

FOCUS ON EUROPEAN ECONOMIC INTEGRATION

This publication presents economic analyses and outlooks as well as analytical studies on macroeconomic and macrofinancial issues in Central, Eastern and Southeastern Europe.

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Economic trends

Economic trends in CESEE

Stubbornly high inflation despite cooling economy^{1, 2, 3}

1 Regional overview

Russia's invasion of Ukraine in early 2022 sent shockwaves through the global economy. Together with the effects of past adverse shocks – most notably the pandemic and the associated disruptions of global supply chains – it propelled price growth up to levels not seen for decades. After a period of pronounced economic stress and uncertainty, some of the factors that weighed on the economies of Central, Eastern and Southeastern Europe (CESEE) became less pressing as the year 2022 progressed. Commodity prices have moderated and – while the war continues, and geopolitical tensions remain high – the European economy has started to adapt to the new realities of geoeconomic fragmentation. In some fields, the adjustment has been rather successful (e.g. concerning the redirection of energy demand away from Russian energy sources and regarding general energy-saving efforts). Also supply chains seem to be functional again after China's departure from its zero COVID policy. This is evidenced by lower global shipping costs and more readily available inputs among other factors. By the turn of the year, several signs suggested that the fourth quarter of 2022 may have already marked the bottom of the current economic downturn: (1) Fillips from lower food and energy prices, improved supply chain functioning and bold monetary policy finally put a brake on accelerating inflation rates; (2) the euro area economy showed no signs of contraction, at least not yet; (3) investment activity withstood tougher financing conditions comparatively well; and (4) sentiment improved notably from the troughs of mid-2022, especially among consumers.

CESEE is not yet out of the woods, though. Economic activity continued to weaken in early 2023 (also compared to the euro area) and inflation remains stubbornly high despite the notable cooling of the economy. Adjustments to the measures introduced to shield households from spiraling energy prices have introduced quite some volatility in headline inflation rates. Underlying (core) price pressures are proving sticky, with labor markets very tight throughout the CESEE region. At the same time, the fast rise in policy rates is starting to bite, and rising (global) financial sector risks could – despite generally solid fundamentals – spill over into CESEE banking sectors. Public support amid the energy crisis and rising government financing costs have consumed fiscal space and are limiting fiscal policymakers' ability to respond flexibly to new challenges.

Economic activity weakened throughout the review period

How is all the above reflected in the data? After confidence indicators had already deteriorated significantly from early summer 2022 onward – consumer confidence fell to a lower level than at the height of the COVID-19 pandemic – activity indicators also weakened from fall 2022. Almost all industrial sectors were affected

¹ Compiled by Josef Schreiner with input from Katharina Allinger, Stephan Barisitz, Mathias Lahnsteiner, Thomas Reiningner, Thomas Scheiber, Tomáš Sláček and Zoltan Walko.

² Cut-off date: April 14, 2023. This report focuses primarily on data releases and developments from October 2022 up to the cut-off date and covers Slovakia, Slovenia, Bulgaria, Croatia, Czechia, Hungary, Poland, Romania, Türkiye and Russia. The countries are ranked according to their level of EU integration (euro area countries, EU member states and non-EU countries).

³ All growth rates in the text refer to year-on-year changes unless otherwise stated.

by the downturn, especially energy-intensive industries and industries that are particularly dependent on raw materials and imported components. Average industrial production growth declined and output in the sector contracted by 1.5% in the CESEE EU member states in February 2023. This was the strongest contraction since the summer of 2020. Retail sales momentum was increasingly driven by daily necessities, while sales of durable goods and fuels weakened. Retail sales in the CESEE EU member states contracted by 0.3% on average in February 2023, a figure comparable to January and February of 2021, a time when lockdown restrictions were still in place in many countries. While activity indicators trended down, sentiment indicators recovered somewhat from autumn 2022 onward. This is particularly true for consumer sentiment, but industrial sentiment brightened as well.

Output contracted in the CESEE EU member states in Q4 2022

In terms of actual GDP figures, this means that – amid quite some volatility in quarterly growth readings – economic momentum decelerated notably in the second half of 2022. Average growth in the CESEE EU member states turned negative in the fourth quarter of 2022 (with Czechia and Hungary meeting the criteria for a technical recession), and growth in Türkiye halved compared to the first half of 2022 (see table 1). The Russian economy, however, rebounded from its strong contraction in the second quarter of 2022.

Private consumption almost completely disappeared as a central pillar of growth

In the second half of 2022, the economic momentum in the CESEE EU member states rested primarily on investment, whose growth weakened only slightly, and on net exports. At the same time, private consumption noticeably failed to support growth in many countries (see chart 1).

Gross fixed capital formation advanced by close to 5% on average in the region during the second half of 2022 and was especially buoyant in Slovakia, Croatia and

Table 1

Real GDP growth

	2020	2021	2022	Q1 21	Q2 21	Q3 21	Q4 21	Q1 22	Q2 22	Q3 22	Q4 22
<i>Period-on-period change in %</i>											
Slovakia	−3.4	3.0	1.7	−1.4	1.9	0.3	0.4	0.3	0.3	0.3	0.3
Slovenia	−4.3	8.2	5.4	1.7	2.0	2.9	3.4	1.0	0.8	−1.3	0.8
Bulgaria	−4.0	7.6	3.4	2.7	1.3	1.9	1.5	0.4	0.7	0.6	0.6
Croatia	−8.6	13.1	6.3	7.2	0.5	2.4	2.1	2.4	1.3	−0.5	0.9
Czechia	−5.5	3.6	2.5	−0.5	1.4	1.7	0.8	0.6	0.3	−0.3	−0.4
Hungary	−4.5	7.2	4.6	1.1	2.3	1.6	2.5	1.3	0.7	−0.7	−0.4
Poland	−2.0	6.8	4.9	2.6	2.2	2.1	1.7	4.2	−2.2	1.1	−2.4
Romania	−3.7	5.9	4.8	2.0	1.8	0.8	0.6	1.3	1.2	1.2	1.0
Türkiye	1.9	11.3	5.6	2.6	2.0	2.7	1.6	0.7	1.9	−0.1	0.9
Russia	−2.7	5.6	−2.1	0.7	1.6	0.6	0.9	0.2	−4.6	0.5	0.5
CESEE average ¹	−2.0	7.8	2.2	1.6	1.8	1.5	1.3	1.1	−1.4	0.4	0.2
Euro area	−6.1	5.3	3.5	0.0	2.0	2.3	0.6	0.6	0.9	0.4	0.0

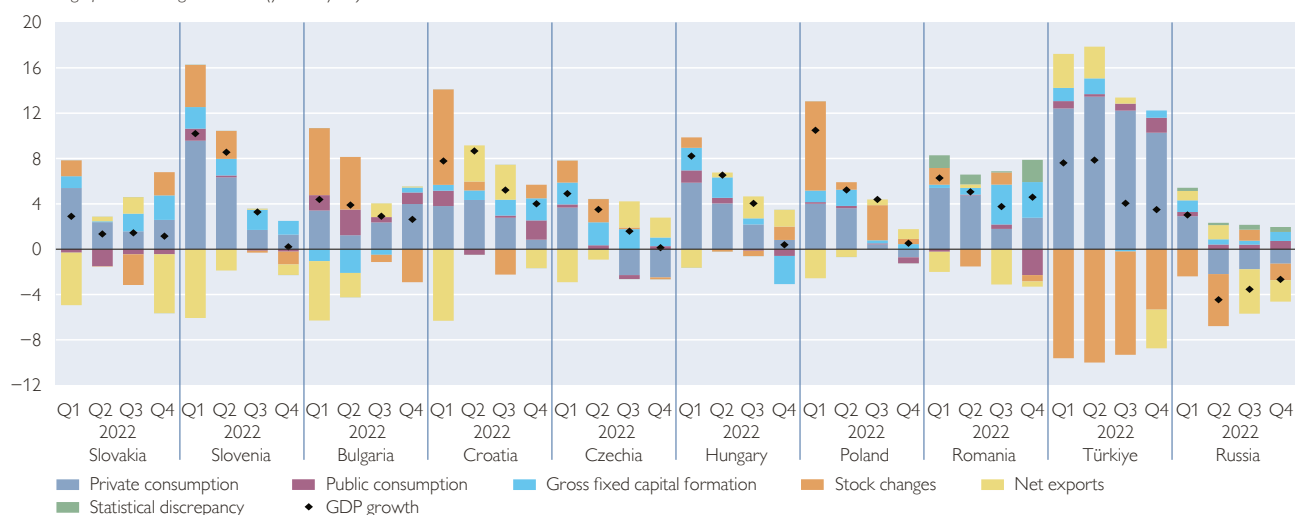
Source: Eurostat, national statistical offices.

¹ Average weighted with GDP at PPP.

Chart 1

GDP growth and its main components

Percentage points, GDP growth in % (year on year)



Source: Eurostat, national statistical offices.

Romania. While nominal financing conditions tightened notably throughout CESEE, real interest rates remained firmly in negative territory, and high profitability provided sources for internal financing. Capital formation was also supported by the beginning utilization of funds under the Recovery and Resilience Facility (RRF), above-average capacity utilization and/or efforts to save (increasingly scarce) labor in several countries. Stock changes, however, weighed on GDP as the high inventories that were built up in 2021 and early 2022 (mostly related to supply chain issues) were slowly being depleted.

Although net exports slowed down toward the end of 2022, they often made a positive contribution to growth – for the first time since late 2020. Real exports increased more strongly than real imports. This in part reflected the unclogging of supply chains amid order backlogs from the past and stronger than expected demand from Western Europe. Exchange rate weakness (for example in Hungary), the strong tourist season (for example in Croatia), consumption restraint and/or lower energy imports due to high world market prices and/or energy-saving measures also played a role. In 2022, natural gas demand declined notably in almost all CESEE EU member states, most strongly so in Romania and Croatia (–14% and –19%, respectively, compared to the 2019–2021 average). In addition, CESEE countries used 4% to 17% less electricity in 2022 than in 2021, with Slovakia and Romania leading the way.

In the review period, poor economic confidence, weakening loan growth and losses in purchasing power in the wake of strong inflation had a growing impact on consumer spending in the CESEE EU member states. By the fourth quarter of 2022, private consumption growth had declined to only 0.5% on average (and was even negative in Czechia and Poland), delivering a moderate contribution to GDP growth at best. The central pillar of growth over the first half of 2022 has thus almost completely disappeared.

Labor market tightness persists

Consumer demand would likely have been even weaker were it not for remaining cushions of pandemic savings (estimated to amount to at least 1% of GDP in most countries) and the still very strong labor markets of the region. Despite weak growth, the average unemployment rate in the CESEE EU member states (at 3.7% in February 2023) currently stands only slightly above the historic lows recorded at the end of 2019. This means that there is practically full employment. A broader measure of the labor market slack – i.e. the share of persons with an unmet need for employment in the extended labor force – even beat its end-2019 reading by a full 0.7 percentage points. At 6% in the fourth quarter of 2022, it reached the lowest level since the start of the time series in 2009. And while employment growth has lost steam recently, trends in employment rates and activity rates were also favorable, with both rising to close to or even above historical heights in the final quarter of 2022.

Earthquakes weighed on activity in Türkiye

In Türkiye, the earthquakes of February 6, 2023, weighed on activity and pushed already weakening industrial output into contraction. Retail sale growth held up better, partly thanks to strong pay hikes at the beginning of this year (including a minimum wage increase of 55% and a 30% increase in civil servant wages) and aided by a favorable base effect after the confidence shock from the lira exchange rate crisis in November to December 2021. GDP growth in the second half of 2022 was based on a robust contribution of private consumption while both investments and net exports weakened.

Russian economy is weathering Western sanctions rather well

While growth readings were volatile in the CESEE region and the economic momentum generally decelerated, the Russian economy improved steadily from its mid-2022 trough. After the first shock of international economic sanctions had been digested, quarter-on-quarter growth came in at 0.5% in the third and fourth quarter, limiting the annual GDP contraction to –2.1% for the whole year. Russian GDP dynamics benefited from higher (war-related) government spending and

Chart 2

Russia: exchange rate and policy rate



Source: Macrobond.

from substantially higher prices for energy. Notwithstanding international sanctions, the country managed to bring substantial quantities of its energy carriers to the world market, in part by redirecting crude oil exports from sanctioning to nonsanctioning countries. With sanctions severely curtailing imports from Western economies, the current account surplus rose to more than 10% of GDP in 2022.

The price cap for Russian oil and the European Union's import ban increased the price discount of Russian oil vis-à-vis oil from other origins from late 2022 onward. This weighed on the ruble's external value and the currency fell back to its pre-invasion level against the euro in late March 2023 (see chart 2). Inflation spiked at 17.8% in April 2022 but came back to 11% in February 2023. After reducing its key rate to 7.5% in mid-September 2022, the Bank of Russia (CBR) has so far left it at this level.

Inflation in CESEE EU stabilizes at a high level amid considerable volatility

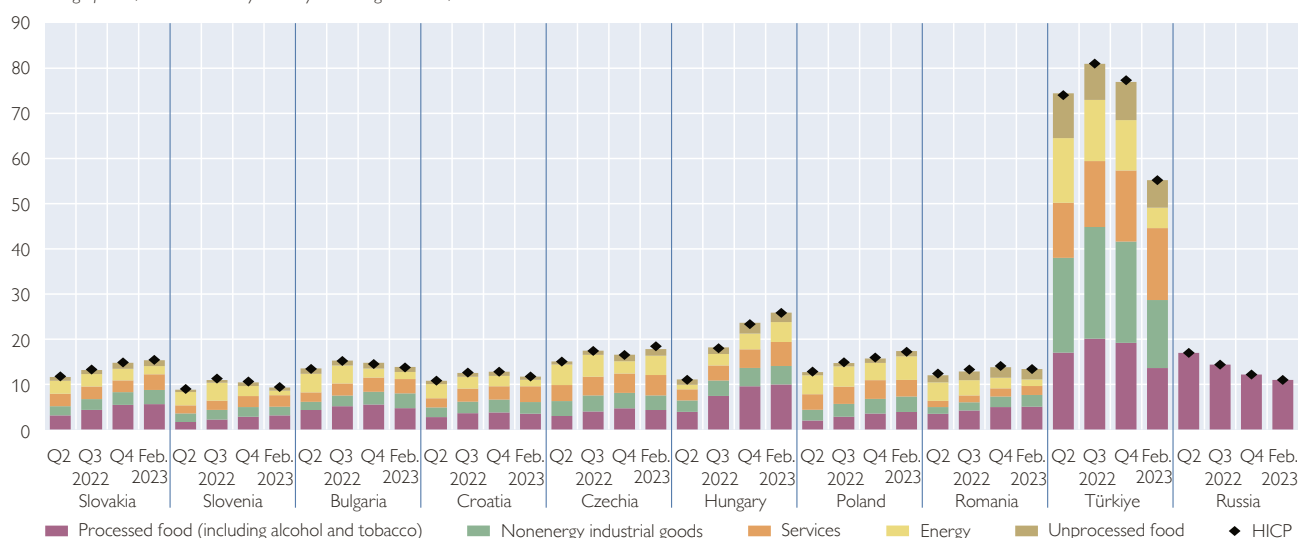
The strong increase in annual inflation rates that characterized much of 2022 seems to have come to an end in the CESEE EU member states as well, and inflation recently stabilized at a high level amid considerable volatility (see chart 3). Energy prices in particular had a disinflationary effect, reflecting lower world market prices and country-specific relief packages for household energy. In December 2022, the average inflation rate in the CESEE EU member states declined to 16%, which marked the first decrease in two years. From May 2022, it became evident, at a disaggregated level, that the share of items with rising inflation rates in the overall consumption basket was declining – from a high level – both in terms of their number and their aggregate weight in the basket. Inflation is therefore currently less broadly based than it was in spring 2022.

However, price dynamics in the region have not yet embarked on a stable and sustainable downward trend. Core inflation, for instance, remained very high and

Chart 3

HICP inflation and its main drivers

Percentage points, contribution to year-on-year change in HICP; HICP in %



Source: Eurostat, The Vienna Institute for International Economic Studies.

Note: CPI data for Russia. No breakdown according to COICOP available.

kept on increasing in several countries of the region. This reflected lagged effects of the pass-through of producer price spikes to consumer bills, an expansion of profit margins in some sectors as well as rising (labor-intensive) services prices. The latter could suggest a stronger translation of wage costs into the general price level amid tight labor markets. Nominal wage growth had already accelerated to around 11% on average in the fourth quarter of 2022. However, the risk of a wage-price spiral is mitigated to some extent by the low unionization in CESEE EU member states and easing inflation expectations. Surveys among consumers show that inflation expectations recently converged back to the values reported in 2018. Inflation expectations in industry, retail and services came down as well but have not yet returned to their pre-pandemic levels.

Moreover, aid packages to shield households from spiraling prices (mostly energy prices) had to be adjusted in several instances as they negatively impacted national budgets and/or the balance sheets of energy suppliers. This once again boosted (regulated) energy prices, and the average inflation rate in the CESEE EU member states again edged up to 16.9% by February 2023. Hungary, for instance, abandoned its fuel price caps and increased its regulated prices for household energy; Czechia introduced a price cap to replace its (subsidized) energy-saving tariff; and Poland removed tax breaks on fuel and energy. Going forward, further adjustments cannot be ruled out, at least in some countries, as the prices for household energy are not yet aligned with world market prices and/or as tax rates (especially for food and energy) have not yet returned to pre-pandemic levels. However, statistical effects as the war-related price spikes of early 2022 drop out of the base should also contribute to some easing of price pressures going forward.

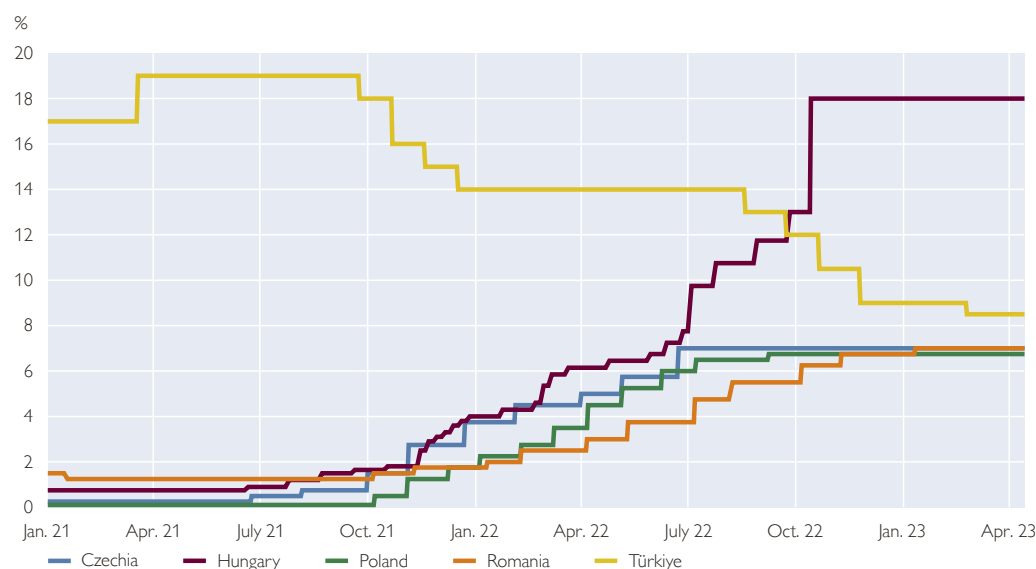
Tightening cycles near an end

Against the backdrop of inflation stabilizing at a high level, the incipient economic slowdown and the already far-reaching tightening of monetary policy, most central banks in the region refrained from further interest rate hikes in the review period (see chart 4). For example, the last rate hike in Poland dates back to September 2022, and the last rate hike in Czechia was in June 2022, even further in the past. The Hungarian central bank (MNB) has also refrained from taking a further interest rate step since October 2022. However, this was preceded by strong monetary tightening in reaction to a depreciation of the forint: After the MNB had hiked its operational policy rate by 125 basis points to 13% in late September 2022 and communicated the end of its hiking cycle, the forint came under pressure and depreciated to its lowest value against the euro (430 HUF per EUR) on October 13, 2022. The following day, MNB called an emergency meeting in which it made several adjustments to its rate tool kit and hiked its operational policy rate to 18%. The policy rate has since stayed at this level – the highest since 1998.

