy will likely contract this year or next, while the three largest economies, the United States, the euro area and China will continue to stall. Expectations are particularly weak for those euro area countries that are severely affected by the uncertainty regarding energy supplies. Expectations regarding the USA have also been revised downwards, mostly due to recent poor performance and the tightened domestic financing conditions. Looking at China, downsized expectations reflect the economic fallout from a very stringent policy to fight coronavirus as well as problems in the real estate market. The IMF expects that global inflation will come to an average of 8.8% in late 2022 and gradually come down from this peak, to 6.5% in 2023. Nevertheless, inflation is expected to remain elevated for longer than previously expected and to eventually return to pre-pandemic levels in 2024.

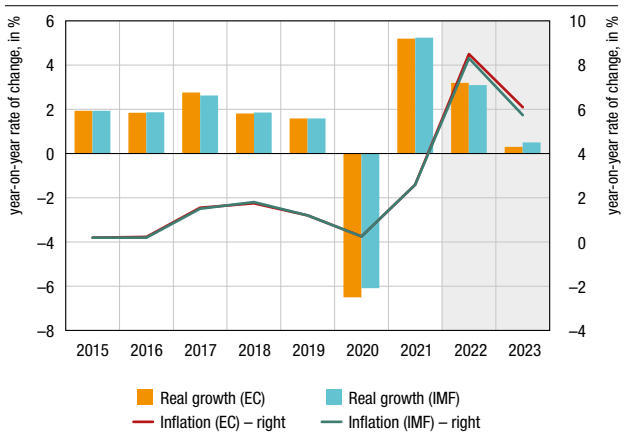
As regards the euro area, the IMF projects economic growth of only 0.5% in 2023. The November projections of the European Commission are even more bleak (Figure 2.4), forecasting that next year GDP growth will drop to 0.3%, while the largest euro area economy (Germany) is projected to decline by 0.6% in 2023. The disturbances in the manufacturing sector caused by the increase in the prices of energy and raw materials and the impeded supply of some inputs used in the production of final goods will significantly offset the positive impact of the easing of containment measures on the services sector. Apart from the weaker foreign demand, in the upcoming period domestic demand will be hampered by a drop in real income of households, a decline in the propensity to consume and a decrease in investments amid heightened uncertainty and worsened financing conditions. According to the same source, the average inflation rate in the euro area could come to an elevated 8.5% in 2022, and then drop to 6.1% in 2023, thus exceeding the ECB's medium-term target level even in 2024 (2.6%).

In line with the described trends in the environment, demand for Croatian export goods and services is expected to grow at a much weaker pace in late 2022 and in 2023 (Figure 2.5). The slump in foreign demand could be more conspicuous in goods exports, given that the manufacturing sector has been more burdened by the high costs of energy and raw materials and disruptions in supply chains. However, demand for services is also expected to weaken gradually after several quarters of sharp growth owing to the relaxation of containment measures.

As regards the global prices of raw materials, crude oil prices are expected to decrease gradually towards the rest of the year and in 2023 (Figure 2.6). The major contribution to the fall should come from the weakening of global demand as well as from supply-side adjustments. Nevertheless, price expectations are subject to a high degree of uncertainty, particularly in the context of the ongoing negotiations of the G7 countries about implementing a price cap on Russian oil. Prices of food and agricultural raw materials are also expected to fall further in the projection horizon, albeit only slightly, due to the remaining uncertainty regarding supply of some crops. The slump in global demand should contribute to the drop in the prices of metal, though it might be significantly limited by the steep prices of energy needed in its production.

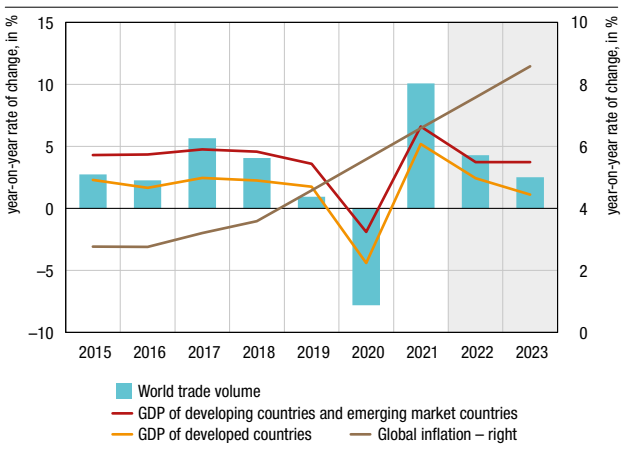
While markets expect that monetary policy in large developed economies will tighten further, they also believe that the tightening cycle is nearing its end. As US inflation has shown signs of cooling down, the markets expect that the Fed's monetary policy

Figure 2.4 Economic growth and inflation in the euro area



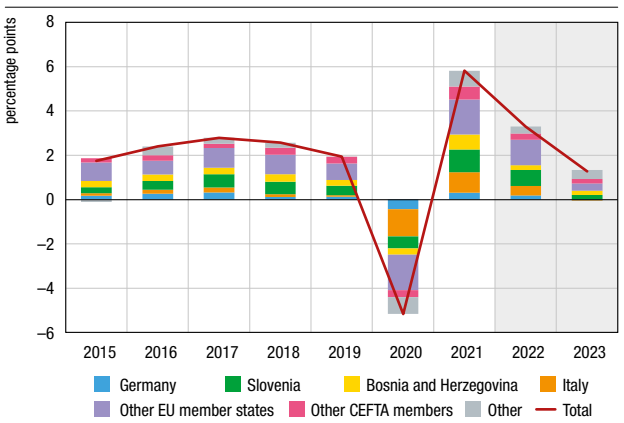
Sources: IMF (October 2022); European Commission (November 2022).

Figure 2.3 Global economic developments



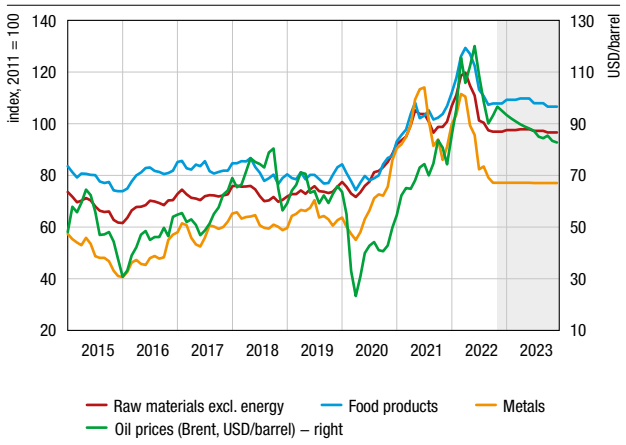
Source: IMF (WEO, October 2022).

Figure 2.5 Foreign demand
contributions of Croatia's trading partners



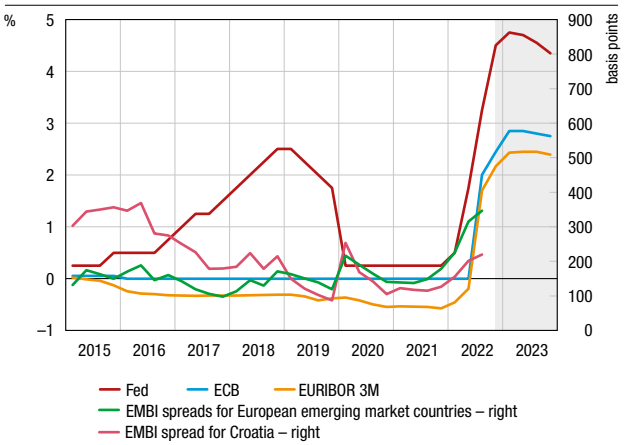
Note: Foreign demand is calculated as the weighted average of real GDP growth of Croatia's trading partners, with their shares in Croatia's exports of goods used as weights.
Source: IMF (WEO, October 2022).

Figure 2.6 Prices of raw materials on the international market



Sources: IMF, oil prices: Bloomberg (Brent crude oil futures, 4 November 2022).

Figure 2.7 Benchmark interest rates and the average yield spread on bonds of European emerging market countries
end of period



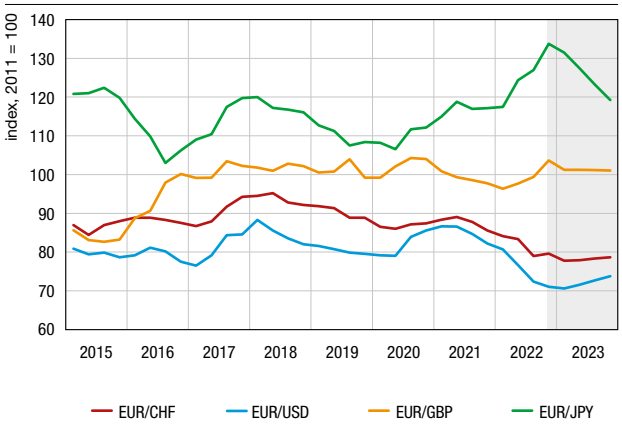
Source: Bloomberg.

tightening trend may also slow down; the Fed is expected to raise its benchmark interest rate by another 0.5 percentage points in late 2022, which is less than in previous steps and to end the tightening cycle in the first half of 2023, when the benchmark rate comes close to 5% (Figure 2.7). At the same time, the ECB is expected to continue with sharp monetary tightening until inflationary pressures start to significantly recede. The tightening cycle is expected to end somewhat later, with the benchmark interest rate at around 3%.

According to the November Foreign Exchange Consensus Forecasts, the exchange rate of the euro against the US dollar is expected to recover slightly on the foreign exchange market by the end of the projection horizon, as the divergence between the two monetary policies becomes less pronounced (Figure 2.8). The euro is expected to strengthen against the Swiss franc by the end of the projection horizon, while its exchange rate against the Japanese yen and the British pound should remain generally unchanged.

The global economy remains largely exposed to negative risks, with the geopolitical uncertainty associated with the war in Ukraine again being the main source of risk. Any further increase in energy prices, largely associated with war's uncertainties, with more pronounced spillovers to consumer prices, would lead to an even sharper fall in disposable income, as well as consumption and investments. In addition, more severe problems in energy supply or insufficient substitution from other sources might stifle industrial production. Surging inflation increases the risk of further tightening of financing conditions, having negative effects on domestic demand and putting pressure on public finances and the banking sector. Although pandemic-related risks have receded, their presence is still felt given the potential emergence of new coronavirus variants requiring the re-introduction of tight containment measures. While the savings accumulated during the pandemic are still relatively large in historical terms, the upside risks associated with their sharp decrease are becoming increasingly less pronounced due to heightened consumer caution amidst broad uncertainty. Also, though the acceleration of the energy transition process poses an upside risk to economic growth as it encourages investments and raises productivity, it might give rise to additional inflationary pressures, to some extent offsetting the positive effects.

Figure 2.8 Exchange rates of individual currencies against the euro

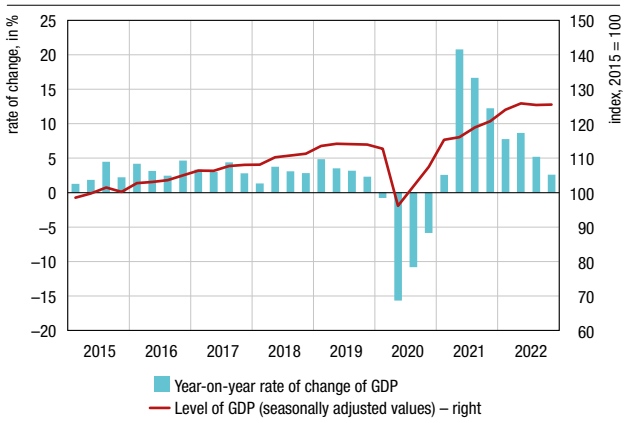


Note: A growth in the index indicates a depreciation of a currency against the euro.
Sources: Eurostat and Foreign Exchange Consensus Forecasts (November 2022).

3 Aggregate supply and demand

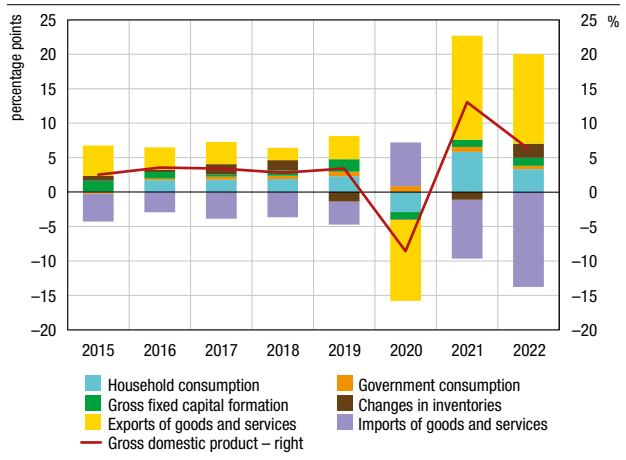
Real GDP was 5.2% higher in the third quarter than in the same period of 2021. The slowdown in annual growth reflected the weakening of economic activity on a quarterly level. Real GDP was 0.4% lower in the third quarter than in the previous quarter, the first decrease on a quarterly basis since mid-2020. Government consumption and exports of goods and services dropped, while total imports surged on a quarterly level. As for the fourth quarter, high-frequency economic indicators,

Figure 3.1 Gross domestic product (GDP)
real values



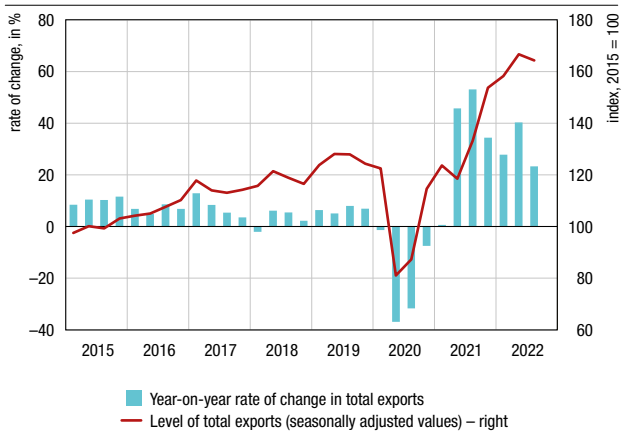
Note: Data for the fourth quarter of 2022 refers to the CNB's monthly indicator of real economic activity, estimated on the basis of data published until 30 November 2022.
Source: CBS (seasonally adjusted by the CNB).

Figure 3.2 GDP rate of change
contributions by components



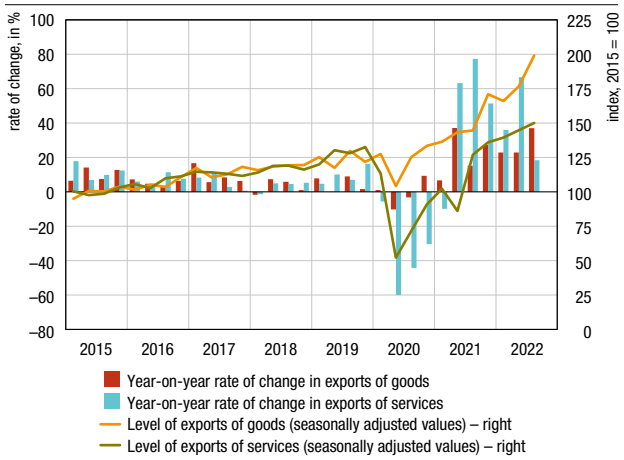
Note: Data for 2022 refer to the first three quarters of 2022.
Source: CBS.

Figure 3.3 Exports of goods and services
real values



Source: CBS (seasonally adjusted by the CNB).

Figure 3.4 Exports of goods and services
real values



Source: CBS (seasonally adjusted by the CNB).

available mostly for October, indicate that real GDP held steady from the quarter before.

Total exports made the largest contribution to annual GDP growth, with almost equal percentages coming from exports of goods and exports of services. All domestic demand components also made a positive contribution to growth, with the rise in household consumption amounting to the largest part. By contrast, a negative contribution came from the stocks category (including statistical discrepancy). In line with stronger domestic and foreign demand, exports of goods and services also went up in the third quarter.

As for the production side of the GDP calculation, GVA growth in the third quarter also slowed down on an annual level (to 5.3%, from 10.0% in the quarter before), shrinking by 1.7% on a quarterly basis. The largest positive contribution to the annual change in GVA in the third quarter came from service activities related to tourism, including wholesale and retail trade, transportation and storage, accommodation and food service activities.

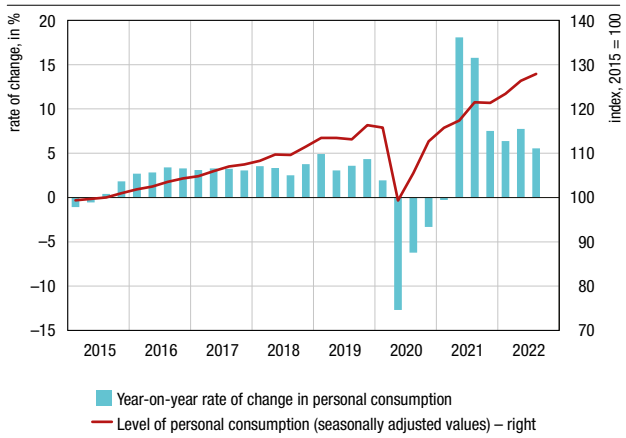
Aggregate demand

Real exports of goods and services rose annually by 23.3% in the third quarter of 2022, while their annual growth in the quarter before reached a high 40.3% due to their very low level in the second quarter of 2021. The rise in exports thus made a very large contribution to annual GDP growth (17.0 percentage points). Nominal CBS data on foreign trade show that exports increased in all main industrial groupings. While the surge in nominal exports was largely the outcome of price increases, exports of energy grew sharply (by more than 20.0%), with growth also seen in exports of non-durable consumer goods and capital goods.

Observed on a quarterly basis, exports of goods accelerated from July to September (to 12.7%, up from 6.4% in the second quarter), whereas exports of services grew at a similar pace as in three months before (3.6% and 3.8%, respectively). The good performance in the exports of services was the outcome of positive results of the tourist season, with the total number of nights stayed outstripping the results from the same period of 2019.

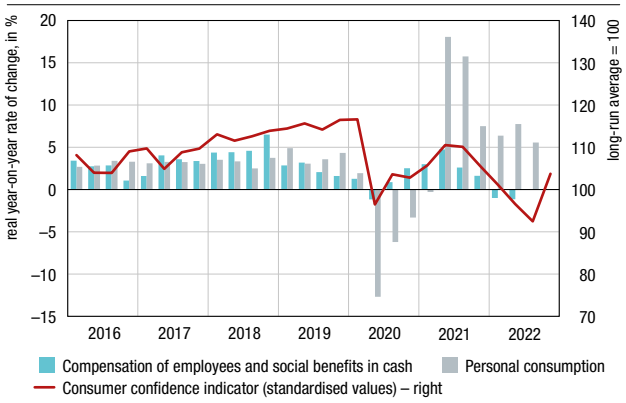
The quarterly growth in personal consumption slowed down from 2.3% in the second quarter to 1.2% from July to September. As a result, the annual growth rate slowed to 5.6% (from 7.8% in the second quarter). Personal consumption was adversely

Figure 3.5 Personal consumption
real values



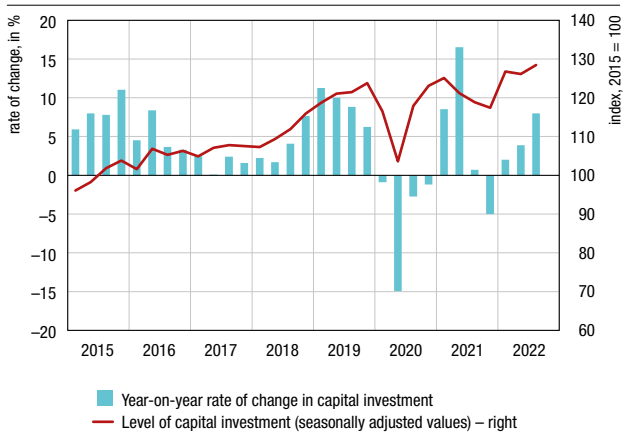
Source: CBS (seasonally adjusted by the CNB).

Figure 3.6 Determinants of personal consumption
real values and index



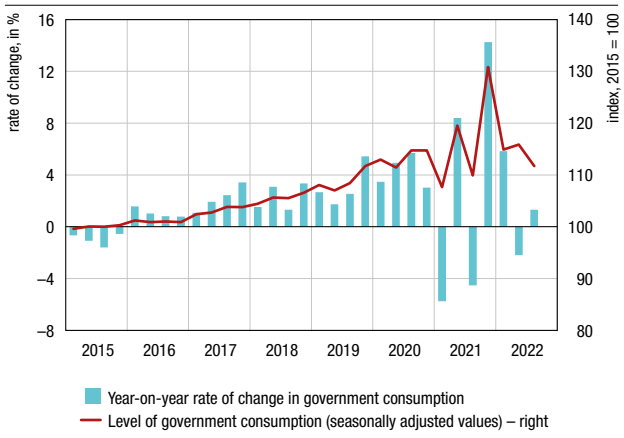
Notes: Real values of compensation of employees and social benefits in cash were calculated by deflating nominal values using the personal consumption deflator. Consumer confidence indicator values were calculated as three-member averages of monthly data, where the most recent data refers to November 2022.
Sources: CBS, Ipsos and CNB.

Figure 3.7 Gross fixed capital formation
real values



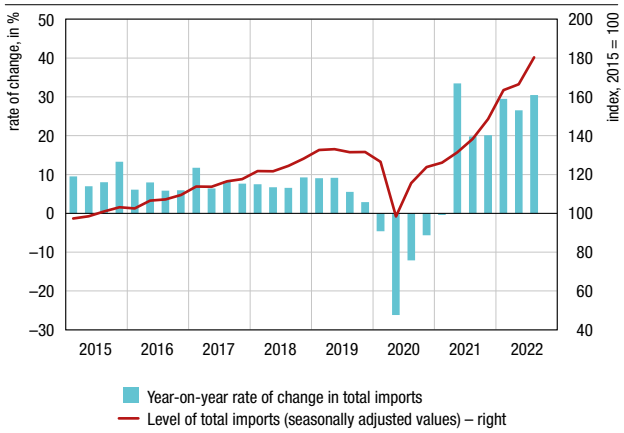
Source: CBS (seasonally adjusted by the CNB).

Figure 3.8 Government consumption
real values



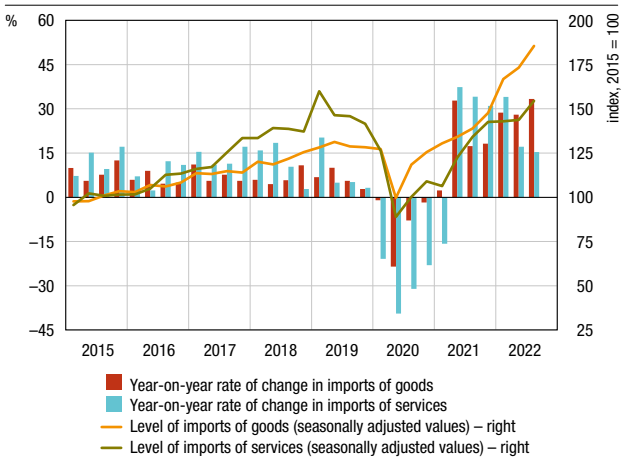
Source: CBS (seasonally adjusted by the CNB).

Figure 3.9 Imports of goods and services
real values



Source: CBS (seasonally adjusted by the CNB).

Figure 3.10 Real imports of goods and services



Source: CBS (seasonally adjusted by the CNB).

affected by movements in real income, which, despite the sharp increase in nominal terms, decreased on both a quarterly and an annual basis because of inflation. In addition, the waning of consumer optimism in the third quarter is attributable to the expected continuation of price increases at relatively high rates. On the other hand, households reduced their savings from their pandemic-highs in order to preserve consumption (see Box 1 Household savings amid elevated inflation). Finally, the rise in personal consumption may be revised downwards in the upcoming period, as indicated in the assessment that the annual increase in retail trade was probably associated with favourable results in tourism (see Box 2 Is personal consumption really growing?).

Investment activity increased by 1.9% in the third quarter of 2022 compared with the previous three months, when it decreased by 0.5%. The quarterly growth in gross fixed capital formation raised the annual growth rate to 8.0%, up from 3.9% in the quarter before. The rise in imports of capital goods and construction activity provide a further indication of the investment activity growth. In the period from July to September, quarterly growth was seen in the volume of construction works, while the volume of civil engineering works decreased. These trends point to a slump in general government investments and an increase in private sector investments.

Government consumption was 3.6% smaller in the third quarter of 2022 than in the quarter before, when it grew by 0.8% on a quarterly level. Notwithstanding the quarterly decrease, government consumption was up by 1.3% in the July-September from the same period of 2021.

The growth in imports of goods and services gained much momentum in the third quarter of 2022 relative to the quarter before, rising from 1.8% to 8.4%. The sharp increase was the outcome of buoyant domestic demand paired with the rise in goods and services exports in the third quarter. On an annual level, total imports jumped by 30.5% in the third quarter, with the growth seen in both imports of goods (33.4%) and services (15.3%). The annual increase in total imports slightly surpassed the rise in total exports. Nevertheless, owing to a steep increase in services exports in the third quarter, net exports made a positive contribution to total economic growth (2.1 percentage points).

Aggregate supply

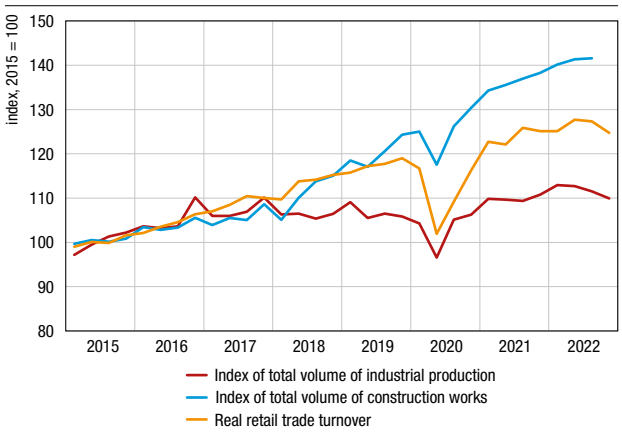
Gross value added dropped by 1.7% in the third quarter of this year, having increased by 3.0% in the previous three months. The fall was primarily due to the decrease in the quarterly GVA in wholesale and retail trade, transportation and storage, accommodation and food service activities, with GVA in manufacturing and construction also shrinking.

The quarterly drop in GVA sharply decelerated its annual growth; GVA grew by 5.3% from the third quarter of 2021 (after growing annually by 10.0% in the second quarter). GVA growth was broad-based, with the greatest increase again seen in wholesale and retail trade, transportation and storage, information and communication, as well as professional, scientific, technical, administrative and ancillary services.

The GDP nowcasting model, based on high-frequency data, mostly available for October, suggests that economic activity is likely to be stagnant from the third to the fourth quarter, which would result in a further slowdown in its annual growth.

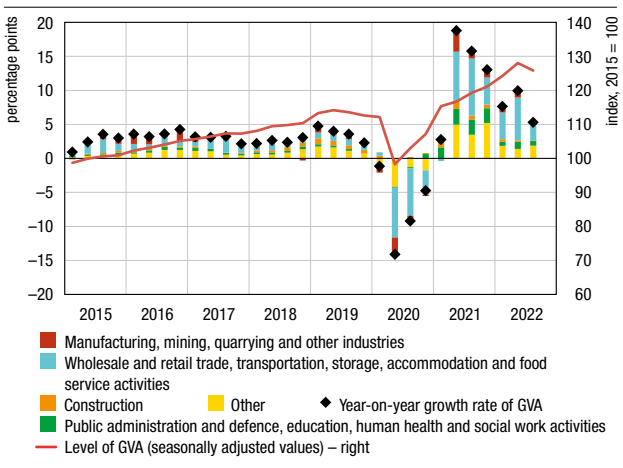
Industrial production dipped by 1.0% in October relative to the third quarter average, when it held steady. Broken down by main industrial groupings, the decline was seen in the production of intermediate goods, and durable and non-durable consumer goods. At the same time, real retail trade turnover went down slightly from the preceding quarter, by 0.3%. Consumer

Figure 3.12 Short-term economic indicators
seasonally adjusted values



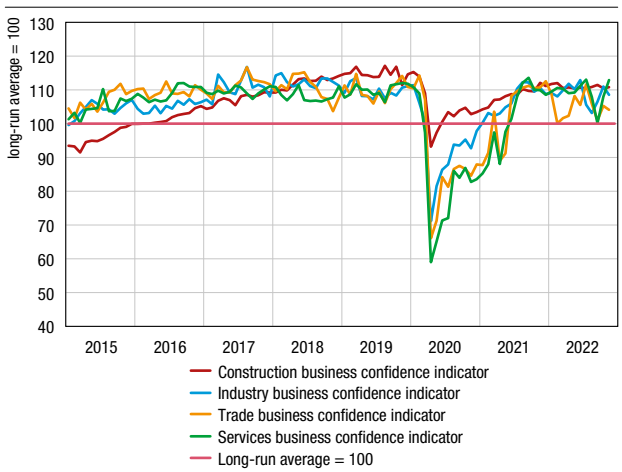
Notes: Quarterly data are calculated as an average of monthly data. Data for the fourth quarter of 2022 for industry and trade refer to October.
Source: CBS (seasonally adjusted by the CNB).

Figure 3.11 GVA rate of change
contributions to the annual change by components



Source: CBS (seasonally adjusted by the CNB).

Figure 3.13 Business confidence indicators
standardised seasonally adjusted values



Sources: Ipsos and CNB (seasonally adjusted by the CNB).

confidence survey data show that the consumer confidence index rose additionally in November from October, suggesting that consumer expectations improved for four consecutive months. Household optimism thus edged up in October and November from exceptionally low levels in the third quarter. As regards business expectations, business optimism in service activities and industry improved, while expectations in construction and trade deteriorated slightly in October and November.

Projected developments

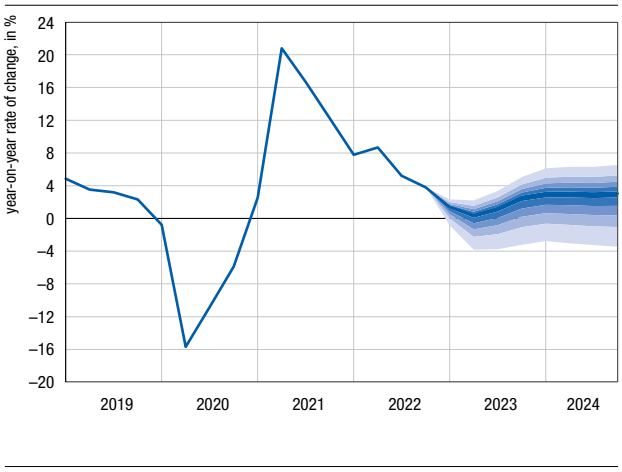
GDP is expected to grow at a rate of 6.3% in 2022, following an exceptionally sharp increase of 13.1% in 2021. Slower economic growth in 2022 reflects a slower increase in all GDP components, which is largely attributable to the disappearance of the base effect of the rapid recovery from the pandemic-induced recession. GDP growth might decelerate sharply in 2023, to 1.4%, due to the global slowdown and, in particular, very unfavourable developments in Europe.