The interest rate ceiling may also have been reached in Romania, after the central bank hiked its policy rate by a moderate 25 basis points to 7% at the beginning of January 2023. Forward rate agreements for the abovementioned countries indicate that market expectations are broadly in line with current market rates. In Hungary, even some unwinding of the emergency rate step of October 2022 is expected in the course of the year.

In Türkiye, both headline and core inflation decelerated from their peaks (at 85% and 79%, respectively, in October 2022) to 55% and 57%, respectively, in

Chart 4

Policy rates in selected CESEE countries

Source: Macrobond.

February 2023. In parallel, the Turkish central bank (TCMB) delivered policy rate cuts by 150 basis points each in October and November (to 9%) and another one in February to 8.5%, implying a large negative real key rate. Against this background and despite regulatory measures to foster a “liraization” of banks’ assets and liabilities, the lira depreciated against the euro by 30% in nominal terms since January 2022 (see chart 5).

Most currencies have recovered to levels seen prior to the invasion of Ukraine

Unlike in Türkiye, monetary conditions in CESEE EU member states with independent monetary policies have probably already reached the restrictive range and should have a significantly dampening effect on prices going forward. Real (ex ante) interest rates have turned positive in recent months and the large interest rate differential to the euro area – together with a more supportive risk environment, e.g. with respect to energy markets – supported regional currencies. This applies not least to Hungary, where the forint has recovered significantly from its crash in October 2022, currently trading around 2% below its early 2022 value. The recovery was also supported by positive political news concerning long-standing issues between Hungary and the European Commission. The development of the forint compares to a depreciation by 2% of the Polish zloty, a largely stable development of the Romanian leu and an appreciation of the Czech koruna by 6%. The latter, however, was buoyed by exchange rate interventions carried out by the Czech National Bank (CNB), which depleted its foreign currency reserves by some 10 percentage points of GDP in the second half of 2022. The central bank has ample firepower given the large foreign currency reserves it amassed during the intervention-floor policy several years ago.

Exchange rates of selected CESEE countries vs. euro

Index: January 2022 = 100, rise = appreciation



Source: Macrobond.

Currencies only temporarily affected by international financial market turbulences

The most recent global financial sector turbulences following troubles at Silicon Valley Bank and Credit Suisse had only a temporary impact on CESEE foreign exchange markets. The Czech koruna lost 2.5% and the Hungarian forint 6% of value against the euro in mid-March, but both currencies recovered quite quickly. Global financial sector uncertainty currently also does not seem to be leading to an early exit from tight monetary policy. Prior to the events of mid-March, the narrative (and the market assessment) was that interest rates in CESEE EU member states would not continue to rise and that some interest rate hikes would possibly be reversed in the nearer future (e.g. the emergency hike in Hungary). Recent rate decisions, however, have set a somewhat more hawkish tone. The central banks of the region emphasized that policy adjustments will be data driven and that there is no predetermined path as to when the rates will be brought back to lower levels. CNB policymakers have explicitly noted that they “consider the market expectations regarding the timing of the first decrease in CNB rates to be premature.” Regardless of upcoming rate decisions, ongoing significant declines in equity prices of European banks could lead to tighter lending standards. Periods of bank stress usually raise the costs of capital and thereby constrain their ability to lend.

Banking sector momentum has weakened

Surveys like the European Investment Bank’s CESEE Bank Lending Survey already suggest that credit supply conditions have deteriorated significantly over the last six months. A weak local market outlook (related to the war in Ukraine, high inflation and the general economic slowdown) is cited as the most important reason for this development. All credit segments have been affected by tighter credit standards, though the tightening has been particularly strong in the mortgage market. While credit demand has been more resilient than supply, it is increasingly being driven by short-term demand for working capital and debt restructuring. At the same time, geopolitical uncertainty and the weak economic outlook are

negatively influencing long-term fixed investments and consumer confidence. Among households, housing market prospects as well as non-housing-related consumption expenditures are expected to drag down demand further.

This increasingly restrictive situation in CESEE banking sectors is not yet fully reflected in credit market data and banks' balance sheets. Credit dynamics in the CESEE region decelerated in the review period, reflecting a slowdown in new lending due to higher interest rates, more early repayments than in previous years and declining volumes in housing transactions. The weakening, however, was not observed evenly across countries and sectors. Credit growth rates, for example, remained broadly stable in Croatia, Bulgaria and Hungary amid some deceleration in growth of credit to households and largely unabated corporate sector credit dynamics. By contrast, corporate loan growth weighed heavily on credit market developments in Slovenia, Czechia, Poland and Romania.

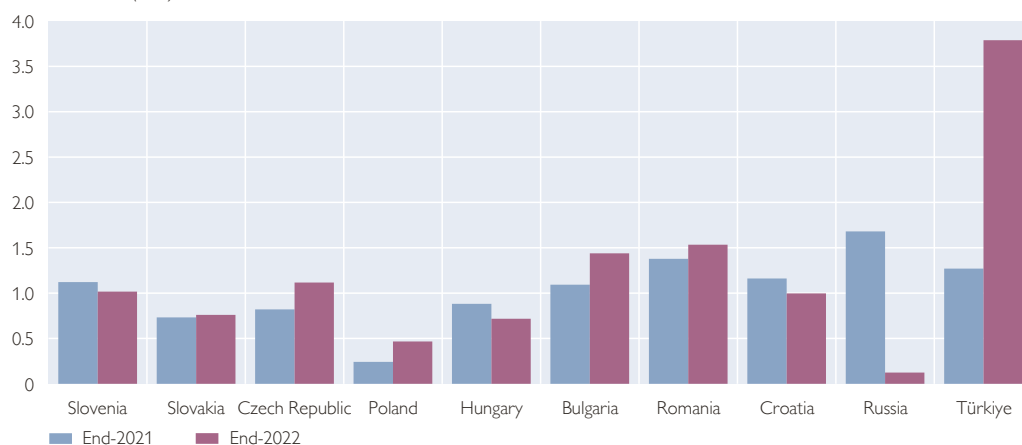
Yet banks' results and balance sheets have remained sound

Profitability was bolstered by higher net interest income and remained at around the levels observed in 2021 (see chart 6) – despite partly higher (personnel) expenses and provisioning. Credit quality also improved across CESEE and non-performing loan (NPL) ratios even reached multiannual lows in some countries. Pockets of vulnerabilities exist, however. While NPL ratios are at a historic low, the share of so-called “stage 2” loans, for which banks are less certain of credit quality, is well above NPLs and increasing in several cases (e.g. Czechia, Croatia and Hungary). Furthermore, fast rising interest rates already exposed some banks with large fixed-income assets (see the example of Silicon Valley Bank in the US). Should the need arise, for instance due to funding shocks generated by changing market sentiment, these assets would have to be sold at a loss. Such unrealized losses, often associated with sovereign assets held to maturity, are significant for a number of countries, but high capital adequacy ratios provide a buffer.

Chart 6

Banking sector profitability

Return on assets (ROA) in %



Source: IMF, national central banks, OeNB.

Note: Data based on annual after-tax profits.

In Türkiye, the supervisory authority has required since mid-2022 that corporations are only granted access to new lira loans if their foreign exchange holdings (including gold) remain below a low ceiling. Moreover, to contain lira loan growth, the central bank has introduced and gradually raised reserve requirement ratios and securities maintenance ratios on selected commercial lira loans, plus additional ratios for banks with high loan growth or relatively high loan interest rates. Despite these measures, growth of credit to the private sector remained well in the double digits. Banking sector profitability increased amid higher operating income and asset growth was reflected in lower NPL ratios.

Even Russia's banking sector reported a moderate profit in 2022

In Russia, banks continue to do business in a regime of regulatory lenience, aided by subsidized lending programs related to strategic enterprises, SMEs and households. This kept the expansion of credit to the private sector broadly stable in the review period. The banking sector reported a very modest overall profit of about USD 3 billion in full-year 2022 (which is less than one-tenth of the figure of 2021), after offsetting the loss from the first half of 2022 incurred on the back of sharply rising provisions and foreign exchange transactions.

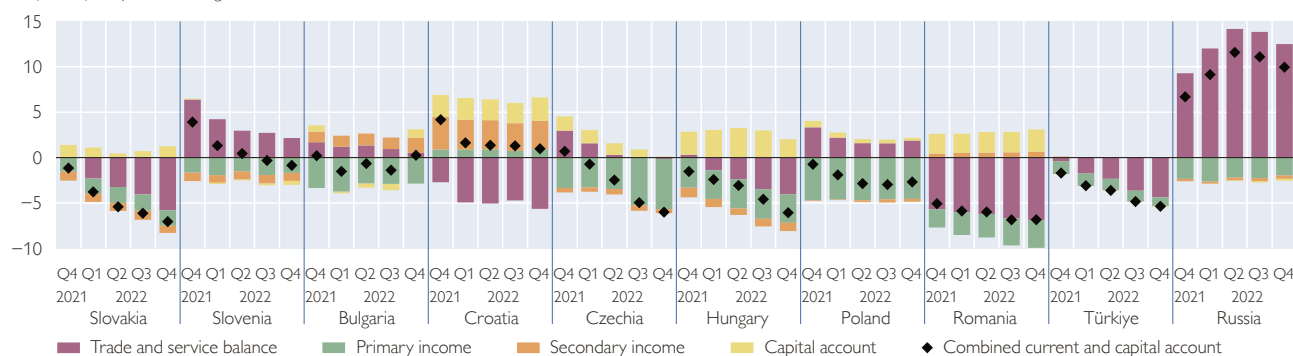
External balances slid further into deficit amid terms-of-trade effects

The war in Ukraine and the ensuing spike in energy prices had a visible impact on CESEE countries' external balances. The terms-of-trade shock amid slowing international momentum had a negative impact on trade balances. This effect was compounded by currency weakness in several instances. Depreciation increased the price for (largely demand-inelastic and usually US dollar-invoiced) energy imports further, while offsetting the negative impact of rising labor costs on competitiveness only to some degree. By the fourth quarter of 2022, combined current and capital account balances deteriorated by between –1.8 percentage points of GDP in Romania and –6.7 percentage points of GDP in Czechia (four-quarter moving sums compared to Q4 2021, see chart 7). Only Bulgaria reported a stable external balance. Against this background, current account balances slipped deeper into deficit in all countries but Croatia and Bulgaria. In some cases, they even approached the unsustainable levels seen ahead of and during the global financial crisis.

Chart 7

Combined current and capital account balance

% of GDP, four-quarter moving sum



Source: Eurostat, IMF, national central banks.

Sufficient financing for covering external deficits

Other investment and foreign direct investment inflows (FDI), which in some cases declined, while accelerating in others, were sufficient to cover large parts of the current account shortfalls over the past four quarters. Part of the strengths of FDI inflows was related to companies exploiting the interest rate differential between CESEE countries and the euro area by increasing intercompany loans. Portfolio flows remained volatile, however. The war, tighter financial conditions around the globe, increased risk aversion and certainly also widening external imbalances have been accompanied by a deterioration in market sentiment toward some CESEE economies. Data on high-frequency portfolio flows show that solid inflows since November 2022 stalled in mid-February 2023, with modest outflows through March, mirroring the fever curve of global banking stress. Government bond yields came down somewhat from their October 2022 peaks, but spreads over German bonds remain clearly elevated in a longer-term perspective.

Inflation is boosting government revenues and lowering debt ratios

High bond yields are not only a function of perceived higher risks, they also reflect high inflation and a generally higher interest rate environment amid monetary tightening. Higher financing costs, of course, weigh on government expenditure. Government expenditure also went up as many CESEE governments were trying to fight the energy crisis by transferring money to households and/or offering support with rising energy bills. This is particularly true in countries that face elections this year (Slovakia, Bulgaria, Poland and Türkiye) or next (Romania). Legacies from pandemic-related stimuli and/or spending related to refugees from Ukraine further fueled spending in some countries.

At the same time, the unexpectedly strong rising price level also boosted tax receipts and – through higher nominal GDP – reduced public debt ratios.

The above factors translated into somewhat lower headline deficits across most of the region, with the exceptions of Poland and Türkiye. Deficit ratios, however, remained elevated, with only Croatia and Slovakia staying below the 3% of GDP target. Debt ratios were lower than a year earlier and hovered between 39.4% of GDP (Türkiye) and 73.3% of GDP (Hungary). Only Bulgaria (22.9% of GDP) and Russia (15.1% of GDP) reported lower government debt levels in 2022. Concerning public finances in Russia, the general government balance reverted from a small surplus in 2021 to a deficit of 1.4% of GDP in 2022. This reflected rising budgetary support for strategic enterprises, SMEs as well as households, expanding arms production, and sharply declining imports and thus import taxes due to Western trade restrictions.

2 Slovakia: one-eyed among the blind? The economy grows dull but scrapes past a recession

Slovakia's lackluster economic performance continued in the second half of 2022, in which GDP growth declined to just above 1%. As a result, real GDP expansion in full-year 2022 nearly halved compared to the hesitant post-pandemic recovery in 2021. The country, however, avoided recession, unlike some regional peers. Economic growth was driven by domestic demand. In contrast, the negative contribution of net exports to real growth in 2022 nearly doubled. This was brought about not only by weakened foreign demand but also by disruptions in the global supply chains – despite some easing since the summer. The latter was epitomized by a significant contraction of car production. In contrast, domestic demand developments somewhat defied the economic odds. Though private consumption growth did slow down noticeably in the second half of the year owing to high and accelerating inflation, it still benefited from savings accumulated during the pandemic and thus contributed more than 2 percentage points to real GDP growth. The mirror image was a steep decline in households' saving rate throughout 2022. Despite rising prices of inputs, cooling foreign demand, a high level of uncertainty and a mediocre absorption of EU funds, investment growth even accelerated in the second half of 2022. In contrast, despite (relatively small) energy support measures, government consumption continued its contraction in the six months to December largely owing to the base effect as pandemic-related support measures boosted public consumption in 2021. Interestingly, while accumulation of inventories made a neutral contribution to GDP growth in 2022 overall, the quarterly contribution fluctuated strongly, echoing the development of supply chain disruptions.

Labor market indicators have come close to their pre-pandemic levels over the last months. Following a moderate but continuous decline until July 2022, the unemployment rate has remained broadly stable since. Employment, in contrast, has kept on rising, although only marginally as demand for labor has weakened amid elevated uncertainty. Foreign workers, particularly refugees from Ukraine, have continued to fill vacant jobs and thus helped mitigate the notorious skill mismatch and lack of (skilled) labor. Nominal wages saw a significant increase, predominantly in the public sector, mainly owing to a previously bargained one-off bonus. Yet, while labor cost increases have outpaced productivity growth, nominal wage growth did not keep up with rising costs of living. Headline inflation continuously headed upward and came in at 15.4% in February 2022. While soaring food and energy prices seem to have peaked in November 2022, core inflation continued climbing to more than 15% most recently. Hence, despite a reduction in the VAT rate for selected goods and services, price hikes have been bloated by nearly all components, most notably food and services.

The general government deficit came in at 2% of GDP in 2022. The reduction compared to 2021 was driven by stronger economic growth, higher tax revenues (not least on the back of high inflation) and lower pandemic-related expenditures. However, these positive factors were counteracted by government expenditures related to the war in Ukraine and measures to compensate firms and households for galloping prices. After the government did not survive the no-confidence vote in the parliament in December 2022, it remains in office with a limited care-taking mandate since snap elections have only been scheduled for end-September 2023. This unusually long run-up has some uncommon consequences such as a power shift toward the parliament, which may also bear some risks.

Table 2

Main economic indicators: Slovakia

	2020	2021	2022	Q3 21	Q4 21	Q1 22	Q2 22	Q3 22	Q4 22
<i>Year-on-year change of the period total in %</i>									
GDP at constant prices	-3.4	3.0	1.7	1.4	1.3	2.9	1.3	1.4	1.1
Private consumption	-1.2	1.7	5.1	3.0	3.1	9.3	4.2	2.8	4.5
Public consumption	-0.6	4.2	-3.2	1.0	3.9	-1.4	-7.1	-2.1	-2.0
Gross fixed capital formation	-10.8	0.2	6.5	-1.8	5.3	6.4	0.5	8.2	9.8
Exports of goods and services	-6.4	10.6	1.0	-2.0	2.2	-5.8	-0.9	8.8	2.6
Imports of goods and services	-8.2	12.1	3.0	4.4	4.5	-1.5	-1.4	6.9	8.0
<i>Contribution to GDP growth in percentage points</i>									
Domestic demand	-5.0	4.1	3.6	6.6	3.4	7.5	0.9	0.0	6.3
Net exports of goods and services	1.6	-1.0	-1.9	-5.3	-2.1	-4.6	0.4	1.5	-5.2
Exports of goods and services	-5.8	9.0	0.9	-1.6	1.7	-5.8	-0.9	6.9	2.5
Imports of goods and services	7.5	-10.1	-2.8	-3.7	-3.8	1.2	1.3	-5.4	-7.7
<i>Year-on-year change of period average in %</i>									
Unit labor costs in the whole economy (nominal, per person)	5.6	2.7	6.6	4.4	5.5	5.4	6.8	8.8	5.6
Unit labor costs in manufacturing (nominal, per hour)	1.5	-3.0	8.6	10.2	7.7	10.2	11.1	3.6	10.1
Labor productivity in manufacturing (real, per hour)	2.6	9.9	-0.9	1.5	6.4	0.5	-0.2	2.4	-5.7
Labor costs in manufacturing (nominal, per hour)	3.6	7.3	7.6	11.9	14.7	10.8	10.9	6.1	3.8
Producer price index (PPI) in industry	-0.5	6.8	27.8	9.3	14.5	24.4	30.6	31.0	25.0
Consumer price index (here: HICP)	2.0	2.8	12.1	3.4	4.8	8.5	11.8	13.3	14.9
<i>Period average levels</i>									
Unemployment rate (ILO definition, %, 15–64 years)	6.8	6.9	6.2	6.8	6.6	6.4	6.2	6.1	6.1
Employment rate (%, 15–64 years)	67.5	69.5	71.4	70.3	70.8	70.6	71.4	71.6	71.8
Key interest rate per annum (%)	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.5	1.8
<i>Nominal year-on-year change in period-end stock in %</i>									
Loans to the domestic nonbank private sector ¹	4.5	7.3	10.5	5.2	7.3	8.9	11.7	12.0	10.5
of which: loans to households	6.1	8.8	10.3	8.0	8.8	10.5	11.3	11.1	10.3
loans to nonbank corporations	1.4	4.3	10.8	-0.2	4.3	5.5	12.6	13.9	10.8
<i>%</i>									
Share of foreign currency loans in total loans to the nonbank private sector	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1
Return on assets (banking sector)	0.5	0.7	0.8	0.8	0.7	0.5	0.7	0.7	0.8
Tier 1 capital ratio (banking sector)	18.1	18.3	18.0	18.8	18.3	18.1	17.8	17.8	18.0
NPL ratio (banking sector)	2.3	1.9	1.7	1.9	1.9	1.9	1.9	1.8	1.7
<i>% of GDP</i>									
General government revenues	39.4	40.1	40.2	..	..	..	..	..	..
General government expenditures	44.7	45.6	42.3	..	..	..	..	..	..
General government balance	-5.4	-5.4	-2.0	..	..	..	..	..	..
Primary balance	-4.1	-4.4	-1.1	..	..	..	..	..	..
Gross public debt	58.9	61.0	57.8	..	..	..	..	..	..
<i>% of GDP</i>									
Debt of nonfinancial corporations (nonconsolidated)	54.5	52.7	51.2	..	..	..	..	..	..
Debt of households and NPISHs ² (nonconsolidated)	46.6	47.9	48.0	..	..	..	..	..	..
<i>% of GDP (based on EUR), period total</i>									
Goods balance	1.1	-0.5	-6.2	-2.6	-1.6	-6.7	-4.3	-4.8	-8.9
Services balance	1.0	0.6	0.4	1.2	0.2	0.5	0.1	0.2	0.6
Primary income	-0.8	-1.5	-1.7	-1.4	-2.7	-0.9	-1.9	-1.6	-2.3
Secondary income	-0.7	-1.0	-0.8	-0.8	-0.4	-1.5	-0.9	-1.2	0.4
Current account balance	0.6	-2.5	-8.3	-3.6	-4.5	-8.6	-6.9	-7.4	-10.2
Capital account balance	0.8	1.3	1.3	0.2	0.7	-0.1	1.0	1.1	2.8
Foreign direct investment (net) ³	2.6	0.3	-2.2	-1.2	0.7	-1.7	-2.2	-3.0	-1.8
<i>% of GDP (rolling four-quarter GDP, based on EUR), end of period</i>									
Gross external debt	119.6	135.0	105.0	116.9	135.0	141.5	129.6	111.6	105.0
Gross official reserves (excluding gold)	6.5	7.0	9.0	7.1	7.0	8.8	9.6	9.3	9.0
<i>Months of imports of goods and services</i>									
Gross official reserves (excluding gold)	0.9	0.9	1.0	1.0	0.9	1.1	1.2	1.1	1.0
<i>EUR million, period total</i>									
GDP at current prices	93,414	98,523	107,730	26,025	25,935	24,076	26,807	28,504	28,344

Source: Bloomberg, European Commission, Eurostat, national statistical offices, national central banks, wiw, OeNB.

¹ Foreign currency component at constant exchange rates.² Nonprofit institutions serving households.³ + = net accumulation of assets larger than net accumulation of liabilities (net outflow of capital).

- = net accumulation of assets smaller than net accumulation of liabilities (net inflow of capital).

3 Slovenia: inflation moderates as consumption loses steam and energy prices decline

GDP growth slowed to 5.4% in 2022. The economy lost lots of steam in the second half of the year, with the growth rate dropping from 10.2% in the first half to 0.2% in the second half of 2022. The deceleration was most pronounced for household consumption, which was hit by the erosion of consumer confidence, slowing employment growth and the continued contraction of real wages, which was only partially cushioned by a decline in households' saving rate and in their net financial assets. Government consumption slipped into contraction during the second half of 2022, mainly as containment measures related to COVID-19 were scaled back. By contrast, investment growth held up well, mostly owing to construction activity. Though housing construction growth slowed considerably, non-housing construction growth accelerated. Investment in machinery and equipment weakened along with the deterioration of economic sentiment, worsening export prospects and falling capacity utilization rates. With import dynamics slowing more than exports, the negative contribution of net real exports diminished in the second half of 2022.

The budget deficit amounted to 3% of GDP in 2022, down from 4.6% recorded in 2021. This improvement was supported by a strong rise in revenues, which were aided by corporate tax proceeds and VAT revenues. At the same time, budget expenditures decreased owing to a fall in current transfers as support measures related to COVID-19 were gradually phased out.

For 2023, the government plans a budget deficit of 5.3% of GDP. The widening of the deficit is mainly related to increased spending on measures to mitigate the impact of the energy and cost-of-living crisis, but in part also due to increased public sector wages and pension outlays. The Fiscal Council has noted that less than 20% of the adopted measures to ease the cost-of-living crisis represent targeted measures. It has also criticized that, excluding crisis mitigation measures, budget expenditure growth is expected to be the highest ever. It also warned that the government will likely have to revise the 2023 budget later in the year, as some expenditure items have been underestimated. In fact, in late March 2023, the government announced a proposed revision of the 2023 budget, cutting both expenditures and the deficit, stating that fewer measures were needed to mitigate the impact of higher energy costs than previously anticipated.

HICP inflation hovered around 10% and 11% between September and December 2022, before falling back to 9.4% by February 2023. The decline in early 2023 was caused mainly by the prices for energy (and, to a smaller extent, unprocessed food), which partly reflected favorable international energy price developments and government measures to mitigate the impact of rising energy prices. By contrast, core inflation edged somewhat higher on the back of accelerating price increases for processed food and services.

The combined current and capital account recorded a deficit during the second half of 2022 as the surplus on the goods and services balance continued to evaporate while the combined deficit on the other items increased modestly. The worsening of the goods and services balance resulted largely from the deterioration of the terms of trade.

Banking sector profitability worsened modestly in 2022. Operating income improved on the back of intensified lending activity and an improvement in the interest margin, but banks created some additional provisions (despite a modest improvement in the quality of the credit portfolio).

Table 3

Main economic indicators: Slovenia

	2020	2021	2022	Q3 21	Q4 21	Q1 22	Q2 22	Q3 22	Q4 22
<i>Year-on-year change of the period total in %</i>									
GDP at constant prices	-4.3	8.2	5.4	5.1	10.5	10.2	8.6	3.3	0.2
Private consumption	-6.9	9.5	8.9	5.8	21.2	20.0	12.9	3.2	2.4
Public consumption	4.1	5.8	0.9	5.4	8.3	4.8	0.8	-0.6	-1.0
Gross fixed capital formation	-7.9	13.7	7.8	11.8	13.2	9.4	7.3	8.7	5.9
Exports of goods and services	-8.6	14.5	6.5	12.6	13.8	8.2	9.3	11.9	-2.5
Imports of goods and services	-9.6	17.6	9.8	19.5	18.1	17.2	12.6	12.6	-1.5
<i>Contribution to GDP growth in percentage points</i>									
Domestic demand	-4.3	9.0	7.5	8.3	12.3	16.3	10.4	3.2	1.2
Net exports of goods and services	0.0	-0.8	-2.1	-3.2	-1.8	-6.1	-1.9	0.1	-0.9
Exports of goods and services	-7.2	11.3	5.4	9.5	11.1	6.9	7.8	9.7	-2.1
Imports of goods and services	7.2	-12.0	-7.5	-12.7	-12.9	-13.0	-9.7	-9.6	1.1
<i>Year-on-year change of period average in %</i>									
Unit labor costs in the whole economy (nominal, per person)	7.6	0.9	1.1	5.0	-4.3	-5.1	-2.3	4.2	8.7
Unit labor costs in manufacturing (nominal, per hour)	6.8	-3.0	2.0	3.9	-0.9	-3.0	2.7	-1.2	9.6
Labor productivity in manufacturing (real, per hour)	-3.3	9.9	5.3	2.9	10.4	9.7	6.6	5.1	-0.2
Labor costs in manufacturing (nominal, per hour)	3.2	6.8	7.3	6.9	9.3	6.4	9.5	3.9	9.4
Producer price index (PPI) in industry	-0.3	5.5	19.6	7.5	9.9	15.6	21.7	21.2	19.9
Consumer price index (here: HICP)	-0.3	2.0	9.3	2.3	4.5	6.3	9.0	11.3	10.6
<i>Period average levels</i>									
Unemployment rate (ILO definition, %, 15–64 years)	5.0	4.8	4.0	4.5	4.5	4.3	4.2	4.0	3.4
Employment rate (%, 15–64 years)	70.9	71.5	73.1	73.4	72.4	72.5	73.1	73.9	73.0
Key interest rate per annum (%)	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.5	1.8
<i>Nominal year-on-year change in period-end stock in %</i>									
Loans to the domestic nonbank private sector ¹	-1.0	5.6	10.4	2.2	5.6	8.0	10.4	12.8	10.4
of which: loans to households	0.1	5.0	7.5	3.6	5.0	6.7	7.9	8.2	7.5
loans to nonbank corporations	-2.2	6.2	13.4	0.7	6.2	9.4	13.2	17.6	13.4
<i>%</i>									
Share of foreign currency loans in total loans to the nonbank private sector	1.4	1.1	0.8	1.2	1.1	1.0	1.0	0.9	0.8
Return on assets (banking sector)	1.0	1.1	1.0	1.0	1.1	0.7	0.8	0.5	1.0
Tier 1 capital ratio (banking sector)	16.7	16.9	15.9	17.0	16.9	15.7	15.7	15.5	15.9
NPL ratio (banking sector)	1.9	0.8	0.7	0.9	0.8	0.9	0.8	0.8	0.7
<i>% of GDP</i>									
General government revenues	43.7	44.9	42.5	..	..	..	..	..	..
General government expenditures	51.4	49.5	45.5	..	..	..	..	..	..
General government balance	-7.7	-4.6	-3.0	..	..	..	..	..	..
Primary balance	-6.1	-3.4	-1.9	..	..	..	..	..	..
Gross public debt	79.6	74.5	69.9	..	..	..	..	..	..
<i>% of GDP</i>									
Debt of nonfinancial corporations (nonconsolidated)	47.8	46.1	43.1	..	..	..	..	..	..
Debt of households and NPISHs ² (nonconsolidated)	27.8	26.4	25.1	..	..	..	..	..	..
<i>% of GDP (based on EUR), period total</i>									
Goods balance	5.0	1.7	-3.9	0.5	-1.1	-4.1	-4.1	-2.6	-4.9
Services balance	4.4	4.7	6.1	5.4	4.9	4.5	6.0	7.3	6.3
Primary income	-0.8	-1.7	-1.7	-1.1	-2.2	-1.2	-1.6	-2.6	-1.2
Secondary income	-1.0	-0.9	-0.9	-0.7	-0.9	-1.0	-1.0	-0.9	-0.7
Current account balance	7.6	3.8	-0.4	4.1	0.7	-1.9	-0.6	1.2	-0.5
Capital account balance	-0.5	0.1	-0.4	0.3	-0.1	-0.3	-0.3	-0.1	-1.0
Foreign direct investment (net) ³	0.6	-0.8	-2.1	-1.3	3.8	-2.7	-1.8	-2.0	-1.8
<i>% of GDP (rolling four-quarter GDP, based on EUR), end of period</i>									
Gross external debt	102.1	97.3	88.0	103.1	97.3	96.2	92.8	90.5	88.0
Gross official reserves (excluding gold)	1.9	3.5	3.3	3.4	3.5	3.5	3.5	3.5	3.3
<i>Months of imports of goods and services</i>									
Gross official reserves (excluding gold)	0.3	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.4
<i>EUR million, period total</i>									
GDP at current prices	47,021	52,208	58,989	13,483	14,009	13,313	15,017	15,309	15,349

Source: Bloomberg, European Commission, Eurostat, national statistical offices, national central banks, wiw, OeNB.

¹ Foreign currency component at constant exchange rates.² Nonprofit institutions serving households.³ + = net accumulation of assets larger than net accumulation of liabilities (net outflow of capital).

- = net accumulation of assets smaller than net accumulation of liabilities (net inflow of capital).

4 Bulgaria risks stagflation after fifth inconclusive election

HICP inflation in Bulgaria increased substantially from fall 2021, peaking at 15.6% in September 2022, with a strong contribution from energy and food price inflation. The pass-through of higher costs affected transport and restaurant services first, but toward the end of the year, inflation also spread to other services, in line with increasing unit labor costs. Subsequently, the HICP inflation rate moderated to 13.7% in February 2023 because of the downward trend in international energy commodity prices. Headline inflation will decelerate in late 2023 but remain high on average in 2023 (between 7% and 10%), as high producer prices, limited supply and labor shortages will continue to weigh on consumer prices in the short run. Against the backdrop of strong wage increases and pro-inflationary fiscal policies, core inflation came in at 10.9% in February 2023 and it is expected to even accelerate in 2023 and to remain high in 2024, dominating headline inflation dynamics.

The interplay of wages and prices also influences economic activity. Despite high inflation, real GDP continued to expand by 3.4% in 2022, supported by robust growth in exports and by wage and social transfer increases that compensated consumers for losses in purchasing power. Private and public consumption as well as the buildup of inventories contributed positively to real GDP growth over the year, while net exports and gross fixed capital investment contributed negatively.

Quarterly data reveal a pronounced cycle of inventories, and stock changes started to dampen GDP growth in the second half of 2022. The cycle was driven by disruptions of global supply chains that changed the incentives for firms to maintain stocks of commodities, raw materials and finished products.

The downward trend in fixed capital investment that started in 2021 persisted in 2022. Rising prices of investment goods and political stalemate that delayed the disbursement of NextGenerationEU (NGEU) funds and, more recently, higher interest rates, have been suppressing new investment. However, fixed capital formation started to add to GDP growth in the final quarter of 2022.

The global energy crisis disrupted the recovery in Bulgaria. While industrial production started to shrink in the second half of 2022, the labor market is lagging behind the cycle. Real GDP is expected to slow down considerably in 2023 in line with weak external demand and rising borrowing costs. GDP estimates range between 0.4% and 2.5%.

The snap general election on April 2, 2023, the fifth in two years, produced yet another highly fragmented parliament with little chance to form a regular government. If the political parties cannot form a temporary technocratic cabinet with a specific agenda, then Kremlin-friendly President Radev will continue ruling through caretaker governments until the next snap vote, which is likely to be held together with the local elections in autumn. Bulgaria's prolonged political deadlock has already forced the country to delay its target date for adopting the euro until 2025. The uncertainty has also hampered Bulgaria's ability to harness EU post-pandemic recovery funds by delaying significant reforms and infrastructure investments and in turn slowing down economic convergence.

In the absence of a formal 2023 budget bill, the generous support measures for households and firms are still in force. They are mostly untargeted and distorting price signals – and they are increasingly jeopardizing the path to sound public finances. While the debt-to-GDP ratio is low, spending pressures related to aging, health and education, as well as infrastructure and the green transition, are mounting. Moreover, rising interest rates and sovereign spreads and the short tenor of public debt have increased the public debt interest burden.

Table 4

Main economic indicators: Bulgaria

	2020	2021	2022	Q3 21	Q4 21	Q1 22	Q2 22	Q3 22	Q4 22
<i>Year-on-year change of the period total in %</i>									
GDP at constant prices	-4.0	7.6	3.4	8.6	10.2	4.4	3.9	2.9	2.6
Private consumption	-0.6	8.8	4.8	9.8	8.9	5.5	2.1	4.2	6.8
Public consumption	8.3	0.4	6.5	2.9	2.3	6.6	11.6	3.8	4.5
Gross fixed capital formation	0.6	-8.3	-4.3	-11.9	-13.0	-7.4	-11.0	-3.3	2.4
Exports of goods and services	-10.4	11.0	8.3	9.6	9.4	4.8	8.9	9.7	9.4
Imports of goods and services	-4.3	10.9	10.5	13.0	3.9	12.3	12.3	9.2	8.5
<i>Contribution to GDP growth in percentage points</i>									
Domestic demand	0.1	7.4	4.6	10.2	7.3	9.6	6.1	1.7	2.5
Net exports of goods and services	-4.0	0.2	-1.2	-1.6	2.9	-5.2	-2.2	1.2	0.1
Exports of goods and services	-6.6	6.2	5.1	5.4	5.1	3.9	6.0	5.9	4.4
Imports of goods and services	2.6	-5.9	-6.3	-7.0	-2.1	-9.1	-8.2	-4.7	-4.3
<i>Year-on-year change of period average in %</i>									
Unit labor costs in the whole economy (nominal, per person)	8.9	3.8	15.6	5.0	2.3	10.3	17.9	16.1	18.8
Unit labor costs in manufacturing (nominal, per hour)	1.6	-1.9	3.8	4.7	3.1	3.0	-1.6	4.5	9.1
Labor productivity in manufacturing (real, per hour)	3.7	8.8	13.6	10.5	9.3	14.5	17.2	13.6	9.5
Labor costs in manufacturing (nominal, per hour)	5.2	7.0	17.9	15.7	12.7	17.9	15.4	18.8	19.5
Producer price index (PPI) in industry	-2.0	15.5	38.3	17.4	28.9	33.9	40.2	50.2	28.8
Consumer price index (here: HICP)	1.2	2.8	13.0	2.9	6.0	8.9	13.4	15.2	14.5
EUR per 1 BGN, + = BGN appreciation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Period average levels</i>									
Unemployment rate (ILO definition, %, 15–64 years)	5.2	5.3	4.3	4.6	4.6	5.0	4.7	3.7	3.9
Employment rate (%, 15–64 years)	68.5	68.2	70.4	69.5	68.5	68.4	69.8	71.9	71.5
Key interest rate per annum (%) ¹	..	..	..	..	..	..	..	..	..
BGN per 1 EUR	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
<i>Nominal year-on-year change in period-end stock in %</i>									
Loans to the domestic nonbank private sector ²	4.3	8.6	12.7	7.5	8.6	10.6	12.5	13.5	12.7
of which: loans to households	6.6	13.4	14.6	11.8	13.4	14.1	14.7	15.2	14.6
loans to nonbank corporations	2.9	5.5	11.4	4.8	5.5	8.4	10.9	12.2	11.4
%									
Share of foreign currency loans in total loans to the nonbank private sector	31.9	29.3	26.2	30.2	29.3	29.0	28.4	27.3	26.2
Return on assets (banking sector)	0.7	1.1	1.4	1.1	1.1	1.6	1.5	1.4	1.4
Tier 1 capital ratio (banking sector)	22.1	22.0	20.5	21.8	22.0	21.4	20.7	20.1	20.5
NPL ratio (banking sector)	4.3	3.7	2.8	3.8	3.7	3.3	3.1	3.1	2.8
<i>% of GDP</i>									
General government revenues	37.7	37.7	38.5	..	..	..	..	..	..
General government expenditures	41.5	41.5	41.3	..	..	..	..	..	..
General government balance	-3.8	-3.8	-2.8	..	..	..	..	..	..
Primary balance	-3.3	-3.3	-2.3	..	..	..	..	..	..
Gross public debt	24.5	24.5	22.9	..	..	..	..	..	..
<i>% of GDP</i>									
Debt of nonfinancial corporations (nonconsolidated)	77.1	69.3	60.2	..	..	..	..	..	..
Debt of households and NPISHs ³ (nonconsolidated)	24.3	23.8	22.8	..	..	..	..	..	..
<i>% of GDP (based on EUR), period total</i>									
Goods balance	-3.2	-4.1	-5.8	-2.9	-6.4	-5.8	-3.8	-5.4	-7.8
Services balance	5.1	5.7	6.3	7.9	4.5	5.4	6.4	8.4	4.8
Primary income	-3.5	-3.3	-2.9	-4.2	-3.2	-4.8	0.4	-4.1	-3.0
Secondary income	1.6	1.2	1.7	1.8	0.9	1.0	1.5	1.5	2.3
Current account balance	0.0	-0.5	-0.7	2.5	-4.1	-4.2	4.6	0.4	-3.6
Capital account balance	1.4	0.7	0.9	0.6	-0.4	-2.3	0.0	-0.4	5.3
Foreign direct investment (net) ⁴	-4.5	-1.4	-2.4	-2.2	0.9	-7.0	2.7	-2.7	-3.0
<i>% of GDP (rolling four-quarter GDP, based on EUR), end of period</i>									
Gross external debt	63.8	58.4	52.5	60.5	58.4	56.0	54.0	54.5	52.5
Gross official reserves (excluding gold)	46.8	45.7	42.8	44.9	45.7	41.6	40.3	42.9	42.8
<i>Months of imports of goods and services</i>									
Gross official reserves (excluding gold)	10.4	9.2	7.6	9.3	9.2	8.0	7.4	7.6	7.6
<i>EUR million, period total</i>									
GDP at current prices	61,639	71,077	84,561	19,515	20,518	17,248	20,075	22,987	24,251

Source: Bloomberg, European Commission, Eurostat, national statistical offices, national central banks, wiw, OeNB.