Total exports might surge by 25.4% in 2022, with the rise in services exports expected to exceed the rise in goods exports by a large margin, reflecting the continuation of favourable developments in tourism.

Household consumption could increase by 5.9% in 2022 and make the largest positive contribution to total economic growth of all domestic demand components. The growth in personal consumption largely reflects the relatively good performance up to September. Total investment activity might pick up pace and grow by 5.6%, driven mostly by growing capital investments in the private sector. Investment activity could be positively affected by a favourable position in the EU funds withdrawal cycle the use of the Next Generation EU funds. Government consumption is also expected to increase in 2022 (2.2%). The results in the first three quarters of 2022 and expectations regarding sustained growth in domestic demand and further strengthening of foreign demand suggest that imports of goods and services might rise by a high 26.1%. The contribution of net foreign demand to total economic growth might thus be negative (–0.7 percentage points).

Economic growth might decelerate sharply in 2023, to 1.4%. The lower growth rate of economic activity in 2023 than in the previous year is primarily due to the negative impact of the geopolitical instability arising from the Russian invasion of Ukraine on domestic and foreign economic developments. Total exports might be lower than in 2022, while the growth in personal consumption and investments is expected to slow down. The ongoing increase in all domestic demand components might lead to a marginal growth in imports of goods and services. The contribution of net foreign demand to economic growth is expected to be almost neutral until the end of the projection horizon.

Figure 3.14 Projection of real GDP dynamics



Sources: CBS and CNB.

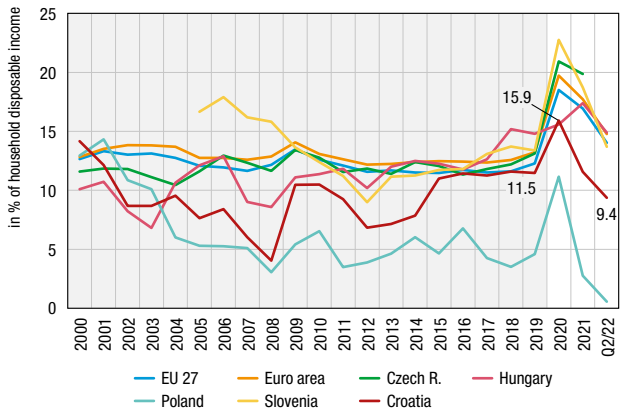
Risks to mean estimated and projected values for 2022 and 2023 are predominantly on the downside. Prolonged and further escalation of geopolitical instability would have an even more adverse impact on global and especially European economic activity, which would be reflected negatively in the domestic economy as well. Further weakening of trade, a leap in the prices of energy and raw materials and prolonged uncertainty could be potential channels for the impact of adverse global developments on the domestic economy. Increasing inflation, especially with respect to the prices of food and energy, could cause an additional decrease in real disposable income, affecting both foreign and domestic demand. There are also risks of a sharper tightening in financial conditions. A possible, even if not very probable, resurgence of the pandemic and the appearance of new virus variants that could cause the reintroduction of containment measures pose additional negative risk. The mentioned risks and the associated heightened uncertainty might have an unfavourable impact on investment decisions of business entities in the upcoming period. In the projection period a significant withdrawal of resources available to Croatia from the EU funds is expected, posing both a positive risk (more intensive use than expected) and a negative risk (insufficient absorption capacities). A positive risk also arises from the potential de-escalation of the situation in Ukraine, which could mitigate some supply chain disruptions. Employment and unemployment performance might also be poorer if adverse risks likely to restrain economic activity became a reality.

Box 1 Household savings amid elevated inflation

Rising inflation may have either a positive or a negative effect on savings, depending on the nature of its cause. This box aims to investigate which of the two effects is predominant in specific periods and among household income groups. Analysis results show that the relationship between expected inflation and savings is very negative in the current situation of a cost shock, while this relationship was positive during a demand shock. A cost shock mostly affects households in the lowest income bracket, which have recently reduced their savings the most, but which probably do not have a major impact on the overall level of savings. Therefore, their potential impact on consumption and on rebound inflationary pressures should be limited.

The gradual decrease of the savings rate from the very high level during the pandemic encouraged and facilitated economic recovery (Figure 1). By contrast, recent cost headwinds and mounting inflation have adversely affected economic activity and given rise to uncertainty regarding trends in savings. On one hand, further decreases in savings may alleviate negative effects on economic developments while on the other, any efforts to stimulate savings amid high inflation may exacerbate recessionary pressures. The relationship between inflation and savings is not straightforward, but depends on the nature of price growth,

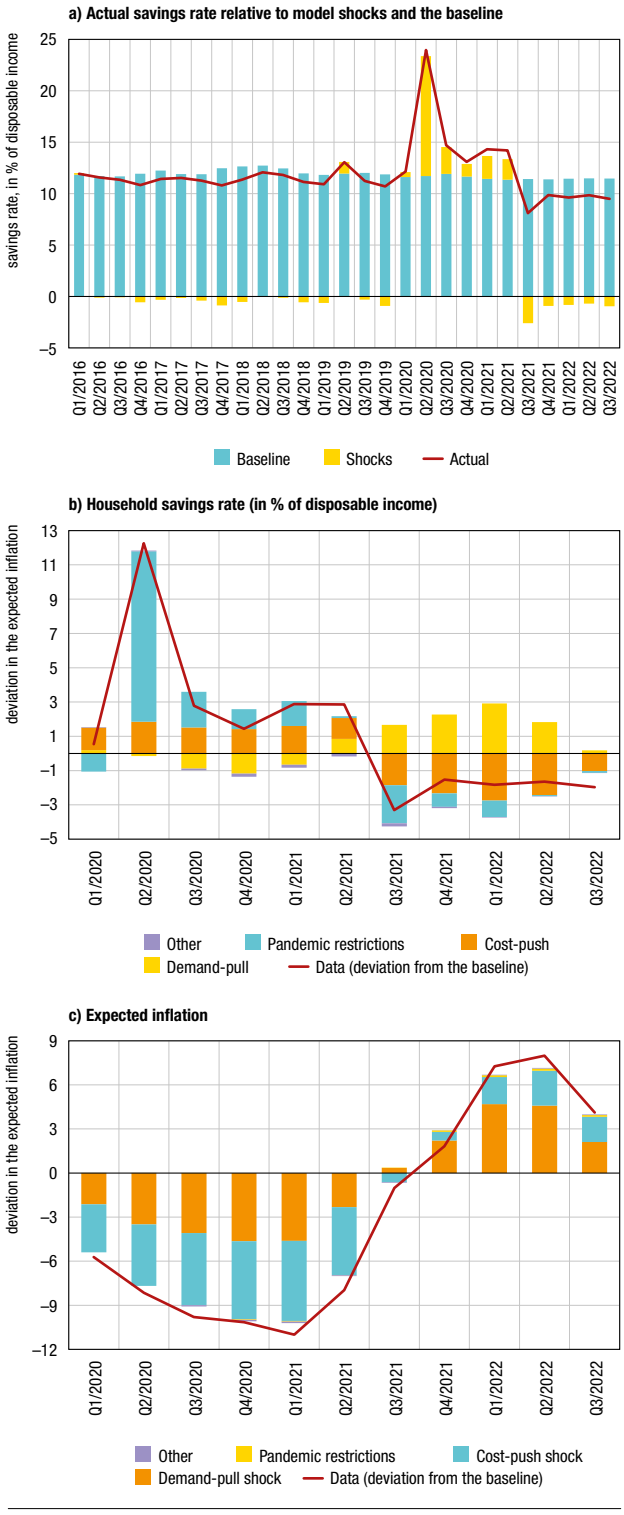
Figure 1 Household savings rates



Notes: The annual rates of household savings are calculated on the basis of annual data on the ratio of savings to household disposable income, including the impact of changes in pension rights. The savings rate for Croatia is an estimate.

Sources: Eurostat, and CNB calculations and estimate.

Figure 2 Historical decomposition of shock contributions



Source: CNB estimate.

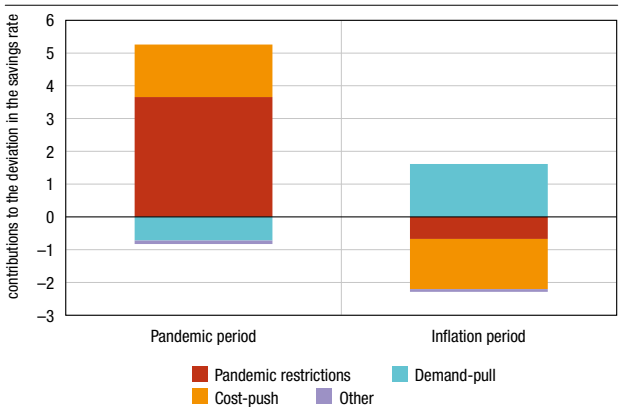
which usually is not quite clear. For this reason, economic literature sometimes cannot easily explain the impact of inflation on savings. In conditions of strong economic activity accompanied by high demand-pull inflation, savings often grow as a reflection of the rise in real income. However, at times of slower economic growth accompanied by higher cost-push inflation, steeper prices may reduce the propensity to save in efforts to maintain the level of consumption.

From the beginning of 2020, the movements in the savings rate were influenced by several factors, whose individual contributions can be isolated by means of a model[1] (Figure 2.a). The first determinant of savings were the epidemiological restrictions that reduced contact consumption and triggered a surge in "forced" savings in the second quarter of 2020 (Figure 2.b). Consumption and economic activity recovered with the relaxation of measures and the restoration of consumer confidence. The rise in real income gave a boost to savings. The impact of such a demand-pull shock, which simultaneously increased income and personal consumption, as well as savings, was first evident in the second quarter of 2021, after which it gradually gained strength. Demand-pull inflation may occur in an environment of buoyant demand (Figure 2.c). However, a cost-push effect driven by rising energy prices was seen as early as the third quarter of 2021. In circumstances like these, households attempt to maintain the level of consumption by temporarily reducing savings to below-average levels. Since mid-2021, the impact of growing costs has outweighed the effects of other factors and maintained the savings rate below historical norms.

Two distinct periods may be identified with regard to movements in savings and types of shocks behind them. The growth in savings between the second quarter of 2020 and the first quarter of 2021 was primarily driven by pandemic restrictions, that is, restrictions on contact consumption and, to a lesser extent, a perceived lower level of prices, which was in part

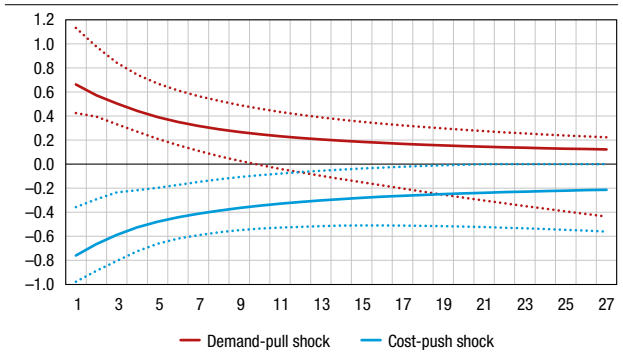
1 To identify channels for the transmission of shocks, we employed was a Bayesian structural vector autoregressive model (BVAR), which captures structural shocks defined based on economic theory, using data on household savings rates (in % of disposable income), expected consumption and expected inflation (from the DG ECFIN's Business and Consumer Survey), and the Google Mobility Index, which serves as a proxy for contact consumption. The model was defined by use of sign and zero restrictions, where a positive demand-pull shock leads to a rise in expected consumption and expected prices, while a positive cost-push shock leads to an increase in expected inflation and a parallel drop in expected consumption. The shock of pandemic restrictions was identified by a parallel drop in consumption and the Google Mobility Index and a rise in the savings rate. Zero restrictions were imposed on all variables apart from savings in case of other shocks. The Google Mobility index was calculated as a composite indicator of the weighted average of the mobility index for recreation, jobs and transit stations.

Figure 3 Shock contribution to the deviation of the savings rate by periods



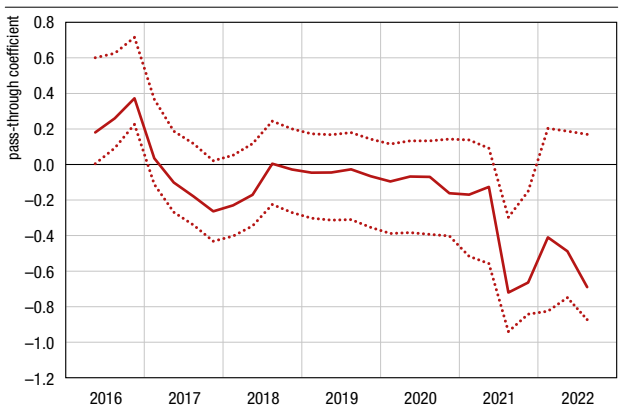
Notes: The "pandemic period" refers to the period from the first quarter of 2020 to the first quarter of 2021. The "inflation period" refers to the period from the second quarter of 2021 to the third quarter of 2022.
Source: CNB estimate.

Figure 4 Pass-through of expected inflation to savings



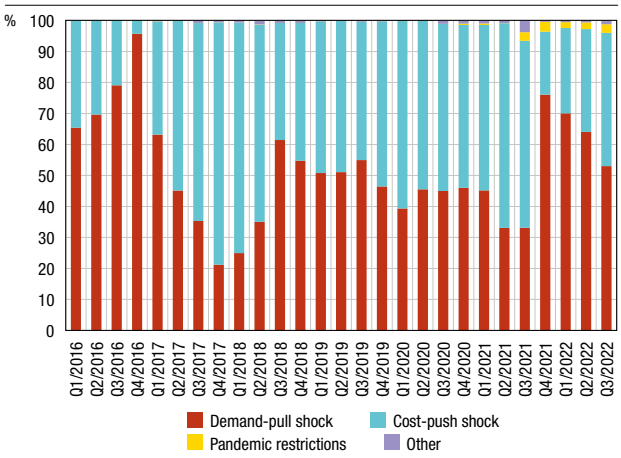
Notes: Dotted lines refer to the 68% credibility band. Though the model also includes the shock of pandemic restrictions and other shocks, the figure shows only supply and demand shocks because of their significant contributions and relevance to explaining the relationship between expected inflation and savings. The pass-through of expected inflation to savings under the impact of the pandemic and other shocks was negative.
Source: CNB estimate.

Figure 5 Pass-through coefficient of expected inflation to savings



Note: Dotted lines refer to the 68% credibility band.
Source: CNB estimate.

Figure 6 Relative importance of individual shocks over time



Source: CNB estimate.

channelled to additional savings (Figure 3). Starting from the second quarter of 2021, the cost shock and the lifting of epidemiological restrictions led to a reduction of the savings rate. Without strong economic activity, the decline in savings would have been even sharper.

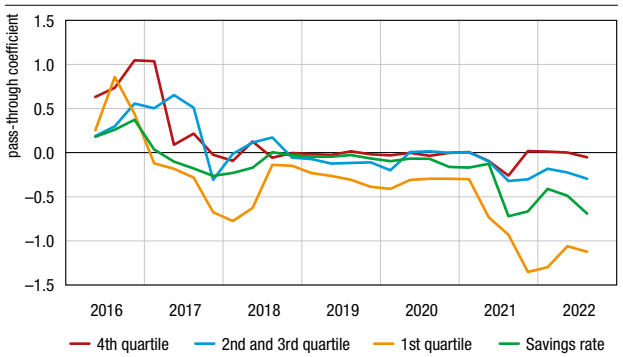
The presented results suggest that the direction of the impact of expected inflation on savings depends on the particular context in which inflation grows. More specifically, inflation growth associated with robust economic growth, that is, growing demand-pull inflation, triggers a rise in savings, while cost-push inflation leads to their reduction (Figure 4).

A further insight into the impact of expected inflation on savings is provided by a coefficient of their relation, which includes the weighted relative importance of a particular shock over time (Figure 5). The coefficient suggests a strong negative impact of inflation on savings during the dominance of cost-push factors in the last two years. Due to the strong shock cost effect, a significant negative correlation between expected inflation and savings is observed in the period of slightly accelerating inflation, which followed the period of deflation (2017 and 2018), and in the current period of mounting inflation.

The impact of inflation on savings also differs among households, depending on their income status and consumer habits. The expected impact of inflation on savings may be analysed by household groups based on consumer survey data.[2] Among other things, the survey comprises information on expected movements in savings across the income distribution.[3] Households in the lowest income bracket (1st quartile) reduced their expected savings the most in attempts to maintain consumption amid rising costs. At the same time, the pass-through coefficient of inflation to expected savings suggests that households with the highest income (4th quartile) do not foresee a significant decrease in savings, despite rising prices (Figure 7). As the bulk of savings is produced by households from upper income brackets, this finding is actually in agreement with aggregate results, which indicate a relatively moderate impact of inflation on the overall level of savings.

2 Business and Consumer Survey (BCS), DG ECFIN.
3 The analysis was made based on the data from the Business and Consumer Survey on the comparison between expected savings (aggregate) with the actual savings rate. As the change dynamics of the balance of responses to the survey faithfully follows the actual savings rate, the results of the analysis made based on expected savings may also be related to the results of the model employing the savings rate.

Figure 7 Pass-through coefficient of expected inflation to expected savings across income distribution



Notes: "Quartiles" refer to income quartiles. "Savings rate" refers to the actual savings rate, that is, the coefficient given in the figure for the coefficient of the pass-through of expected inflation to savings (Figure 5). The model with the same specifications and identifications as for the savings rate was used to capture the presented coefficients, where expected savings of a given quartile were separately entered into the model instead of the savings rate.
Source: CNB estimate.

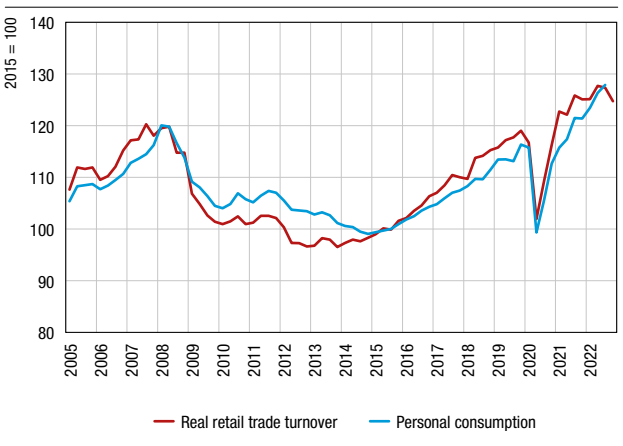
The savings rate has fluctuated sharply in recent years, first in response to epidemiological restrictions and then in response to inflation acceleration. The outbreak of the pandemic led to a "forced" increase in savings in response to the inability to use contact services. By contrast, households responded to cost-push inflationary pressures which have been dominant in the recent period by reducing savings in attempts to maintain the attained level of consumption, in particular households from lower income groups. While this effect mitigates the impact of cost disturbances on economic activity, it may also help enterprises to transfer growing business costs to the prices of final goods and services, thereby reinforcing inflationary pressures. However, this impact is somewhat limited by the fact that expected savings are mostly reduced by households with the smallest income, which cannot have a significant impact on the overall level of consumption. In addition, as the savings rate has already dropped to below pre-pandemic levels, it remains questionable whether it would be possible to reduce savings further in order to maintain consumption and consumer habits.

Box 2 Is personal consumption really growing?

Over the last year, wages have significantly lagged behind inflation, while consumer confidence dropped to levels seen only at the peak of the pandemic. At the same time, retail trade turnover and personal consumption grew sharply in tandem with record tourism performance. This box examines the possibility that retail trade rose largely on account of tourist demand, which would be in line with the movements in tourist spending. Analysis results indeed suggest that the total annual growth in real retail trade turnover was the outcome of good results in tourism, while domestic retail consumption decreased. This may imply that either the rise in personal consumption was overestimated or that consumption was redirected to services or goods not covered by retail trade indicators.

The surge in retail trade turnover and personal consumption that began in mid-2020 continued in the first nine months of 2022 (Figure 1). However, the growth was accompanied by a decrease in real wages and a slump in consumer confidence to very low levels. One of the possible explanations for this discrepancy between personal consumption and its fundamental determinants is an exceptionally good tourist season, that is, the possibility that retail trade growth was actually driven by the spending of non-residents. This hypothesis will be tested by estimating an econometric model for retail trade, which will attempt to separate the contributions of resident demand and non-resident demand to developments in retail trade.

Figure 1 Personal consumption and real retail trade turnover



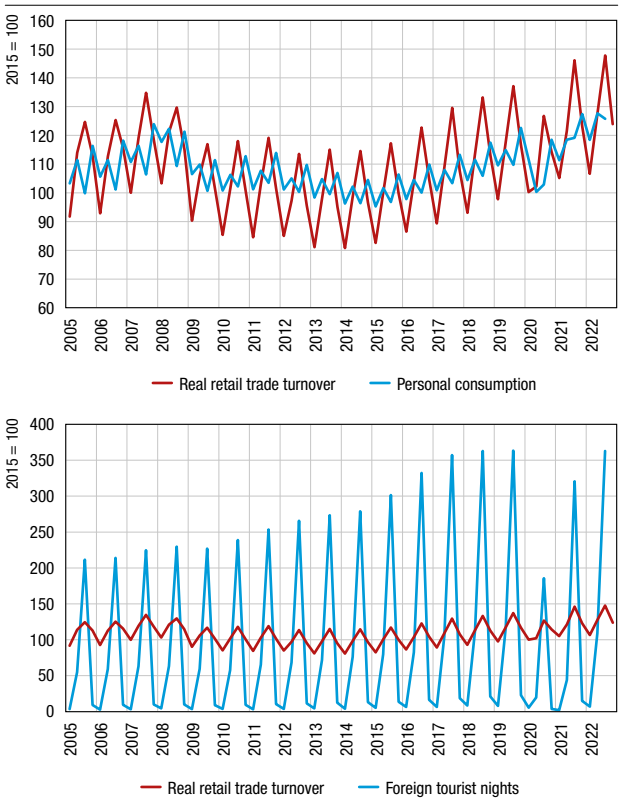
Note: The figure shows seasonally adjusted values.
Source: CBS.

Retail trade accounts for a large share of total household consumption and is highly, though not perfectly, correlated with personal consumption (Figure 1). Retail trade indicators are available with a relatively short time lag and are not subject to subsequent revisions. This is why they are often used in various analyses to make up-to-date estimates of developments in personal consumption, an important component of total GDP. In addition, retail trade is obviously an important indicator used in official calculations of personal consumption expenditures.

Retail trade developments are strongly influenced by the tourist season. In summer months, retail trade turnover is around fifty percent larger than during winter. On the other hand, the intensity of seasonal fluctuations of personal consumption is much weaker than that of retail trade fluctuations (Figure 2), so that the seasonality of retail trade turnover is much more pronounced than the seasonality of the personal consumption series. In addition, personal consumption usually peaks in the fourth quarter, which is the outcome of larger spending before winter holidays. The isolation of the impact of the tourist season on retail trade turnover is not a simple task, so that over the summer months it may be difficult to interpret retail trade developments and correlate them with domestic demand. The surge in retail trade over the summer months may signal a rise in domestic demand, but it may also be the outcome of good performance in the tourist season. Furthermore, the deleterious impact of the coronavirus pandemic on the tourism activity additionally distorted the long-term relationship between these indicators.

To isolate the impact of foreign demand on retail trade turnover, the ordinary least squares (OLS) method was used to estimate the equation where the annual real growth rate of retail trade turnover is treated as a dependent variable, while indicators

Figures 2.a and 2.b Relationship between personal consumption and real retail trade turnover (2.a) and foreign tourist nights and real retail trade turnover (2.b)



Note: The figure shows original (seasonally unadjusted) values.
Source: CBS.

of domestic and foreign demand are used as independent variables. Used as a variable representing the contribution of foreign demand is the contribution of each calendar month to the annual growth rate of tourist nights, that is, the annual growth rate of the number of nights stayed weighted by the share of each individual month in total nights stayed. It would not be appropriate to use only the annual growth rate of the number of nights stayed, as a 1% increase in the number of nights stayed during a summer month would not have the same impact on retail trade developments as an equal increase during winter months. To further test the stability (robustness) of the estimated relationship, the absolute annual change in the number of nights stayed was used in alternative models instead of the contribution to the change in the number of nights stayed. Variables that are usually considered as the main determinants of personal consumption were used as other independent variables to explain changes in real retail trade turnover: annual rate of change in employment, real net wages and standardised values of the consumer confidence index as well as the annual change in the unemployment rate. The model results are given in Table 1.

The coefficient with the contribution of the number of nights stayed is significant and positive in all models and ranges from 0.54 to 0.67. This indicates that a 1 percentage point contribution to the annual increase in the number of nights stayed raises retail trade turnover by around 0.6 percentage points. This relationship does not change if pre-pandemic data are used in the model estimate. The models that use the absolute change in the number of nights stayed (models 6 and 7) also indicate a significant and positive effect of changes in the number of nights stayed on retail trade growth, where the growth in the number of nights of one million from the same month of the previous year has a positive impact on retail trade turnover of around 1 percentage point.

The calculation of contributions of domestic and foreign factors on the basis of estimated models (Table 2) shows that the impact of non-resident demand in the period from June to September this year constantly exceeded retail trade growth in all estimated models. This suggests that the contribution of domestic demand to retail trade was negative and that the domestic component of retail trade already decreased on an annual basis in those months.

Assuming that the number of nights stayed by foreign tourists in October 2022 was the same as in October 2019 (i.e. along the lines of those seen in the preceding part of 2022), as indicated by eVisitor data, the negative contribution of the domestic component was probably even larger in this October (Table 3).

Developments in real retail trade turnover up to the second quarter of 2022 may be well explained by domestic determinants

Table 1 OLS regression results

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Nights stayed (contribution)	0.6114*** (0.1072)	0.5426*** (0.1017)	0.5611*** (0.1021)	0.6744** (0.1118)	0.5814*** (0.2319)		
Nights stayed (number)						0.0012*** (0.0002)	0.0010*** (0.0002)
Unemployment	–1.0572*** (0.2081)	0.6044* (0.3249)		–0.0199 (0.0460)	–0.2728 (0.2216)	0.0407 (0.0504)	0.1223** (0.0484)
Employment		1.2506*** (0.2824)	0.8622*** (0.1918)	0.8359* (0.3318)	0.3265** (0.1846)	1.1160*** (0.3346)	1.4899***
Wages	0.3379** (0.1499)	0.4113*** (0.1539)	0.3775** (0.1542)	0.5022*** (0.1661)	0.5961*** (0.1170)	0.5626*** (0.1710)	0.4081** (0.1588)
Confidence	0.2801*** (0.0424)	0.2596*** (0.0467)	0.2292*** (0.0441)	0.0954*** (0.0338)	0.0954 (0.0338)		0.2570*** (0.0476)
Const.	–0.5414 (0.3508)	0.6966** (0.3860)	0.4488 (0.3654)	0.5647 (0.4309)	0.0299 (0.2768)	0.9223** (0.4319)	0.9956** (0.3948)
Period	ALL	ALL	ALL	ALL	UP TO THE PANDEMIC	ALL	ALL
Observation	193	147	147	147	120	147	147
R-square	0.57018	0.590249	0.609185	0.535433	0.665968	0.527028	0.607974

Note: *** – P ≤ 0.01, ** – P ≤ 0.05, * – P ≤ 0.10
Source: CNB calculations.

Table 2 Estimate of the contribution of domestic demand

Model	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Coefficient	0.611	0.543	0.561	0.674	0.581	0.001	0.001
Retail trade (June, YoY)	3.8	3.8	3.8	3.8	3.8	3.8	3.8
Retail trade (July, YoY)	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Retail trade (August, YoY)	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Retail trade (September, YoY)	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Tourism contribution (June)	6.3	5.6	5.8	6.9	6.0	7.6	6.6
Tourism contribution (July)	4.3	3.9	4.0	4.8	4.1	5.2	4.5
Tourism contribution (August)	1.5	1.4	1.4	1.7	1.5	1.9	1.6
Tourism contribution (September)	0.9	0.8	0.8	1.0	0.9	1.1	0.9
Gap (June)	**–2.5**	**–1.8**	**–2.0**	**–3.1**	**–2.2**	**–3.8**	**–2.8**
Gap (July)	**–1.7**	**–1.3**	**–1.4**	**–2.2**	**–1.5**	**–2.6**	**–1.9**
Gap (August)	**–1.1**	**–0.9**	**–1.0**	**–1.3**	**–1.0**	**–1.4**	**–1.2**
Gap (September)	**–0.6**	**–0.5**	**–0.5**	**–0.7**	**–0.5**	**–0.7**	**–0.6**

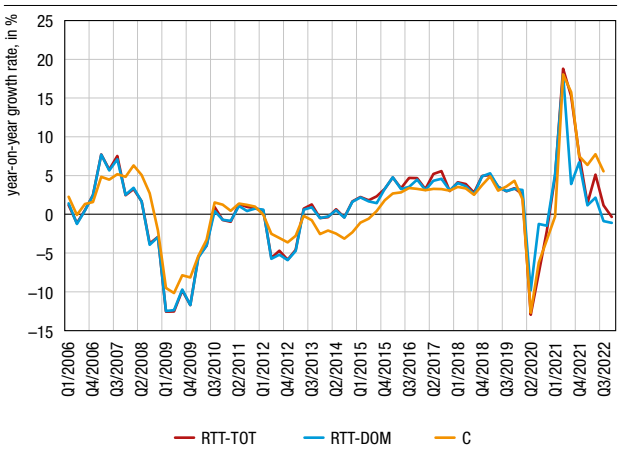
Source: CNB calculations.

Table 3 Domestic and foreign contributions to the annual rate of change in retail trade turnover

Month	Number of nights stayed by foreign tourists	Number of nights stayed (YoY)	Number of nights stayed (contribution, YoY)	Retail trade (YoY)	Foreign component (contribution)	Residual (domestic component contribution)
1/21	76	–76.5	–0.7	–1.1	–0.4	–0.7
2/21	79	–80.1	–0.9	–0.9	–0.5	–0.4
3/21	175	–4.5	0.0	16.6	0.0	16.6
4/21	396	1,421.8	1.0	32.6	0.6	32.1
5/21	1,194	1,079.7	3.1	16.6	1.7	15.0
6/21	5,663	80.8	7.2	10.9	3.9	7.0
7/21	19,225	44.1	16.6	12.8	9.0	3.8
8/21	23,962	65.0	26.7	18.5	14.5	4.0
9/21	9,605	253.5	19.5	14.5	10.6	3.9
10/21	1,810	344.9	4.0	8.4	2.2	6.2
11/21	337	130.8	0.5	5.9	0.3	5.6
12/21	327	297.6	0.7	8.6	0.4	8.2
1/22	260	243.9	0.3	2.0	0.2	1.8
2/22	334	323.7	0.4	0.3	0.2	0.1
3/22	558	218.2	0.6	1.8	0.3	1.5
4/22	2,097	430.0	2.7	7.5	1.5	6.1
5/22	3,701	210.1	4.0	4.3	2.2	2.2
6/22	12,166	114.8	10.3	3.8	5.6	–1.8
7/22	23,686	23.2	7.1	2.6	3.9	–1.3
8/22	25,530	6.5	2.5	0.4	1.4	–0.9
9/22	10,531	9.6	1.5	0.3	0.8	–0.5
10/22	2,694	48.8	1.4	–0.3	0.8	–1.1

Note: The figure shows an estimate of results for model 3.
Source: author's calculations.