¹ Not available in a currency board regime.² Foreign currency component at constant exchange rates.³ Nonprofit institutions serving households.⁴ + = net accumulation of assets larger than net accumulation of liabilities (net outflow of capital).

- = net accumulation of assets smaller than net accumulation of liabilities (net inflow of capital).

5 Croatia: smooth transition into the euro area amid slowing growth

On January 1, 2023, Croatia joined the Schengen Area and the euro area. The euro changeover went smoothly and on January 15, euro banknotes and coins became the sole legal tender in Croatia. Survey data from the Eurobarometer show that most Croatian citizens found it easy to switch to the euro, which is unsurprising given previously high levels of euroization. However, 38% continued to think that euro introduction was not good for Croatia. Moreover, most people thought that euro adoption would lead to higher inflation. From a macroeconomic point of view, euro adoption has removed the previously elevated currency risks stemming from financial asset and liability euroization. This has reduced macroeconomic imbalances in Croatia.

At the same time, the geopolitical and economic environment remains challenging. Croatia's impressive post-pandemic economic expansion has gradually weakened. GDP growth decelerated notably to 4.6% year on year in the second half of 2022 (6.3% for the full-year 2022). Private consumption growth slowed in the second half of the year, while growth of gross fixed capital formation accelerated strongly. Both components made roughly similar contributions to GDP growth. A relatively strong positive contribution came from changes in inventories. Net exports made a negative contribution in the second half of 2022 as the surplus in the services balance could not keep up with rising deficits in the goods balance. On the output side, all sectors except manufacturing expanded in the second half of the year.

CPI inflation was 11.7% year on year in February 2023 – the strongest contributions came from services and processed food items, while tax changes had a dampening effect. During 2022, the government passed two large policy packages to mitigate the effects of higher inflation (worth roughly 6% of 2021 GDP). On April 1, 2023, another policy package worth EUR 1.7 billion (around 2.5% of 2022 GDP) entered into force. The lion's share (EUR 1.2 billion) has been allocated to energy price caps, the remainder to various measures to support the most vulnerable citizens and to subsidies. To help finance the packages, the government introduced a tax on excess corporate profits generated in 2022, which will bring in roughly 0.3% of GDP in additional revenues according to estimates by the Ministry of Finance.

Croatia's public sector gross debt in euro has remained roughly unchanged compared to a year ago. However, in relative terms, indebtedness continued to decline to 70% of GDP, helped by strong economic growth. With these debt levels, Croatia broadly mirrors the EU average, while it has the third-highest public debt level among the CESEE EU member states. The budget deficit for 2022 came in at 1.6% of GDP and is expected to increase to 2.3% of GDP in 2023.

The Croatian National Bank announced an increase in the countercyclical capital buffer from 0.5% to 1% from December 31, 2023. It noted that cyclical risks are increasing due to continued strong growth of residential real estate prices, robust mortgage lending activity and very high growth of corporate lending. The latter slowed down somewhat in the second half of 2022. The banking sector's return on assets was 1% in 2022, 0.3 percentage points lower than in 2021. This was due to lower net operating income. Banks' tier 1 capital ratio declined from 25.4% to 24% between end-2021 and end-2022, mainly due to unrealized losses from bond valuations and an increase in risk-weighted assets. The NPL ratio continued to decrease to 3% at end-2022, while the share of stage 2 loans increased in the second half of 2022.

Table 5

Main economic indicators: Croatia

	2020	2021	2022	Q3 21	Q4 21	Q1 22	Q2 22	Q3 22	Q4 22
<i>Year-on-year change of the period total in %</i>									
GDP at constant prices	-8.6	13.1	6.3	16.7	12.2	7.8	8.7	5.2	4.0
Private consumption	-5.1	9.9	5.1	15.8	7.5	6.2	7.5	5.4	1.3
Public consumption	4.3	3.0	3.0	-4.5	14.3	5.8	-2.2	1.3	6.8
Gross fixed capital formation	-5.0	4.7	5.8	0.7	-5.0	2.0	3.9	8.0	9.6
Exports of goods and services	-23.3	36.4	25.4	53.0	34.4	27.8	40.3	23.3	14.2
Imports of goods and services	-12.4	17.6	25.0	19.8	20.1	29.5	26.5	30.5	14.6
<i>Contribution to GDP growth in percentage points</i>									
Domestic demand	-3.1	6.5	6.5	-3.0	8.8	14.1	5.5	2.1	5.7
Net exports of goods and services	-5.4	6.6	-0.2	19.7	3.4	-6.3	3.2	3.1	-1.7
Exports of goods and services	-11.8	15.1	13.0	28.7	13.7	9.4	17.2	17.7	6.8
Imports of goods and services	6.3	-8.5	-13.2	-9.0	-10.2	-15.7	-14.0	-14.6	-8.5
<i>Year-on-year change of period average in %</i>									
Unit labor costs in the whole economy (nominal, per person)	..	..	..	..	..	..	..	..	..
Unit labor costs in manufacturing (nominal, per hour)	2.4	-0.9	6.9	3.5	5.3	4.1	8.3	7.3	8.1
Labor productivity in manufacturing (real, per hour)	-2.5	4.7	0.9	1.8	0.7	4.6	-0.2	1.2	-1.8
Labor costs in manufacturing (nominal, per hour)	-0.4	3.9	7.9	5.4	6.0	9.0	8.1	8.6	6.2
Producer price index (PPI) in industry	-3.2	11.7	25.8	13.1	24.6	25.1	32.5	30.2	15.6
Consumer price index (here: HICP)	0.0	2.7	10.7	3.1	4.6	6.4	10.8	12.6	12.8
EUR per 1 HRK, + = HRK appreciation	-1.6	0.1	-0.1	0.4	0.6	0.4	-0.1	-0.3	-0.3
<i>Period average levels</i>									
Unemployment rate (ILO definition, %, 15–64 years)	7.6	7.6	7.1	6.3	6.3	7.2	7.4	6.8	6.8
Employment rate (%, 15–64 years)	62.0	63.4	65.0	64.6	64.1	64.2	64.9	65.1	65.6
Key interest rate per annum (%)	..	..	..	..	..	..	..	..	..
HRK per 1 EUR	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
<i>Nominal year-on-year change in period-end stock in %</i>									
Loans to the domestic nonbank private sector ¹	2.8	2.4	10.4	2.8	2.4	3.9	7.2	10.4	10.4
of which: loans to households	1.6	4.1	5.3	4.5	4.1	4.0	5.1	4.9	5.3
loans to nonbank corporations	4.8	-0.1	18.6	0.2	-0.1	3.6	10.4	19.5	18.6
<i>%</i>									
Share of foreign currency loans in total loans to the nonbank private sector	52.0	52.2	58.1	51.5	52.2	52.1	52.5	55.1	58.1
Return on assets (banking sector)	0.6	1.2	1.0	1.1	1.2	1.2	1.2	1.3	1.0
Tier 1 capital ratio (banking sector)	25.0	25.4	24.0	25.2	25.4	25.2	24.6	23.5	24.0
NPL ratio (banking sector)	5.4	4.3	3.0	4.7	4.3	4.2	3.8	3.3	3.0
<i>% of GDP</i>									
General government revenues	46.7	46.0	45.7	..	..	..	..	..	..
General government expenditures	54.0	48.5	47.2	..	..	..	..	..	..
General government balance	-7.3	-2.6	-1.6	..	..	..	..	..	..
Primary balance	-5.3	-1.0	-0.3	..	..	..	..	..	..
Gross public debt	87.0	78.4	70.0	..	..	..	..	..	..
<i>% of GDP</i>									
Debt of nonfinancial corporations (nonconsolidated)	12.4	11.0	10.1	..	..	..	..	..	..
Debt of households and NPISHs ² (nonconsolidated)	5.0	4.5	4.1	..	..	..	..	..	..
<i>% of GDP (based on EUR), period total</i>									
Goods balance	-17.6	-19.6	-26.7	-18.5	-20.7	-29.0	-27.0	-25.8	-25.4
Services balance	10.5	16.9	21.0	41.6	8.3	4.7	17.4	46.3	10.5
Primary income	2.5	0.9	0.9	-0.8	2.8	1.6	0.3	-1.1	3.1
Secondary income	4.0	3.6	3.2	3.3	3.0	3.4	3.1	2.8	3.5
Current account balance	-0.5	1.8	-1.6	25.6	-6.6	-19.2	-6.2	22.1	-8.3
Capital account balance	2.1	2.4	2.6	2.2	2.8	2.1	2.1	2.0	4.0
Foreign direct investment (net) ³	-1.4	-4.8	-5.6	-7.1	-4.7	-6.8	-4.0	-5.0	-6.7
<i>% of GDP (rolling four-quarter GDP, based on EUR), end of period</i>									
Gross external debt	79.6	76.8	74.0	79.8	76.8	80.2	79.8	75.0	73.5
Gross official reserves (excluding gold)	37.6	42.9	41.5	43.6	42.9	40.1	40.4	40.4	41.2
<i>Months of imports of goods and services</i>									
Gross official reserves (excluding gold)	9.3	9.8	7.6	10.3	9.8	8.6	8.1	7.6	7.6
<i>EUR million, period total</i>									
GDP at current prices	50,427	58,269	67,393	16,412	14,823	14,368	16,854	18,922	17,249

Source: Bloomberg, European Commission, Eurostat, national statistical offices, national central banks, wiw, OeNB.

¹ Foreign currency component at constant exchange rates.² Nonprofit institutions serving households.³ + = net accumulation of assets larger than net accumulation of liabilities (net outflow of capital).

- = net accumulation of assets smaller than net accumulation of liabilities (net inflow of capital).

6 Czechia: economy navigating troubled waters; technical recession amid eye-catching imbalances

Czechia's economic growth and its structure changed dramatically in H2 2022. Facing weak domestic demand but relatively sturdy net exports and fixed capital formation, real GDP growth experienced a sharp slowdown to 0.8%, after expanding by more than 4% in the first six months of the year. In fact, the economy entered a technical recession. Moreover, the composition of growth drivers changed dramatically. Whereas domestic demand had contributed positively and net exports negatively to growth for more than two years, the roles reversed in the review period. GDP growth was mainly driven by net exports. In contrast, domestic demand provided an increasingly negative contribution to GDP dynamics. This was brought about predominantly by weakened household consumption. Its previously vigorous expansion on the back of pandemic savings and resilient nominal disposable income was replaced by a severe contraction in H2 2022 as high inflation, tightened monetary policy and elevated uncertainty started to bite. While the largest drop was recorded in purchases of durable goods, expenditures on food decreased significantly too. Public consumption made a slightly negative contribution to growth in H2 2022, despite higher defense spending, expenses related to Ukrainian refugees and growing public sector wages and pensions. The expansion of fixed investment and its contribution to GDP growth were relatively robust.

The balance of goods and services turned negative in H2 2022, to a large extent owing to high import prices of energy commodities. This, in combination with a rather high primary income deficit on the back of outflowing dividends, brought about an unusually deep current account deficit (6.1% of GDP in 2022). The general government deficit came in at 3.6% of GDP in 2022, while public debt increased to more than 44% of GDP. Public finances were burdened by permanent tax reductions implemented during the pandemic, expenditures related to the war in Ukraine and incoming refugees as well as by the support to households and firms troubled by strong price increases. These factors notwithstanding, the fiscal outcome was not only significantly better than the Treasury had expected but the deficit was also much smaller than in the previous two years. However, important challenges for public finances remain, e.g. relating to demographics and the pension system. The economic slowdown notwithstanding, the labor market remains rather tight. Despite a very moderate increase, the unemployment rate has stayed contained, hovering at or below 2.5%.

Strong and broad-based price growth accelerated almost continuously throughout 2022 with only a slight breather toward the end of the year owing to some easing in the price pressure of both energy and nonenergy imports. These echoed not only the relaxation on the energy markets but also some easing of the frictions in global supply chains as well as a steadily appreciating koruna. HICP inflation thus averaged just short of 15% in 2022. Yet it accelerated again in January 2023 (19.1%) as a result of electricity prices rising to the government price cap after the energy savings tariff was discontinued. In February, both headline and core inflation eased somewhat, inter alia due to some slowdown of service price growth and imputed rents. The CNB has kept its key interest rate unchanged at 7% since June 2022 as the composition of the CNB board shifted to a more dovish stance. In the new makeup a majority of CNB board members prefer rate stability while putting more emphasis on the strong exchange rate to rein in inflation. The CNB expects headline inflation to drop to single-digit levels in H2 2023 and to reach the 2% target in H1 2024.

Table 6

Main economic indicators: Czechia

	2020	2021	2022	Q3 21	Q4 21	Q1 22	Q2 22	Q3 22	Q4 22
<i>Year-on-year change of the period total in %</i>									
GDP at constant prices	-5.5	3.6	2.5	3.5	3.6	4.9	3.5	1.6	0.1
Private consumption	-7.2	4.1	-0.9	4.8	8.4	8.3	-0.1	-5.0	-5.5
Public consumption	4.2	1.4	0.6	5.1	0.6	1.3	1.7	-1.6	1.1
Gross fixed capital formation	-6.0	0.8	6.2	1.6	0.7	8.0	7.9	6.8	2.7
Exports of goods and services	-8.0	6.9	5.7	-1.7	-3.4	1.2	1.6	11.1	9.3
Imports of goods and services	-8.2	13.3	5.7	9.8	6.1	5.4	3.0	7.5	6.9
<i>Contribution to GDP growth in percentage points</i>									
Domestic demand	-5.1	7.1	2.3	10.7	10.3	7.8	4.4	-0.7	-1.6
Net exports of goods and services	-0.4	-3.6	0.2	-7.2	-6.7	-2.9	-0.9	2.3	1.8
Exports of goods and services	-5.9	4.8	4.1	-1.1	-2.7	1.0	1.3	7.2	6.6
Imports of goods and services	5.6	-8.4	-4.0	-6.1	-4.0	-3.9	-2.1	-4.9	-4.9
<i>Year-on-year change of period average in %</i>									
Unit labor costs in the whole economy (nominal, per person)	7.2	1.8	4.8	3.8	1.3	4.2	2.9	4.6	7.4
Unit labor costs in manufacturing (nominal, per hour)	2.9	-2.6	4.5	5.1	5.7	7.0	7.6	0.7	3.2
Labor productivity in manufacturing (real, per hour)	4.5	4.7	1.8	-0.1	-0.7	-0.4	-0.3	5.5	2.6
Labor costs in manufacturing (nominal, per hour)	7.1	2.4	6.5	4.9	4.9	6.6	7.2	6.2	5.9
Producer price index (PPI) in industry	0.6	6.2	18.6	8.1	11.0	16.4	21.3	20.6	16.2
Consumer price index (here: HICP)	3.3	3.3	14.8	3.3	5.0	10.2	15.0	17.4	16.5
EUR per 1 CZK, + = CZK appreciation	-3.0	3.2	4.4	3.8	5.1	5.8	4.1	3.7	4.1
<i>Period average levels</i>									
Unemployment rate (ILO definition, %, 15–64 years)	2.6	2.9	2.4	2.8	2.3	2.5	2.4	2.3	2.3
Employment rate (%, 15–64 years)	74.4	74.4	75.5	75.0	75.3	75.0	75.2	75.8	75.8
Key interest rate per annum (%)	0.8	0.9	5.9	0.7	2.4	4.2	5.6	7.0	7.0
CZK per 1 EUR	26.5	25.6	24.6	25.5	25.4	24.6	24.6	24.6	24.4
<i>Nominal year-on-year change in period-end stock in %</i>									
Loans to the domestic nonbank private sector ¹	3.0	9.7	6.2	6.3	9.7	10.4	9.2	8.6	6.2
of which: loans to households	6.5	9.9	4.8	9.1	9.9	10.3	8.3	6.5	4.8
loans to nonbank corporations	-1.3	9.4	8.3	2.8	9.4	10.5	10.5	11.6	8.3
<i>%</i>									
Share of foreign currency loans in total loans to the nonbank private sector	14.6	14.6	19.4	14.1	14.6	15.6	17.3	19.4	19.4
Return on assets (banking sector)	0.6	0.8	1.1	0.8	0.8	1.0	1.2	1.2	1.1
Tier 1 capital ratio (banking sector)	23.6	22.8	21.6	23.2	22.8	21.7	20.9	21.1	21.6
NPL ratio (banking sector)	2.6	2.3	1.9	2.5	2.3	2.2	2.0	1.9	1.9
<i>% of GDP</i>									
General government revenues	41.5	41.4	41.0	..	..	..	..	..	..
General government expenditures	47.2	46.5	44.6	..	..	..	..	..	..
General government balance	-5.8	-5.1	-3.6	..	..	..	..	..	..
Primary balance	-4.9	-4.3	-2.4	..	..	..	..	..	..
Gross public debt	37.7	42.0	44.1	..	..	..	..	..	..
<i>% of GDP</i>									
Debt of nonfinancial corporations (nonconsolidated)	56.1	53.4	51.5	..	..	..	..	..	..
Debt of households and NPISHs ² (nonconsolidated)	34.0	35.7	33.2	..	..	..	..	..	..
<i>% of GDP (based on EUR), period total</i>									
Goods balance	4.9	1.2	-1.5	-2.0	-1.7	0.4	-2.2	-2.9	-0.9
Services balance	1.8	1.8	1.3	1.9	1.6	1.6	1.8	1.6	0.3
Primary income	-4.2	-3.3	-5.5	-4.7	-2.9	-1.9	-4.3	-11.2	-4.2
Secondary income	-0.5	-0.5	-0.5	-0.5	-0.2	-1.3	-0.4	-0.4	0.1
Current account balance	2.0	-0.9	-6.1	-5.3	-3.3	-1.2	-5.0	-12.9	-4.7
Capital account balance	1.2	1.6	0.1	2.4	2.1	-0.3	0.9	0.8	-1.0
Foreign direct investment (net) ³	-2.6	-0.1	-2.5	-0.7	0.3	-1.1	-1.9	-1.8	-5.1
<i>% of GDP (rolling four-quarter GDP, based on EUR), end of period</i>									
Gross external debt	76.3	75.5	66.8	73.8	75.5	77.5	72.9	67.3	66.8
Gross official reserves (excluding gold)	62.5	64.1	47.2	62.8	64.1	62.9	57.7	50.8	47.2
<i>Months of imports of goods and services</i>									
Gross official reserves (excluding gold)	11.9	11.0	7.6	11.0	11.0	10.7	9.6	8.2	7.6
<i>EUR million, period total</i>									
GDP at current prices	215,824	238,361	276,659	61,848	63,500	62,484	68,948	71,573	73,653

Source: Bloomberg, European Commission, Eurostat, national statistical offices, national central banks, wiw, OeNB.

¹ Foreign currency component at constant exchange rates.² Nonprofit institutions serving households.³ + = net accumulation of assets larger than net accumulation of liabilities (net outflow of capital).

- = net accumulation of assets smaller than net accumulation of liabilities (net inflow of capital).

7 Hungary: tight monetary policy, weakening consumption and global raw material prices to reduce inflation substantially

In H2 2022, Hungary's GDP growth slowed substantially and reached a meager 0.4% in the fourth quarter, pushing Hungary into a technical recession. The weakening was most pronounced for investments, as increasing interest rates, deteriorating economic sentiment, falling capacity utilization rates, worsening export expectations and the delay of public investment projects as part of the government's fiscal consolidation efforts cooled activity. Household consumption also weakened substantially amid slowing employment growth, falling real wages and sharply worsening consumer confidence. Slowing domestic demand and the acceleration of export growth (exceeding import growth) benefited net real exports, which delivered a positive growth contribution during H2 2022.

The budget deficit declined to 6.2% of GDP in 2022, as revenues were supported by strong economic growth and windfall taxes. Expenditure growth was slowed by the postponement of public investment projects and operational savings to accommodate bigger outlays for the utility bill protection scheme. At the end of 2022, the government modified its 2023 budget deficit target from 3.5% to 3.9% of GDP. This mainly reflected the substantial increase in the cost of the various energy subsidy schemes, but pension outlays, interest expenditure and fiscal reserves were also set markedly higher than in the original budget.

In mid-December 2022, the European Commission and the Council of the EU approved Hungary's recovery and resilience plan (RRP) and the Partnership Agreement with Hungary for 2021–2027. At the same time, the Council decided to withhold EUR 6.3 billion of structural funds until Hungary takes additional measures to safeguard the rule of law. Later on, the Commission specified that it would not disburse any of the EUR 22 billion in cohesion funds until some horizontal enabling conditions are met. These issues mainly concern judicial independence, the so-called "child protection" law and serious risks to academic freedom and the right to asylum. Hungary has pledged to implement the necessary legal requirements but lengthy negotiations with the Commission are ongoing.

Inflation continued to accelerate during the reporting period and presumably peaked at 26.2% in January 2023, before easing to 25.8% in February 2023. However, the decline in February was primarily driven by energy and unprocessed food prices, while core inflation edged up further and price pressures remained broad-based. Increasing fuel shortages forced the government to abandon the price cap on automotive fuels in early December 2022. By contrast, the price cap on selected basic food items was extended until end-April 2023, and the government has indicated that the price cap will remain in place until inflation slows significantly. Nevertheless, food price inflation in Hungary kept on rising during the reporting period and has been the highest in the EU since August 2022.

The MNB maintained its strict policy stance. To additionally absorb banking sector liquidity, it restarted regular auctions of 1-week discount bonds and longer-term deposits from late January 2023 and announced a doubling of the mandatory reserve rate to 10% as of April along with abolishing interest on the first 2.5% of the reserve base. The tight monetary policy together with the MNB's provision of foreign currency to cover FX liquidity needs in connection with energy imports and news about the approval of Hungary's Partnership Agreement and RRP supported the forint between mid-December 2022 and mid-March 2023, when it temporarily came under pressure following the outbreak of global banking sector risks (Silicon Valley Bank, Credit Suisse).

Table 7

Main economic indicators: Hungary

	2020	2021	2022	Q3 21	Q4 21	Q1 22	Q2 22	Q3 22	Q4 22
<i>Year-on-year change of the period total in %</i>									
GDP at constant prices	-4.5	7.2	4.6	6.3	7.6	8.2	6.5	4.0	0.4
Private consumption	-1.2	4.6	6.4	6.5	7.7	11.6	8.4	4.7	1.7
Public consumption	-0.5	1.7	0.8	2.9	-3.1	4.3	2.5	-0.6	-2.9
Gross fixed capital formation	-7.1	6.5	1.2	13.3	1.5	10.9	6.1	1.2	-9.0
Exports of goods and services	-6.1	8.8	11.8	2.3	0.5	9.1	9.9	16.4	12.1
Imports of goods and services	-3.9	7.7	11.1	5.6	1.3	10.9	9.5	13.7	10.2
<i>Contribution to GDP growth in percentage points</i>									
Domestic demand	-2.6	6.2	3.9	8.8	8.1	9.9	6.1	2.1	-1.1
Net exports of goods and services	-2.0	1.0	0.7	-2.5	-0.5	-1.6	0.4	1.9	1.5
Exports of goods and services	-5.0	6.9	9.5	1.8	0.4	8.3	8.1	12.5	9.0
Imports of goods and services	3.1	-5.9	-8.8	-4.3	-1.0	-9.9	-7.7	-10.5	-7.5
<i>Year-on-year change of period average in %</i>									
Unit labor costs in the whole economy (nominal, per person)	6.8	2.6	11.8	3.3	2.6	12.5	6.7	12.1	15.9
Unit labor costs in manufacturing (nominal, per hour)	8.4	0.1	8.0	9.3	11.2	6.9	7.5	4.9	12.2
Labor productivity in manufacturing (real, per hour)	-0.2	5.9	3.8	0.2	0.5	4.0	2.6	7.2	1.8
Labor costs in manufacturing (nominal, per hour)	7.4	6.8	12.1	9.5	11.7	11.2	10.3	12.4	14.2
Producer price index (PPI) in industry	4.3	13.5	33.4	14.4	20.7	23.4	32.0	41.2	36.9
Consumer price index (here: HICP)	3.4	5.2	15.3	5.0	7.1	8.3	11.0	18.0	23.3
EUR per 1 HUF, + = HUF appreciation	-7.4	-2.0	-8.3	-0.1	-1.0	-0.9	-7.9	-12.3	-11.3
<i>Period average levels</i>									
Unemployment rate (ILO definition, %, 15–64 years)	4.3	4.1	3.7	3.9	3.7	3.8	3.2	3.7	3.9
Employment rate (%, 15–64 years)	69.7	73.1	74.4	73.6	74.1	74.0	74.3	74.6	74.5
Key interest rate per annum (%)	0.8	1.1	8.0	1.3	2.0	3.1	5.3	10.6	13.0
HUF per 1 EUR	351.2	358.5	390.9	353.9	364.3	364.1	385.3	403.5	410.9
<i>Nominal year-on-year change in period-end stock in %</i>									
Loans to the domestic nonbank private sector ¹	11.0	12.1	9.9	11.6	12.1	9.3	10.2	10.8	9.9
of which: loans to households	14.1	14.9	6.3	16.0	14.9	11.0	8.9	7.6	6.3
loans to nonbank corporations	8.8	9.9	12.6	8.3	9.9	7.9	11.3	13.3	12.6
<i>%</i>									
Share of foreign currency loans in total loans to the nonbank private sector	22.3	20.3	23.3	20.3	20.3	21.3	22.3	23.6	23.3
Return on assets (banking sector)	0.4	0.9	0.7	1.2	0.9	1.1	0.6	0.7	0.7
Tier 1 capital ratio (banking sector)	17.4	18.1	16.7	16.6	18.1	17.3	16.7	16.2	16.7
NPL ratio (banking sector)	2.4	1.6	2.0	1.8	1.6	1.6	1.9	2.0	2.0
<i>% of GDP</i>									
General government revenues	43.6	41.2	41.6	..	..	..	..	..	..
General government expenditures	51.1	48.3	47.8	..	..	..	..	..	..
General government balance	-7.5	-7.1	-6.2	..	..	..	..	..	..
Primary balance	-5.2	-4.8	-3.4	..	..	..	..	..	..
Gross public debt	79.3	76.6	73.3	..	..	..	..	..	..
<i>% of GDP</i>									
Debt of nonfinancial corporations (nonconsolidated)	68.6	75.8	79.3	..	..	..	..	..	..
Debt of households and NPISHs ² (nonconsolidated)	20.1	20.4	18.1	..	..	..	..	..	..
<i>% of GDP (based on EUR), period total</i>									
Goods balance	-1.0	-2.9	-8.8	-5.4	-5.8	-7.4	-6.9	-11.3	-9.3
Services balance	2.9	3.2	4.7	4.2	2.7	4.3	4.9	5.7	4.1
Primary income	-2.6	-3.3	-3.1	-3.6	-3.6	-2.1	-3.4	-3.8	-3.1
Secondary income	-0.5	-1.1	-0.9	-0.7	-0.7	-0.6	-1.0	-1.1	-0.9
Current account balance	-1.1	-4.1	-8.1	-5.5	-7.4	-5.7	-6.4	-10.5	-9.3
Capital account balance	2.0	2.5	2.0	1.9	4.2	4.3	2.6	1.0	0.6
Foreign direct investment (net) ³	-1.7	-1.9	-2.3	-2.4	-5.2	4.4	-2.7	-8.2	-1.9
<i>% of GDP (rolling four-quarter GDP, based on EUR), end of period</i>									
Gross external debt	81.1	84.7	88.2	87.9	84.7	85.6	83.7	85.0	88.2
Gross official reserves (excluding gold)	23.3	21.7	19.8	22.8	21.7	19.8	19.6	20.1	19.8
<i>Months of imports of goods and services</i>									
Gross official reserves (excluding gold)	3.6	3.3	2.5	3.4	3.3	2.9	2.7	2.6	2.5
<i>EUR million, period total</i>									
GDP at current prices	137,723	154,098	169,726	39,852	44,449	37,627	42,129	43,176	46,794

Source: Bloomberg, European Commission, Eurostat, national statistical offices, national central banks, wiw, OeNB.

¹ Foreign currency component at constant exchange rates.² Nonprofit institutions serving households.³ + = net accumulation of assets larger than net accumulation of liabilities (net outflow of capital).
- = net accumulation of assets smaller than net accumulation of liabilities (net inflow of capital).

8 Poland: sharp slowdown of growth in the wake of weaker consumption

GDP growth amounted to about 5% in full-year 2022 but declined continuously from 10.5% in the first quarter to about 0.5% in the fourth quarter. In quarter-on-quarter terms, GDP rebounded in the third quarter following a contraction after Russia had escalated its war against Ukraine, but it contracted again by 2.4% in the fourth quarter. Foreign demand contributed more to GDP growth than domestic demand, whether including or excluding the contribution from inventory change. This was true both in year-on-year and quarter-on-quarter terms in the second half and particularly in the fourth quarter, even though its contribution also declined in the fourth quarter. Nevertheless, the parallel slowdown of real imports in the wake of weaker domestic demand was sufficiently strong to lead to a positive contribution of net exports to GDP growth throughout the second half of 2022. Correspondingly, in that period, the surplus of the goods and services balance in balance of payment terms was higher than a year earlier, even though in full-year terms it declined from 3.3% to 1.9% of GDP. With the primary balance deficit roughly unchanged at 4.5%, the combined current and capital account deficit came in at 2.7% of GDP in 2022, still fully covered by net FDI inflows of 4% of GDP. The weakening of domestic demand in the second half of 2022 primarily reflected private consumption, as consumer confidence deteriorated and both real wages and real pension payments declined. In contrast, the slowdown of gross fixed capital formation was less pronounced. While industrial confidence, too, was moderately weaker in the second half and capacity utilization declined, other factors including sales profitability, the share of profitable enterprises and corporate liquidity continued to support business investment. Residential investment (measured by the number of dwellings under construction) and housing loans were lower than a year earlier in the second half of 2022.

In the second half of 2022, nominal unit labor costs (ULC) of manufacturing gross value added were higher than a year earlier and their increase exceeded that in the euro area by about 6.5 percentage points, while the złoty's nominal value in euro was weaker by about 3%. Thus, in real (ULC-deflated) terms, the złoty was stronger by about 3.5%. According to HICP (and national CPI) definition, annual headline inflation stood at almost 16% (17.3%) in the final quarter and at 17.2% (18.4%) in February 2023, while core inflation stood at 13.2% (11.3%) and at 13.6% (12.0%), respectively. Within core HICP inflation, nonenergy industrial goods inflation stood below average at 10.3% in February. The Monetary Policy Council (MPC), pursuing a CPI inflation target of $2.5\% \pm 1$ percentage points, has maintained its main policy rate at 6.75% since its hike in September 2022. In early April 2023, the MPC stated that the earlier strong monetary policy tightening will lead to a gradual decline in inflation toward the target and that this disinflation would be faster if supported by an appreciation of the złoty, which, in the MPC's assessment, would be consistent with the fundamentals of the Polish economy.

Regarding fiscal policy, the 2022 general government deficit rose to 3.7% of GDP and, according to the European Commission staff forecast in November, it will increase further to 5.5% in 2023. Despite increased military expenditure and spending on support for displaced persons from Ukraine, the deficit rise resulted primarily from a decline in the revenue-to-GDP ratio induced by anti-inflationary tax policy. The general government debt ratio declined from 53.6% of GDP at end-2021 to 49.1% at end-2022.

Table 8

Main economic indicators: Poland

	2020	2021	2022	Q3 21	Q4 21	Q1 22	Q2 22	Q3 22	Q4 22
<i>Year-on-year change of the period total in %</i>									
GDP at constant prices	-2.0	6.8	4.9	7.4	9.4	10.5	5.2	4.4	0.5
Private consumption	-3.4	6.3	3.0	4.6	8.3	6.5	6.3	0.7	-1.4
Public consumption	4.9	5.0	-0.3	5.0	5.7	0.8	1.1	0.5	-2.6
Gross fixed capital formation	-2.3	2.1	4.5	5.8	5.7	7.1	9.1	1.6	2.6
Exports of goods and services	-1.1	12.5	4.5	8.0	7.3	4.5	5.2	6.8	1.7
Imports of goods and services	-2.4	16.1	5.5	13.4	12.4	9.5	7.0	6.0	0.1
<i>Contribution to GDP growth in percentage points</i>									
Domestic demand	-2.6	7.9	5.2	9.5	11.4	13.0	5.9	3.9	-0.3
Net exports of goods and services	0.6	-1.0	-0.4	-2.2	-2.0	-2.6	-0.7	0.5	0.9
Exports of goods and services	-0.6	6.6	2.6	4.3	3.9	3.0	3.3	3.8	0.8
Imports of goods and services	1.2	-7.6	-3.0	-6.5	-5.9	-5.5	-4.0	-3.3	0.1
<i>Year-on-year change of period average in %</i>									
Unit labor costs in the whole economy (nominal, per person)	7.5	-0.8	9.8	-2.6	-1.6	1.7	10.6	13.9	13.3
Unit labor costs in manufacturing (nominal, per hour)	4.7	-4.6	1.8	0.9	-0.8	-1.6	2.1	2.6	4.3
Labor productivity in manufacturing (real, per hour)	1.9	12.9	8.7	8.8	10.3	12.7	9.7	9.0	4.1
Labor costs in manufacturing (nominal, per hour)	6.2	8.0	10.8	9.8	9.4	10.9	12.1	11.7	8.6
Producer price index (PPI) in industry	-0.5	8.1	23.7	9.6	13.6	18.5	25.3	27.5	23.7
Consumer price index (here: HICP)	3.7	5.2	13.2	5.1	7.3	9.0	12.8	14.9	15.9
EUR per 1 PLN, + = PLN appreciation	-3.3	-2.6	-2.6	-2.8	-2.4	-1.6	-2.5	-3.8	-2.3
<i>Period average levels</i>									
Unemployment rate (ILO definition, %, 15–64 years)	3.2	3.4	3.0	3.1	2.9	3.2	2.7	3.0	2.9
Employment rate (%, 15–64 years)	68.7	70.3	71.4	71.0	71.0	71.0	71.4	71.2	71.8
Key interest rate per annum (%)	0.5	0.3	5.3	0.1	1.1	2.7	5.1	6.5	6.8
PLN per 1 EUR	4.4	4.6	4.7	4.6	4.6	4.6	4.6	4.7	4.7
<i>Nominal year-on-year change in period-end stock in %</i>									
Loans to the domestic nonbank private sector ¹	-1.2	5.0	0.8	2.6	5.0	6.1	6.1	4.8	0.8
of which: loans to households	1.6	4.2	-4.7	4.0	4.2	3.1	0.4	-2.5	-4.7
loans to nonbank corporations	-6.0	6.5	10.8	-0.1	6.5	11.7	16.9	18.5	10.8
<i>%</i>									
Share of foreign currency loans in total loans to the nonbank private sector	19.6	17.5	18.5	18.0	17.5	17.6	17.7	19.0	18.5
Return on assets (banking sector)	0.0	0.2	0.5	0.5	0.2	1.0	0.8	0.3	0.5
Tier 1 capital ratio (banking sector)	18.5	17.4	17.6	18.0	17.4	16.7	17.0	16.4	17.6
NPL ratio (banking sector)	7.0	5.8	5.4	6.3	5.8	5.7	5.6	5.7	5.4
<i>% of GDP</i>									
General government revenues	41.3	42.3	39.8	..	..	..	..	..	..
General government expenditures	48.2	44.1	43.5	..	..	..	..	..	..
General government balance	-6.9	-1.8	-3.7	..	..	..	..	..	..
Primary balance	-5.6	-0.7	-2.1	..	..	..	..	..	..
Gross public debt	57.2	53.6	49.1	..	..	..	..	..	..
<i>% of GDP</i>									
Debt of nonfinancial corporations (nonconsolidated)	44.9	43.4	0.0	..	..	..	..	..	..
Debt of households and NPISHs ² (nonconsolidated)	33.7	32.1	0.0	..	..	..	..	..	..
<i>% of GDP (based on EUR), period total</i>									
Goods balance	1.3	-1.3	-3.7	-2.7	-3.6	-4.2	-3.6	-4.0	-3.1
Services balance	4.4	4.7	5.6	4.6	4.2	5.2	6.6	5.8	4.9
Primary income	-3.8	-4.7	-4.5	-5.5	-3.1	-4.7	-5.5	-5.0	-3.1
Secondary income	0.5	-0.1	-0.3	0.2	-0.3	-0.3	-0.4	-0.4	-0.1
Current account balance	2.4	-1.4	-3.0	-3.5	-2.7	-4.1	-3.0	-3.7	-1.4
Capital account balance	1.4	0.7	0.3	1.0	0.8	-0.5	0.5	0.8	0.3
Foreign direct investment (net) ³	-2.4	-4.1	-4.0	-5.9	-2.9	-7.7	-3.1	-4.4	-1.3
<i>% of GDP (rolling four-quarter GDP, based on EUR), end of period</i>									
Gross external debt	58.5	56.2	53.0	57.1	56.2	55.1	54.9	53.9	53.0
Gross official reserves (excluding gold)	21.7	23.4	22.0	23.8	23.4	21.8	22.0	22.5	22.0
<i>Months of imports of goods and services</i>									
Gross official reserves (excluding gold)	5.5	5.2	4.3	5.5	5.2	4.6	4.5	4.4	4.3
<i>EUR million, period total</i>									
GDP at current prices	526,034	574,543	654,275	145,387	161,418	149,585	155,613	164,229	184,849

Source: Bloomberg, European Commission, Eurostat, national statistical offices, national central banks, wiiw, OeNB.