Figure 3 Annual growth rates of personal consumption (C), total real retail trade turnover (RTT-TOT) and retail series with excluded consumption by foreign tourists (RTT-DOM)



Note: Data for the fourth quarter of 2022 refer to October.
Sources: CBS and CNB calculations.

of personal consumption. After that, there is a visible divergence between the components of domestic retail trade and total retail trade, with the domestic component growing only marginally in the second quarter of 2022 and falling on an annual level in the third quarter. This suggests that retail trade growth in the third quarter was driven exclusively by tourist spending (Figure 3). Developments in personal consumption from the national accounts follow the dynamics of total real retail trade turnover better than the estimated domestic component of real retail trade turnover. This may suggest that either household consumption in 2022 has turned to services and other components not covered by retail trade or that larger spending by non-residents has been incorrectly interpreted and caused an overestimation of personal consumption.

4 Labour market

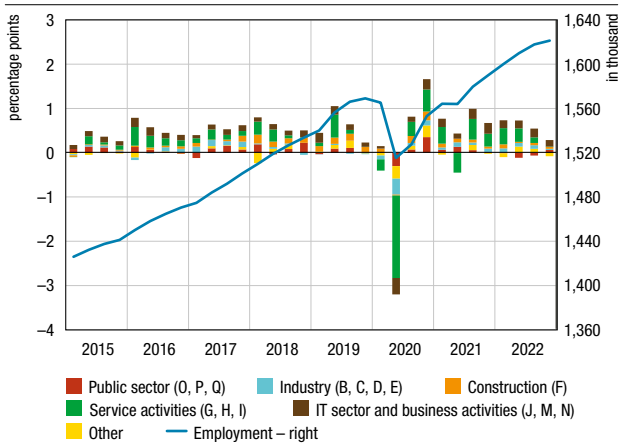
Employment and unemployment

The labour market has proved resilient to recent adverse economic events, despite a very gradual weakening of favourable trends. In the third quarter, total employment rose by 0.5% from the previous quarter, when employment growth was a little higher, 0.6%. Employment in the IT sector made the biggest contribution to total employment growth, followed by the contribution of tourism-related service activities, while the number of employed persons in the public sector fell (Figure 4.1). At the annual level, the number of employed persons was 2.4% higher in the third quarter of this year than in the same period in 2021. Available data for October hint at a continued slowdown in employment growth, with the highest quarterly employment rate still recorded by the IT sector. The job vacancy rate almost held steady in October at an elevated level of 1.28%.

Employment growth led to a further decline in the unemployment rate. The registered unemployment rate fell to 6.8% of the labour force in the third quarter, from 6.9% in the previous three months. The absence of any very sharp fall in the unemployment rate, despite employment growth, can largely be explained by an increase in employment of third-country workers (from non-EU countries) and increased employment of retirees on a half-time basis. Data for October suggest a continued decline in the unemployment rate to 6.6%. There were 112 thousand unemployed persons in October, as against 123 thousands in the same month in the previous year (Figure 4.2). The internationally comparable ILO unemployment rate is available for the second quarter of 2022, when it grew to 7.6% of the labour force (seasonally adjusted), remaining, however, at a lower level than in the same period in the previous year, when it was 8.4% (Figure 4.3%).

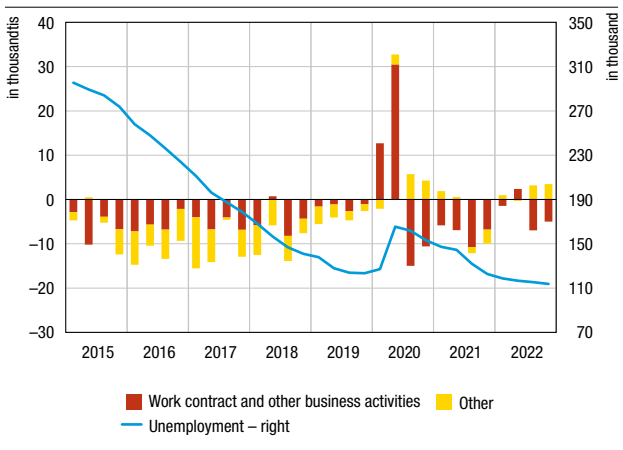
The employment rate in the April to June period amounted to 48.5%, exceeding the level from the same period in the previous year. The long term growth trend in the unemployment rate thus continued. The participation rate also went up annually to

Figure 4.1 Employment by NCA
levels



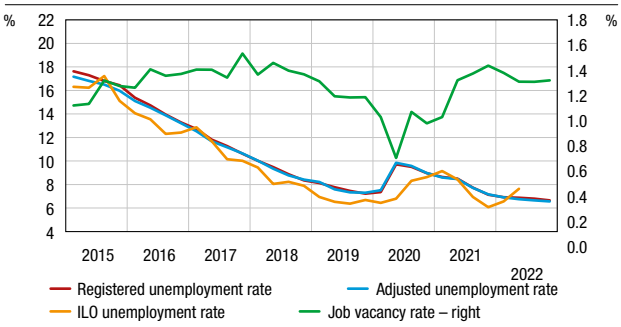
Note: Data for the fourth quarter of 2022 refer to October.
Source: CPII (seasonally adjusted by the CNB).

Figure 4.2 Total unemployment and net unemployment inflows
seasonally adjusted data



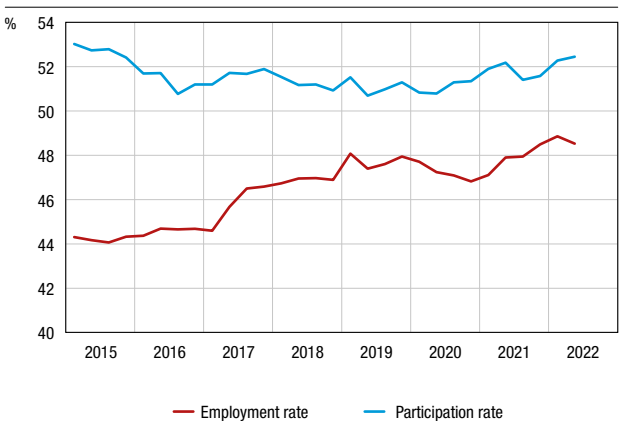
Note: Data for the fourth quarter of 2022 refer to October.
Source: CES (seasonally adjusted by the CNB).

Figure 4.3 Unemployment and job vacancy rates
seasonally adjusted data



Notes: Since January 2015, the calculation of the registered unemployment rate has used data on employed persons from the JOPPD form. The adjusted unemployment rate is the CNB estimate and is calculated as the share of the number of registered unemployed persons in the working age population, estimated as the sum of unemployed persons and persons insured with the CPII. The job vacancy rate is calculated as the share of total posts that are vacant in the total demand for labour (the sum of the number of persons insured with the CPII and vacant posts). Data for the registered and the adjusted unemployment rate for the fourth quarter refer to October.
Sources: CBS, CES and CNB calculations (seasonally adjusted by the CNB).

Figure 4.4 Labour Force Survey
seasonally adjusted series



Source: CBS (seasonally adjusted by the CNB).

52.4% (Figure 4.4).

Wages and unit labour costs

In the third quarter of 2022, the growth of nominal gross wages decelerated to 1.7% from 2.7% in the previous quarter. Nominal gross wages in the private sector grew more than 10% annually in both the second and the third quarter, whereas public sector wages increased at a considerably slower rate. However, despite the relatively high growth rates, nominal wages lagged behind the rise in the general price level since the second half of the previous year, with the result that real wages continued to decrease at the quarterly level (down by 1.1% in the third quarter). Data for October show that real net wages continued to drop in the fourth quarter (Figure 4.5).

Although they lagged behind the growth in prices, wages grew faster than labour productivity, so that the nominal unit labour cost increased in the second quarter of 2022 (Figure 4.6).

Projected developments

Following the 2.2% increase in employment in 2021, the number of employed persons is expected to grow by 2.5% annually in 2022. Employment in the private sector could contribute more to employment growth than employment in the public sector while a significant share of new employees could be accounted for by workers from third countries. The number of unemployed persons is likely to decline in 2022 and the ILO unemployment rate could drop to 6.9% of the labour force from 7.6% in 2021.

The average nominal gross wage could increase by 8.7% in 2022, with the growth of private sector wages slightly exceeding that of public sector wages. The build-up of inflationary pressures made an impact on nominal wages amid strong demand for workers and the lack of qualified labour, which have strengthened the bargaining power of workers. With regard to the public sector, it has been agreed that the wage calculation base for civil servants and government employees will be raised by 6% starting from 1 October 2022 and by 2% from 1. April 2023. Despite a significant expected rise in the average nominal gross wage, its real value could fall by 1.7% from 2021 due to the expected strong increase in consumer prices.

The marked economic slowdown is expected to spill over to the labour market in 2023. Total employment could grow by

Table 4.1 Estimate and projection of labour market indicators for 2021 and 2022

year-on-year rate of change, in %

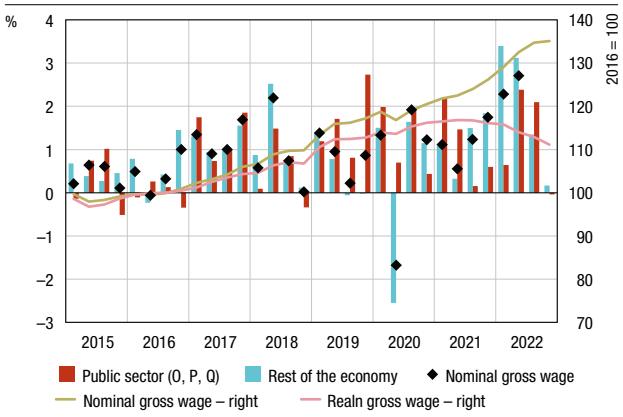
	2018	2019	2020	2021	2022	2023
Number of employed persons – CPII	2.3	2.3	–1.2	2.2	2.5	0.4
Number of employed persons – national accounts	2.6	3.1	–1.2	1.2	2.5	0.4
Participation rate (ILO)	51.2	51.2	51.0	51.8	52.9	53.4
Unemployment rate (ILO)	8.4	6.6	7.5	7.6	6.9	6.8
Average nominal gross wage	4.9	3.8	2.5	4.1	8.7	7.9
ULC	3.7	0.0	10.4	–5.5	4.0	6.9
Productivity	0.2	0.3	–7.5	11.7	3.7	0.9

Note: The year-on-year rates of change in employment refer to data on persons insured with the CPII, year-on-year rates of change in the average gross wage until 2016 refer to data from the JOPPD form, whereas year-on-year rates of change in unit labour costs and productivity refer to national accounts data. The estimate and projection of unit labour costs (and productivity) assume that the rise in employment and total employment in the national accounts will be equal to the expected increase in the number of persons insured with the CPII. Average gross nominal wages are recorded on an accrual basis.

Sources: CBS, Eurostat, CPII and the CNB projection.

Figure 4.5 Average nominal gross wage

seasonally adjusted data, quarterly rate of change and levels

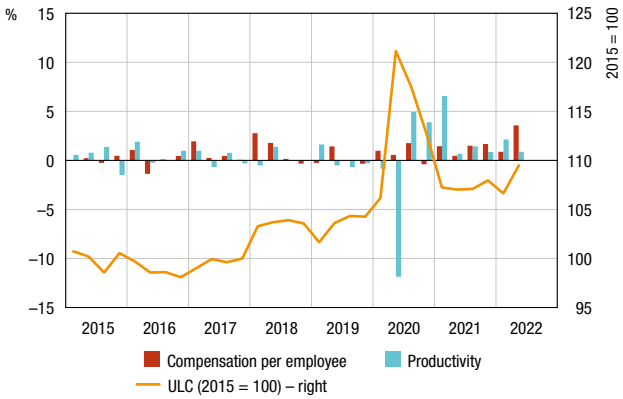


Notes: Data on the average nominal gross wage by activity refer to data from the RAD-1 form, and from January 2016 to data from the JOPPD form. Data for the fourth quarter of 2022 refer to October.

Source: CBS (calculated and seasonally adjusted by the CNB).

Figure 4.6 Compensation per employee, productivity and unit labour costs

seasonally adjusted data, quarterly rate of change and levels (2015 = 100)

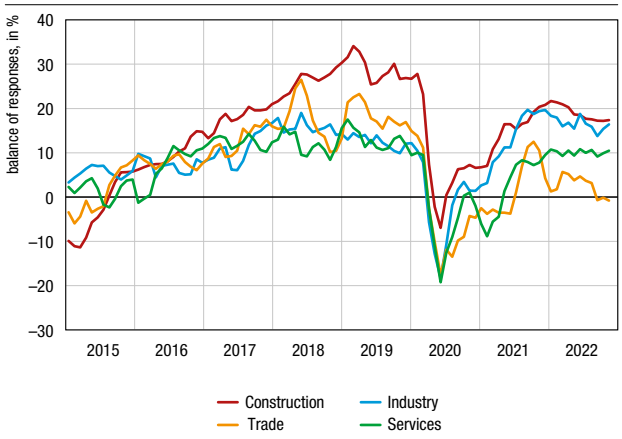


Note: In the calculation of unit labour costs, paid compensation of employees and real GDP were taken from the national accounts, while data on the number of employees (persons employed in legal persons and natural persons who received compensation) and total employment were taken from the CPII.

Sources: CPII and Eurostat (seasonally adjusted by the CNB).

Figure 4.7 Employment expectations by sectors (in the following three months)

seasonally adjusted data, three-member moving average of monthly data



Source: Ipsos (seasonally adjusted by the CNB).

0.4%, while the ILO unemployment rate could drop to 6.8% of the labour force. The average nominal gross wage is expected to decelerate to 7.9%. However, real wages could edge up by 0.5% as inflationary pressures ease.

5 Inflation

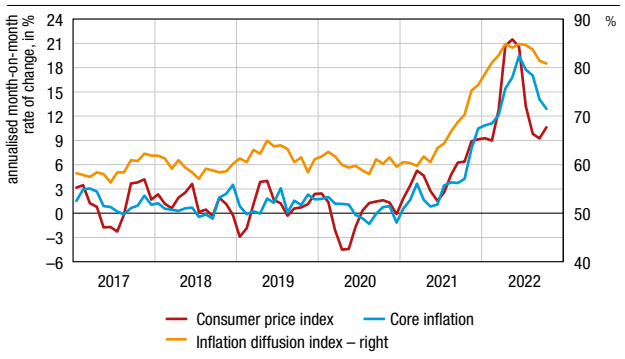
Consumer price inflation (CPI) accelerated in almost every one of the first ten months of 2022, although at a declining pace in the second half of the year, rising to 13.2% in October from 5.5% at the end of 2021. These trends primarily resulted from the spillover of the high global prices of energy products and food and industrial raw materials to domestic producer and consumer prices. Although perceptibly subdued at the end of the observed period, pressures arising from delays in global supply chains also pushed prices up. As a consequence of all this, the inflation diffusion index, that is, the share of products whose prices increased in the total number of products, increased, hitting a thirty-year high at mid-year (Figure 5.1). However, the inflation diffusion index decreased in the second half of the year, due to price caps on some energy products and basic food products that softened the intensity of inflation growth. In addition, current inflationary pressures eased in the second half of the year, as did the statistical effect of the base period related to a sharp acceleration of inflation in the second half of 2021, which suggests that the inflation rate will gradually stabilise.

The largest contribution to the acceleration of the annual inflation rate in the last four months came from the prices of food and services (Figure 5.2.). The annual growth rate in food prices (including alcohol and tobacco) increased from 14.3% in June to 17.2% in October, mostly due to the spillover of the mentioned imported cost pressures. The prices of meat preparations, cheese and eggs, vegetables, bread and cigarettes were major contributors to the increase. The acceleration of the food price growth would have been even sharper if the prices of nine basic food products had not been limited by a set of measures adopted in autumn.[4] The annual growth rate of services prices accelerated from 5.3% in June to 7.2% in October. This increase was boosted by a large number of subcomponents, in particular by hotel and restaurant services, propelled by the continued recovery of Croatian tourism.[5] Specifically, the growth of prices in restaurants and coffee shops was generated by rising input costs (the prices of food and beverages as well as energy products) and inflation pressures stemming from wage increases (amid the lack of a qualified labour force in hotels and restaurants) and the growth of demand for related services following the lifting of containment measures. Due to ongoing delays in supply chains and the spillover of an earlier increase in the prices of energy and industrial raw materials, the annual growth in consumer prices of industrial products accelerated at a relatively low rate, up from 9.6% in June to 10.1% in October. The prices of household goods and personal care products grew the most.

Core inflation (which excludes agricultural product prices, energy prices and administered prices) accelerated sharply from 11.3% in June to 14.2% in December (Table 5.1) as a result of the mentioned rise in the contribution of the prices of processed food products, market-based services, in particular hotels and restaurants and accommodation services, and industrial products.

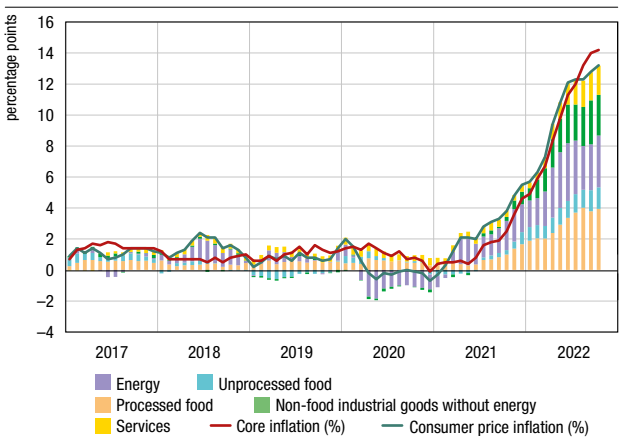
In contrast, the annual rate of growth in energy prices dropped from 22.2% in June to 19.9% in October, primarily as a result of a slowdown in the annual rate of growth in refined petroleum products prices, caused by a marked fall in global crude oil prices and the beneficial base period effects. The average price of a barrel of Brent crude oil (in US dollars) was 22% lower in October than in June due reports on the global economic slowdown. The administrative prices of energy products

Figure 5.1 Indicators of current inflation trends



Notes: The month-on-month rate of change is calculated from the quarterly moving average of seasonally adjusted consumer price indices. The inflation diffusion index is measured by a 6-month moving average. The inflation diffusion index shows the share of the number of products that increased in price in a given month in the total number of products and is based on the monthly rates of change derived from the seasonally adjusted components of the HICP.
Sources: CBS and Eurostat.

Figure 5.2 Year-on-year inflation rate and contributions of components to consumer price inflation



Note: Core inflation excludes agricultural product prices, energy prices and administered prices.
Sources: CBS and CNB calculations.

4 Sunflower oil, long-life milk, flour, sugar, whole chicken and some kinds of pork.

5 The acceleration of the annual growth of services prices was also driven by the prices of the repair and maintenance of personal transport equipment, refuse collection, insurance and personal care.

Table 5.1 Price indicators

year-on-year rate of change

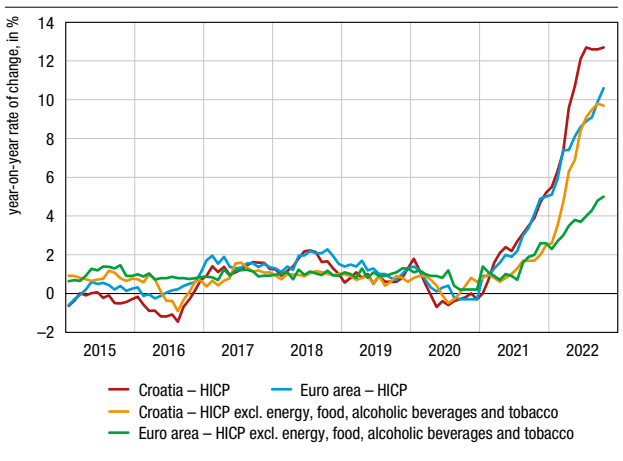
	12/2021	3/2022	6/2021	9/2022	10/2022
Consumer price index and its components					
Total index	5.5	7.3	12.1	12.8	13.2
Energy	11.0	13.3	22.2	17.7	19.9
Unprocessed food	9.0	9.5	12.9	16.0	16.4
Processed food	7.0	9.0	14.9	16.8	17.5
Non-food industrial goods without energy	3.1	5.8	9.6	10.9	10.1
Services	1.7	2.6	5.3	6.9	7.2
Other price indicators					
Core inflation	4.6	6.7	11.3	14.0	14.2
Index of industrial producer prices on the domestic market	19.6	24.7	30.8	30.2	23.6
Index of industrial producer prices on the domestic market (excl. energy)	4.3	6.8	9.9	11.5	11.8
Harmonised index of consumer prices	5.2	7.3	12.1	12.6	12.7
Harmonised index of consumer prices at constant tax rates	5.0	7.3	13.4	14.1	14.4

Note: Processed food includes alcoholic beverages and tobacco.
Sources: CBS and Eurostat.

(electricity[6], natural gas and heat energy) were relatively stable in the last four months, while the prices of solid fuels, which are freely determined, increased sharply.

The consumer price inflation rate measured by the harmonised index of consumer prices (HICP) accelerated in the euro area too, rising from 8.6% in June to 10.6% in October 2022. (Figure 5.3). The increase was primarily driven by food prices, which account for about one fourth of total inflation. The acceleration of food prices resulted from the spillover of an earlier increase in production costs and the effect of the summer drought. Another increase was recorded in the contribution of the prices of industrial products (clothing, among others) and services, in particular the prices of transportation services, which rose due to specific factors, such as the expiry of the subsidised transport pass in Germany. After having grown in the second half of the year, the contributions of the prices of industrial products and service make up about one third of total euro area inflation.

Figure 5.3 Indicators of price developments in Croatia and the euro area



Sources: CBS and Eurostat.

6 Electricity prices edged up in October due to the growth of these prices for households whose consumption exceeds the threshold up to which prices are fixed at a lower level.

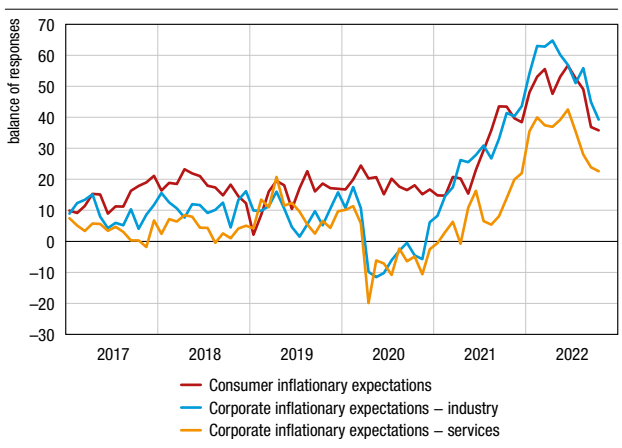
The contribution of energy prices almost held steady in the observed period: the accelerated annual growth of natural gas and electricity prices was offset by the decelerated growth of refined petroleum product prices. However, energy prices continued to account for the largest share of total euro area inflation.

Croatia's HICP inflation went up from 12.1% in June to 12.7% in October, 2.1 percentage points more than euro area inflation (for more information, see Box 3 Why is inflation in Croatia higher than in the euro area? The core inflation rate (measured by the HICP excluding energy, food, alcoholic beverages and tobacco) accelerated to 9.7% in October from 8.4% in June, exceeding the euro area rate by a considerable 4.7 percentage points. Croatia's core inflation rate differs from that in the euro area in that both of its components (industrial products and services) grew at a higher rate.

Inflationary expectations

Short-term inflationary expectations of consumers and corporate managers in Croatia's industrial sector decreased in the period between June and October 2022, remaining, however, relatively high (Figure 5.4). The recent decrease in consumers'

Figure 5.4 Short-term consumer and corporate inflationary expectations



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

inflationary expectations was probably due to the measures the Croatian government implemented this year to subdue the growth of the consumer prices of energy products and basic food products. The downward trend in the inflationary expectations of industrial enterprise managers can probably be linked to the expectations of a decline in production process costs, arising from, among other things, a drop in the prices of food and industrial raw materials in the world market in the third quarter of 2022 and the expected continuation of this trend, indicated by developments in futures markets. In addition, the share of corporate managers claiming that the lack of materials and equipment limits their operation decreased (Figure 5.5), which points to the weakening of inflationary pressures caused by delays in supply chains, a factor that could also have curtailed inflationary expectations. Additionally, government measures adopted in autumn to ensure the stability of electric and heat energy prices for the corporate sector could also have diminished inflationary expectations.

In the second half of the year, economic analysts gradually revised upwards their short-term expectations regarding Croatia's average annual inflation in 2022, projecting the inflation rate to stand at 8.9% in the survey carried out in June, compared with 10.4% projected in the survey from November (Figure 5.6). This was probably brought about by the fact that inflation rates were higher than anticipated in the preceding months and by assessments that upward pressures on prices could be stronger and more persistent than projected. Analysts expect inflation to slow down further in 2023 from 2022, but to remain elevated. Inflationary expectations for 2023 were gradually revised upwards, from 4.3% in June to 6.5% in November.

Projected developments

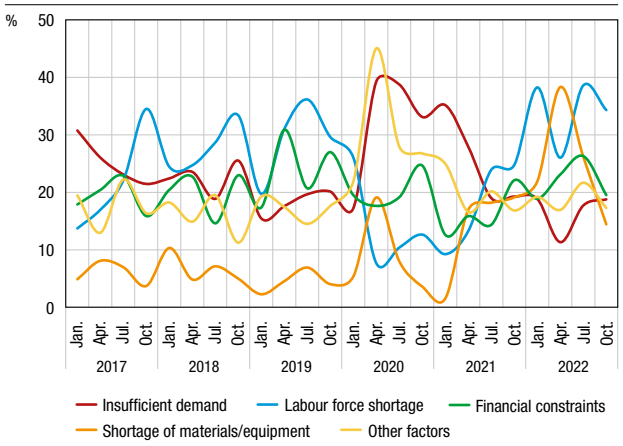
In accordance with developments in the first nine months, average annual HICP inflation is expected to accelerate sharply to 10.6% in 2022 from 2.7% in 2021. The acceleration of the average annual inflation rate was driven by increases in the annual growth rates of all main inflation subcomponents, in particular core inflation (HICP excluding food and energy). Food prices could also aid the acceleration of inflation, although to a smaller extent, while the contribution of energy prices is expected to be lower, given that the prices of food and energy started to grow earlier than other inflation components and therefore influenced trends in the previous year.

The annual core inflation rate could grow to 7.3% in 2022 from 1.3% in 2021, reflecting the prolonged period of inflationary pressures, on both the supply and the demand side. The main pressures on inflation in the first half of the year were associated with the high prices of energy products and other raw materials, high freight rates and disturbances in supply chains caused by the war in Ukraine, i.e., supply side pressures. The second half of the year saw pressures coming from the demand side, primarily including those related to non-resident demand for tourist services.

The annual rate of growth in food prices could amount to 12.8%, which is significantly above the 2.6% of the previous year. The growth of food prices accelerated due to the spillover on retail food prices of preceding rises in the global prices of food raw materials and mineral fertilisers as well as of growing energy prices. The higher food price growth rate was partly caused by disturbances in the chains of supply, especially the supply of the product groups in the global production of which Russia and Ukraine account for a large share.

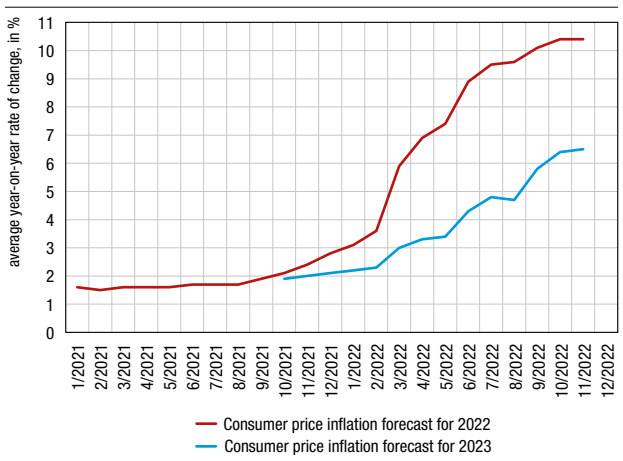
The average annual rate of growth in energy prices could leap from 8.8% in 2021 to 20.0% in 2022 due to the acceleration of

Figure 5.5 Factors limiting industrial production



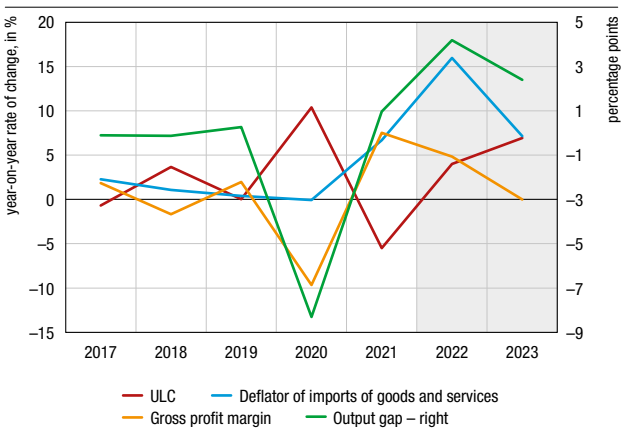
Source: Ipsos.

Figure 5.6 Short-term inflationary expectations by economic analysts



Source: Eastern Europe Consensus Forecasts.

Figure 5.7 Domestic and foreign inflation indicators

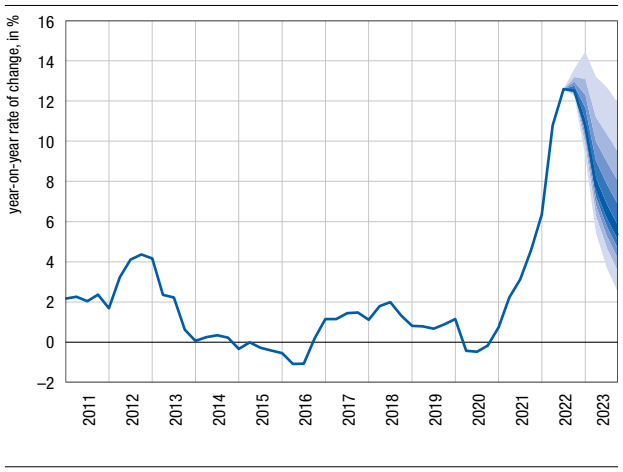


Note: Gross profit margin is calculated as the difference between the annual rate of change of the GDP deflator and the annual rate of change of unit labour costs.
Sources: Eurostat, CBS and CNB calculations.

the growth of prices of most energy subcomponents, both those that are mostly market-defined (refined petroleum products[7] and solid fuels) and those with administered prices (electricity and natural gas).