¹ Foreign currency component at constant exchange rates.² Nonprofit institutions serving households.³ + = net accumulation of assets larger than net accumulation of liabilities (net outflow of capital).

- = net accumulation of assets smaller than net accumulation of liabilities (net inflow of capital).

9 Romania: economic activity stays resilient, but current account deficit widens further

Despite a challenging external environment, Romania's economic activity remained resilient in the second half of 2022, bringing full-year GDP growth to 4.8%. Seasonally adjusted quarter-on-quarter growth was stable in the third quarter and decelerated only mildly in the final quarter of the year.

In the second half of 2022, gross fixed capital formation became the most important growth driver supported by partly EU-funded public investments. Alongside, construction output showed double-digit growth. It is also worth mentioning that substantial investments in the areas of electromobility, electricity storage facilities and solar panels have been launched or announced recently. While domestic credit growth slowed down, it was still positive in real terms within the segment of nonbank corporations, but considerably below the inflation rate in the household segment. Private consumption continued to expand, even though real wage growth remained negative in the second half of 2022 and the unemployment rate edged up in the final quarter. Consumer demand benefited from the energy capping scheme (that was extended until March 2025) and the mild winter that limited utility bills. Net exports contributed negatively to GDP growth in second half of 2022, but the negative contribution decreased in the final quarter. Industrial production continued to shrink in the second half of 2022, as particularly energy-intensive sectors (such as metals and chemistry) were hit by high energy costs. Yet, supply chain bottlenecks in the automotive industry have eased. Meanwhile, unit labor costs in the manufacturing sector grew considerably and the Romanian leu tended to appreciate slightly against the euro in the second half of 2022.

Consumer price inflation stood at 16.4% at end-2022 and came down to 15.5% in February 2023. Remarkably, the National Bank of Romania's (NBR) estimates that the annual inflation rate would have been about 11 percentage points higher without the energy price capping scheme at end-2022. While headline inflation rate started to decline, core inflation was still rising and reached 15% in February 2023. Against this background, the NBR hiked its key policy rate further to 7% in January 2023, and then left it unchanged at the subsequent two board meetings. The NBR currently projects inflation to go down to 7% at end-2023 and to 4.2% at end-2024. Hence, the central bank assumes that inflation will remain above the upper bound of the inflation target variation band of $2.5\% \pm 1$ percentage point until the end of its forecast horizon. After the general government budget deficit fell to still high 6.2% of GDP in ESA 2010 terms, the budget plan for 2023 envisages a further gradual decline of the budget deficit to 4.4%. Within the framework of the excessive deficit procedure, Romania should put an end to the excessive deficit situation by 2024.

The current account deficit widened to 9.3% of GDP in 2022, compared to 7.2% of GDP in 2021 and 8.2% recorded in the four quarters up to mid-2022. Looking at the full-year comparison, the widening of the deficit was driven by the goods balance and the primary income balance (mainly related to outflows of reinvested earnings and dividends). In the fourth quarter, both items tentatively improved compared to the third quarter. Also, the capital account surplus rose in the fourth quarter thanks to increasing EU fund inflows. Nevertheless, the net borrowing position from current and capital accounts remained clearly negative in the fourth quarter as well as over the whole year (6.8% of GDP). Net FDI inflows stayed at an elevated level and covered half of this position in 2022.

Table 9

Main economic indicators: Romania

	2020	2021	2022	Q3 21	Q4 21	Q1 22	Q2 22	Q3 22	Q4 22
<i>Year-on-year change of the period total in %</i>									
GDP at constant prices	-3.7	5.9	4.8	6.7	2.4	6.3	5.1	3.8	4.6
Private consumption	-3.7	8.0	5.6	9.4	9.8	7.1	7.8	2.8	5.1
Public consumption	0.6	2.0	-3.2	-2.0	4.7	-2.4	0.1	2.6	-7.0
Gross fixed capital formation	1.4	2.0	8.8	-1.8	-6.5	1.4	2.7	11.4	16.2
Exports of goods and services	-9.4	12.8	8.0	7.2	7.9	8.6	9.5	12.9	1.7
Imports of goods and services	-5.8	15.4	9.8	11.5	8.4	10.4	7.0	18.2	3.3
<i>Contribution to GDP growth in percentage points</i>									
Domestic demand	-2.2	7.3	5.5	7.5	3.1	6.9	3.9	6.8	3.1
Net exports of goods and services	-1.5	-1.5	-0.8	-2.1	-0.5	-1.8	0.3	-3.1	-0.5
Exports of goods and services	-3.8	4.6	3.5	2.5	2.8	4.7	4.3	4.2	0.5
Imports of goods and services	2.3	-6.2	-4.3	-4.6	-3.3	-6.5	-4.0	-7.3	-0.9
<i>Year-on-year change of period average in %</i>									
Unit labor costs in the whole economy (nominal, per person)	5.5	-2.0	5.6	-3.1	-0.1	3.4	3.5	8.2	8.8
Unit labor costs in manufacturing (nominal, per hour)	7.7	3.9	14.5	9.1	12.4	11.7	15.1	13.8	17.1
Labor productivity in manufacturing (real, per hour)	0.4	3.1	-1.6	0.3	-4.0	-0.1	-2.5	-0.6	-2.9
Labor costs in manufacturing (nominal, per hour)	8.1	7.1	12.7	9.4	7.9	11.6	12.2	13.1	13.7
Producer price index (PPI) in industry	0.0	14.9	44.7	16.4	30.8	46.2	47.3	50.5	36.2
Consumer price index (here: HICP)	2.3	4.1	12.0	4.3	6.6	8.2	12.4	13.3	14.1
EUR per 1 RON, + = RON appreciation	-1.9	-1.7	-0.2	-1.8	-1.6	-1.4	-0.4	0.4	0.6
<i>Period average levels</i>									
Unemployment rate (ILO definition, %, 15–64 years)	5.2	5.6	5.6	5.3	5.9	6.0	5.3	5.4	5.8
Employment rate (%, 15–64 years)	65.6	61.9	63.0	62.3	62.1	62.4	63.5	63.4	62.8
Key interest rate per annum (%)	1.9	1.4	4.3	1.3	1.6	2.3	3.4	5.1	6.5
RON per 1 EUR	4.8	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
<i>Nominal year-on-year change in period-end stock in %</i>									
Loans to the domestic nonbank private sector ¹	4.8	14.2	12.0	12.7	14.2	15.2	17.1	15.7	12.0
of which: loans to households	4.2	9.3	4.3	8.8	9.3	9.3	8.6	6.3	4.3
loans to nonbank corporations	5.5	19.8	20.0	17.3	19.8	21.7	26.4	25.7	20.0
<i>%</i>									
Share of foreign currency loans in total loans to the nonbank private sector	30.5	27.6	31.2	28.4	27.6	27.3	28.0	29.4	31.2
Return on assets (banking sector)	1.0	1.4	1.5	1.5	1.4	1.2	1.5	1.5	1.5
Tier 1 capital ratio (banking sector)	23.2	20.9	18.8	21.4	20.9	19.0	18.9	18.8	18.8
NPL ratio (banking sector)	3.8	3.4	2.7	3.7	3.4	3.3	3.0	2.8	2.7
<i>% of GDP</i>									
General government revenues	32.3	32.7	33.5	..	..	..	..	..	..
General government expenditures	41.5	39.8	39.7	..	..	..	..	..	..
General government balance	-9.2	-7.1	-6.2	..	..	..	..	..	..
Primary balance	-8.0	-6.0	-5.0	..	..	..	..	..	..
Gross public debt	46.9	48.6	47.3	..	..	..	..	..	..
<i>% of GDP</i>									
Debt of nonfinancial corporations (nonconsolidated)	33.0	33.1	30.9	..	..	..	..	..	..
Debt of households and NPISHs ² (nonconsolidated)	16.0	15.7	13.8	..	..	..	..	..	..
<i>% of GDP (based on EUR), period total</i>									
Goods balance	-8.6	-9.6	-11.3	-9.4	-9.2	-12.2	-11.4	-11.7	-10.2
Services balance	4.3	3.9	4.4	3.5	4.0	4.4	5.0	4.1	4.1
Primary income	-1.5	-2.0	-3.0	-2.7	-1.8	-2.2	-3.7	-4.0	-2.1
Secondary income	0.9	0.4	0.7	0.8	0.3	0.4	0.7	0.8	0.6
Current account balance	-4.9	-7.2	-9.3	-7.8	-6.6	-9.5	-9.4	-10.7	-7.6
Capital account balance	1.9	2.2	2.4	1.5	4.1	1.0	2.1	1.5	4.5
Foreign direct investment (net) ³	-1.3	-3.7	-3.4	-4.1	-3.5	-5.3	-2.3	-3.9	-2.5
<i>% of GDP (rolling four-quarter GDP, based on EUR), end of period</i>									
Gross external debt	57.6	56.6	49.8	56.7	56.6	54.7	52.6	50.4	49.8
Gross official reserves (excluding gold)	17.0	16.8	16.3	17.5	16.8	16.1	16.1	16.0	16.3
<i>Months of imports of goods and services</i>									
Gross official reserves (excluding gold)	4.9	4.3	4.0	4.7	4.3	4.1	4.0	3.9	4.0
<i>EUR million, period total</i>									
GDP at current prices	220,325	241,099	286,526	65,854	72,934	54,572	67,066	79,062	85,825

Source: Bloomberg, European Commission, Eurostat, national statistical offices, national central banks, wiw, OeNB.

¹ Foreign currency component at constant exchange rates.² Nonprofit institutions serving households.³ + = net accumulation of assets larger than net accumulation of liabilities (net outflow of capital).

- = net accumulation of assets smaller than net accumulation of liabilities (net inflow of capital).

10 Türkiye: fragile economy hit by earthquake as country awaits election outcome

GDP growth amounted to 5.6% in 2022, declining from almost 8% in the first half to less than 4% in the second half of the year. The main driving force was private consumption, followed by real exports, while gross fixed capital formation almost stagnated in the second half of the year. Real export growth turned negative in the fourth quarter. By contrast, real import growth was far lower than that of real exports in the first three quarters, but it stood at about 10% in the fourth quarter so that net exports' contribution to GDP turned negative. However, the sum of growth contributions of all published demand components amounted to GDP growth of about 14% in 2022, far above the published rate. The difference could stem from a very large negative contribution of inventory change, for which no figures are published, and from an underreporting of real imports. Balance-of-payments import growth (in USD) was considerably higher, possibly reflecting not only higher energy import prices. It outpaced export growth by far so that both goods and services deficit and current account deficit widened by 4 percentage points year on year, reaching about 4.5% and 5.5%, respectively, of GDP in 2022. Net FDI inflows remained at close to 1% of GDP and, together with net other investment inflows, financed portfolio investment outflows and part of the current account deficit. Net errors and omissions amounted to 3% of GDP, financing the other part and preventing gross official reserves from declining sharply relative to GDP. At the same time, off-balance sheet net short positions due within one year amounted to about 100% of official FX reserves, with about half from FX swaps with domestic banks and the other half from swaps with Arabian and Asian central banks. Most recently, Saudi Arabia joined this list of creditors.

Both headline and core inflation decelerated from their peaks of 85% and 79%, respectively, in October to 55% and 57%, respectively, in February. In parallel, the Turkish central bank (TCMB) delivered policy rate cuts by 150 basis points each in October and November (to 9%) and another one in February to 8.5%, implying a large negative real key rate. While the lira depreciated by 10% in nominal terms against the euro from August to February, it appreciated by about 11% in real (CPI-deflated) terms. Lira stabilization without interest rate hikes resulted (1) from the continuous requirement for exporters to sell part of their FX revenues to the central bank, (2) from government financing and guarantees for new exchange rate-linked lira deposits stemming from converted FX deposits and (3) from regulatory measures to foster "liraization" of banks' assets and liabilities. Initially, reserve requirement ratios and requirements to hold lira (government) securities depended inversely on a bank's share of converted deposits in its total FX deposits. From 2023, required securities maintenance depended inversely on a bank's compliance (or overcompliance) with the new 60% target share of lira deposits. As a result, in the second half of 2022, the correction of banks' negative on-balance sheet net FX position continued, lowering their need for entering swaps with the central bank by selling FX initially (given the ban on contracting foreign swap partners). In parallel, nonfinancial corporations reduced their overall negative on-balance sheet net FX position further and their positive short-term on-balance net FX position rose moderately again.

The general government fiscal deficit increased to 3.5% of GDP in 2022, up from 1.1% of GDP in 2021. In the wake of the earthquake and related to upcoming elections, the deficit will likely rise further.

Table 10

Main economic indicators: Türkiye

	2020	2021	2022	Q3 21	Q4 21	Q1 22	Q2 22	Q3 22	Q4 22
<i>Year-on-year change of the period total in %</i>									
GDP at constant prices	1.9	11.3	5.6	7.9	9.6	7.6	7.9	4.1	3.5
Private consumption	3.3	15.3	19.6	9.4	20.5	20.7	22.3	20.3	16.0
Public consumption	2.5	2.6	5.1	8.0	1.3	4.5	1.6	4.6	9.0
Gross fixed capital formation	7.4	7.4	2.8	-1.3	2.1	4.5	5.3	-0.9	2.6
Exports of goods and services	-14.4	24.9	9.1	25.9	21.6	14.3	16.4	12.4	-3.2
Imports of goods and services	6.7	2.4	7.9	-8.7	3.2	2.2	5.8	11.9	10.2
<i>Contribution to GDP growth in percentage points</i>									
Domestic demand	4.1	11.4	13.4	6.3	12.7	14.2	15.1	12.6	12.2
Net exports of goods and services	-5.4	5.0	0.5	7.4	4.4	3.0	2.8	0.5	-3.4
Exports of goods and services	-3.8	5.6	2.3	5.3	5.2	3.5	4.1	3.0	-0.9
Imports of goods and services	-1.6	-0.6	-1.8	2.1	-0.8	-0.5	-1.3	-2.5	-2.5
<i>Year-on-year change of period average in %</i>									
Unit labor costs in the whole economy (nominal, per person)	..	..	..	..	..	..	..	..	..
Unit labor costs in manufacturing (nominal, per hour)	10.0	19.1	74.3	29.2	26.7	48.4	53.8	93.7	100.0
Labor productivity in manufacturing (real, per hour)	8.3	-0.2	-0.5	-1.1	3.3	2.1	2.6	-1.0	-5.2
Labor costs in manufacturing (nominal, per hour)	18.9	19.1	73.8	27.8	30.9	51.4	57.8	91.9	89.7
Producer price index (PPI) in industry	12.2	43.9	128.5	44.8	60.6	104.7	131.0	146.7	127.7
Consumer price index (here: HICP)	12.3	19.6	72.3	19.2	25.9	54.8	74.1	81.0	77.3
EUR per 1 TRY, + = TRY appreciation	-21.0	-23.2	-39.8	-15.9	-26.4	-43.1	-39.8	-44.3	-32.8
<i>Period average levels</i>									
Unemployment rate (ILO definition, %, 15–64 years)	13.4	12.2	10.7	11.9	11.2	11.8	10.4	10.3	10.3
Employment rate (%, 15–64 years)	47.5	50.3	52.8	51.6	51.7	50.8	53.0	53.5	54.0
Key interest rate per annum (%)	10.2	17.8	12.9	18.9	15.9	14.0	14.0	13.4	10.2
TRY per 1 EUR	8.0	10.5	17.4	10.1	12.8	15.7	16.8	18.1	19.0
<i>Nominal year-on-year change in period-end stock in %</i>									
Loans to the domestic nonbank private sector ¹	4.3	8.6	12.7	14.5	36.1	45.1	60.4	68.7	56.3
of which: loans to households	6.6	13.4	14.6	15.9	20.4	22.7	37.5	42.0	55.4
loans to nonbank corporations	2.9	5.5	11.4	14.7	41.9	52.4	67.4	77.5	56.8
<i>%</i>									
Share of foreign currency loans in total loans to the nonbank private sector	30.9	38.1	27.7	32.2	38.1	37.0	33.9	31.1	27.7
Return on assets (banking sector)	1.0	1.3	3.8	1.1	1.3	2.6	3.3	3.5	3.8
Tier 1 capital ratio (banking sector)	14.1	13.2	15.3	12.9	13.2	15.4	13.6	14.4	15.3
NPL ratio (banking sector)	4.4	3.4	2.2	3.8	3.4	3.0	2.7	2.4	2.2
<i>% of GDP</i>									
General government revenues	31.2	31.4	32.1	..	..	..	..	..	..
General government expenditures	35.9	32.5	35.6	..	..	..	..	..	..
General government balance	-4.7	-1.1	-3.5	..	..	..	..	..	..
Primary balance	-1.6	2.1	-0.8	..	..	..	..	..	..
Gross public debt	39.7	41.8	39.4	..	..	..	..	..	..
<i>% of GDP</i>									
Debt of nonfinancial corporations (nonconsolidated)	..	..	..	..	..	..	..	..	..
Debt of households and NPISHs ¹ (nonconsolidated)	..	..	..	..	..	..	..	..	..
<i>% of GDP (based on EUR), period total</i>									
Goods balance	-5.3	-3.6	-10.0	-3.2	-4.2	-11.8	-9.0	-11.4	-8.4
Services balance	1.6	3.2	5.7	5.3	3.9	3.5	5.3	8.4	4.8
Primary income	-1.3	-1.4	-0.9	-1.1	-1.2	-1.3	-1.2	-0.9	-0.6
Secondary income	0.0	0.1	0.0	0.1	0.1	-0.2	-0.1	0.0	0.1
Current account balance	-5.0	-1.7	-5.4	1.1	-1.4	-9.9	-5.1	-3.8	-4.1
Capital account balance	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Foreign direct investment (net) ²	-0.6	-0.8	-0.9	-1.4	-0.6	-0.4	-1.8	-0.7	-0.8
<i>% of GDP (rolling four-quarter GDP, based on EUR), end of period</i>									
Gross external debt	51.3	50.8	44.0	53.0	50.8	51.6	51.1	51.0	44.0
Gross official reserves (excluding gold)	6.5	9.3	9.1	10.7	9.3	8.3	7.5	8.9	9.1
<i>Months of imports of goods and services</i>									
Gross official reserves (excluding gold)	2.4	3.2	2.6	3.8	3.2	2.6	2.2	2.5	2.6
<i>EUR million, period total</i>									
GDP at current prices	625,392	687,929	853,070	191,802	182,302	160,450	203,933	236,083	252,605

Source: Bloomberg, European Commission, Eurostat, national statistical offices, national central banks, wiw, OeNB.