Croatia's annual inflation rate could start decelerating at a stronger pace in early 2023, so that the average annual inflation rate is expected to stand at 7.5%, compared with 10.6% in 2022. The projected inflation slowdown resulted from the stabilisation of inflationary pressures and the gradual disappearance of the base effect that the high growth rate of current inflation in 2022 had on the annual inflation rate in 2023. In addition, a slowdown in the inflation rate is also indicated by the alleviation of inflation pressures from the external environment, due in particular to the fall of the prices of crude oil and other raw materials in the world market. Given future market prices, this alleviation is expected to continue in the remaining part of the projection period. The slowdown in overall inflation could result in a lower annual increase of all inflation subcomponents: energy prices could rise 10.6% in 2023, instead of the 20.0% of 2022, food prices only 7.8% instead of 12.8%, while core inflation could be 6.6% instead of the previous year's 7.3%.

Figure 5.8 Projection of consumer price inflation



Sources: CBS and CNB calculations.

If the national consumer price index is observed, due to the relatively small differences from the harmonised consumer price index[8], average annual rates could be equal in the current and following years. In terms of the national index, inflation is expected to pick up to 10.5% in 2022 from 2.6% in 2021 and to slow down to 7.5% in 2023.

The inflation projection is surrounded by great uncertainty and considerable risks, especially as regards 2023. The prevailing risks are that inflation could be higher than anticipated and that the return to low and stable inflation rates could take longer than expected. The main risk for the realisation of projected inflation in Croatia is posed by higher than expected inflation in Croatia's main trading partners. Most recent global inflation forecasts have proved to be wrong, so that the precision of new global forecasts is questionable. As the reasons for the rapid acceleration of global inflation are still unclear, no precise projections can be made regarding the expected fast slowdown of inflation. The inflation rate is under the increasingly strong influence of medium-term structural factors, such as deglobalisation and orientation to renewable energy sources due to climate change, and structural factors mostly reduced the inflation rate in the previous periods. Additionally, the uncertainty surrounding the prices of energy and other raw materials amid the war in Ukraine could lead to price increases if additional sanctions are imposed on Russia, if supply chain disturbances grow due to the escalation of the war between these two countries and if the supply of raw materials from Russia, most importantly energy products, declines. Risks arising from domestic inflationary pressures could reflect potentially faster than expected wage growth, which could spill over to an increase in Croatia's consumer price inflation.

By contrast, risks that could drive inflation lower than anticipated are less pronounced. These risks stem from a drop in the prices of energy products and other raw materials in the world market and lower than expected food prices, primarily resulting from a possible de-escalation of the war in Ukraine and the revocation of sanctions imposed on Russia. Inflation could also be lower if monetary policies tighten faster or responses to the tightening implemented so far are stronger, which could result in the weakening of inflationary pressures. These pressures could also be lower if economic activity slows down more than expected.

Box 3 Why is inflation higher in Croatia than in the euro area?

Inflation measured by the harmonised index of consumer prices was much higher in Croatia than in the euro area in 2022. The biggest contributions were made by food prices, followed by the prices of services and industrial products, while the contribution of energy prices was lower in Croatia than in the euro area. There were several probable causes for the divergence in inflation between Croatia and the euro area, including a sharp increase in non-resident demand for tourist services, a stronger economic recovery, a decrease in domestic market competition and differences in the consumer basket structure arising from the larger share of food and accommodation services' prices in Croatia's consumer basket. The difference in inflation between Croatia and the euro area is expected to diminish in 2023.

Croatia's consumer price inflation (measured by the harmonised index of consumer prices, HIPC) had for a long time followed trends in the euro area.[9] With relatively small deviations in the long term, both overall and core inflation (measured by the HICP excluding energy, food, alcohol and tobacco) Croatia's inflation and euro area inflation were still equal[10] in 2021. However, in the first ten months of 2022, inflation in Croatia accelerated

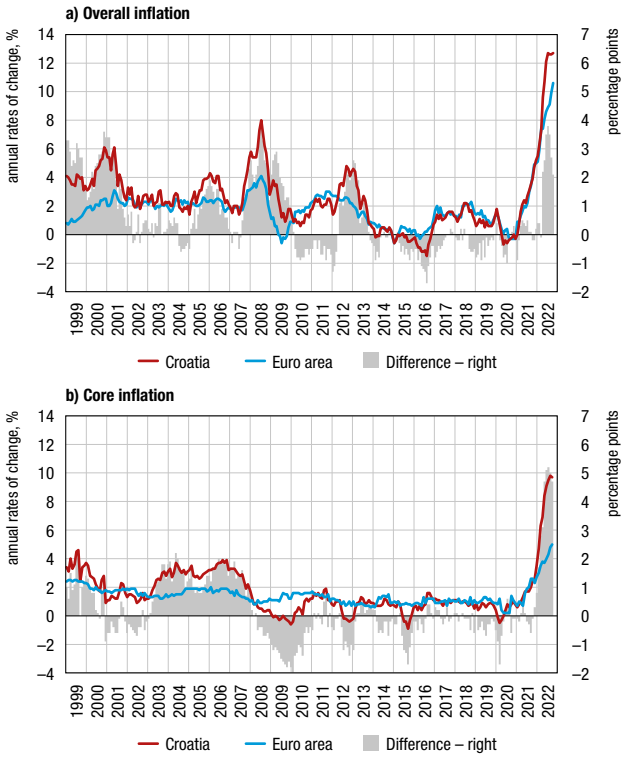
7 The Croatian government made several interventions in the refined petroleum product market since March: first by temporarily reducing excise duties on petrol and diesel fuels and fixing the margins of oil traders and then by periodically setting the maximum retail price of basic petrol and diesel fuels (set on Tuesday for another seven or fourteen days).

8 For differences between these two indices, see Box 2 Comparison of the national and harmonised index of consumer prices in Croatia, Macroeconomic Developments and Outlook No. 12, July 2022.

9 Between the beginning of 1999 and the end of 2021, the annual overall inflation rate in Croatia was on average 0.6 percentage points higher than the euro area inflation rate. In a somewhat shorter period from the beginning of 2002 to the end of 2021, Croatia's core inflation exceeded euro area inflation by an average of 0.1 percentage points and its overall inflation was 0.3 percentage points higher.

10 In December 2021, Croatia's overall inflation stood at 5.2%, relative to 5.0% in the euro area, while its core inflation amounted to 2.5%, relative to 2.6% in the euro area.

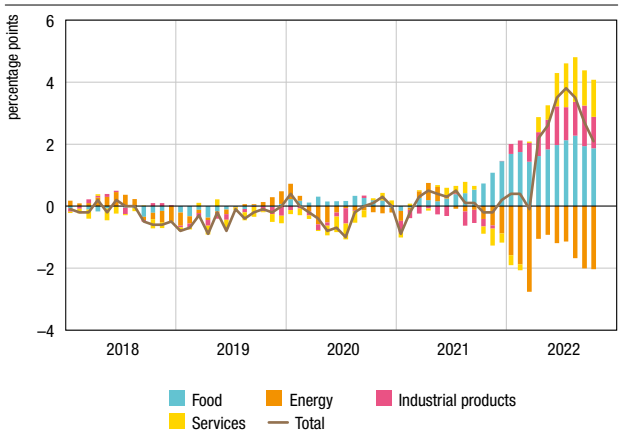
Figure 1.1 Inflation developments in Croatia and the euro area



Notes: Core inflation in Croatia is measured by the harmonised index of consumer prices that excludes energy, food, alcoholic beverages and tobacco prices. In other words, core inflation includes the prices of industrial products and services.
Sources: Eurostat and CNB calculations.

more than in the euro area (Figure 1.1). The difference between overall inflation in Croatia and that in the euro area peaked at 3.8 percentage points in July 2022[11], decreasing to 2.1 percentage points by October. The difference between core inflation rates reached the maximum of 5.2 percentage points in August 2022, falling to 4.7 percentage points by October. The text below

Figure 1.2 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.

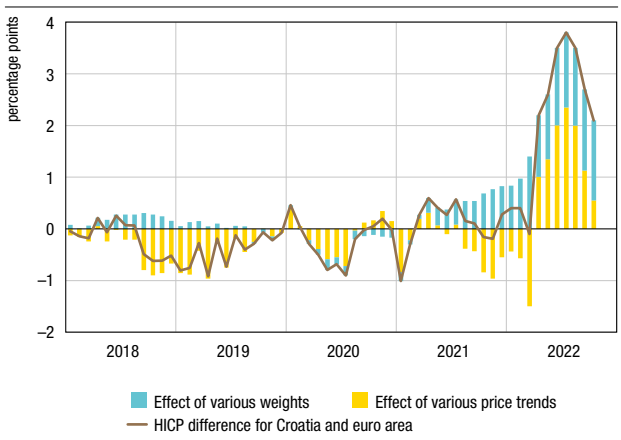
11 The same divergence was recorded in the previous period of heightened inflation in July 2008.

explains the main reasons for the divergence in inflation between Croatia and the euro area.

An analysis of the difference between the contributions of the main components of overall inflation in Croatia and that in the euro area (Figure 1.2) shows that Croatia's inflation was higher in October 2022 primarily because of the contribution of food prices (including alcohol and tobacco prices). The second largest contribution was that of services prices, followed by the contribution of industrial product prices. In contrast, the contribution of energy prices was lower in Croatia than in the euro area.

The differences between the contributions of individual components can be explained by the different trends of their prices and/or their different shares in the consumer baskets, which reflect variations in consumer preferences.[12] The recent divergence in inflation between Croatia and the euro area is also due to differences between the weights of individual components and their price trends (Figure 1.3), with the effect of price

Figure 1.3 Impact of different movements in prices and weights in Croatia and the euro area



Sources: Eurostat and CNB calculations.

trend differences easing in the period between July and October 2022.

The annual increase in food prices in Croatia was 16.0% in October 2022, which is 2.9 percentage points more than in the euro area.[13] Additionally, food prices account for a larger share in the consumer basket in Croatia than in the euro area (Table 1.1), which may be attributed to a lower degree of Croatia's economic development and the relatively high level of food product prices.

Broken down by individual components, the increase in the contribution of food prices to Croatia's overall consumer price inflation in October 2002 was mainly due to bread prices (Figure 1.4). The second largest contributions came from meat prices (in particular of dried, salted or smoked meat, beef and veal) as well as from milk, cheese and egg prices.

Services prices increased by 9.5% annually in Croatia in

12 For more details on the differences between the contributions of individual components in 2016, see Box 1 Causes of the difference between inflation in Croatia and the euro area, Macroeconomic Developments and Outlook No. 1, December 2016. No. 1, December 2016.

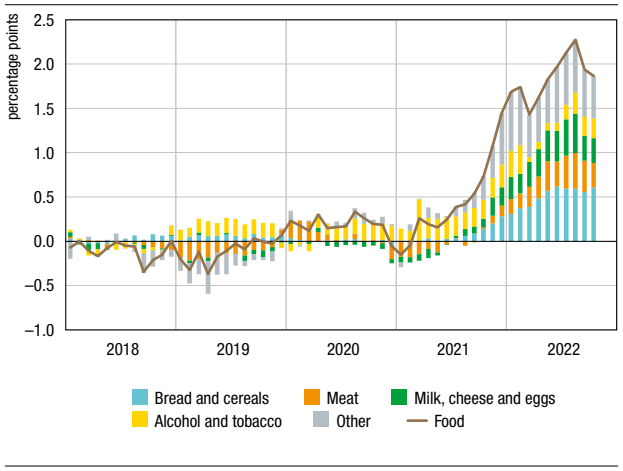
13 However, the annual food-price growth in Croatia was lower than in most Central and Eastern European Countries. Food price inflation grew at higher rates in the countries with high shares of agricultural product imports from Ukraine, Russia and Belarus (see: Bodnár K. and T. 2022): The surge in euro area food inflation and the impact of the Russia-Ukraine war, ECB Economic Bulletin, 4/2022).

Table 1.1 Structure of the consumer price index in Croatia and in the euro area in 2022, in %

	Croatia	Euro area
Energy	13.2	10.9
Food	28.8	20.9
Processed food products	22.9	15.9
Non-processed food products	5.9	5.0
Core inflation	58.1	68.2
Industrial products	26.6	26.5
Services	31.5	41.7

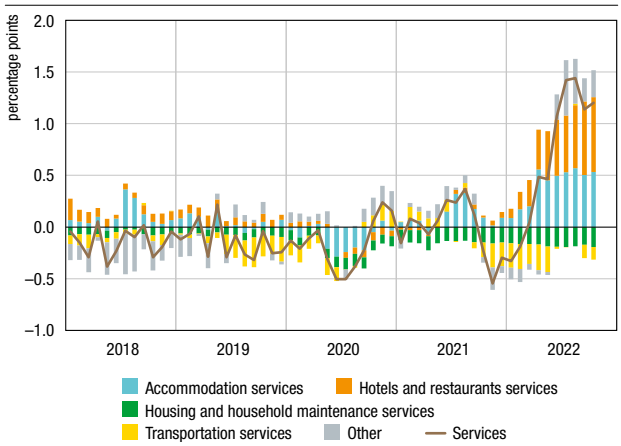
Source: Eurostat.

Figure 1.4 Difference between the contributions of food prices and some inflation subcomponents to inflation in Croatia and the euro area



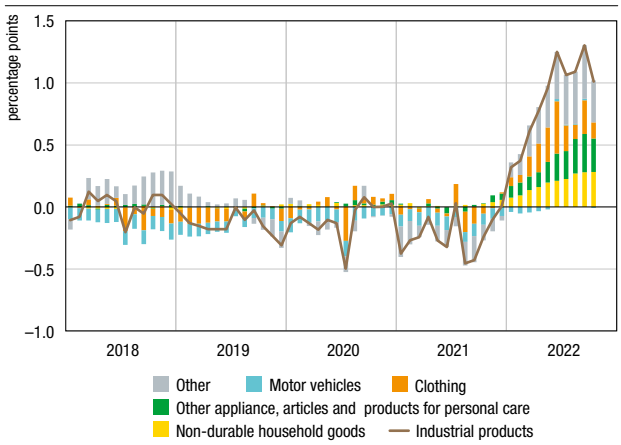
Sources: Eurostat and CNB calculations.

Figure 1.5 Difference between the contributions of services prices and some inflation subcomponents to inflation in Croatia and the euro area



Sources: Eurostat and CNB calculations.

Figure 1.6 Difference between the contributions of industrial product prices and some inflation subcomponents to inflation in Croatia and the euro area



Sources: Eurostat and CNB calculations.

October 2022, 5.2 percentage points more than in the euro area. The annual growth of hotel and restaurant services prices in Croatia was more than twice as fast as that in the euro area (18.2% relative to 7.1%), accounting for one of the fastest growth rate in euro area member states. The impact of the faster growth of services prices on the divergence in inflation between Croatia and the euro area was alleviated due to their smaller share in the consumer price basket in Croatia. However, although services as a whole account for a smaller share of the consumer price basket in Croatia than in the euro area, this is not the case with accommodation services, for example.

Accordingly, the larger contribution of services prices to Croatian inflation is primarily connected with tourism-related services amid the strong recovery of non-resident demand for tourist services. The largest difference between the contributions of specific services in September 2022 stemmed from the prices of accommodation and hotels and restaurants (Figure 1.5), which can account for almost the whole difference between the contributions of services prices to overall inflation in Croatia and the euro area. The prices of other services, e.g., the prices of housing and household maintenance services as well as transport services, contributed less to Croatian than to euro area inflation.

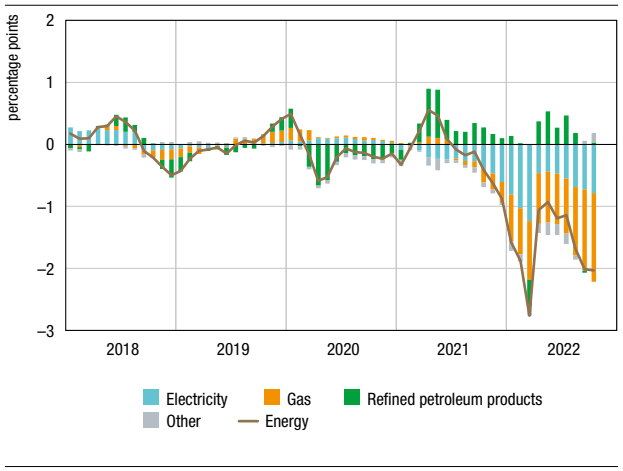
The higher contribution of industrial products to Croatian inflation than to euro area inflation resulted from the faster growth of industrial product prices in Croatia, while their shares in Croatia's and the euro area's consumer baskets are the same. Specifically, industrial products prices increased by 9.9% annually in Croatia in October 2022, 3.8 percentage points more than in the euro area. The higher contribution of industrial products to inflation in Croatia was mainly due to the prices of non-durable household goods and other appliances, articles and products for personal care (Figure 1.6). The contribution of the prices of newspapers and books as well as clothing was also higher in Croatia than in the euro area.

If the prices of services and industrial products are taken as a whole, as a basic core inflation indicator (i.e. the consumer price index that excludes energy, food, alcohol and tobacco prices), their contribution to Croatia's inflation surpassing euro area inflation has since June 2022 exceeded the contribution of food prices.

In contrast with the prices of food, services and industrial products, energy prices grew at slower rates in Croatia than in the euro area. The annual growth rate of energy prices in Croatia, standing at 19.0% in October 2022, was 22.5 percentage points lower than the euro area average and one of the lowest growth rates in all euro area member states. The slower growth

14 Household prices of natural gas and electricity increased less than prices charged to enterprises.

Figure 1.7 Difference between the contributions of energy prices and some inflation subcomponents to inflation in Croatia and the euro area



Sources: Eurostat and CNB calculations.

of energy prices in Croatia[14] 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.

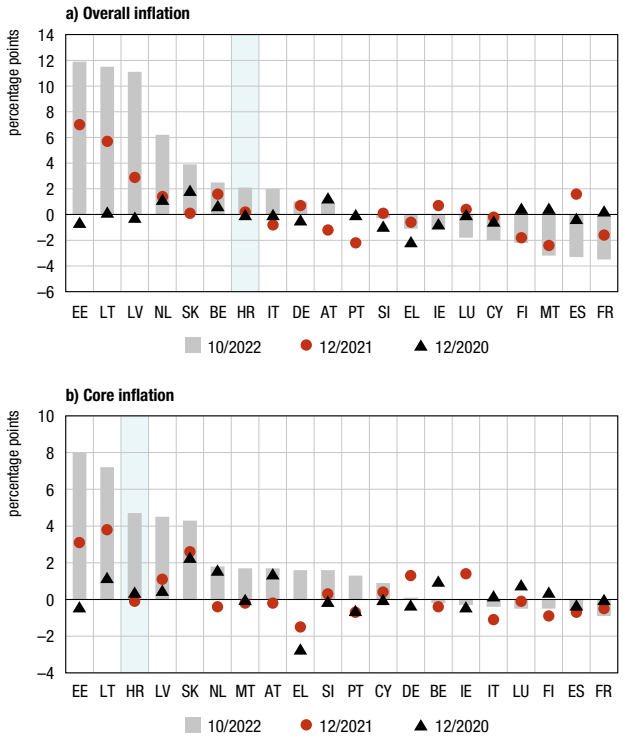
The impact of the slower growth of energy prices was offset by their accounting for a larger share in the Croatian than in the euro area consumer basket, but the contribution of energy prices to overall inflation in Croatia was lower. Among individual energy products (Figure 1.7), markedly lower contributions to inflation in Croatia were made by gas and, to a smaller extent, electricity. The contribution of refined petroleum product prices in Croatia was larger than that in the euro area during a large part of the year, becoming equal in September and October.

Inflation differentials relative to the euro area average in 2022 increased in many other monetary union members (Figure 1.8). Inflation in the Baltic countries, for example, exceeded 20% in October 2022 and inflation in the Netherlands and Slovakia was considerably higher than the euro area average. Croatia's inflation rate equalled Italy's and Belgium's inflation rates. In contrast, inflation rates in France, Spain and Malta were lower than the average euro area rate. As regards core inflation, Croatia's inflation differential is among the highest relative to the euro area average, just behind those of Estonia and Lithuania.

The increase in inflation differentials in the monetary union was due to several factors, including the varied impact of the corona virus crisis and the various speeds at which economies opened, differences in the effect of the growth of prices of energy products, food raw materials and other raw materials (e.g., due to differences in consumer basket structures and/or measures implemented by governments to limit the impact of price growth) and differences in developments in the prices of industrial products and services caused by disturbances in supply chains and national labour markets.[15]

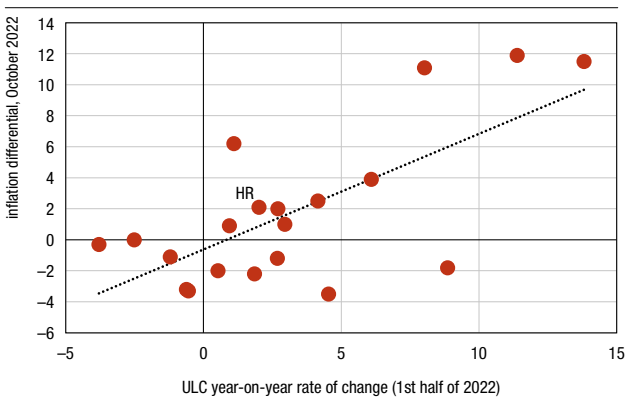
In addition to the faster growth of food prices and their larger share in the consumer basket as well as the robust growth of non-resident demand for tourist services, the divergence in inflation between Croatia and the euro area was also caused by other factors.[16] One factor is that the economic recovery in Croatia was stronger than that in the euro area. Stronger upward pressures on prices in Croatia could also be related to lower competition in the domestic market, smaller than the euro area market. The increase in inflation differential could also be caused by the relatively high import dependence of the domestic economy, which is therefore more exposed to the spillover of heightened global inflationary pressures. Another possibility is that some

Figure 1.8 Inflation differential relative to the euro area



Notes: Core inflation in Croatia is measured by the harmonised index of consumer prices that excludes energy, food, alcoholic beverages and tobacco prices. In other words, core inflation includes the prices of industrial products and services.
Sources: Eurostat and CNB calculations.

Figure 1.9 Change in nominal unit labour costs and inflation difference relative to the euro area average between individual euro area member states and Croatia



Sources: Eurostat and CNB calculations.

15 See Beynet P. and A. 2022): What is driving the spike in inflation dispersion in the euro area and how should policy react, ECOSCOPE, available at: https://oecdecoscope.blog/2022/09/06/what-is-driving-the-spike-in-inflation-dispersion-in-the-euro-area-and-how-should-policy-react/.

16 For factors influencing the inflation differential in the period until (and including) 2012, see Box 1 Determinants of the differences between the Croatian and the eurozone inflation rate, CBN Bulletin, December 2012.

domestic entrepreneurs, having lower productivity and being less competitive than others, had to transfer growing input costs (e.g. of energy and wages) to the final prices of their products and/or services.

There is also a question of whether the divergence in inflation between Croatia and the euro area was also influenced by differences in the developments of unit labour costs (ULC). A faster annual growth of the ULC in 2022 is related to an increase in the difference between the inflation rates of individual euro area member states and the monetary union average (Figure 1.9). As regards Croatia, although the ULC annual growth rate was in the first half of 2022 somewhat lower than in the euro area, the difference in ULC trends between Croatia and the euro area deteriorated relative to the second half of 2021, when the ULC in Croatia decreased and the euro area ULC recorded decelerated growth.

The higher inflation in Croatia cannot be attributed to the effect of the introduction of the euro. So far, there have been no indications that the euro changeover has had any considerable impact on price growth, especially taking into account measures introduced to prevent unjustified price growth (primarily the dual display of prices). In addition, the experience of other countries tends to suggest that the conversion of national currencies into the euro has only a very slight effect on consumer price growth.

Finally, the increasing difference in the inflation rate between Croatia and the euro area should reflect only temporary divergence. The year 2023 is expected to see a slowdown in inflation both in Croatia and in the euro area and a lower inflation difference. According to the latest projections of the Croatian National Bank and the European Central Bank, the difference in the average annual overall inflation rate could decrease from 2.2 percentage points in 2022 to 1.2 percentage points in 2023. Consensus Economics analysts (November 2022) also expect inflation difference to decrease, from 1.9 percentage points in 2022 to 0.5 percentage points in 2023.

6 Current and capital account

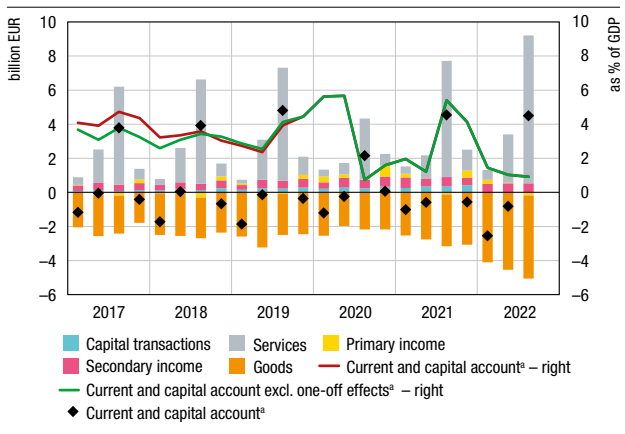
The current and capital account surplus was slightly lower in the third quarter of 2022 than in the same period in the previous year. Notwithstanding the significant deterioration of the trade in goods deficit, driven primarily by the growth of the prices of energy products and other raw materials in the world market, unfavourable trends in the goods account were offset by the strong growth of net exports of services, spurred by rising tourism revenues. The primary account deficit widened slightly, while the overall surplus in the secondary income and capital accounts held steady from the third quarter of 2021. The cumulative values realised in the last four quarters show that the current and capital account surplus stood at a low 0.9% of GDP in the period up to end-September 2022, relative to 4.2% of GDP in 2021, due primarily to a sharp increase of the deficit in the trade of energy products (Figure 6.1).

Foreign trade and competitiveness

Foreign trade in goods, having stepped up sharply in the first half of the year, accelerated additionally in the third quarter of 2022. The bulk of the acceleration resulted from a sharp increase in the prices of energy products and other raw materials in the world market, boosted additionally by the war in Ukraine, which caused a considerable deterioration of trade conditions. According to balance of payments data, the nominal growth of goods exports and imports was 55.1% and 57.7% respectively in the third quarter of 2022, with the result that the trade in goods deficit surged by 61.0% annually. As regards cumulative results in the past year, the trade in goods deficit stood at 25.6% of GDP in the period until the end of September 2022, higher than the 19.6% of the whole of 2021.

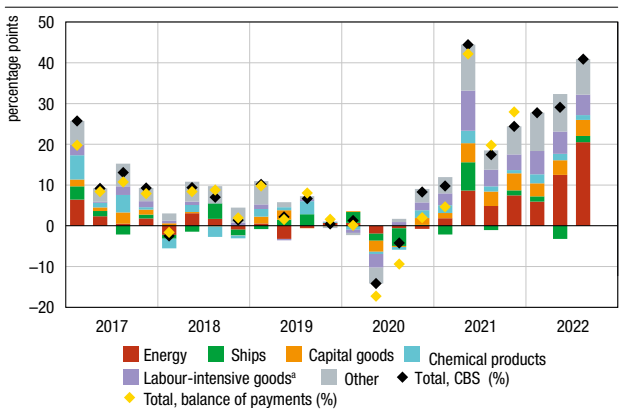
Detailed CBS data show that the better performance of exports on an annual level was mostly accounted for by energy products (Figure 6.2), particularly exports of electricity to Slovenia and gas to Hungary. Exports of other goods also rose considerably, particularly of food products to Italy, Slovenia and Serbia and capital goods (especially electrical machinery, apparatus and appliances) to Italy and Germany. Also contributing to the rise, although to a somewhat smaller extent, was the growth

Figure 6.1 Current and capital account balance and its structure



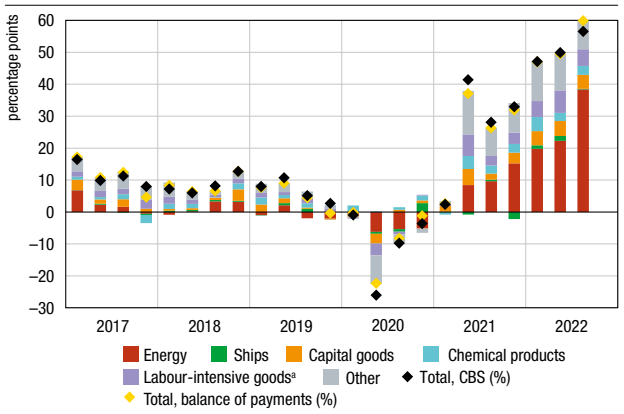
[a] Sum of the last four quarters.
Note: One-off effects include the conversion of CHF-linked loans in 2015 and bank provisions for loans to the Agrokor Group in 2017 and 2018.
Source: CNB.

Figure 6.2 Exports of goods
year-on-year rate of change and contributions



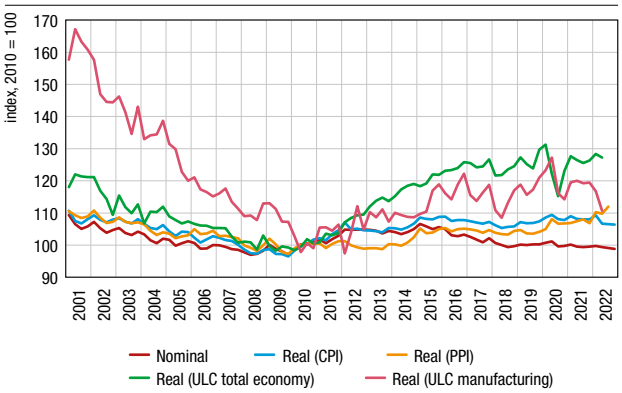
[a] Labour-intensive goods (according to the SITC) include: textile, wearing apparel, footwear, leather, paper, cork and wood, furniture, manufactures of metals and non-metallic mineral manufactures, prefabricated buildings and manufactured articles n.e.c.
Sources: CBS and CNB.

Figure 6.3 Imports of goods
year-on-year rate of change and contributions



[a] Labour-intensive goods (according to the SITC) include: textile, wearing apparel, footwear, leather, paper, cork and wood, furniture, manufactures of metals and non-metallic mineral manufactures, prefabricated buildings and manufactured articles n.e.c.
Sources: CBS and CNB.

Figure 6.5 Nominal and real effective exchange rates of the kuna



Notes: A fall in the index indicates an effective appreciation of the kuna. Data for the fourth quarter of 2021 relating to the nominal exchange rate refer to October and November and those relating to the real exchange rate deflated by consumer prices refer to October.
Source: CNB.

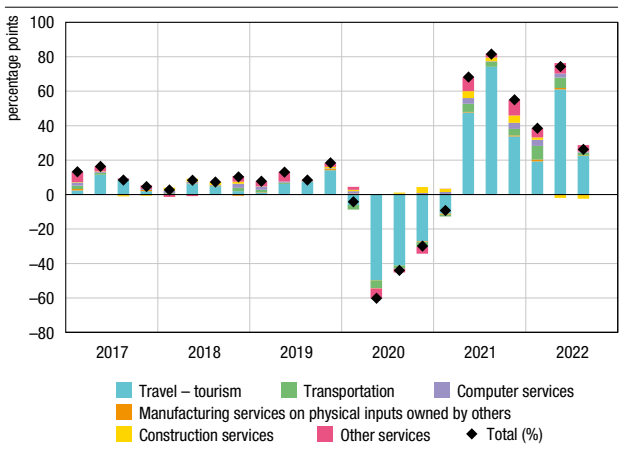
of exports of other transport equipment (i.e. ships to Greece) and textile industry products to Italy and Ukraine.

The aggregate increase in goods imports was due to the same production categories, most importantly energy products, that is, natural and manufactured gas from the USA, oil and refined petroleum products from Azerbaijan, Italy and Slovenia and electricity from Hungary and Serbia (Figure 6.3). A sharp increase was also recorded in the imports of capital goods (notably electrical machinery, apparatus and appliances from China) and food products from Hungary, Italy and Germany. Also rising were imports of road vehicles from Germany, Slovenia and the Czech Republic, textile industry products from Italy and Germany, metal industry products from Germany and Bosnia and Herzegovina and, to a smaller degree, imports of other chemical products (excluding medical and pharmaceutical products) from Italy and France.

In contrast to foreign trade in goods, the balance in the services account increased sharply thanks to an increase in tourist consumption by foreign tourists, which rose by 27.3% in the third quarter of 2022 from the same period in the previous year. This was due to the further relaxation of containment measures early in the year and their gradual lifting as well as to a rebound in demand for services, which had been largely subdued during the pandemic. Furthermore, the growth of revenues from tourism substantially exceeded the increase in volume indicators, i.e. the numbers of arrivals and nights, stemming from a marked rise in the average spending by foreign tourists, largely caused by the significantly higher prices of accommodation and hotels and restaurants. Net exports of other services also increased, although much less. The cumulative values recorded over the past year reveal that the surplus in the international trade in services increased from 16.8% of GDP in 2021 to 20.5% at the end of September 2022.

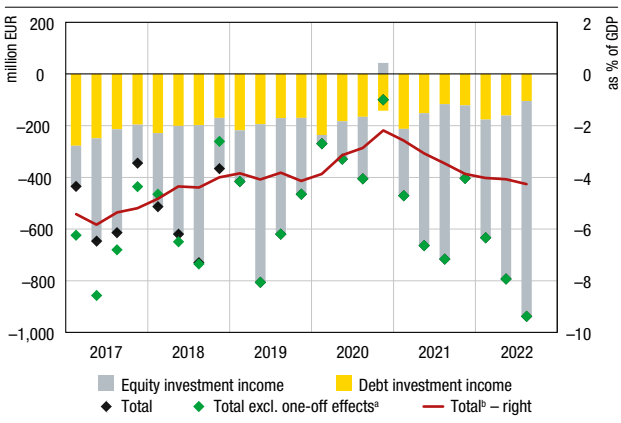
The price competitiveness of Croatian exports, measured by developments in the real effective exchange rates deflated by consumer and producer prices recorded divergent trends in the second half of 2022. Price competitiveness continued to improve from early 2022, if real effective exchange rates deflated by producer prices are observed, due to the low growth of consumer prices in Croatia compared with that in Croatia's major trading partners. In contrast, price competitiveness measured by real effective exchange rates deflated by consumer prices deteriorated

Figure 6.4 Services exports
year-on-year rate of change and contributions



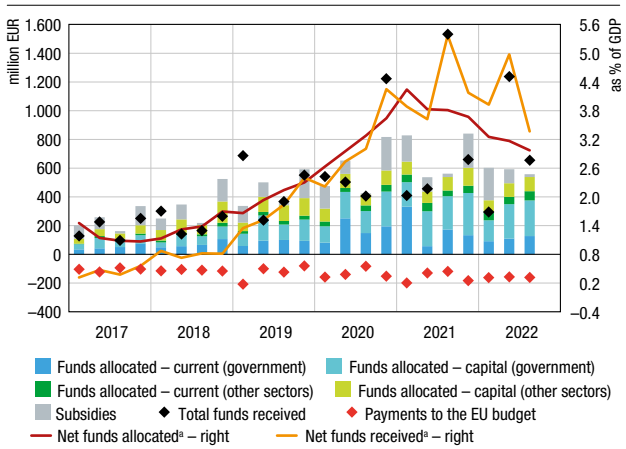
Source: CNB.

Figure 6.6 Investment income



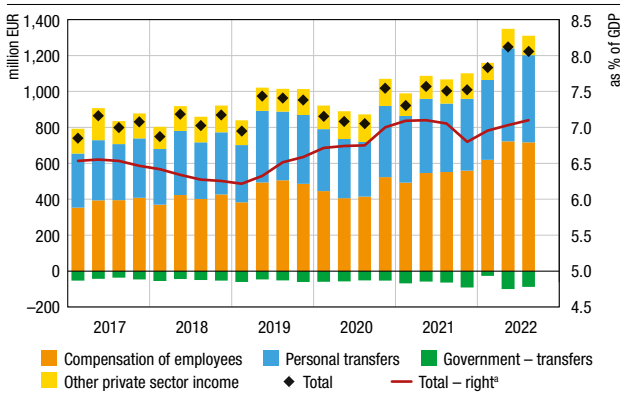
[a] One-off effects include the conversion of CHF-linked loans in 2015 and bank provisions for loans to the Agrokor Group in 2017 and 2018.
[b] Sum of the last four quarters, excluding one-off effects.
Source: CNB.

Figure 6.7 Transactions with the EU budget



[a] Sum of the last four available quarters.
Notes: As regards total funds received from EU funds, only funds allocated and paid out to end beneficiaries are recorded in the current and capital account of the balance of payments, while funds received but not allocated are recorded in the financial account. Payments to the EU budget carry a negative sign in the figure. The positive value of net received and net allocated funds is the surplus over the payments to the EU budget.
Sources: CNB and MoF.

Figure 6.8 Other income, excluding investment income and transactions with the EU



[a] Sum of the last four quarters.
Note: Compensation of employees is recorded in the primary income account, while other series (personal transfers, other private sector income and government transfers) are recorded in the secondary income account.
Source: CNB.

slightly as a result of the kuna strengthening against other currencies included in the basket for the calculation of the effective exchange rate of the kuna (Figure 6.5).

Income and transactions with the EU

The primary income account balance deteriorated noticeably in the third quarter of 2022 from the same period of the year before as a result of a further growth in the equity investment income deficit (Figure 6.6.), resulting from the growing profitability of enterprises in foreign ownership. Domestic sectors' net interest expenditures edged down due to the growth of interest income of the central bank and other domestic sectors from non-residents' securities.

Net income from transactions with the EU budget edged down in the third quarter of 2022 because of the slight growth of payments to the common budget, while the use of EU funds held steady from the same period in the previous year. The surplus of EU utilised funds over payments to the EU budget, reported as the sum of the last four quarters, decreased from 3.7% of GDP at the end of 2021 to 3.0% of GDP at the end of September 2022 (Figure 6.7).

By contrast, net inflow from other income, which excludes income from equity and debt investments and transactions with the EU budget, also increased perceptibly in the third quarter of 2022 relative to the equivalent period in 2021 due to the continued rise of net revenues from compensations of persons temporarily employed abroad and from personal transfers (Figure 6.8).

Projected developments

The surplus in the current and capital account could decrease considerably to 1.2% of GDP in 2022 from the 4.1% of 2021. Despite the strong growth of the surplus in the international trade in services, in particular in revenues from tourism, and the considerable growth of the overall surplus in the secondary income and capital transaction accounts caused by the greater use of EU funds and larger net inflows from personal remittances from abroad, the overall balance in the current and capital account could deteriorate noticeably, primarily due to the sharp increase in the trade in goods deficit and a slight decrease in the primary account surplus.

The pronounced widening of the trade in goods deficit was mainly the result of the considerable growth of net imports of all categories of energy products, caused by the price shock in the global market, which had started as early as in 2021 and further intensified after the outbreak of the war in Ukraine at the end of February this year. Exports and imports of other goods, with the exception of energy products, have also been rising strongly amid inflationary pressures. However, the somewhat stronger growth of imports than of exports has led to the significant widening of the deficit in the trade of other goods. Unfavourable developments could also be recorded in the primary income account due to the growth of profitability of domestic enterprises in foreign ownership. This could be only partly offset by an increase in revenues from compensations of persons temporarily employed abroad.

In contrast, owing to exceptionally favourable results thus far this year, particularly in the months of the peak tourist season, revenues from tourism consumption by foreign tourists in 2022 might be as much as 22% higher than in 2019. Such an outstanding financial result could primarily result from the strong growth of prices, whereas volume indicators could hover around the pre-crisis level.

Although to a much lesser extent, the adverse trends could also be moderated due to a rise in net inflows from personal remittances from abroad. The use of EU funds is expected to increase, but the positive balance of transactions with the EU budget could drop from 3.7% of GDP in 2021 to 3.4% of GDP in 2022 because of a sharp increase in nominal GDP.

The current and capital account balance is expected to continue to deteriorate and to drop to 1.0% of GDP in 2023. The growth of the surplus in foreign trade in services and the expected peak of disbursements of EU funds prevented the balance from decreasing further. Specifically, the following year is the deadline for the disbursement of funds allocated under the financial envelope for the 2014 to 2020 period and funds from the EU Solidarity Fund to be used for the reconstruction of earthquake-hit areas. In addition, the use of funds under the National Recovery and Resilience Plan, financed from the EU recovery instrument (Next Generation EU) is expected to intensify. As a result, the positive balance of net transactions with the EU budget might peak at 4.5% of GDP in 2023. The growth of the surplus in foreign trade in services could once again be

driven by rising revenues from tourism, although at a much slower rate than in the previous two years.

Favourable developments in the secondary income and capital transaction accounts as well as in foreign trade in services could be offset by the continued growth of the trade in goods deficit, despite a drop in imports of energy products and, to a much lower degree, by a decrease in the primary income account caused by the continued growth of profitability of domestic enterprises in foreign ownership and interest expenditures on the external debt of domestic sectors.

The projection of developments in the current and capital account of the balance of payments is exposed to significant risks and uncertainties. The key risks arise from the assumed developments in the prices of energy products and other key raw materials, in view of the high import dependency of the Croatian economy, which could further weaken the foreign trade balance. Still, when it comes to energy products, there are some positive risks suggesting that price developments could be better than expected. The same is true of the projection of the use of EU funds available to Croatia. Even though the use of EU funds could exceed present expectations, there is also a negative risk of a slower uptake due to potentially limited absorption capacities.

7 Private sector financing

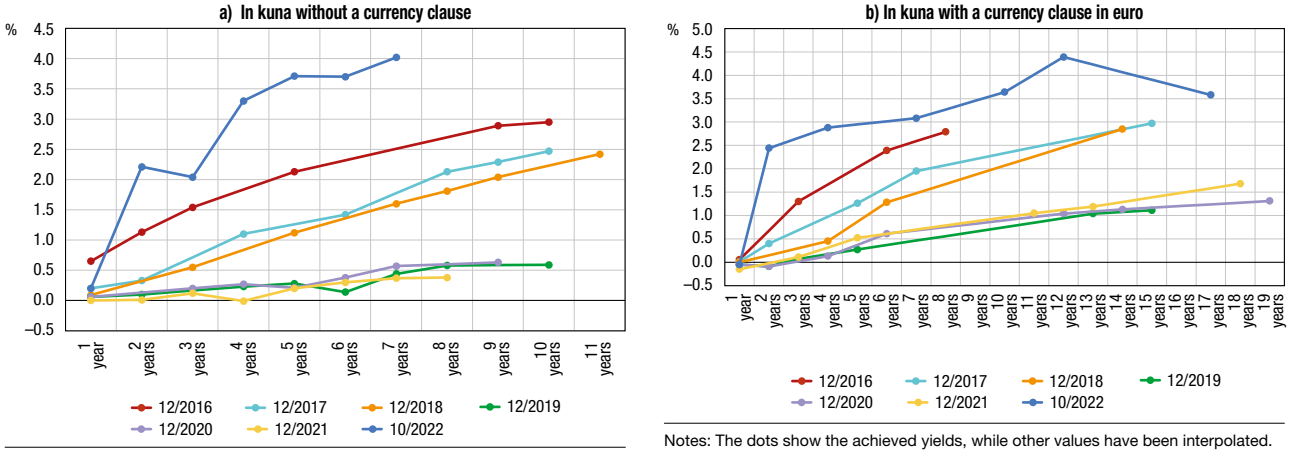
The second half of the year was marked by protracted strong inflationary pressures, geopolitical uncertainties and the worsening of global financing conditions, reflected in the further rise in market yields on government debt securities. The tightening of financing conditions in financial markets started to spill over to corporate financing costs, without, however, any significant pressures on the increase in interest rates for households so far. Credit standards for corporate and household loans tightened in the third quarter. Demand for corporate loans recorded the strongest growth since the survey was introduced, while household demand for loans trended down. The annual growth in total corporate financing continued its upward trend, largely due to the increased borrowing from domestic credit institutions. The annual growth of household placements remained stable in the second half of the year, with housing loans still accounting for the bulk of lending activity.

The costs of government borrowing, one of the determinants of borrowing costs for other domestic sectors, continued to rise in the second half of the year in regard to long-term borrowing, while short-term borrowing costs held steady. The interest rate on one-year kuna T-bills in the domestic market held steady at 0.2% from May (Figure 7.1a). Long-term borrowing costs went up; e.g. the yield on seven-year kuna bonds without a currency clause stood at 4.02% in October, up by 3.7 percentage points from the end of 2021. Over the same period, the yield on ten-year kuna bonds with a currency clause in euro grew by 2.7 percentage points, standing at 3.64% in October (Figure 7.1b). In July, the government issued kuna bonds with a currency clause in euro in the domestic market, that is, four-year bonds worth EUR 0.4bn with a yield of 2.17% and ten-year bonds worth EUR 0.8bn with a yield of 3.47%. However, the impact of the rise in the yields on total government interest expenses should be limited due to the relatively long average maturity of public debt.

After Croatia's accession to the euro area in early 2023 was officially confirmed in July, all three credit rating agencies upgraded Croatia's credit rating to a record-high level. Since mid-July, Fitch and Standard & Poor's have maintained Croatia's BBB+ investment rating, three notches above speculative rating, while Moody's has maintained its Baa2 rating, two notches above speculative rating.

The tightening of global financing conditions started to spill over to corporate financing costs in the second half of the year. The interest rate on pure new corporate loans went up to 2.76% in October (Figure 7.2), the highest level since the beginning of 2019. Relative to October last year, the cost of financing rose by 107 basis points (Figure 7.3), mostly fuelled by the increase in the interest rate on investment and syndicated loans, as well as on loans for working capital. In terms of size of enterprise, the annual increase was mostly driven by the rise in the interest rate

Figure 7.1 Yield-to-maturity on RC bonds



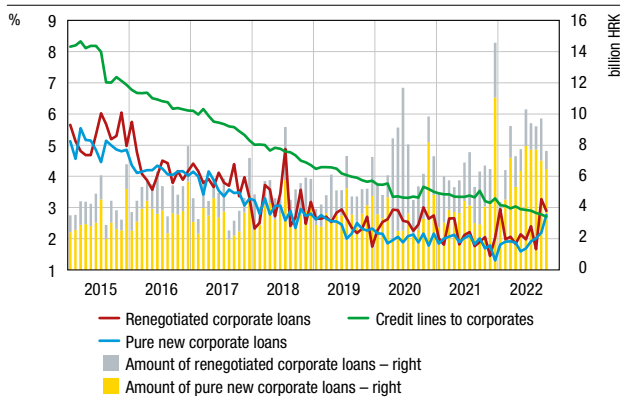
Notes: The dots show the achieved yields, while other values have been interpolated. Data for a one-year yield refer to the achieved interest rate on one-year kuna T-bills without a currency clause.

Source: CNB.

Notes: The dots show the achieved yields, while other values have been interpolated. Data for a one-year yield refer to the achieved interest rate on one-year T-bills with a currency clause in euro. Data for the end of 2016 refer to November, for the end of 2017, 2019, 2020 and 2021 refer to October, and for 2022 refer to May.

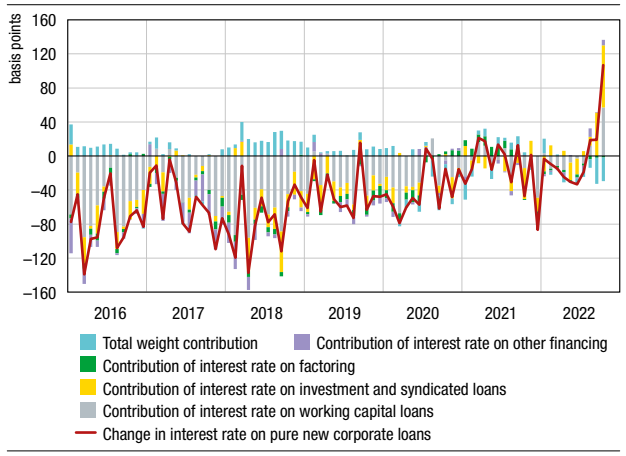
Source: CNB.

Figure 7.2 Interest rates and amounts of loans to corporates



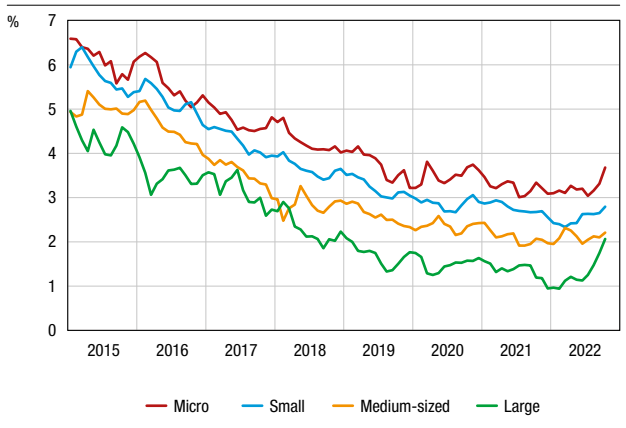
Note: Data on pure new loans are not available for credit card loans, overdrafts, revolving loans and receivables on charge cards since their new business volume (for other instruments, this includes both pure new loans and renegotiated loans) is equal to balances and thus included in the credit line category.
Source: CNB.

Figure 7.3 Contributions to the annual change in interest rate on pure new corporate loans



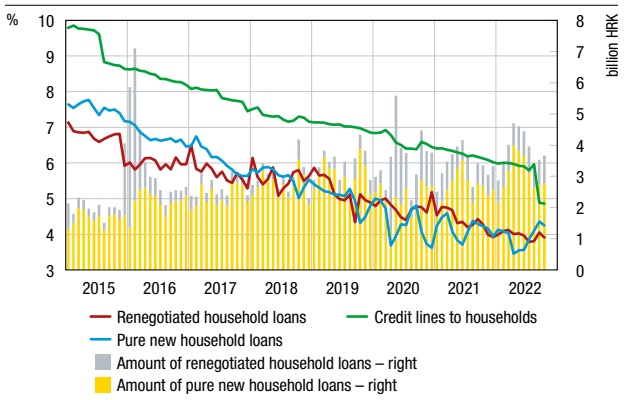
Note: Calculated by applying the Bennet index, according to which total contribution is divided into interest rate effect and weight effect.
Source: CNB.

Figure 7.4 Interest rates on pure new loans by the size of enterprises



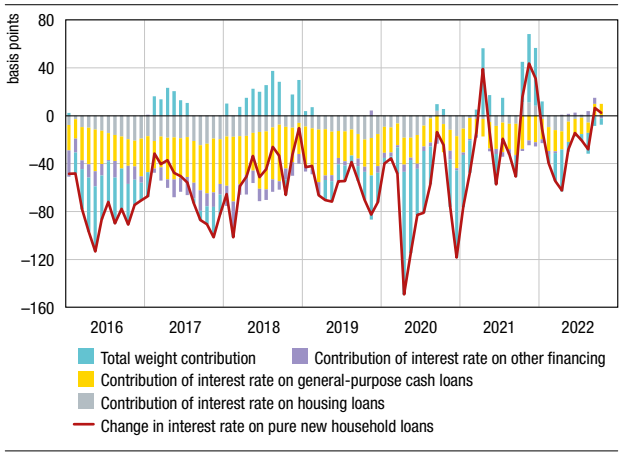
Note: Quarterly weighted moving averages.
Source: CNB.

Figure 7.5 Interest rates and amounts of household loans



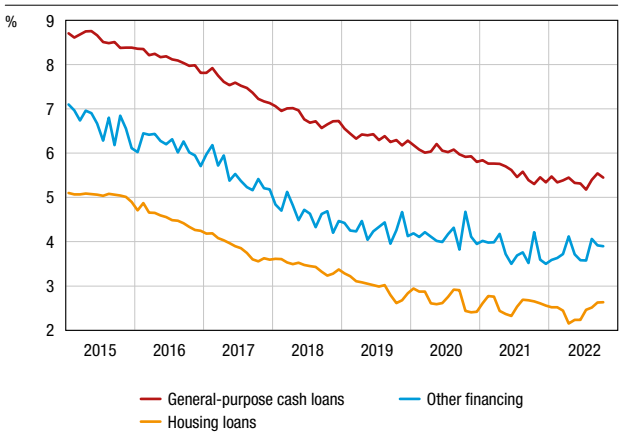
Note: Data on pure new loans are not available for credit card loans, overdrafts, revolving loans and receivables on charge cards since their new business volume (for other instruments, this includes both pure new loans and renegotiated loans) is equal to balances and thus included in the credit line category.
Source: CNB.

Figure 7.6 Contributions to the annual change in interest rate on pure new household loans



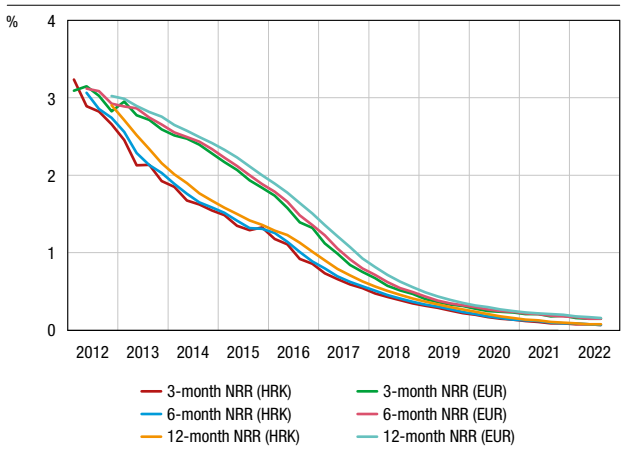
Note: Calculated by applying the Bennet index, according to which total contribution is divided into interest rate effect and weight effect.
Source: CNB.

Figure 7.7 Interest rates on pure new household loans by purpose



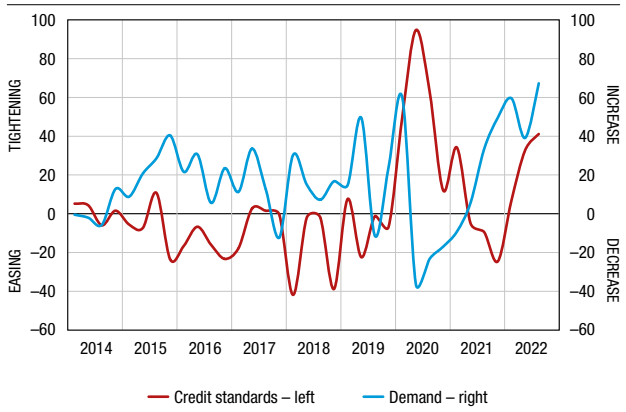
Source: CNB.

Figure 7.8 National reference rate (NRR)



Note: The rates shown are the rates for all natural and legal persons.
Sources: CNB and HUB.

Figure 7.9 Credit standards and corporate demand for loans



Note: Data show the net percentage of banks weighted by the share in total corporate loans.
Source: CNB.

on loans to large enterprises (by 108 basis points), accounting for more than two-thirds of new financing with banks in the second half of 2022.

The quarterly average of financing costs went up in the second half of the year for enterprises of all sizes (Figure 7.4), especially for large enterprises. Interest rates have mostly continued their downward trend for larger enterprises, since they are generally perceived as less risky. However, the difference between financing costs narrowed, and thus the quarterly weighted interest rate on pure new loans to micro enterprises was 1.6 percentage points higher in October from that on such loans to large enterprises, having mostly held steady at around two percentage points in the first half of the year.

In contrast with corporates, there have been no significant pressures for a rise in financing costs for households so far. The interest rate on pure new loans to households edged down to 4.25% in October (Figure 7.5), although its level still remained high relative to the second quarter when the fall in financing costs was driven by the government housing loans subsidy programme. The costs of household financing edged up by only two basis points on an annual level (Figure 7.6), due to the slight rise in interest rates on general-purpose cash loans.

In October, the interest rates on general-purpose cash loans and housing loans stood at 5.5% and 2.6% respectively (Figure 7.7), very similar to the values recorded in the same month last year.

The funding costs of the Croatian banking system mostly remained favourable amid record high surplus liquidity. The national reference rate[17] (Figure 7.8), which is most often used in household loan contracts as a parameter for determining the level of the variable component of variable interest rate on loans, remained unchanged or edged down in the third quarter. On the other hand, the six-month EURIBOR continued its upward trend in the second half of the year. In the first eleven months, it grew by 3.0 percentage points, reaching 2.4%, the highest level since January 2009.

According to the bank lending survey, the tightening of credit standards for corporate loans continued to intensify in the third quarter, with demand for corporate loans recording the strongest growth since the survey was first conducted (Figure 7.9). The further tightening of credit standards in the third quarter was mainly driven by the worsened expectations related to overall economic trends as well as the outlook for the industry or the individual corporation. The most important drivers of the strong demand for loans were corporate needs for financing inventories and working capital, with the intensity of demand related to fixed capital formation increasing from the first half of the year.

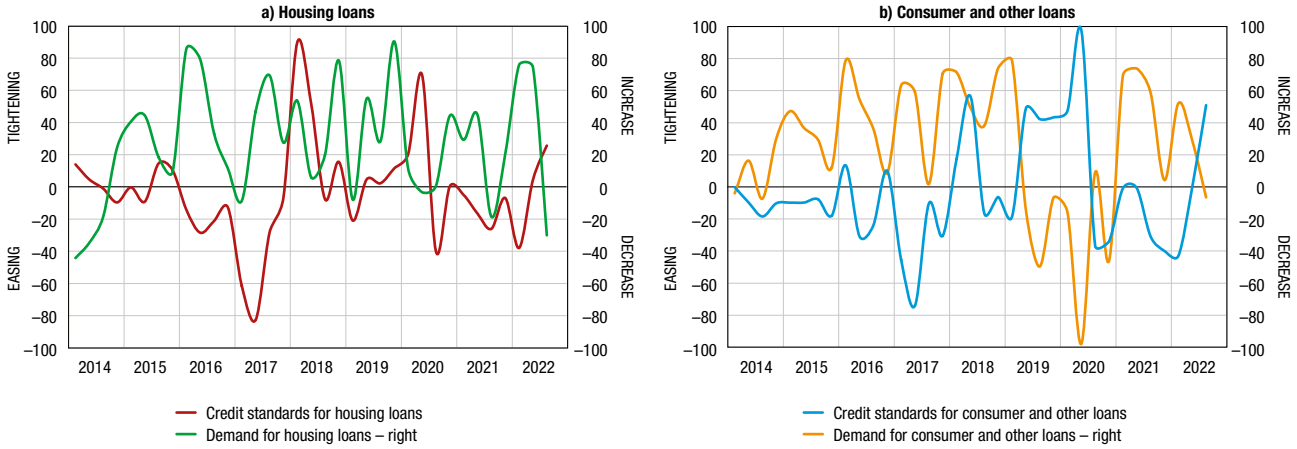
With respect to households, credit standards tightened in the third quarter, twice as strongly for consumer and other loans as for housing loans (Figure 7.10). Banks reported that the tightening of credit standards for all household loans was mainly fuelled by worsened economic expectations, cost of sources of funds and balance sheet restrictions, as well as by the worsened creditworthiness of clients in the case of consumer loans. Having risen in the first half of the year, demand for loans diminished in the third quarter, especially for housing loans. The fall in demand for housing lending was the result of the deterioration of the outlook in the real estate market and the rise in non-housing expenses of households, while demand for consumer and other loans diminished due to a continued decline in consumer confidence.

Due to the growth in domestic debt, total corporate financing trended up in the third quarter (Figure 7.11), with a slight external deleveraging. If viewed on an annual level, the growth in total financing continued its upward trend, reaching 9.4% in September (transaction-based), the highest rate since the beginning of 2009. All types of financing gathered momentum on an annual level, with more than two-thirds of the increase accounted for by the rise in borrowing from domestic credit institutions.

The annual growth of corporate debt to domestic credit institutions continued to accelerate, standing at 22.3% in October (transaction-based, Figure 7.12). In a challenging business environment, corporates are faced with diverse needs for financing, with loans for working capital, investment loans and syndicated loans contributing equally to this current intensive growth (Figure 7.13). With regard to the structure of financing in terms of enterprise size, the annual increase in borrowing by large enterprises was the most pronounced, having reached a high 36.5%

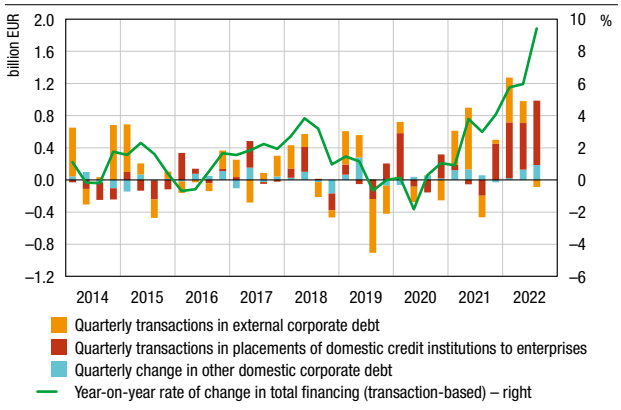
17 The national reference rate (NRR) is the average interest rate paid on deposits by the banking sector. It is used as one of the benchmark interest rates for determining the level of the variable component of variable interest rate on loans, in accordance with Article 11a of the Consumer Credit Act (pursuant to the Act on Amendments to the Consumer Credit Act, OG 143/2013).

Figure 7.10 Credit standards and household demand for loans



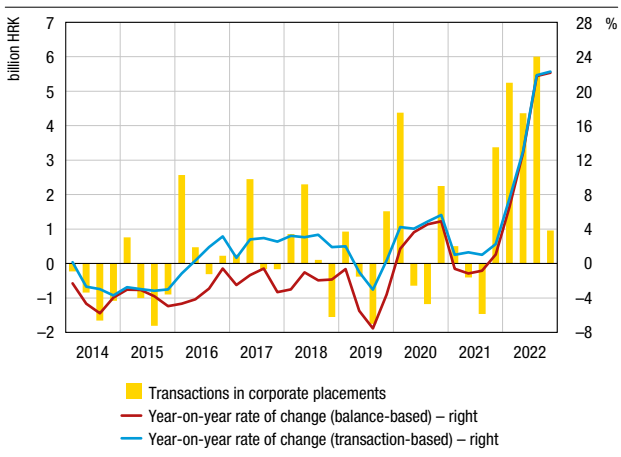
Note: Data show the net percentage of banks weighted by the share in total household loans.
Source: CNB.