¹ Nonprofit institutions serving households.² + = net accumulation of assets larger than net accumulation of liabilities (net outflow of capital).

- = net accumulation of assets smaller than net accumulation of liabilities (net inflow of capital).

11 Russia: high oil revenues keep recession relatively mild despite severe Western sanctions

High energy prices, a successful rechanneling of oil exports to nonsanctioning countries and competent fiscal and monetary management have helped cushion the effects of major Western sanctions in response to Russia's invasion of Ukraine. The EU oil and oil products embargo against Russia and the G7 oil price cap for Russian deliveries to third countries, however, created further challenges from December 2022 (EU oil embargo, G7 oil price cap) and February 2023 (EU oil products embargo) onward.

Russia's GDP contracted by 2.1% in 2022. Driving forces of the drop in economic activity were the decline of private consumption (−1.4%) and the substantial shrinkage of inventories (following a major buildup in the previous year). On the other hand, economic activity was supported by government consumption (+2.8%) and fixed investment (+3.3%, notably boosted by public investment in transportation infrastructure, enterprise restructuring and increased arms production).

Partly supported by continuing capital controls, the ruble's exchange rate remained relatively high until November (around RUB 60 per USD), before losing about 20% of its value in late 2022 and early 2023. This downward slide was largely caused by the declining Urals oil price (from USD 67 per barrel in November 2022 to USD 50 in January–February 2023), which was mostly triggered by the abovementioned new EU and US oil sanctions. As of late March 2023, the ruble had fallen back to its pre-invasion level (of around RUB 76–77 per USD). Inflation continued to decline to 11% in February 2023 (year on year). After reducing its key rate to 7.5% in mid-September 2022, the CBR has so far left it at this level.

The unemployment rate reached a new post-Soviet record low of 3.7% (ILO definition) in January 2023. This i.a. reflects a very tight labor market, after hundreds of thousands left Russia following the start of the Ukraine invasion and the mobilization wave a few months later. Although the average Urals oil price was higher in 2022 than in 2021, the general government balance reverted from a small surplus in 2021 to a deficit of 1.4% of GDP in 2022, on the back of rising budgetary support for strategic enterprises, households and arms production as well as of sharply declining imports and thus import taxes due to Western trade restrictions. The deficit was financed to a larger degree on the domestic debt market, and to a smaller degree by drawing down on the National Wealth Fund. Russia's low government debt (end-2022: 15.1% of GDP) still provides the authorities with sufficient leeway to take recourse to domestic deficit financing.

The abovementioned substantial dip of the Urals oil price in January–February 2023, combined with (one-off) technical effects of the move to a single tax account system as well as brought-forward VAT refunds, triggered a sharp widening of the budget deficit in those two months. Western oil-related sanctions will likely render the budgetary situation more difficult in 2023. High energy export prices until November 2022 and sharply contracting imports in the wake of sanctions triggered a record current account surplus of 10.2% of GDP in 2022. In the second half-year of 2022, the banking sector managed to offset its initial sanctions-triggered loss and achieve a very modest overall profit of about USD 3 billion in full-year 2022, which is, however, less than one-tenth of the corresponding figure of 2021.

Table 11

Main economic indicators: Russia

	2020	2021	2022	Q3 21	Q4 21	Q1 22	Q2 22	Q3 22	Q4 22
<i>Year-on-year change of the period total in %</i>									
GDP at constant prices	-2.7	5.6	-2.1	5.0	5.8	3.0	-4.5	-3.5	-2.7
Private consumption	-5.9	9.9	-1.4	9.8	7.8	5.6	-4.4	-3.6	-2.7
Public consumption	1.9	2.9	2.8	2.6	2.4	1.9	2.3	2.4	4.7
Gross fixed capital formation	-4.0	9.1	3.3	11.3	5.9	7.4	2.7	1.8	3.0
Exports of goods and services	-4.2	3.3	-13.9	8.5	6.8	3.6	-15.8	-26.6	-14.6
Imports of goods and services	-11.9	19.1	-15.0	21.6	19.8	1.4	-27.6	-20.5	-11.2
<i>Contribution to GDP growth in percentage points</i>									
Domestic demand	-3.5	8.2	-1.4	7.0	7.7	1.9	-5.9	-0.1	-1.2
Net exports of goods and services	1.1	-2.5	-1.1	-1.3	-1.6	0.8	1.2	-3.9	-1.9
Exports of goods and services	-1.3	1.0	-4.2	2.5	1.9	1.1	-4.8	-8.1	-4.1
Imports of goods and services	2.4	-3.5	3.1	-3.8	-3.5	-0.3	6.0	4.2	2.2
<i>Year-on-year change of period average in %</i>									
Unit labor costs in the whole economy (nominal, per person)	..	..	..	..	..	..	..	..	..
Unit labor costs in manufacturing (nominal, per hour)	7.6	3.3	16.5	3.3	4.4	12.0	14.8	18.8	20.5
Labor productivity in manufacturing (real, per hour)	-1.4	7.2	-1.2	7.7	8.1	4.8	-3.3	-2.1	-3.7
Labor costs in manufacturing (nominal, per hour)	5.9	10.9	15.2	11.3	12.8	17.7	11.0	16.4	16.0
Producer price index (PPI) in industry	-3.7	24.6	12.8	28.2	28.3	25.6	21.4	5.2	-1.2
Consumer price index (here: HICP)	3.4	6.7	13.7	6.9	8.3	11.5	16.9	14.4	12.2
EUR per 1 RUB, + = RUB appreciation	-12.3	-5.3	18.1	-0.3	9.3	-8.7	24.3	42.7	28.6
<i>Period average levels</i>									
Unemployment rate (ILO definition, %, 15–64 years)	5.8	4.8	3.9	4.4	4.3	4.2	3.9	3.9	3.8
Employment rate (%, 15–64 years)	..	..	..	..	..	..	..	..	..
Key interest rate per annum (%)	5.0	5.7	10.6	6.3	7.5	12.7	13.9	8.3	7.5
RUB per 1 EUR	82.6	87.2	73.9	86.6	83.1	98.3	72.0	60.7	64.6
<i>Nominal year-on-year change in period-end stock in %</i>									
Loans to the domestic nonbank private sector ¹	9.6	15.3	14.0	13.9	15.3	15.6	11.7	12.1	14.0
of which: loans to households	12.9	22.1	9.4	20.7	22.1	20.3	12.2	10.2	9.4
loans to nonbank corporations	8.0	12.2	16.4	10.8	12.2	13.3	11.4	13.0	16.4
%									
Share of foreign currency loans in total loans to the non-bank private sector	12.6	10.8	7.5	10.8	10.8	11.2	7.3	6.7	7.5
Return on assets (banking sector)	1.9	2.4	0.2	2.6	2.4	-0.8	-2.4	-0.9	0.2
Tier 1 capital ratio (banking sector)	9.7	9.6	10.4	9.8	9.6	..	..	10.6	10.4
NPL ratio (banking sector)	17.1	15.1	15.3	15.8	15.1	..	..	15.9	15.3
<i>% of GDP</i>									
General government revenues	35.5	35.6	34.6	..	..	..	..	..	..
General government expenditures	39.5	34.8	36.0	..	..	..	..	..	..
General government balance	-4.0	0.8	-1.4	..	..	..	..	..	..
Primary balance	..	..	..	..	..	..	..	..	..
Gross public debt	17.6	15.5	15.1	..	..	..	..	..	..
<i>% of GDP</i>									
Debt of nonfinancial corporations (nonconsolidated)	..	..	..	..	..	..	..	..	..
Debt of households and NPISHs ² (nonconsolidated)	..	..	..	..	..	..	..	..	..
<i>% of GDP (based on EUR), period total</i>									
Goods balance	6.3	10.4	13.5	11.3	12.4	20.0	17.4	11.4	8.7
Services balance	-1.1	-1.1	-1.0	-1.4	-1.1	-0.9	-0.6	-1.1	-1.2
Primary income	-2.3	-2.3	-2.0	-2.2	-2.6	-2.0	-2.0	-2.4	-1.5
Secondary income	-0.4	-0.3	-0.4	-0.3	-0.2	-0.3	-0.5	-0.3	-0.3
Current account balance	2.4	6.7	10.2	7.4	8.5	16.8	14.3	7.6	5.6
Capital account balance	0.0	0.0	-0.2	0.0	0.0	0.0	-0.2	-0.3	-0.2
Foreign direct investment (net) ³	-0.2	1.4	1.3	0.9	2.7	0.2	2.2	1.6	0.9
<i>% of GDP (rolling four-quarter GDP, based on EUR), end of period</i>									
Gross external debt	29.9	27.4	16.5	30.1	27.4	25.4	26.1	22.3	16.5
Gross official reserves (excluding gold)	28.6	28.2	19.3	29.5	28.2	25.9	24.4	21.5	19.3
<i>Months of imports of goods and services</i>									
Gross official reserves (excluding gold)	16.8	16.4	15.0	16.7	16.4	15.0	15.9	15.6	15.0
<i>EUR million, period total</i>									
GDP at current prices	1,301,316	1,558,582	2,162,355	408,332	482,544	370,340	507,680	630,437	653,898

Source: Bloomberg, European Commission, Eurostat, national statistical offices, national central banks, wiw, OeNB.

¹ Foreign currency component at constant exchange rates.² Nonprofit institutions serving households.³ + = net accumulation of assets larger than net accumulation of liabilities (net outflow of capital).

- = net accumulation of assets smaller than net accumulation of liabilities (net inflow of capital).

Ukraine: economy has been hit hard but continues to function due to increasing international financial support

Ukraine's GDP collapsed by roughly 30% in 2022, because of Russia's war of aggression, which has affected the economy via the destruction of production capacities and infrastructure, flight movements within the country and abroad, and through a severe restriction of export opportunities. In particular, much of the export through Black Sea ports has ceased, with the exception of the possibility of exporting agricultural goods under the Black Sea Grain Initiative through some ports remaining under Ukrainian control. Massive Russian attacks on civilian and energy infrastructure since the fall of 2022 have led to power shortages and interrupted the economic recovery from the shock of the first phase of the full-scale war. After GDP grew 9% quarter on quarter in the third quarter of 2022, it shrank again by 4.7% quarter on quarter in the fourth quarter. The liberation of parts of the country from Russian occupation in autumn and resuming business activity as well as rebuilding probably helped contain the renewed GDP drop. The situation in the energy sector started to improve in early 2023.

The trade deficit (goods and services) of USD 25.9 billion in 2022 was almost 10 times higher than in 2021 (USD 2.7 billion), as the slump in exports by far exceeded the decline in imports. Services imports were fueled by expenses of Ukrainians who went abroad due to the war. Yet, as the secondary income balance (as a result of grants and humanitarian aid from abroad) and the primary income balance (as a result of largely stable remittances inflows and sharply falling investment income outflows) improved strongly, there was a current account surplus of USD 8.0 billion.

The deep war-driven recession hit labor demand hard: According to a survey, 36% of those who had a job before the start of the war were unemployed in February 2023. The war, together with the resulting currency devaluation, also caused the inflation rate to rise to 26.6% at end-2022 from about 10% before the full-scale war began. Yet, inflation trended down to 24.9% in February 2023. The National Bank of Ukraine has left its key policy rate stable since the hike to 25% in early June last year. The peg vis-à-vis the USD remained unchanged after the 25% devaluation in July 2022.

The budget deficit increased to 16.7% of GDP in 2022 but would have been by about 10 percentage points higher when excluding grants (primarily from the US) from revenues. Restraining the deficit at lower levels would have resulted in an even deeper economic slump. This deficit widening without the consequence of much stronger inflation acceleration was only possible due to international financial assistance in the amount of USD 32 billion, which financed 60% of the deficit (excluding grants), while bond sales to the central bank (monetary financing) contributed 25% and other bond issues domestically 15%.

For the year 2023, international financial assistance was scheduled to reach more than USD 40 billion, including support from the G7 and other countries, the EU and the IMF. A four-year USD 15.6 billion Extended Fund Facility was approved by the IMF Executive Board at end-March 2023 and is playing a key role in anchoring policies. Monetary financing ceased this year, and the Ukrainian authorities took measures to revive the domestic bond market. Thanks to improving international financial support inflows, Ukraine's international reserves rose to USD 31.9 billion at end-March 2023 from USD 22.3 billion at end-July 2022 (i.e. the lowest level recorded in 2022). Central bank interventions to support the hryvnia stood at a high level at end-2022 but have decreased since then. In parallel, the spread between the cash market rate and the official exchange rate narrowed, partly also reflecting policy measures.

Economic trends in the Western Balkans

Relative resilience in the face of post-pandemic and war-implied challenges, but pockets of vulnerabilities call for continued vigilance¹

Economic slowdown caused by global and domestic factors

Following a relatively robust recovery from the pandemic in 2021, the economic performance in the Western Balkans² (WB) slowed down significantly in 2022, particularly in the second half of the year (table 1). Hence, after 7.7% in 2021, average GDP-weighted real economic growth in the region dropped to just above 3% last year. It ranged between about 2% in North Macedonia and 6% in Montenegro. It is worth noting that half of the WB countries experienced real GDP growth in 2022 at or below the EU average (3.5%) thus setting back real convergence. Russia's war against Ukraine and its repercussions have put a significant, although mainly indirect, drag on the Western Balkan economies. The slackening of economic activity was thus predominantly brought about by the global macroeconomic environment, which had clouded because of post-pandemic supply chain frictions and an ubiquitous surge in (commodity) prices that had not been seen in a long time, among other factors. The situation has been exacerbated by Russia's war in Ukraine, resulting in a simultaneous tightening of financial conditions. On the external side, the small and rather open WB economies have suffered from weak foreign demand, particularly from the EU, which accounts for some 35% to 80% of WB exports. In contrast, the direct trade exposure of the Western Balkans to Russia, Ukraine and Belarus is rather limited. In addition, some idiosyncratic domestic factors affected economic performance in the region last year. For example, the summer drought hampered the relatively important agricultural sector in Serbia and, via lower hydropower generation, it impaired industrial production in

Table 1

Real GDP growth

	2020	2021	2022	Q3 21	Q4 21	Q1 22	Q2 22	Q3 22	Q4 22
Annual real change in %									
Gross domestic product									
Albania	-3.3	8.9	4.8	6.9	5.1	7.0	3.1	4.9	4.7
Bosnia and Herzegovina ¹	-3.0	7.4	3.9	7.6	7.8	5.9	5.8	2.6	1.7
Kosovo	-5.3	10.7	3.5	14.5	7.9	2.2	0.7	3.9	6.8
Montenegro	-15.3	13.0	6.1	27.9	9.3	4.7	13.6	2.8	4.7
North Macedonia	-4.7	3.9	2.1	1.4	1.2	2.2	4.0	2.0	0.6
Serbia	-0.9	7.5	2.3	7.8	7.2	4.1	3.8	1.0	0.4
WB average ²	-3.0	7.8	3.2	8.3	6.5	4.5	4.3	2.2	1.9

Source: Eurostat.

¹ Expenditure-side data.

² Average weighted with GDP at PPP.

¹ Compiled by Tomáš Slačík.

² The Western Balkans comprise the EU candidate countries Albania, Bosnia and Herzegovina, Montenegro, North Macedonia and Serbia as well as the potential candidate Kosovo. The designation "Kosovo" is used without prejudice to positions on status and in line with UNSC 1244 and the opinion on the Kosovo Declaration of Independence.

some countries. In Serbia, in particular the drought aggravated disturbances in electricity production owed to damages in the major power station. Industrial production thus declined by as much as 43% in Q2 in an annual comparison.

Domestic demand drove moderate economic growth while net exports lagged behind

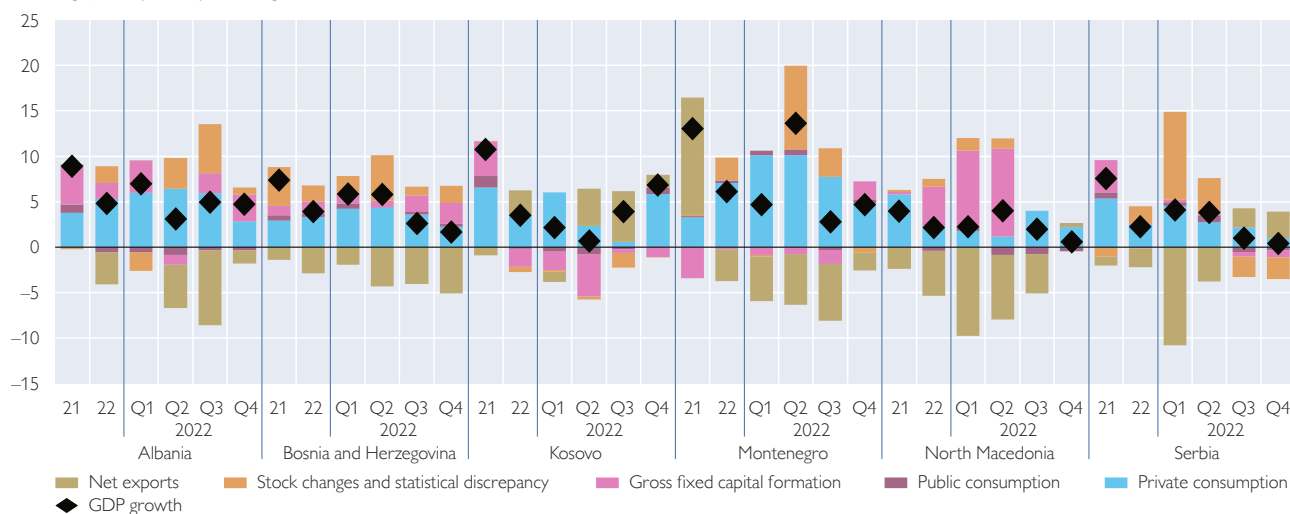
On the expenditure side, economic growth in the WB region in 2022 was driven by domestic demand while net exports made a negative contribution to GDP growth in all countries but Kosovo. Among the domestic demand components, household consumption played a dominant role, especially in the first half of the year, benefiting from rather buoyant wage growth and improving labor market conditions (table 2). Household consumption was also bolstered to some extent by various government support measures to mitigate the increase in cost of living, strong credit growth (especially in Kosovo), resilient inflows of remittances and the arrival of (well-off) residents in the wake of Russia's invasion to Ukraine (especially in Montenegro and Serbia). However, these nominal boosts to disposable incomes have been increasingly counteracted in real terms by accelerated inflation.

Investment made a positive contribution to economic growth in Albania, Bosnia and Herzegovina and North Macedonia. In Albania, it was particularly fixed investment which benefited from a booming construction sector and strong FDI inflows heading into the real estate and tourism industry. In Bosnia and Herzegovina, capital formation profited from favorable lending activity and stock-piling of inventories. Similarly, an accumulation of inventories was the predominant driver of capital formation in North Macedonia. This was brought about by an increase in the import of intermediary goods, raw materials, energy products, machinery and equipment, among others. Yet barring this special case, gross investment was rather muted in general, suffering from elevated input costs and

Chart 1

GDP growth and growth contributions in the Western Balkans

Percentage points, year-on-year GDP growth in %



Source: Eurostat, wiw, national statistical institutes.