Figure 7.11 Corporate financing



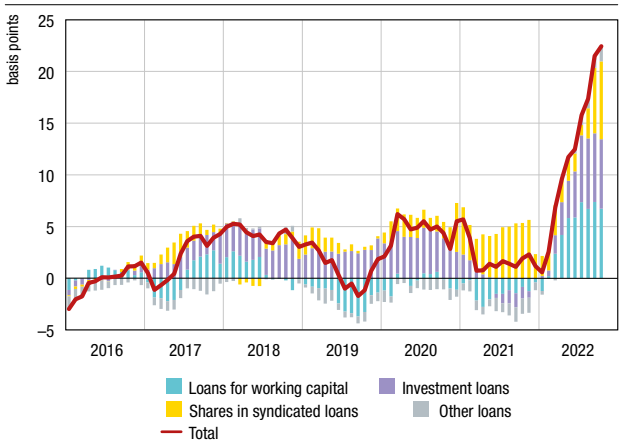
Notes: Other domestic financing includes borrowing from domestic leasing companies, the CBRD and HAMAG-BICRO. External debt excludes the effect of debt-equity swaps. All changes were calculated on the basis of transactions (except for leasing companies).
Sources: HAMAG-BICRO, HANFA, CNB and CNB calculations.

Figure 7.12 Corporate domestic placements of credit institutions



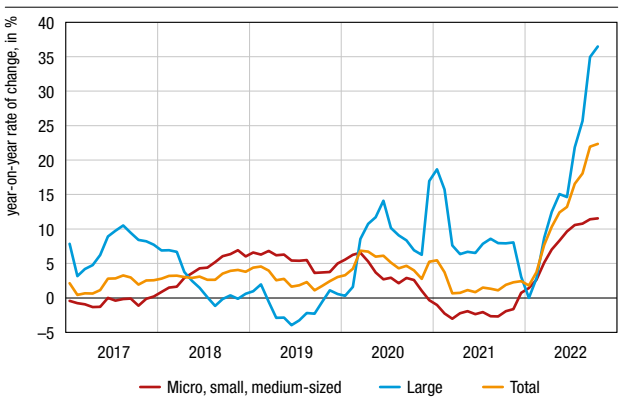
Note: Data for the fourth quarter of 2022 refer to October.
Source: CNB.

Figure 7.13 Growth in corporate loans by purpose
transaction-based



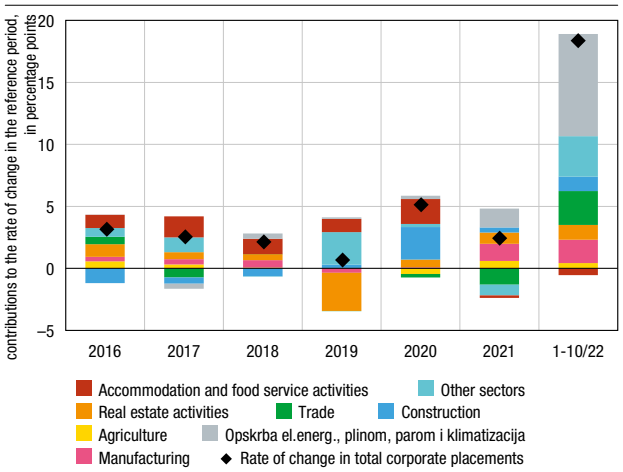
Source: CNB.

Figure 7.14 Growth in corporate placements by size
transaction-based



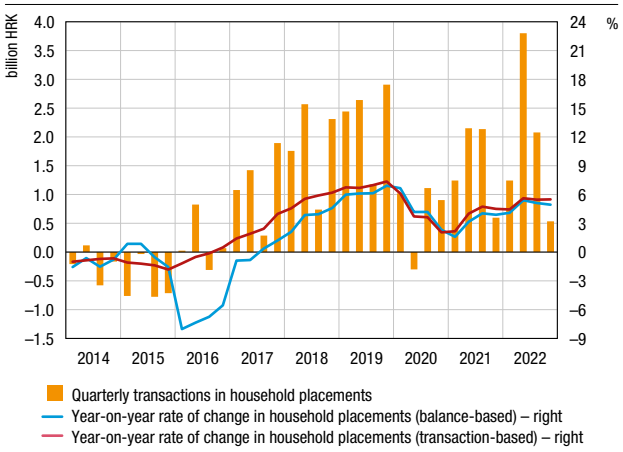
Note: The data were adjusted for the assessment of the effect of activated government guarantees for loans to particular shipyards and the decrease in the claims on the Agrokor Group linked to the operational implementation of the settlement.
Source: CNB.

Figure 7.15 Growth in corporate placements by activity
transaction-based



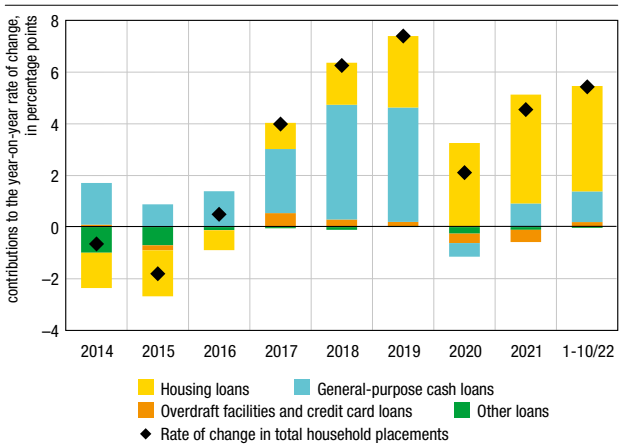
Notes: In October 2019, a large corporation switched from Section L (Real estate activities) to Section E (Water supply, sewerage, waste management and remediation activities). This is why in 2019 a sharp decrease in placements was recorded in Real estate activities, and a substantial rise was seen in Other sectors, which include Water supply activity.
Source: CNB.

Figure 7.16 Household placements



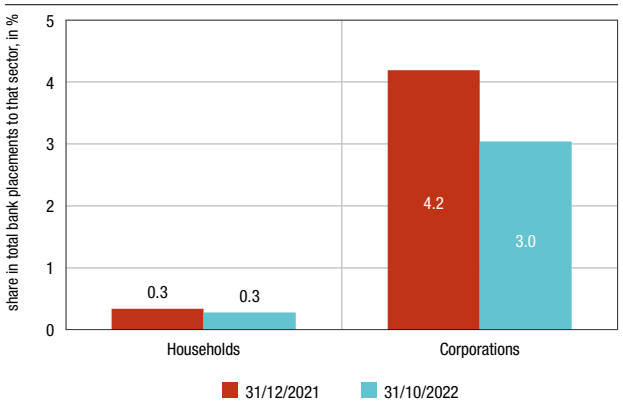
Note: Data for the fourth quarter of 2022 refer to October.
Source: CNB.

Figure 7.17 Growth in household placements by loan type
transaction-based



Source: CNB.

Figure 7.18 Placements under payment deferral or restructuring measures



Note: Since June 2021, data on approved loan payment deferral or restructuring applications have been collected according to a new methodology, but this has not led to significant deviations from the data collected by the old methodology.
Source: CNB.

in October (Figure 7.14), while lending to micro, small and medium-sized enterprises grew at a much slower pace.

Broken down by activities, in the first ten months of 2022 the largest increase in borrowing from domestic credit institutions was seen in energy activities (Figure 7.15), mainly because of the high costs of procurement owing to the rapid increase in the prices of imported energy products and raw materials. However, inflationary pressures and the expected further increase in borrowing costs have affected the entire non-financial corporate sector, and so the growth in bank financing of corporations, excluding energy activities, was four times as high in the same period as the growth in bank financing of all corporations in 2021.

The annual growth of household placements has held steady since May, when it amounted to 5.5%, with the same rate recorded in October (transaction-based, Figure 7.16). The bulk of the growth is still accounted for by housing loans (Figure 7.17) which grew by 9.5% in October on an annual level, which is almost the same as the growth seen in 2021. The annual growth in general-purpose cash loans edged down in the second half of the year to 3.0% in October, growing slightly more than in the previous year (2.4%).

The total amount of bank placements covered by payment deferral or restructuring measures was lower at the end of October 2022 from the end of last year. At end-October, 3.0% of bank placements to corporates and only 0.3% of placements to households were covered by the measures (Figure 7.18).

Projected developments

Total placements (government excluded) might record an annual growth rate of 10.7% (transaction-based) in 2022, which is almost three times the rate of 3.9% recorded in 2021. The acceleration of the growth in placements was mostly spurred by a strong increase in corporate lending, which might grow in annual terms by 22.0% by the end of 2022. A notably smaller, albeit positive, contribution to growth might also come from lending to households, which might grow by 5.3% in 2022, largely driven by housing lending, and to a lesser extent by the increase in general-purpose cash loans.

Box 4 Has the EU Council's decision on Croatia's accession to the euro area in early 2023 already had an impact on the cost of borrowing?

The reduction of currency risk arising from a high level of euroisation is one of the most significant benefits of euro adoption for Croatia. The near elimination of currency risk should lead to a decline in country risk premium, and consequently to a reduction in Croatia's borrowing costs. This box aims to show that the adoption of the euro has already had a beneficial effect on the cost of government borrowing. This is particularly important in the present conditions, in which central banks worldwide have been hiking interest rates, with a large effect on the cost of borrowing of countries comparable to Croatia.

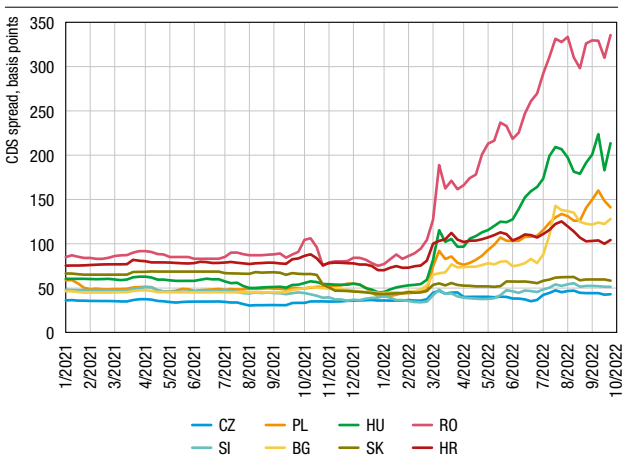
Euro area membership brings about a reduction in the cost of government borrowing (Szilard, 2021; Kunovac and Pavić, 2018; Wiegand, 2017; Ehrmann, Fratzscher, Gürkaynak and Swanson, 2007; Côté and Graham, 2004). It has been argued that the elimination of currency risk and the accession to the European Stability Mechanism (ESM), providing support to countries experiencing financial difficulties are the main reasons behind the existence of the so-called euro premium. However, it should be noted that "euro premium" also tended to be negative in some periods, such as during the European debt crisis, when the ESM was established. Given that Croatian economy is heavily euroised, the elimination of currency risk is expected to bring relatively large benefits. The euro-denominated liabilities of the government, corporates and some households substantially exceed their euro-denominated assets, and so a strong depreciation of the kuna would increase the debt servicing burden and weigh on debt repayment capacity. Rational investors should make sure that the effects of the currency risk elimination are already mirrored in the prices of government bonds. More specifically, due to a reduced probability of default in the future, creditors should be prepared to offer more affordable funding to the government.

The impact of euro adoption on the yield on bonds of the Republic of Croatia as a result of the announced accession to the euro area cannot be directly measured, but it can be estimated. The estimation of the effect of euro adoption on yields is not simple since it is very hard to separate the impact of the announced accession to the euro area (EU Council decision) from other shocks affecting the movement of bond yields. A possible solution to this problem would be to compare the trends in Croatia's government bond yields with yields on government bonds of peer countries. The trends in the CDS premium[18], which is a standard measure of risk and one of the core determinants[19] of bond yields, particularly point to recent changes in Croatia's financing costs relative to peer countries (Figure 1).

The CDS premium on the five-year Croatian government bond trended up from the beginning of the year, although less so than in some peer countries. In early 2022, Croatia was perceived as the second most risky country among peer countries (only Romania being perceived as more risky than Croatia). The rise in CDS premia was particularly strong for non-euro area countries, except the Czech Republic, and less so for euro area peer countries. By end-September, market perception of the probability of default for Croatia was more favourable than for Romania, Hungary, Bulgaria and Poland, non-euro area EU member states. However, it is hard to argue that more favourable trends in CDS premia for Croatia are attributable to the EU Council decision on Croatia's imminent accession to the euro area. In 2022, CDS premia were largely affected by the tightening of monetary policy and the effects of the conflict in Ukraine. The impact of these shocks might have varied across countries; for instance, Poland and Romania might be more exposed to risks induced by the war in Ukraine than Croatia.

The so-called synthetic control method (Abadie, 2021) is used in this box to determine the causal effect of the announced adoption of the euro. The idea is to construct a synthetic Croatia by averaging the trends in indicators for other countries. Each country is assigned a weight[20] in a synthetic control group, so that it tracks well the trends in indicators for Croatia. Following the decision of the EU Council on the adoption of the euro, the synthetic control group shows a counterfactual scenario, that is, the expected movements in Croatia's government bond yields in the absence of such decision. Synthetic Croatia mimics well the movements in yields on Croatia's ten-year eurobond before the adoption of the EU Council decision (Figure 2). Following the adoption of the EU Council decision, Croatia's bond yields moved at a different pace than those of the synthetic control group. The yield on Croatia's bonds was 60 basis points lower at end-September than that in the counterfactual scenario in which the accession to the euro area had not been announced (Figure 3).

Figure 1 Trends in CDS premia in Croatia and peer countries



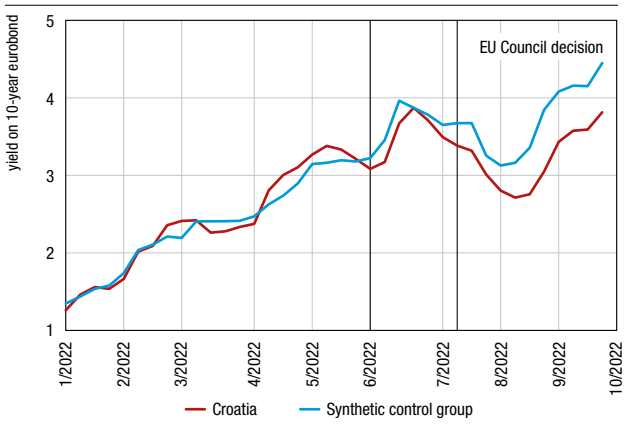
Note: CDS premium relates to the five-year government bond.
Source: Bloomberg.

18 *Credit default swap (CDS)* premium is a default insurance premium on a financial instrument (in this case, on the five-year government bond).

19 Bond yields are determined by other factors as well, such as the possibility of using a bond as collateral in repo transactions and the scarcity of collateral in the market.

20 The weights were selected in such a way as to minimise the discrepancy in the movement of yields (the root mean squared prediction error, to be more precise) between Croatia and the synthetic control group in the period from the beginning of 2022 to the adoption of the EU Council decision. In addition, the discrepancy (Euclidean distance) in the characteristics relevant for the yield dynamics was also minimised. The considered variables included the average of bond yields since the beginning of the year, the average daily change in EUR/HRK exchange rate, the average monthly rise in prices measured by HICP, the growth rate of real GDP, the public debt-to-GDP ratio and the budget balance-to-GDP ratio. The synthetic control group and the assigned weights included: Romania (weight of 0.355), the Netherlands (weight of 0.247), Greece (weight of 0.214), Sweden (weight of 0.088), Lithuania (weight of 0.055) and Denmark (weight of 0.041). The series of yields of synthetic Croatia is a linear combination of the above weights, multiplied by the corresponding yields for each of the countries. The weights obtained by using the synthetic control method are not necessarily unique, meaning that different weight combinations can also minimise the root mean squared prediction error.

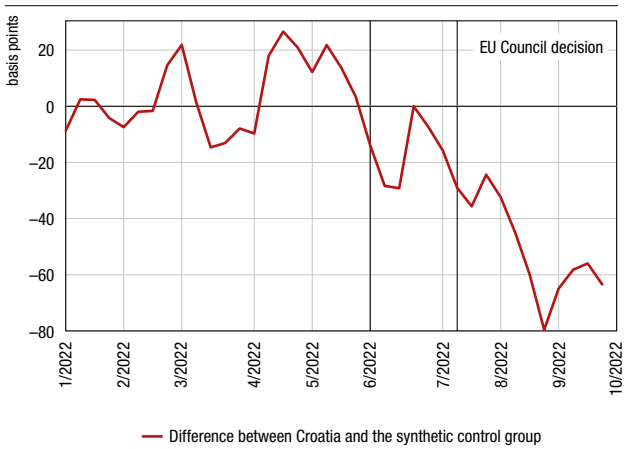
Figure 2 Yield movements relative to the synthetic control group



Note: The first vertical line concerns the Convergence Report of 1 June 2022, while the second vertical line concerns the decision of the EU Council on the adoption by Croatia of the euro.

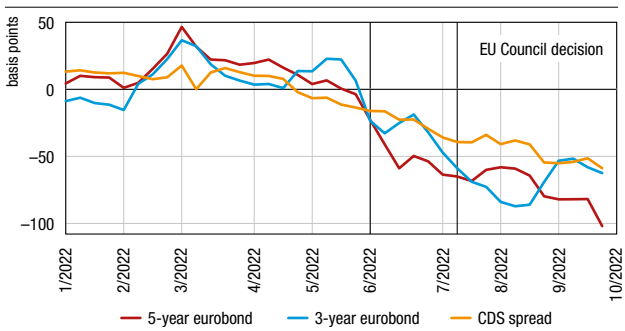
Source: CNB calculation.

Figure 3 Yield spread on Croatia's ten-year euro government bond relative to the synthetic control group



Source: CNB calculation.

Figure 4 The difference between the actual developments and those recorded in the synthetic control group for different maturities and CDS premia



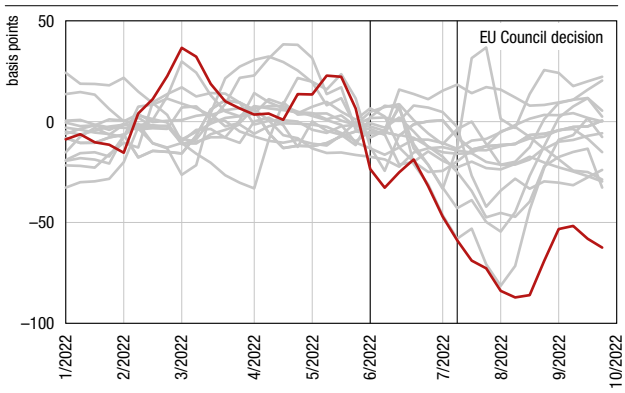
Notes: With regard to the five-year eurobond, the synthetic control group includes: Romania (weight of 0.382), Denmark (weight of 0.266), Greece (weight of 0.238), Lithuania (weight of 0.054), Sweden (weight of 0.034) and the Netherlands (weight of 0.026). With regard to the three-year eurobond, the synthetic control group includes: Austria (0.311), Lithuania (0.214), Portugal (0.196), the Netherlands (0.119), Hungary (0.102), Poland (0.054) and Greece (0.003). With regard to the CDS premium, the synthetic control group includes: Romania (0.321), Denmark (0.281), Greece (0.247), Sweden (0.098) and Lithuania (0.053).

Source: CNB calculation.

The adoption of the euro has a more favourable effect on bonds with short maturities. The yields on bonds with short maturities, e.g. with maturities of three and five years, decreased more than those of the control group, which is consistent with the larger impact of the elimination of uncertainty regarding the accession to the euro area in the short and medium term than in the long term (Figure 4). A similar decrease relative to the synthetic Croatia is also seen in the CDS premia following the adoption of the EU Council decision. This suggests that investors indeed perceive Croatia to be less likely to default following its entry to the euro area. Other domestic sectors are also exposed to currency risk, meaning that joining the euro area is expected to have a favourable effect on the borrowing costs of households and corporates.

This analysis rests on the key assumption that there were no other events following the EU Council decision that might have been taken into account in explaining the difference between Croatia and the synthetic control group. It is more likely that this assumption would hold good if, by applying the same method for other countries, we obtained results suggesting that there were no major idiosyncratic changes in yields. In terms of the

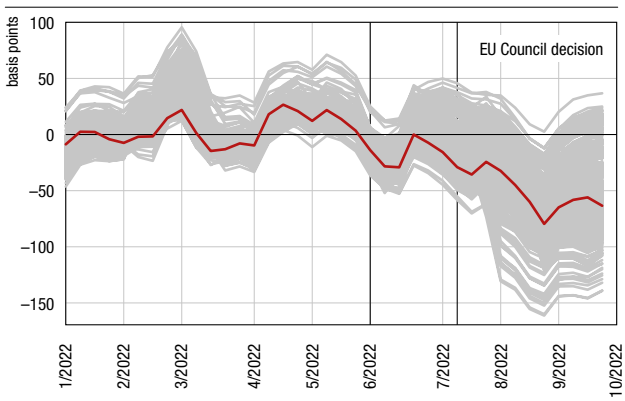
Figure 5 Difference compared to the synthetic control group for all the countries included in the sample concerning the three-year eurobond



Notes: The countries for which the method did not result in an adequate synthetic control group were excluded from the chart. This was done where the absolute difference compared to the synthetic control group before 1 June exceeded 50 basis points.

Source: CNB calculation.

Figure 6 Difference relative to the synthetic control group for a thousand of randomly selected samples



Note: The countries for which the method did not result in an adequate synthetic control group were excluded from the chart. This was done where the absolute difference compared to the synthetic control group before 1 June exceeded 50 basis points.

Source: CNB calculation.

specific shock associated with the introduction of the euro, the estimated impact would be larger for Croatia than for the other countries if the same method were applied. The comparison of the change in bond yields for all the countries relative to their specific control groups shows that Croatia's bond yields witnessed an unusually sharp fall relative to those of other countries following the Convergence Report and the EU Council decision (Figure 5).

The presented results might have been specific to a country or a group of countries within the synthetic control group. For instance, maybe a relevant country in the control group suffered from a specific shock in July and the results mirrored the effect of that shock, and not of the decision on the adoption of the euro (e.g., maybe the Russian aggression against Ukraine had a more pronounced impact on Romania's yield movements in July). In order to assess whether the choice of individual countries included in the control group influenced the result, members of the control group have been selected randomly a thousand times, with each country given equal probability of appearing in the sample. The synthetic control method was then applied to each of the newly formed samples. Figure 6 shows that even the randomly selected sets of countries in most cases resulted in lower yields for Croatia relative to the synthetic control group. This suggests that the results did not depend on the specific group of countries comprising the control group.

The results suggest that some of the impact of Croatia's joining the euro area was likely already reflected in the yields on Croatia's government bonds before the adoption of the EU Council decision. More specifically, the fall in yields was also observed following the publication of the Convergence Report (1 June 2022), when the European Commission announced that Croatia had met the criteria for joining the euro area. Some investors probably expected that Croatia would be joining the euro area in early 2023 even before that. However, there were some concerns regarding the fulfilment of the criteria for the adoption of the euro, particularly the criterion concerning inflation. Consequently, this result can be observed as an additional effect of the reduced uncertainty regarding the accession to the euro area, that is, as the lower limit of the probable effect of the adoption of the euro at this point.

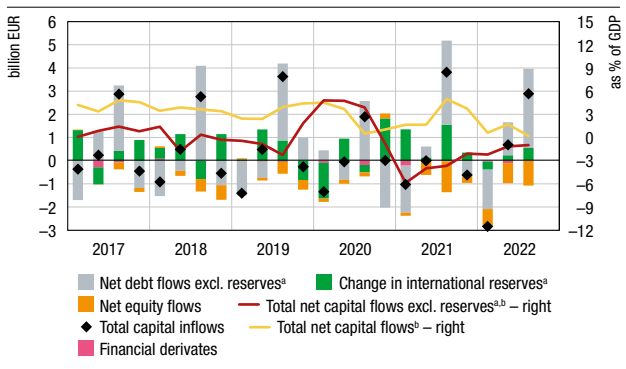
The analysis of the trends in yields of Croatia and peer countries suggests that some of the anticipated favourable effects of the entry into the euro area have already materialised and are mirrored in the cost of government borrowing. Additional effects on the price of borrowing, perhaps not foreseen by investors, might materialise after the accession to the euro area. The favourable effect on government financing might also spill over to the cost of borrowing of corporates and households in the future (Kunovac and Pavić, 2017). This is particularly important in view of the current hikes in central banks' key interest rates, which have led to a disproportionate surge in the cost of borrowing of countries comparable to Croatia.

8 Foreign capital flows

The financial account of the balance of payments, changes in gross international reserves and liabilities of the CNB excluded, saw a sharp net capital outflow of EUR 1.6bn in the third quarter of 2022. The net capital outflow was entirely the result of the decline in net debt liabilities of domestic sectors, due to the usual seasonal improvement in the external position of credit institutions, while net equity liabilities rose noticeably. As the international reserves of the central bank also increased in the same period, total net capital outflow was even sharper, standing at EUR 2.1bn.

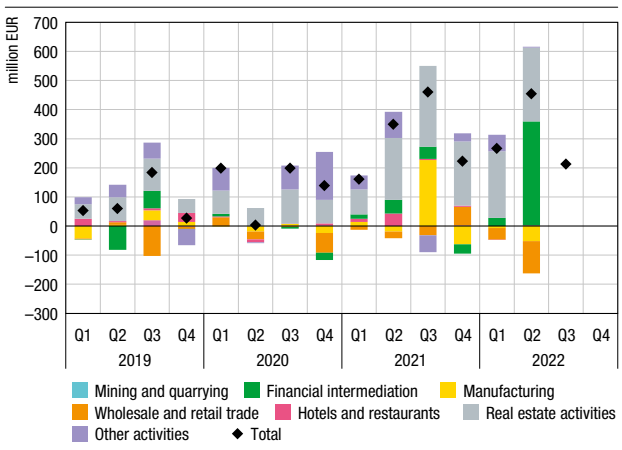
Net inflow from equity investments of EUR 1.1bn generated in the third quarter of 2022 is for the most part accounted for by profits of banks and non-financial corporations in foreign ownership, growing by approximately one-third. In the conditions of continued economic growth, the rise in the profits of non-financial corporations was partly also the result of the rise in prices, while the current profit of banks was spurred by the decrease in value adjustments for loans. New direct equity investments in Croatia, debt-to-equity transactions excluded, were relatively modest (Figure 8.2).

Figure 8.1 Flows in the financial account of the balance of payments



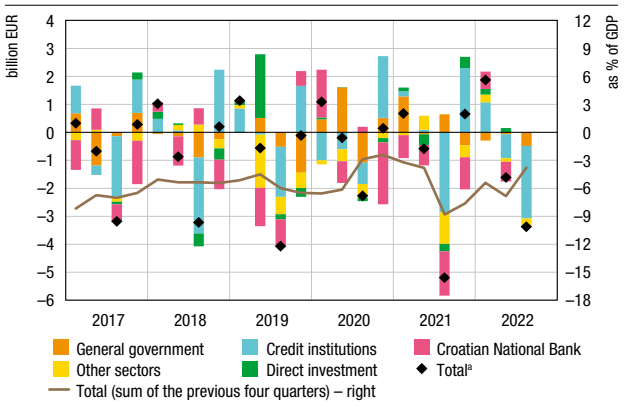
[a] Changes in gross international reserves net of CNB liabilities.
[b] Sum of the previous four quarters.
Notes: Net flows are the difference between changes in assets and liabilities. Equity flows comprise changes in foreign direct equity investments, reinvested earnings and portfolio equity investment, while net borrowing from affiliated enterprises is composed of debt equity flows. Positive value means net capital outflow abroad.
Source: CNB.

Figure 8.2 Foreign direct equity investment in Croatia by activities



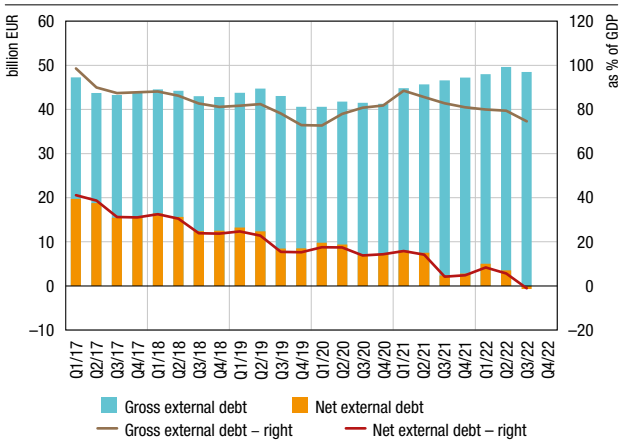
Note: Equity investment net of debt-to-equity transactions and round-tripping investments.
Source: CNB.

Figure 8.3 Net external debt transactions by sectors



[a] Sum of the previous four quarters.
Notes: Transactions refer to the change in debt excluding cross-currency changes and other adjustments. Net external debt is calculated as the gross external debt stock net of external debt claims.
Source: CNB.

Figure 8.4 Stock of gross and net external debt



Note: Net external debt is calculated as the gross external debt stock net of external debt claims.
Source: CNB.

A major decline in net external debt liabilities (by EUR 3.4bn, excluding the change in gross international reserves and CNB liabilities) seen in the third quarter of 2022 was the result of a noticeable growth in assets, accompanied, to a lesser extent, by a decrease in liabilities. All domestic sectors improved their net debt position, especially credit institutions (Figure 8.3), owing to a sharp rise in foreign assets resulting from foreign currency inflows during the peak tourist season. In contrast, bank assets in the TARGET2[21] system decreased. In addition, the foreign position of the government improved due to a fall in foreign liabilities, especially based on long-term debt securities, as a result of transactions in the secondary market. The debt position of other domestic sectors also improved, the largest decline being in net liabilities under long-term loans, but net liabilities to affiliated creditors were also reduced. At the same time, international reserves (gross reserves minus CNB liabilities) increased perceptibly as a result of the rise in government foreign currency deposited with the CNB associated with the inflow of EU funds.

21 Bank funds within the TARGET2 system constitute central bank foreign assets, but they are not part of international reserves.

The increased volume of repo transactions also added to the increase in gross international reserves, albeit to a considerably lesser extent. However, given that the external liabilities of the central bank increased by the same amount as a result of these transactions, they did not influence its net external position.

Relative indicators of external debt improved noticeably in the first nine months of 2022. Gross external debt stood at EUR 48.5bn (74.6% of GDP) at the end of September 2022, down by 6.4 percentage points from the end of 2021. The improvement in the relative indicator of gross external debt was due exclusively to the sharp rise in nominal GDP, while gross debt increased in absolute terms (mostly debt of other domestic sectors). Given that the foreign assets of domestic sectors, especially of credit institutions and the central bank, increased more than their liabilities, net external debt decreased in both relative and absolute terms. At the end of September 2022, net external debt entered into the negative territory for the first time, standing at –EUR 0.7bn (–1.1% of GDP), down by 3.5 percentage points from the end of 2021.

Projected developments

The net capital outflow in the whole of 2022 might be considerably smaller than last year's results, which reflects the substantially less favourable estimate of the current and capital account surplus. The estimated net capital outflow mirrors a sharp decrease in net debt liabilities of domestic sectors, albeit less pronounced than in the previous year, while the largest improvement might be recorded in the net external position of banks. Although to a much lesser extent, the net external position of the government is also expected to improve at the level of the whole year, whereas the position of other domestic sectors might deteriorate slightly.

The net inflow from equity investments might be larger in 2022 than that recorded in the previous year, mostly due to smaller outflows triggered by equity investments of residents in foreign shares and equity holdings. In addition, despite the increase in the profitability of domestic banks and non-financial corporations in foreign ownership, equity liabilities might be much smaller than in the previous year due to the increase in dividend payments, that is the lifting of restrictions on credit institutions' distributions in force until 1 October 2021. Direct equity investments in Croatia might also be slightly lower than last year at the level of the whole year, albeit to a much lesser extent, considering the high base in 2021, due to several larger acquisitions of domestic enterprises by foreign investors.

Having stagnated in 2021, the gross external debt-to-GDP ratio is expected to decline again in the current year. This improvement is the result of the rise in nominal GDP, while the stock of total gross external debt might increase in absolute terms due to the growth in liabilities of the central bank and banks. The relative indicator of gross external debt might come to around 73% of GDP at the end of 2022, relative to 81% of GDP in late 2021. External claims might exceed external liabilities for the first time, so that the net external debt might be negative and stand at around –0.5% of GDP.

A slight net outflow of capital might continue in 2023, with a further drop in net debt liabilities and a net inflow from equity investments. In line with the projected slight fall in total gross external debt, accompanied by an increase in external debt assets and the further rise in nominal GDP, the relative indicators of gross and net external debt might improve further, reaching 67%, that is, –3% of GDP.

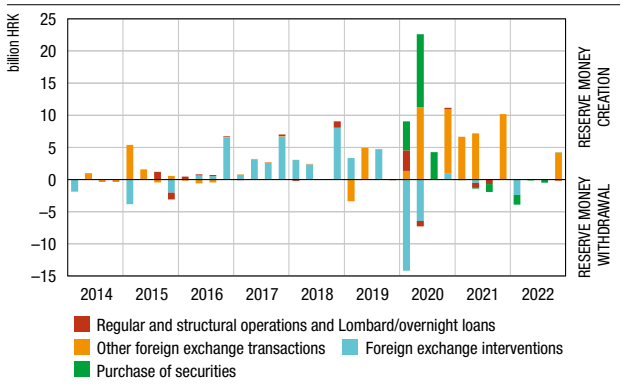
Projection of capital flows and the decrease in net external debt liabilities are related to the estimate of the current and capital account surplus, which is exposed to significant risks. In

addition, it should not be disregarded that the external liabilities accumulated earlier continue to make Croatia prone to risks of an even more pronounced deterioration in financing conditions and the worsening of the global investment climate. However, these risks have declined considerably with the strengthening of Croatia's external position and the envisaged introduction of the euro, which contributes to enhancing the resilience of the domestic economy.

9 Monetary policy

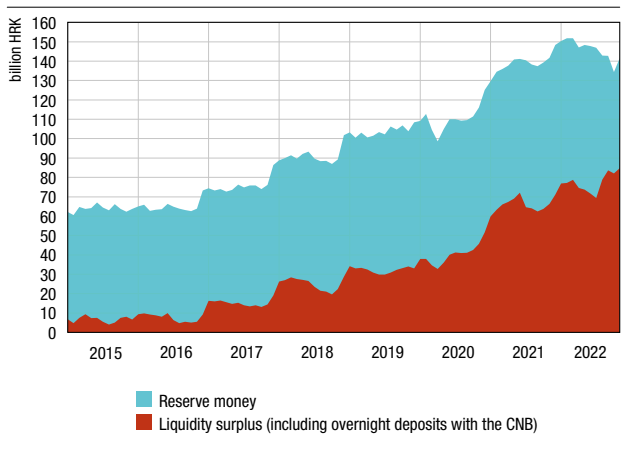
The monetary environment in the second half of 2022 was marked by geopolitical and economic turmoil, particularly by soaring inflation that prompted faster and sharper tightening of the monetary policies of central banks around the world. Against this backdrop, financing conditions in global financial markets deteriorated further. The effect of the spillover of unfavourable global financing conditions onto the costs of financing in Croatia has been relatively limited so far, mostly due to Croatia's forthcoming entry to the euro area, as well as a reduced risk perception and the ample kuna liquidity of banks, further reinforced by the adjustment of the CNB's monetary policy instruments to those of the Eurosystem. The kuna/euro exchange rate has been stable. Market expectations were further anchored by Croatia's participation in the European Exchange Rate Mechanism and the expected introduction of the euro. Having sold a total of EUR 385m to banks on three occasions in March, the CNB made no interventions in the foreign exchange market in the remaining part of the year. As regards other foreign exchange transactions, from the beginning of the year to the end of November, the CNB purchased a net of EUR 576.8m from the Ministry of Finance, of which almost the entire amount was recorded in November, when the CNB purchased EUR 550m. If total foreign exchange transactions over the same period are observed, the CNB purchased net EUR 191.8m, creating a total of HRK 1.4bn in reserve money (Figure 9.1).

Figure 9.1 Flows of reserve money (M0) creation



Notes: The Lombard facility cancelled on 28 September 2017 was replaced by the overnight facility. Other foreign exchange transactions include the purchase of foreign exchange from and the sale of foreign exchange to the MoF and the European Commission and foreign currency swaps with banks. The positive values refer to the purchase of foreign exchange.
Source: CNB.

Figure 9.2 Bank liquidity and reserve money



Note: Data are up to November 2022.
Source: CNB.

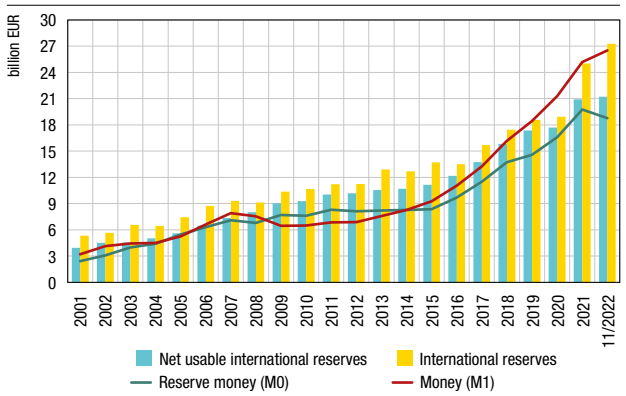
As regards kuna operations, the CNB continued to conduct regular weekly operations at a fixed rate of 0.05%. However, since March[22] there has been no interest on the part of banks in funds offered through this monetary policy instrument in the remaining part of the year. No structural operations were used to create additional kuna liquidity, and their stock dropped to HRK 2.8bn at end-November, down by HRK 240m from the end of the previous year due to early repayments. In addition, certain bonds in the CNB's portfolio having fallen due, the stock of total subscribed bonds of the Republic of Croatia decreased by HRK 2.1bn from the end of 2021.

Banks' free reserves reached record highs in the second half of 2022. The average daily surplus kuna liquidity of the domestic banking system thus stood at HRK 84.8bn in November (Figure 9.2). The average daily liquidity surplus drifted up from last December to this November by HRK 13.7bn. This was due to the mentioned adjustment of the CNB's monetary policy instruments in the process of euro area accession. In July 2022, the CNB adopted the Decision on amendments to the Decision on reserve requirements, lowering the reserve requirement rate from 9% to 5% as of August, followed by a further reduction to 1% as of December. Consequently, the kuna component of reserve requirements decreased by HRK 14.7bn in August, leading to an increase in surplus kuna liquidity of the domestic banking system. In July 2022, the CNB also adopted the Decision on amendments to the Decision on the minimum required amount of foreign currency claims, introducing a gradual revocation of the maintenance of foreign currency liabilities by foreign currency claims, by reducing the minimum maintenance percentage from 17% to 8.5% as of August and by entirely revoking the measure as of December.

A higher level of repo agreements, rising government foreign currency deposits with the CNB and purchases of foreign

22 The uncertainties brought about by the impacts of the sanctions imposed on the Russian Federation sparked banks' interest in additional liquidity, prompting the CNB to place in March 2022, for the first time since May 2020, funds to the banks through a regular operation, which resulted in banks borrowing a total of HRK 770m with one week maturity at a fixed rate of 0.05%.

Figure 9.3 International reserves of the CNB and monetary aggregates

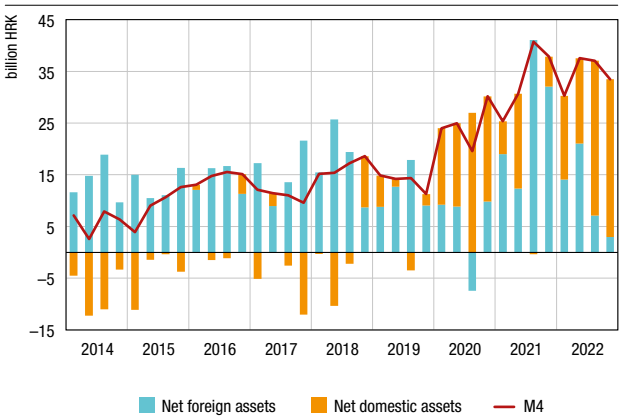


Notes: Net usable international reserves are defined as international reserves net of CNB foreign liabilities, reserve requirements in f/c, government foreign currency deposits and off-balance sheet liabilities (swaps). The most recent data available for M1 in 2022 refer to October.

Source: CNB.

Figure 9.5 Net foreign assets, net domestic assets and total liquid assets (M4)

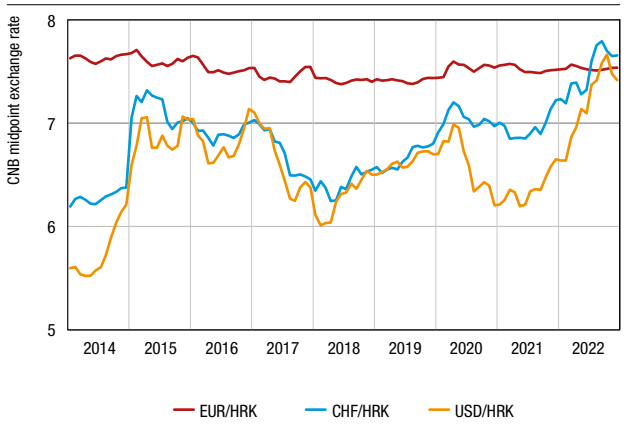
absolute changes in the last 12 months



Notes: Absolute changes exclude the exchange rate effect. Data for the fourth quarter of 2022 are up to October.

Source: CNB.

Figure 9.4 Nominal exchange rates of the kuna against selected currencies



Source: CNB.

exchange from the government led to an increase in Croatia's international reserves in the first eleven months of 2022. Gross international reserves were EUR 27.3bn at the end of November (Figure 9.3), up by EUR 2.3bn (9.1%) from the end of 2021. Net usable reserves grew by EUR 0.3bn (1.4%) in the same period, to EUR 21.2bn at end-November.

In the second half of 2022, the exchange rate of the kuna against the euro was stable. Occasional appreciation pressures during the summer months were largely driven by a successful tourist season and consequently by a larger supply of foreign exchange. These pressures were cushioned by occasional corporate demand for foreign exchange, in particular in the energy sector due to higher prices of raw materials and energy products.

The exchange rate of the kuna against the euro stood at EUR/HRK 7.55 at the end of November 2022, up by 0.4% relative to the end of the same month in 2021, while the average exchange rate in the first eleven months of 2022 stood at EUR/HRK 7.53, having increased by 0.1% from the same period in 2021 (Figure 9.4). Compared to the central rate[23], in the period from Croatia's entry to the European Exchange Rate Mechanism to the end of November 2022, the average exchange rate moved within a very narrow range of –1.0% to +0.7%. The exchange rate of the kuna against the US dollar and the Swiss franc was higher in late November 2022 than at the end of November 2021, reflecting the weakening of the euro against these two currencies on global financial markets.

The growth of monetary aggregates decelerated in 2022. The annual growth of total liquid assets (M4) stood at 8.4% (transaction-based) at end-October 2022, decelerating moderately from 9.9% in June and 10.4% at the end of the previous year. Net domestic assets (NDA) accelerated on an annual level, largely driven by the growth in placements to domestic sectors, while the rise in net foreign assets (NFA) decelerated. As regards the components of M4, the annual growth of money (M1) decelerated noticeably, having fallen from 18.0% at end-December 2021 to 7.4% at the end of October 2022. Within M1, currency outside credit institutions recorded a sharp decline ahead of the introduction of the euro.

Croatia will join the euro area at the beginning of 2023 against the backdrop of the ECB's monetary tightening cycle, which will bring about a deterioration of financing conditions for domestic sectors. However, further adjustments of the reserve requirement rate and the rate of the minimum required foreign currency claims to the ECB's set of instruments will lead to a sharp increase in banks' free reserves, as well as alleviate and slow down the spillover of the deterioration in the average financing conditions in the euro area to domestic market.

23 Croatia entered the Exchange Rate Mechanism in July 2020, with the central rate of the kuna being set at 1 euro = 7.5345 and the standard fluctuation band at ±15% around this rate.

10 Public finance

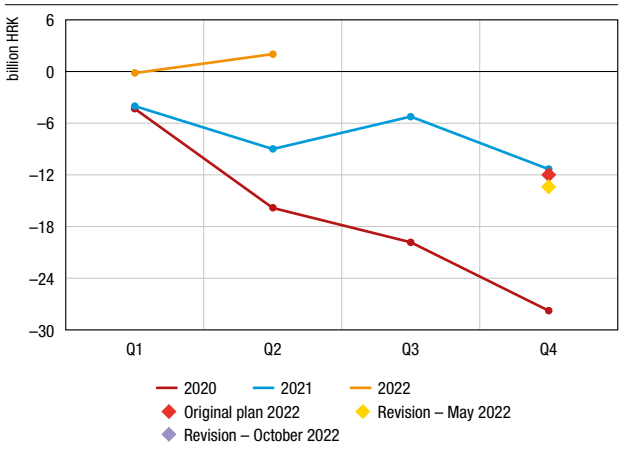
In the first half of 2022, the consolidated general government ran a surplus of HRK 2.0bn (ESA 2010), a visible improvement from the deficit generated in the same period last year (HRK 9bn). Observed on a quarterly basis, the first quarter of 2022 witnessed a deficit of HRK 0.2bn, which was an improvement of HRK 3.8bn on an annual basis. Favourable trends in public finance continued into the second quarter, which saw a surplus of HRK 2.2bn, an improvement in the balance of HRK 7.2bn on an annual basis.

The Croatian government's original plan projected a consolidated general government deficit of HRK 12.0bn. The first upward budget revision adopted in May foresaw a deficit of HRK 13.4bn in view of the unfavourable effect on public finance of the package of measures adopted in April aimed at mitigating the effects of inflation as well as the escalation of geopolitical instability. The projected deficit was revised downward to HRK 7.1bn under the second revision in October 2022, mainly due to a better-than-anticipated inflow of tax revenues, associated with favourable cyclical developments and the increase in the level of prices.

With the aim of mitigating inflationary pressures on citizens' living standards and businesses, the Croatian government adopted two packages of measures, in April and September 2022, worth HRK 4.8bn or 1.1% of GDP (April) and HRK 21bn or 4.2% of GDP (September). According to available data, the estimated direct effect of the April package of measures on budget deficit in 2022 amounts to around 1.0% of GDP, while the direct effect of the September package of measures on general government budget balance might reach around 1.1% of GDP, with the bulk of this fiscal effect to be observed in 2023.

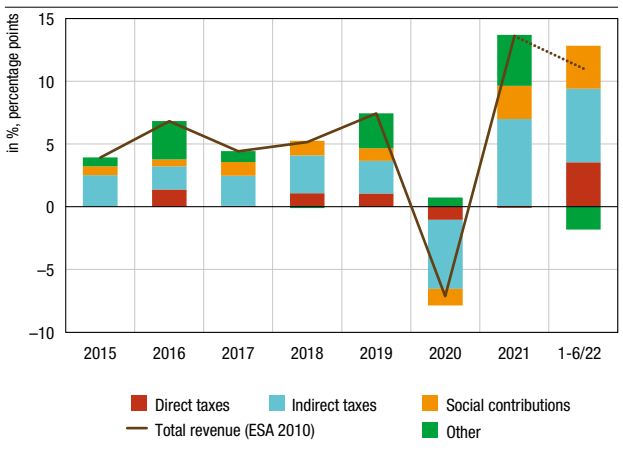
As regards the revenue side of the budget (ESA 2010), total revenues were as much as 11.0% higher in the first half of 2022 than in the same period of the preceding year. The mentioned growth in total revenues was largely driven by the considerable

Figure 10.1 General government cumulative balance by quarters (ESA 2010)



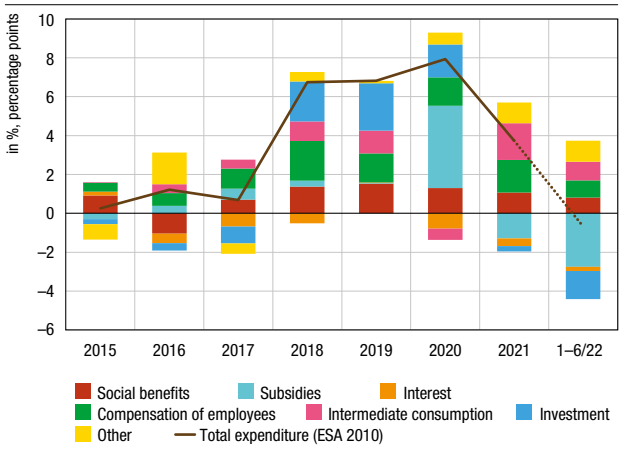
Sources: Eurostat and MoF (CNB calculations).

Figure 10.2 Consolidated general government revenue
ESA 2010, year-on-year rate of change and contributions



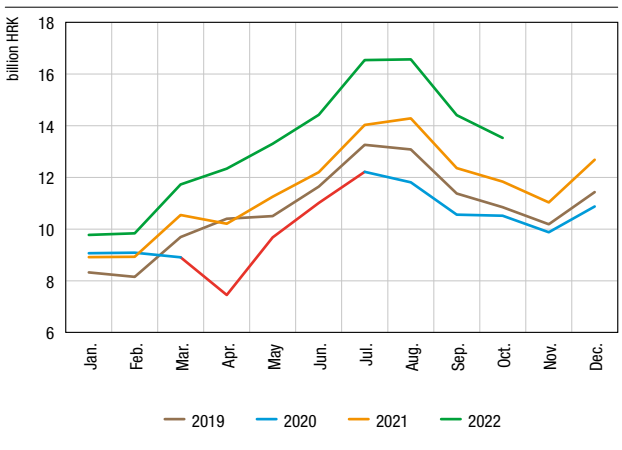
Source: Eurostat (CNB calculations).

Figure 10.3 Consolidated general government expenditure
ESA 2010, year-on-year rate of change and contributions



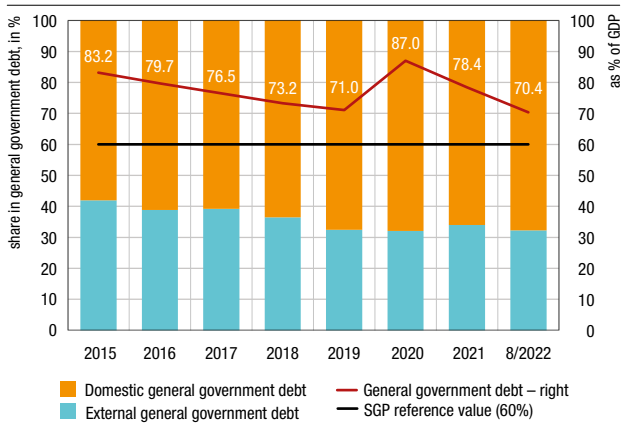
Source: Eurostat (CNB calculations).

Figure 10.4 Amounts of fiscalised receipts in wholesale and retail trade, repair of motor vehicles and motorcycles (G)



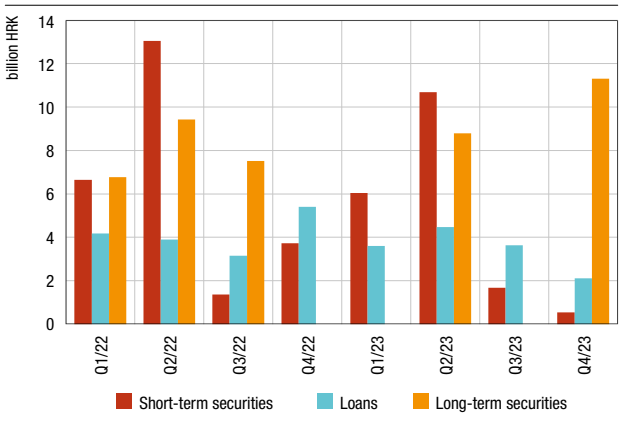
Note: The red line denotes a period of restrictive epidemiological measures.
Sources: MoF and Tax Administration (CNB calculations).

Figure 10.5 General government debt
end-period stock



Note: Nominal GDP for the last four available quarters was used to calculate the relative indicator as at the end of August 2022.
Source: CNB.

Figure 10.6 General government debt maturity



Note: Projection of the repayment of short-term and long-term securities is based on the balances as at 20 November 2022 and projection of the repayment of loans on the balance as at 30 September 2022.
Sources: MoF and CNB.

annual rise in revenues from indirect taxes, which reflected not only the recovery of nominal personal consumption and tourist activity but also the increase in the general level of prices. The April anti-inflation package of measures had an opposite effect on the trends in this fiscal category, given that it reduced the VAT rate on some products and services as well as excise duties on fuel within the scope of the limitations on the retail prices of refined petroleum products. The growth of total revenues was also driven by the strong annual increase in revenues from direct taxes, which was a reflection of the good business performance of corporations and favourable developments in the labour market. The rise in employment and wages was also reflected in the annual increase in revenues from social contributions. Other revenues made a negative contribution to developments in total revenues, most likely as a result of slower annual withdrawal of EU funds.

The expenditure side of the consolidated general government budget (ESA 2010) saw a marginal decrease (of 0.7%) in the first half of 2022, from the same period of the previous year. The decrease in total expenditures was mostly driven by the sharp fall in expenditures on subsidies, reflecting the discontinuation of job preservation grants to employers during the pandemic. The fall in capital expenditures, that is, investment activity, also imparted a downward momentum to total expenditures, likely due to the slower implementation of projects financed from EU funds. It should be noted that the expenditures associated with the use of EU funds have had a neutral impact on the budget balance. Expenditures on interest also decreased in the first half of 2022 on an annual level, due to the refinancing of the maturing debt under more favourable terms. On the other hand, expenditures on intermediate consumption went up, largely due to increased costs, including of energy products, and partly also due to costs associated with the reception of refugees from Ukraine. Expenditures for employee compensations also saw annual growth, resulting mostly from the increase in the wage calculation base of 4% from 1 May 2022 for civil servants and government employees. Expenditures for social benefits also increased on an annual level, largely due to the rise in expenditures for pensions, that is, the impact of indexation, and the one-off energy supplement to pensions envisaged in the April anti-inflation package of measures.

Favourable developments in public finance continued during the third quarter. According to preliminary MoF data for the central government under Directive 2011/85/EU, the central government generated a budget surplus of HRK 7.6bn in the third quarter of 2022. This surplus is an improvement of HRK 3.9bn on the surplus generated in the same period of the previous year. Furthermore, according to recent data from the fiscalisation system, an increase of 14.3% was recorded in wholesale and retail trade, repair of motor vehicles and motorcycles (G) from the same period last year (the same indicator stood at 16.6% in September).

Consolidated general government debt stood at HRK 344.3bn at the end of August 2022, an increase of HRK 0.5bn from the end of 2021. However, the relative indicator of public debt decreased to 70.4% of GDP in August 2022 from 78.4% of GDP at the end of 2021, largely reflecting the growth in nominal GDP.

As regards issues in financial markets, in early February 2022 the Croatian government issued in the domestic market a bond with a currency clause worth nominally EUR 1bn, falling due in 2030, with a yield to maturity of 1.39% and an annual interest rate of 1.25%. The funds raised were used to refinance bonds with a currency clause worth nominally EUR 500m that fell due on 5 February and bonds worth nominally HRK 3bn that fell due on 7 February, while the remaining amount was earmarked to finance budget needs. In addition, in July the Croatian government issued in the domestic market two tranches of bonds: one with a total nominal amount of EUR 400m falling due in 2026 with a yield to maturity of 2.17% and another with a total nominal amount of EUR 800m falling due in 2032 with a yield to maturity of 3.47%, both of them with a currency clause. The mentioned bond issues were used to refinance a bond with a total nominal amount of EUR 1bn that fell due on 22 July 2022, while the remaining amount was earmarked to finance budget needs. In April, the Croatian government issued in the international market a eurobond with a nominal amount of EUR 1.25bn, falling due in 2032, with a yield to maturity of 2.98% and an annual coupon interest rate of 2.88%. The funds thus raised were used in May to refinance the matured eurobond with a nominal amount of EUR 1.25bn.

11 Deviations from the previous projection

The current estimates of global economic growth for 2022 are less favourable than those foreseen in the July projection. Thus, according to the most recent IMF projection, global economic growth in 2022 might be 0.4 percentage points lower than previously expected. However, the negative correction of this growth is mostly accounted for by the United States of America, while most other developed markets, including the euro area, recorded somewhat better results, largely driven by the favourable trends in the services sector. The prices of oil and other raw materials edged down from the previous projection, mostly due to a weaker global demand. The global inflation estimate for the current year has been revised sharply upwards due to a strong spillover of the earlier hikes in the prices of raw materials to consumer prices. Against this backdrop, the level of central banks' benchmark interest rates has also been revised upwards.

Croatian real gross domestic product might grow by 6.3% in 2022, faster than expected in July 2022, when the annual growth rate was projected at 5.5%. The correction of the expected growth rate primarily reflects much higher expectations regarding foreign demand and personal consumption, as well as the revision of the GDP series released in November this year with an upward correction of the GDP growth rate in the first half of the year. Total exports might thus increase by 25.4% from 11.3% as previously projected. The upward revision reflects much better performance in the exports of both goods and services in the first nine months of 2022. Tourist season results were notably better than the earlier projections, which had a positive effect on the exports of services. At the same time, performance in the exports of goods also exceeded earlier expectations. As regards domestic demand, the expected personal consumption growth rate in 2022 was also corrected upwards to 5.9% (from 5.3%). The correction reflects better results than the previously projected values, with the expected continuation of the spending of savings accumulated during the pandemic. In addition, the growth in gross wages thus far this year has been more pronounced than earlier expected, especially in the private sector, partly attributable to the rise in wages due to increasing inflationary pressures and labour shortages in certain segments of the economy. By contrast, government consumption might increase at a slower pace than previously expected (2.2% from the previous 3.3%), with this correction reflecting poorer results in the second and third quarters of this year. Gross fixed capital formation might also grow slower than previously expected (5.6% rather than 6.4%). The downward correction stems from poorer results in the second quarter and the likely postponement of investments due to the rise in costs in the past year, as well the anticipated continued increase in operating expenses due to the rise in the prices of energy and other key raw materials. Total imports might increase by 26.1% in 2022, more than projected in December, when growth was expected to stand at 9.9%. The sharp rise in the imports of goods and services reflects much better results in the second and third quarters of 2022, as well as more favourable expectations regarding total exports and personal consumption. Since the upward correction of goods and services imports is more pronounced than the revision of total exports, net foreign demand could make a negative contribution to total economic growth in 2022 (–0.8 percentage points), even though it was expected to be positive under the July 2022 projection.

The estimated average annual inflation rate measured by the harmonised index of consumer prices for 2022 was increased to 10.6%, up by 1.2 percentage points from the July projection. This is mainly the result of the increase in the estimated annual core inflation rate (including the prices of industrial products and services), from 6.2% in the previous projection to 7.3% in the current one. In addition, the estimated average annual

Table 11.1 Basic assumptions, deviations from the previous projection

	2022		
	Previous projection (7/2022)	Current projection	Deviation
GDP (real rate of change, in %)			
Rest of the world	3.6	3.2	–0.4
Developed countries	1.5	2.4	0.9
Euro area	2.8	3.1	0.3
USA	3.7	1.6	–2.1
Japan	2.4	1.7	–0.6
Developing countries and emerging market countries	3.8	3.7	–0.1
Main trading partners of the Republic of Croatia	2.6	3.3	0.7
Prices			
Euro area HICP[a]	6.8	8.1	1.3
Oil prices (USD/barrel)[b]	107.5	101.5	–6.1
Key interest rates			
EURIBOR 3M[c]	0.2	2.2	2.0
ECB main refinancing rate[c]	0.5	2.5	2.0
US federal funds target rate[c]	2.7	4.5	1.8

[a] ECB, September 2022. [b] Bloomberg, Brent crude oil futures. [c] Bloomberg, rates at the end of the year.
Note: Weighted average economic growth of the major trading partners includes six countries accounting for 60% of Croatian exports of goods.
Source: IMF (WEO), October 2022.

Table 11.2 Domestic indicators, deviations from the previous projection

	2022			2023		
	Previous projection (7/2021)	Outturn	Deviation	Previous projection (7/2022)	Current projection	Deviation
National accounts (real rate of change, in %)						
GDP	5.5	6.3	0.7	2.5	1.4	–1.1
Personal consumption	5.3	5.9	0.6	2.5	1.2	–1.4
Government consumption	3.3	2.2	–1.1	2.5	2.5	–0.1
Gross fixed capital formation	6.4	5.6	–0.8	4.1	3.2	–0.9
Exports of goods and services	11.3	25.4	14.0	6.2	–0.5	–6.6
Imports of goods and services	9.9	26.1	16.2	7.5	0.3	–7.2
Labour market						
Number of employed persons (average rate of change, in %)	2.6	2.5	–0.1	1.1	0.4	–0.7
Registered unemployment rate	6.4	7.0	0.6	5.9	6.9	1.0
ILO unemployment rate	6.1	6.9	0.8	6.2	6.8	0.6
Prices						
Consumer price index (rate of change, in %)[a]	9.4	10.6	1.2	4.6	7.5	2.9
External sector						
Current account balance (as % of GDP)	3.4	–1.4	–4.8	2.1	–2.1	–4.2
Current and capital account balance (as % of GDP)	5.8	1.2	–4.6	5.2	1.0	–4.1
Gross external debt (as % of GDP)	77.9	73.3	–4.7	69.8	67.3	–2.5
Monetary developments (rate of change, in %)						
Total liquid assets – M4	9.9	10.3	0.4			
Total liquid assets – M4	9.6	9.6	0.0			
Placements (excl. central government)	7.4	10.5	3.1			
Placements (excl. central government)	7.4	10.7	3.2			

[a] Rates of change are calculated on the basis of data on transactions (see Annex 1 Introduction of data on transactions in monetary developments analysis in the CNB Bulletin No. 221).
Source: CNB.

growth rate of food prices was also revised upwards from 11.5% to 12.8%. The upward revision of the estimated core inflation and food price growth in the whole of 2022 largely stems from their higher levels in the first ten months than what was expected under the July projection and, to a lesser extent, than the higher projected inflation by the end of this year. This is due among other things to a robust non-resident demand for tourist services, as well as stronger-than-projected effects of the spillover of the previous increase in the prices of raw materials, mineral fertilisers and semi-finished goods, as well as electricity and gas prices and freight rates for the corporate sector to domestic consumer prices. The estimated average annual growth rate of energy prices edged up from the previously projected 18.9% to 20.0% under the current projection.

The estimate of the current and capital account surplus in 2022 as a percentage of GDP deteriorated considerably from the previous projection (by 4.6 percentage points). This correction is mostly the result of a much larger deterioration in the foreign trade balance than previously anticipated, strongly driven by substantially increased net imports of energy products. On the other hand, the unfavourable developments were only partly mitigated by a more favourable estimate of the surplus in the international trade in services, taking into account tourism revenues in the first nine months of this year and, to a considerably lesser extent, the improved balance in the primary income account. The indicator of gross external debt is not fully comparable to the previous projection due to methodological changes that had a noticeable effect on the increase in gross external debt in an absolute amount. Nevertheless, a more favourable gross external debt-to-GDP ratio is expected at the end of 2022 relative to the previous projection, mostly due to a higher estimate of nominal GDP.

The projection for 2022 growth in credit institutions' placements (excluding the government) has been revised upwards. Total placements might record a growth of 10.7% by the end of 2022 (transaction-based), which is almost three times the rate of 3.9% recorded in 2021, up by 3.2 percentage points from the previous projection. Such trends primarily reflect stronger lending to corporates and to a lesser extent also to households in the preceding part of the year. It is estimated that corporates borrowed more from domestic banks mostly because of the high costs of procurement owing to the surge in the prices of imported energy products and raw materials. The strong growth in corporate demand for loans was also driven by the expectation of a further increase in borrowing costs. The growth in corporate placements could accelerate to 22.0% by the end of 2022 from 2.3% in 2021 (transaction-based), with expectations having been revised upwards from the previously projected growth (13.6%). In addition, household placements are projected to increase by 5.3% (transaction-based), which is a somewhat sharper growth than the previously projected 5.0%, picking up from 4.5% a year before. The upward correction is due to the rise in placements to households over the past months. As in the previous few years, growth might be largely achieved through

housing lending, and to a lesser extent through demand for general-purpose cash loans.

The growth in total liquid assets (M4) in 2022 is projected at 9.6% (transaction-based), which is equal to the previous projection. Even though the growth in money was substantially revised downwards in this projection due to the decrease in currency outside credit institutions in the light of Croatia's accession to the euro area, the strong growth in foreign currency deposits brought about a rise in M4.

12 Annex A: Macroeconomic projections of other institutions

Table 12.1 Macroeconomic projections of other institutions
change in %

	GDP		Household consumption		Gross fixed capital formation		Exports of goods and services		Imports of goods and services		Industrial production		Consumer prices	
	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023
Croatian National Bank (December 2022)	**6.3**	**1.4**	**5.9**	**1.2**	**2.2**	**2.5**	**25.4**	**–0.5**	**26.1**	**0.3**	**–**	**–**	**10.5**	**7.5**
Eastern Europe Consensus Forecasts (November 2022)	5.8	1.7	5.2	1.3	6.7	4.3	–	–	–	–	2.1	1.1	10.7	6.3
European Commission (October 2022)	6.0	1.0	–	–	–	–	–	–	–	–	–	–	10.1	6.5
International Monetary Fund (October 2022)	5.9	3.5	–	–	–	–	–	–	–	–	–	–	9.8	5.5
Ministry of Finance (October 2022)	5.7	0.7	4.5	0.4	4.5	1.7	17.3	–0.2	20.2	0.4	–	–	10.4	5.7
Raiffeisen bank[a] (October 2022)	5.8	1.8	6.1	1.9	6.7	6.9	15.7	9.8	22.4	9.6	2.5	1.8	12.9	2.4
World Bank (October 2022)	6.4	1.8	–	–	–	–	–	–	–	–	–	–	10.1	3.9
European Bank for Reconstruction and Development (September 2022)	6.5	2.0	–	–	–	–	–	–	–	–	–	–	–	–

[a] Rates of change in exports and imports of goods and services refer to the change in the nominal value.
Note: Projection of the Ministry of Finance was taken from the Convergence Programme of the Republic of Croatia for the period from 2023 to 2025.
Sources: Publications of the respective institutions.

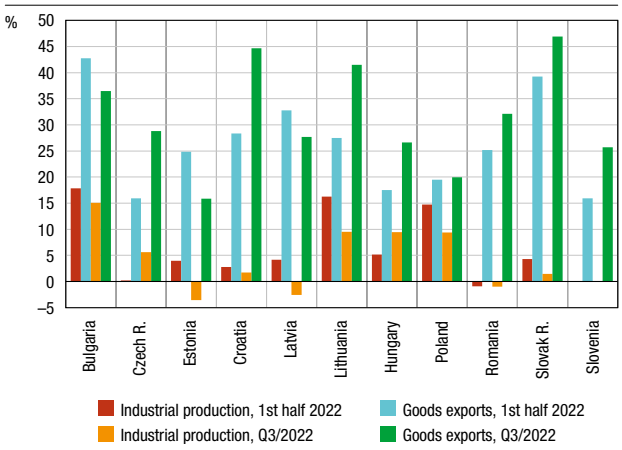
13 Annex B: Comparison of Croatia and selected countries

Table 13.1 Gross domestic product

	Year-on-year rate of change, original data			Quarter-on-quarter rate of change, seasonally adjusted data			
	2019	2020	2021	Q4/ 2021	Q1/ 2022	Q2/ 2022	Q3/ 2022
Bulgaria	4.0	–4.0	7.6	1.6	0.5	0.9	:
Czech R.	3.0	–5.5	3.5	0.8	0.6	0.5	–0.4
Estonia	3.7	–0.6	8.0	0.8	0.0	–1.3	–1.8
Croatia	3.4	–8.6	13.1	1.5	2.8	1.5	–0.4
Latvia	2.6	–2.2	4.1	–0.4	1.8	0.0	–1.7
Lithuania	4.6	0.0	6.0	1.1	0.6	0.3	0.5
Hungary	4.9	–4.5	7.1	2.1	1.6	0.8	–0.4
Poland	4.4	–2.0	6.8	1.6	4.3	–2.3	1.0
Romania	3.9	–3.7	5.1	0.5	1.5	1.3	1.3
Slovak R.	3.5	–4.3	8.2	5.2	–0.1	0.2	–1.4
Slovenia	2.5	–3.4	3.0	0.3	0.3	0.3	0.3
Average[a]	**3.7**	**–3.5**	**6.6**	**1.4**	**1.3**	**0.2**	**–0.3**

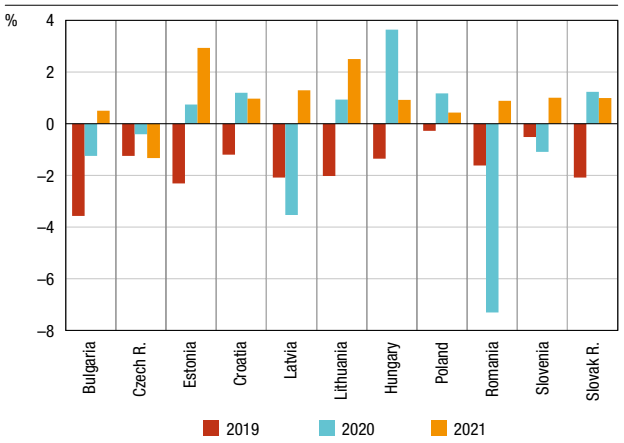
[a] Simple average.
Sources: Eurostat, EC, CBS and CNB.

Figure 13.1 Industrial production and goods exports
year-on-year rate of change



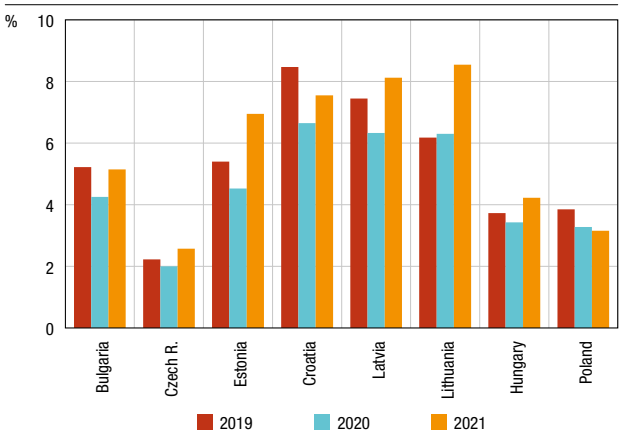
Sources: Eurostat and CBS.

Figure 13.2 Labour Force Survey employment rate
year-on-year rate of change



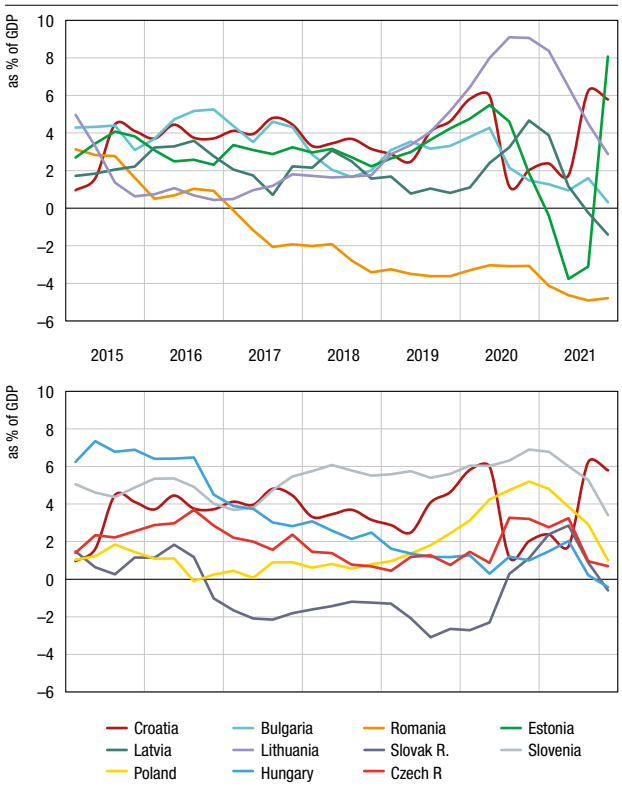
Note: Eurostat states that data from the Labour Force Survey have breaks in time series resulting from updated methodology in the first quarter of 2021.
Source: Eurostat.

Figure 13.3 Labour Force Survey unemployment rate



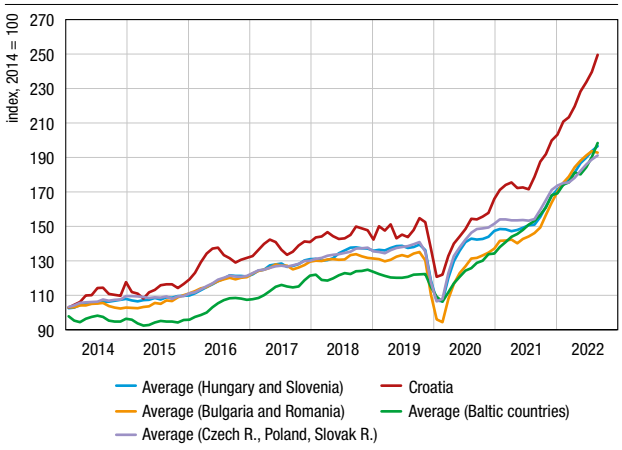
Note: Eurostat states that data from the Labour Force Survey have breaks in time series resulting from updated methodology in the first quarter of 2021.
Source: Eurostat.

Figure 13.4 Current and capital account balance
sum of the last four quarters



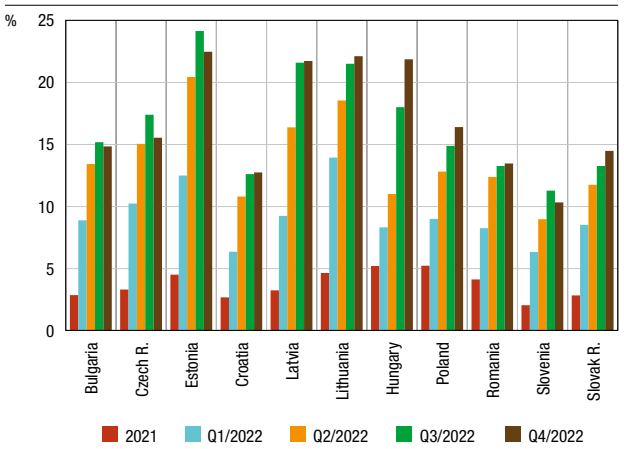
Sources: Eurostat and CNB.

Figure 13.5 Goods exports
quarterly moving average, seasonally adjusted data



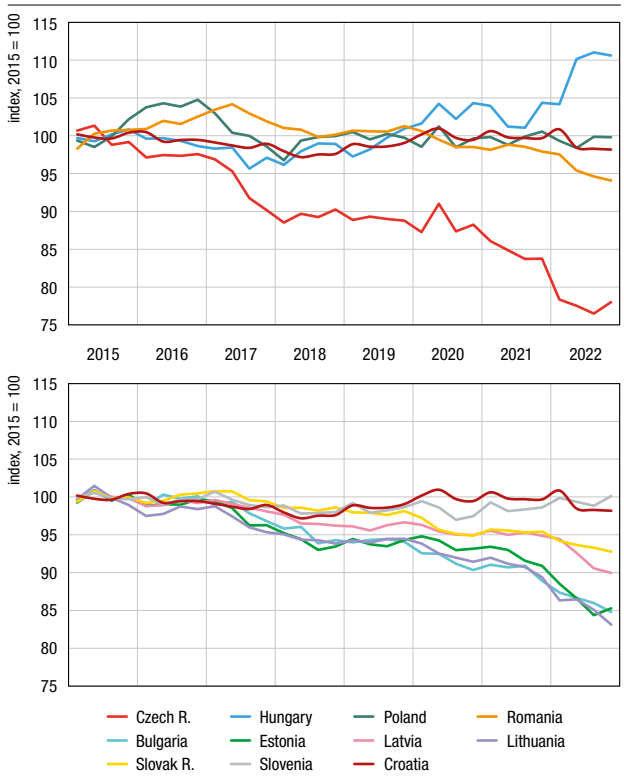
Sources: Eurostat and CNB.

Figure 13.6 Consumer price inflation
average year-on-year rate of change



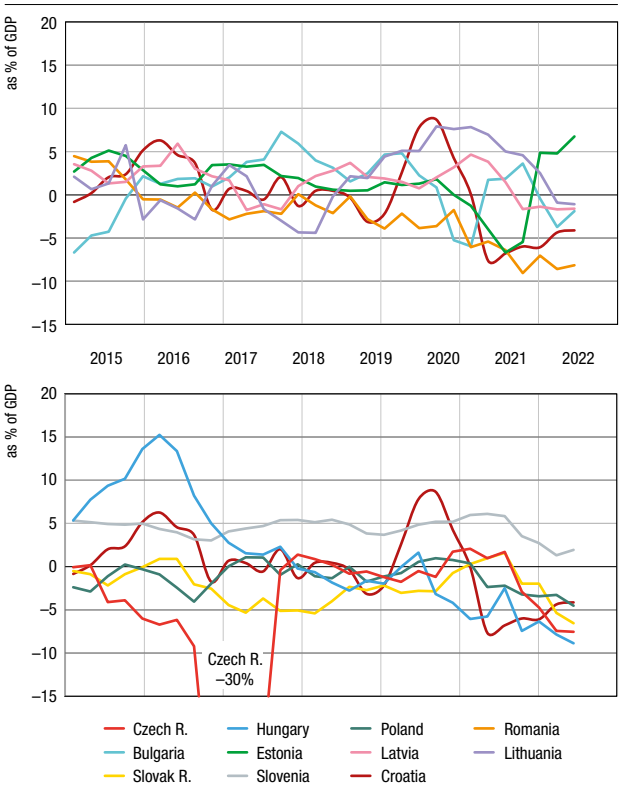
Note: Data for the fourth quarter of 2022 refer to October.
Source: Eurostat.

Figure 13.7 Real effective exchange rate (deflated by consumer prices) in selected countries



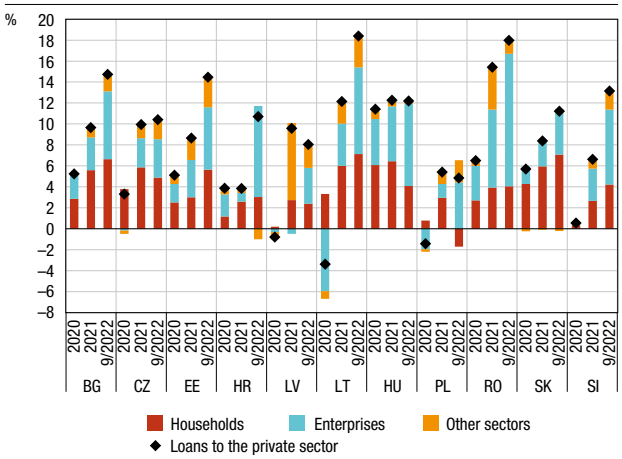
Notes: Data for 2022 refer to the January-October period. A fall in the index indicates a real effective appreciation.
Sources: BIS and CNB.

Figure 13.8 Balance of payments financial account balance, excluding the change in international reserves
sum of the last four quarters



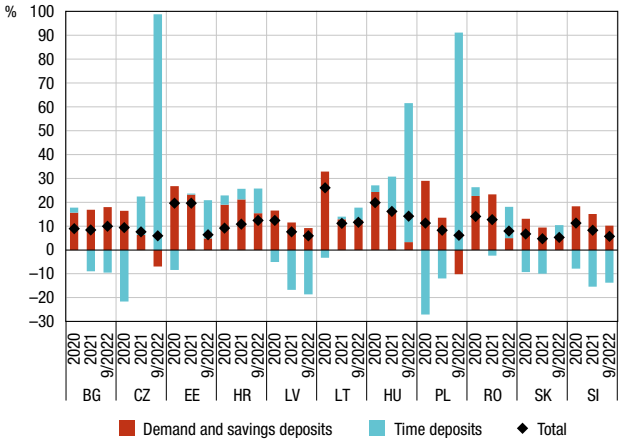
Sources: Eurostat and CNB.

Figure 13.9 Bank loans to the private sector
contributions to the year-on-year rate of change, transaction-based



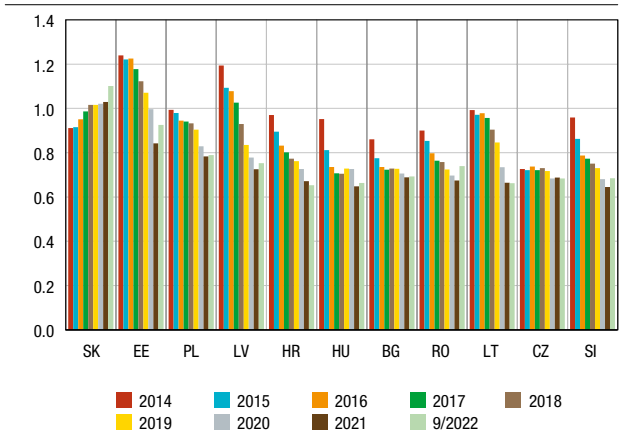
Sources: ECB and CNB.

Figure 13.10 Private sector deposits
year-on-year rate of change, transaction-based



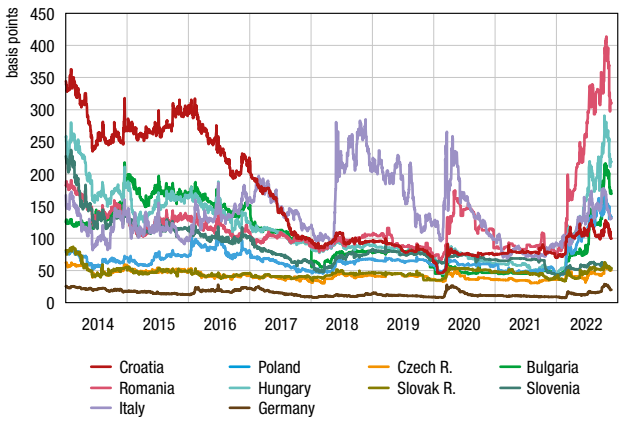
Sources: ECB and CNB.

Figure 13.11 Placement to deposit ratio of the private sector



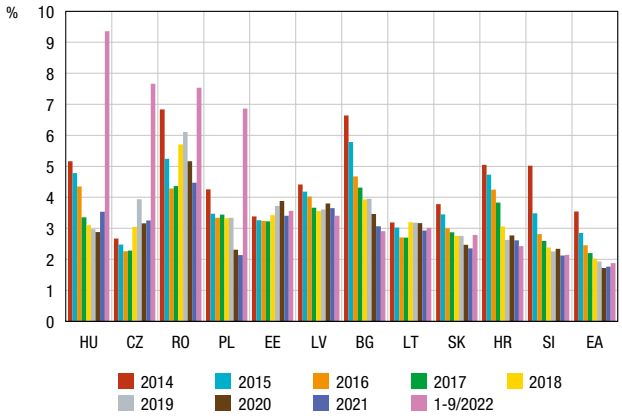
Sources: ECB and CNB.

Figure 13.12 CDS spreads for 5-year government bonds of selected countries



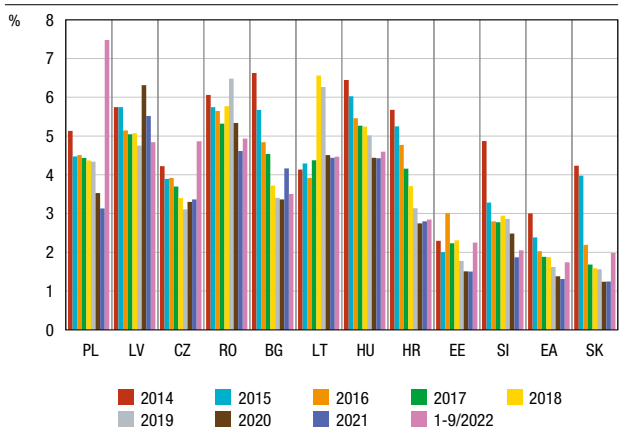
Note: Credit default swaps (CDS) spread is an annual premium that a CDS buyer pays for protection against credit risk associated with an issuer of an instrument.
Source: S&P Capital IQ.

Figure 13.13 Short-term interest rates on corporate loans



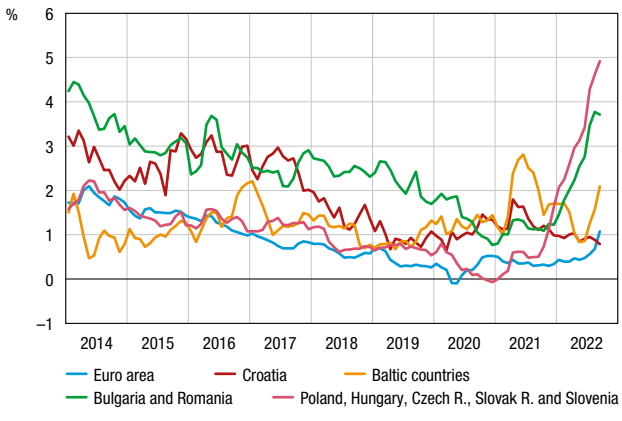
Note: Includes average interest rates on corporate loans up to EUR 1m and with a maturity of up to 1 year.
Source: ECB.

Figure 13.14 Interest rates on housing loans



Sources: ECB and NCBs.

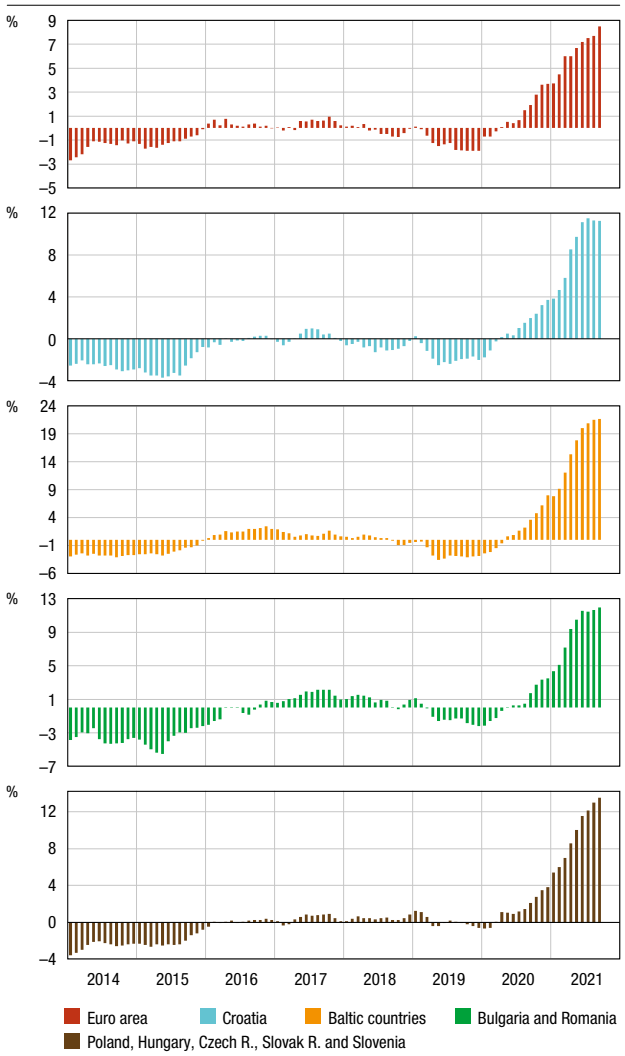
Figure 13.15 Expected real interest rate on corporate loans
up to EUR 1m and with maturity up to 1 year



Notes: The expected real interest rate equals the nominal interest rate deflated by inflation projected for the next year from the Consensus Forecasts. Country group averages are not weighted.
Sources: ECB and Consensus Forecasts.

Figure 13.16 Spread between expected and achieved real interest rate on corporate loans

up to EUR 1m and with maturity up to 1 year

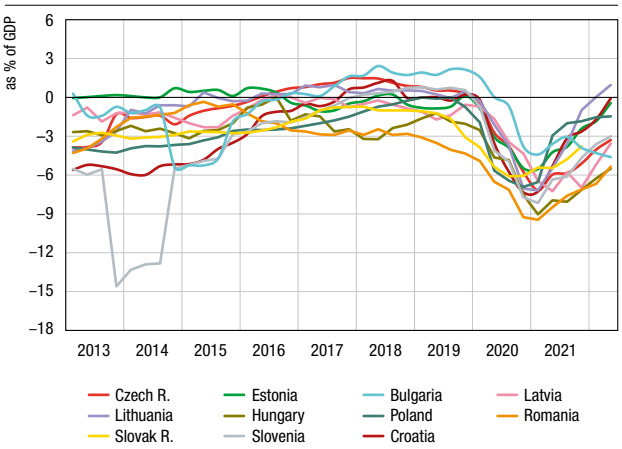


Notes: The expected real interest rate equals the nominal interest rate deflated by inflation projected for the next year from the Consensus Forecasts and the achieved real interest rate equals the nominal interest rate deflated by inflation achieved. Country group averages are not weighted.

Sources: ECB and Consensus Forecasts.

Figure 13.17 Consolidated general government balance

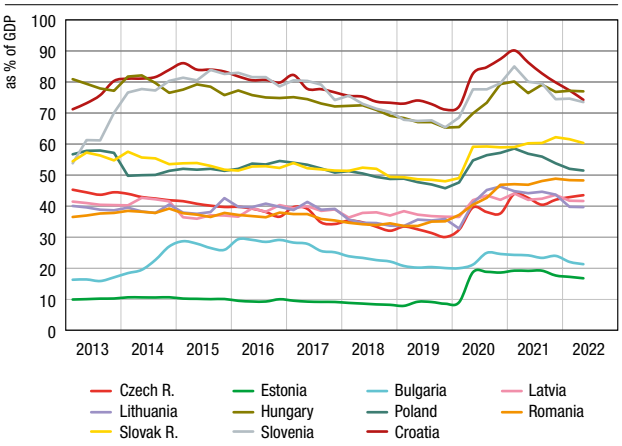
four-quarter moving sums



Sources: Eurostat and CNB.

Figure 13.18 General government debt

end-quarter stock



Sources: Eurostat and CNB.

Abbreviations and symbols

Abbreviations

APN – Agency for Transactions and Mediation in Immovable Properties
ARZ – Rijeka-Zagreb Motorway
BIS – Bank for International Settlements
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
CCI – consumer confidence index
CDCC – Central Depository and Clearing Company Inc.
CDS – credit default swap
CEE – Central and Eastern European
CEFTA – Central European Free Trade Agreement
CEI – consumer expectations index
CES – Croatian Employment Service
CHIF – Croatian Health Insurance Fund
CM – Croatian Motorways
CLVPS – Croatian Large Value Payment System
CNB – Croatian National Bank
CPF – Croatian Privatisation Fund
CPI – consumer price index
CPII – Croatian Pension Insurance Institute
CR – Croatian Roads
CSI – consumer sentiment index
DAB – State Agency for Deposit Insurance and Bank Resolution
dep. – deposit
DVP – delivery versus payment
EC – European Commission
ECB – European Central Bank
EFTA – European Free Trade Association
EMU – Economic and Monetary Union
ESI – economic sentiment index
EU – European Union
excl. – excluding
f/c – foreign currency
FDI – foreign direct investment
Fed – Federal Reserve System
FINA – Financial Agency
FISIM – financial intermediation services indirectly measured
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
HUB – Croatian Banking Association
ILO – International Labour Organization
IMF – International Monetary Fund
incl. – including
IPO – initial public offering
m – million
MIGs – main industrial groupings
MM – monthly maturity
MoF – Ministry of Finance
NA – national accounts
NBS – National Bureau of Statistics of China
NCA – National Classification of Activities
NCB – national central bank
NCS – National Clearing System
n.e.c. – not elsewhere classified
OECD – Organisation for Economic Co-Operation and Development
OG – Official Gazette
R – Republic
o/w – of which
PPI – producer price index
RTGS – Real-Time Gross Settlement
Q – quarterly
RR – reserve requirement
SDR – special drawing rights
SE – South-East
SITC – Standard International Trade Classification
SGP – Stability and Growth Pact
ULC – unit labour cost
VAT – value added tax
WTO – World Trade Organization
ZMM – Zagreb Money Market
ZSE – Zagreb Stock Exchange

Three-letter currency codes

ATS – Austrian schilling
CHF – Swiss franc
CNY – Yuan Renminbi
DEM – German mark
EUR – euro
FRF – French franc
GBP – pound sterling
HRK – Croatian kuna
ITL – Italian lira
JPY – Japanese yen
USD – US dollar
XDR – special drawing rights

Two-letter country codes

AT – Austria
BE – Belgium
BG – Bulgaria
CY – Cyprus
CZ – Czech Republic
DE – Germany
DK – Denmark
EE – Estonia
ES – Spain
FI – Finland
FR – France
GB – Great Britain
GR – Greece
HR – Croatia
HU – Hungary
IE – Ireland
IT – Italy
LT – Lithuania
LV – Latvia
MT – Malta
NL – Netherlands
PL – Poland
PT – Portugal
RO – Romania
SI – Slovenia

SK – Slovak Republic

UK – United Kingdom

Symbols

– – no entry

.... – data not available

0 – value is less than 0.5 of the unit of measure being used

∅ – average

a, b, c,... – indicates a note beneath the table and figure

* – corrected data

( ) – incomplete or insufficiently verified data

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