Note: Gross capital formation for North Macedonia.

geopolitical uncertainty, subdued foreign demand and contracting industrial production (Montenegro).

The contribution of public consumption to growth was rather insignificant in most instances or it was slightly negative as earlier pandemic support measures were phased out. While exports of services in the tourism strongholds benefited from a strong tourism season, overall net exports remained subdued in most of the region in 2022, some recovery in Kosovo and Serbia in the second half of the year notwithstanding. This was owed to muted foreign demand in the EU, which is the region's most important trading partner by far, as well as to the fact that export growth was outpaced by increases in imports (including those of services, e.g. in Albania due to outbound tourism).

Continued labor market tightening, exacerbated by migration and demographic trends

While official labor market figures might not provide an entirely accurate picture due to high levels of informality and data (availability) limitations, the readings suggest that labor markets tightened further in 2022. Unemployment, whose solid long-lasting downward trend was partially interrupted during the pandemic, resumed its decline in 2022 (table 2) in all countries in the region³. At end-2022, the unemployment rate thus ranged between nearly 10% in Serbia and just above 15% in Bosnia and Herzegovina. Employment also somewhat improved in the entire region so that at end-2022 between one-third (Kosovo) and two-thirds (Albania) of the potential working population were employed. Despite continued improvements, formal employment, in most cases, remains well below the EU average (about 70%), suggesting not only persistent structural mismatches between labor demand and supply but also a comparably large informal sector.

Labor shortages have become more severe in the face of tightening (formal) labor markets exacerbated by outward migration and adverse demographic trends. Labor shortages have been exerting mounting pressure on wages (table 2), especially in the booming sectors. Nominal wage growth accelerated in all WB economies throughout 2022, largely driven by wage hikes in the private sector and amplified by increases in minimum wages. Shortages of skilled labor are increasingly becoming a binding constraint for firms' ability to do business. Nonetheless, nominal wage hikes mostly did not keep up with accelerated inflation in 2022 so that real wage growth ended up in negative territory except for Serbia and to a lesser extent Albania.

³ We expect that this also holds true for Kosovo. Even though Labor Force Survey data provided by the Kosovo Agency of Statistics is available only until 2021, more recent data from the Tax Administration of Kosovo indicate a further improvement in labor market indicators.

Table 2

Labor market

	2020	2021	2022	Q3 21	Q4 21	Q1 22	Q2 22	Q3 22	Q4 22
<i>Annual change in %</i>									
Average gross wages – total economy									
Albania	2.7	6.3	8.2	6.9	8.4	5.8	7.0	9.2	10.8
Bosnia and Herzegovina	4.0	4.4	11.7	4.5	5.1	8.2	10.7	13.4	14.4
Kosovo	–2.3	3.9	19.8	..	..	..	..	..	..
Montenegro	1.3	1.4	11.3	1.7	1.9	11.3	10.6	11.4	11.8
North Macedonia	8.3	5.7	11.1	4.8	5.4	7.7	10.4	12.0	14.1
Serbia	9.5	9.4	13.8	9.0	11.8	13.4	13.6	14.8	13.4
%									
Unemployment rate¹									
Albania	12.2	12.1	11.3	11.6	11.9	11.7	11.5	10.8	11.0
Bosnia and Herzegovina	16.2	17.5	15.5	..	..	..	..	..	..
Kosovo	26.0	20.8	0.0	17.7	19.0	16.6	0.0	0.0	0.0
Montenegro	18.4	16.9	15.1	15.0	15.7	17.0	14.9	13.4	14.9
North Macedonia	16.6	15.8	14.6	15.9	15.3	14.9	14.7	14.4	14.2
Serbia	9.5	11.4	9.7	10.8	10.2	11.0	9.2	9.3	9.4

Source: Eurostat, Macrobond, national statistical offices, wiw.

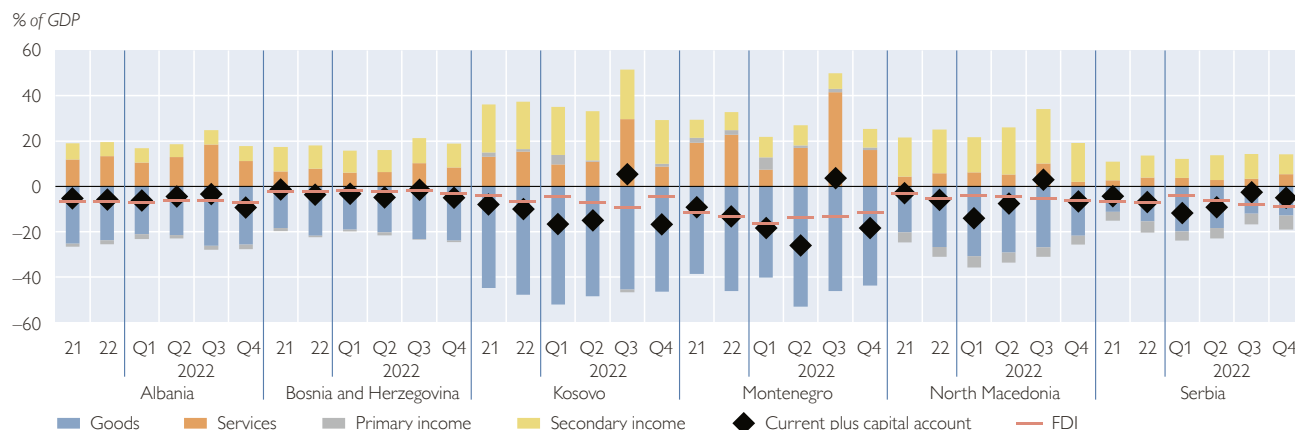
¹ Labor force survey.**Widening external deficits do not appear a major cause for concern**

External deficits relative to GDP widened in all countries but Albania in 2022, primarily on account of higher trade deficits. These were brought about mainly by elevated import prices of commodities and comparably weaker export performance attributable to moderated foreign demand. The goods trade deficit thus widened by between 2.9 (Kosovo) and 7.5 (Montenegro) percentage points of GDP in the twelve months to December 2022 while it improved by 2.6 percentage points of GDP in Albania. The deteriorations in the goods trade deficits were partially offset by higher surpluses in the services balance. The latter's improvement was particularly strong in Albania (more than 6 percentage points of GDP), Montenegro (3.5 percentage points) and Kosovo (2.5 percentage points) thanks to the recovery in tourism. The influx of remittances recorded in the secondary income balance remained robust. Hence, overall, the combined current and capital account deficit widened by 2 (Kosovo) to 4 (Montenegro) percentage points of GDP during 2022. Albania was the only country where it slightly improved. The combined current and capital account deficits thus ranged between some 4.4% of GDP in Bosnia and Herzegovina and 13% in Montenegro. Yet, these imbalances were (almost) fully covered by FDI inflows in Albania, Montenegro and Serbia and to a large extent in the remaining countries (chart 2).

The development of external accounts was inversely reflected by the level of reserves relative to GDP. It declined in all countries in the region (apart from Serbia), reflecting the strong increase in the value of imports (relative to exports) among other factors (table 3). In Serbia, in contrast, international reserves recovered to record highs in absolute terms (more than EUR 21 billion by end-February 2023) thanks to strong FDI inflows and higher external borrowing. The latter increased particularly after Serbia had sought help from both the IMF and the

Chart 2

External accounts in the Western Balkans



Source: National central banks, national statistical offices, wiiv.

Note: FDI: + = net accumulation of assets larger than net accumulation of liabilities (net outflow of capital).
 - = net accumulation of assets smaller than net accumulation of liabilities (net inflow of capital).

Table 3

Reserve assets excluding gold

	2020	2021	2022	Q3 21	Q4 21	Q1 22	Q2 22	Q3 22	Q4 22
End of period, % of GDP									
Albania	28.6	31.9	26.6	19.1	21.8	21.0	20.0	19.6	18.5
Bosnia and Herzegovina	39.1	41.1	34.3	27.7	28.1	26.9	25.7	25.0	23.7
Kosovo ¹	13.3	13.8	13.1	11.1	9.5	9.8	10.7	11.6	8.8
Montenegro	41.5	35.3	31.4	23.4	23.9	23.6	22.4	23.1	20.9
North Macedonia	27.8	28.1	27.0	20.1	18.7	16.5	15.6	18.6	18.3
Serbia	25.1	27.2	28.7	20.3	18.6	15.4	15.6	16.9	19.4

Source: National central banks, IMF.

¹ Reserve assets (including gold).

United Arab Emirates (UAE) in the second half of 2022 to handle its soaring market debt costs. As a result, Serbia turned to the IMF and concluded a Stand-by Arrangement (SBA) and obtained a loan at preferential conditions from the UAE.

Despite mostly prudent fiscal stance in the region, pockets of fiscal vulnerability remain and need to be addressed

Except for Montenegro, where the general government deficit widened significantly and contributed to the inflationary pressure, the fiscal stance in the WB region was rather prudent in 2022 and added only marginally to aggregate demand. The fiscal deficit relative to GDP remained broadly unchanged in North Macedonia while Bosnia and Herzegovina recorded a slight increase, yet at a rather low level (table 4). By contrast, the fiscal deficit decreased in Albania and Kosovo, and also marginally in Serbia – despite 2.5% of GDP spent on subsidies and loans to energy state-owned enterprises. Before Serbia managed to successfully return to the

international capital market in January 2023, the SBA from the IMF and the loan from the UAE helped cover the large extra costs resulting from the energy crisis.

In general, while the revenue side was aided by the still – relatively – robust economic activity in the region, it was particularly driven up by high inflation. To some extent also tax collection improved, most notably in Kosovo, inter alia thanks to the progressing formalization of the economy. Expenditures also increased in nominal terms. On the one hand, this was predominantly attributable to measures aiming to mitigate inflationary pressures on households and firms such as, inter alia, price caps, (energy) subsidies, bonuses, additional pensions and transfers. On the other hand, in most countries, government expenses such as public sector wages and investment costs increased in response to inflationary pressures. In contrast, however, in some instances (e.g. in Albania, Kosovo, Montenegro) low execution of public investment plans dampened the expenditure side and thus contributed to a better fiscal outcome.

General government debt relative to GDP declined in most cases, most significantly in Montenegro. In the latter country, this was – despite the highest fiscal deficit in the region – due to strong nominal GDP growth on the one hand and some debt repayment on the other. Yet, the reduction of public debt in Montenegro notwithstanding, it remains the country with the highest debt among its peers. Moreover, from the current budgetary perspective, the expansionary fiscal stance is envisaged to continue in the medium term⁴. This does not only elevate the fiscal risk but also adds to inflationary pressure, especially in a country with no autonomous monetary policy. Notable fiscal vulnerabilities persist – despite some progress – also in Albania, primarily due to high refinancing requirements and exposure to interest and exchange rate risks amid tightening financial conditions as well as energy price volatility. Against this background, it is key to restore fiscal buffers to be able to cope with future shocks. Rather quick and decisive fiscal consolidation is also in the cards for Serbia and North Macedonia, in the former under the auspices of the IMF.

Table 4

Fiscal policy indicators

	2020	2021	2022f	2020	2021	2022f
	General government balance			General government debt		
	End of period, % of GDP					
Albania	-6.7	-4.5	-3.5	74.5	73.2	69.4
Bosnia and Herzegovina	-5.2	-0.3	-1.0	36.1	34.0	34.0
Kosovo	-7.6	-1.3	-0.5	22.0	21.1	19.6
Montenegro	-11.1	-1.9	-5.6	105.3	82.5	75.5
North Macedonia	-8.3	-5.4	-5.4	51.9	51.8	51.4
Serbia	-8.0	-4.1	-3.9	58.6	57.1	55.2
Ukraine	-5.3	-3.4	-17.0	60.4	49.0	85.0

Source: European Commission (Ameco), Macrobond, national central banks, wiiv.

⁴ According to the latest Economic Reform Programme, the Montenegrin authorities plan a fiscal deficit of 5.9% of GDP in 2023 and 6.2% in 2024 and 2025 on the basis of the continuation of existing legislation. While the authorities recognize the need for fiscal consolidation, recent measures will lower revenues and at the same time imply higher mandatory expenditures on public wages, social transfers, pensions and the Health Insurance Fund.

Gradually moderating yet still high inflation deserves continued vigilance

In all WB economies inflation started soaring in mid-2021, although to different extents. Yet after still relatively moderate increases in 2021, consumer price inflation climbed sharply in 2022, averaging between 6.7% in Albania and about 14% in Bosnia and Herzegovina as well as North Macedonia (chart 3). Such high readings had not been seen for a very long time or, in some countries, not ever in recorded history. However, while still high, inflation seems to have mostly culminated in October and November 2022 and has somewhat eased since then in all WB countries but Serbia. A combination of supply- and demand-side factors has contributed to price pressures. Supply constraints have driven food and energy prices to record highs and they have been amplified by the war in Ukraine. On the demand side, lingering demand-supply imbalances brought about by the pandemic have continued to weigh on prices. The surge in prices has thus been driven particularly by food items followed by housing and transportation. Food prices have contributed between 50% and 60% to headline inflation in the WB (compared to about 30% in the euro area). This primarily echoes the fact that the weight of food items is roughly twice as high in the region's consumer basket compared to the euro area. The markedly lower acceleration of inflation (remaining in single-digit levels) in Albania is notable not only in comparison to its regional peers but also to other countries in Central and Eastern Europe. This is attributable to a relatively high share of administered prices, energy tariff controls, almost exclusive electricity production in domestic hydropower plants and, last but not least, rather robust currency appreciation for most of 2022. In the two other countries with flexible exchange rates the currencies have remained broadly stable vis-à-vis the euro (chart 4). Increases in core inflation⁵ have been relatively subdued in the region so far. Yet, most recently, core inflation has also accelerated up to 11% in Serbia and Montenegro, suggesting that the pass-through of cost-push factors is becoming more broad-based.

To prevent a de-anchoring of inflation expectations and to bring inflation back on a downward trajectory, the respective central banks in the three countries with autonomous monetary policy started their monetary policy tightening in March (Albania) and April 2022 (North Macedonia and Serbia), respectively. Since then, key policy rates have been raised in 6 steps (25 or 50 basis points each) from 0.5% to 3% in Albania, in 10 steps (25–75 basis points each) from 1.25% to 5.5% in North Macedonia and in 13 steps (i.e. every month since the start of the cycle, 25–50 basis points each) from 1% to 6% in Serbia (chart 5)⁶. In addition, according to the National Bank of Serbia (NBS), it has intervened in the FX market to keep the dinar exchange rate vis-à-vis the euro relatively stable to help contain the spillover of rising import prices on domestic prices⁷. In the three countries without autonomous monetary policy – Bosnia and Herzegovina, Kosovo and Montenegro – the tools to combat inflation are mostly limited to minimum reserve requirements

⁵ Subject to the varying country-specific definitions of core inflation.

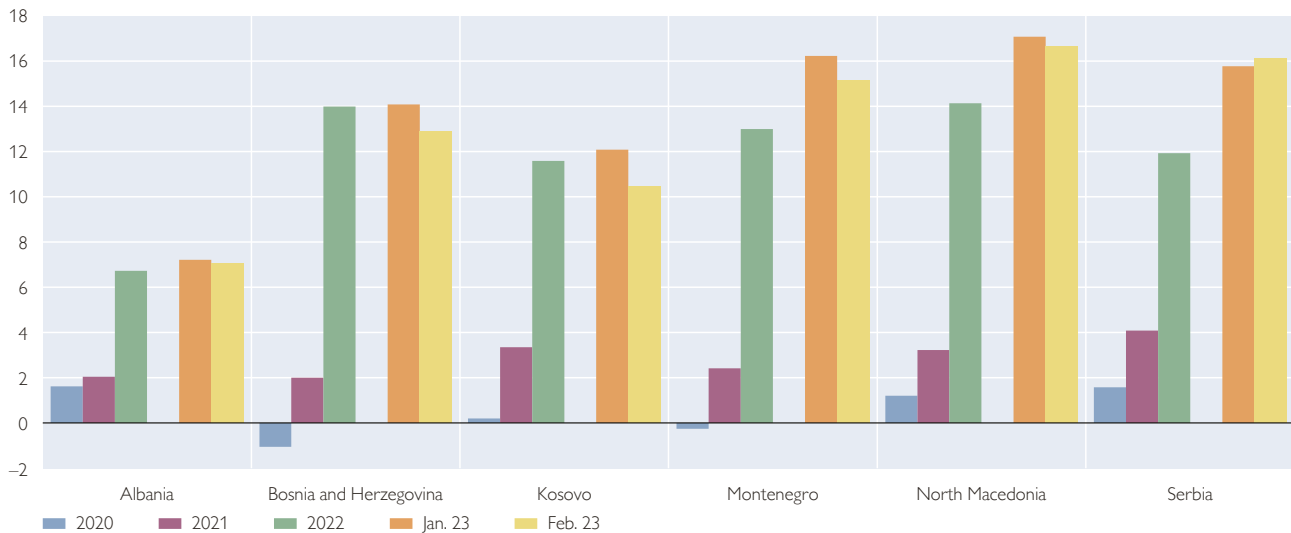
⁶ Monetary policy tightening has been less vigorous in Albania thanks to more contained inflation rises, steady currency appreciation and stronger than expected transmission associated particularly with a strong increase of treasury bill yields.

⁷ 2022 was the 5th among the last 6 years that the NBS ended as a net FX buyer. The NBS's purchases in FX market interventions exceeded the sales by over EUR 700 million in 2022 (see NBS | [Show news](#)).

Chart 3

Consumer price developments

Period average, annual change in %



Source: Macrobond, wiiw.

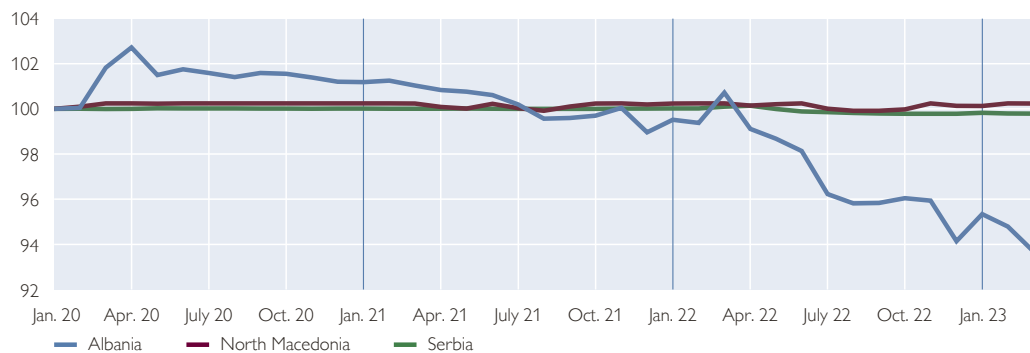
and macroprudential tools. Yet in the current inflationary period none of these tools have been actively used for monetary policy purposes so far. The central banks in the three mentioned WB countries have argued that the current inflation is mainly imported and/or that such instruments are predominantly employed for financial stability objectives. In this context, it is important to again stress the crucial role of prudent fiscal policy also in the monetary policy context, especially in countries without autonomous monetary policy.

Looking ahead, inflation is projected to soon start falling noticeably in the entire region, including in Serbia, where it has not yet plateaued so far. The slowdown is expected to be brought about by weakening global cost-push factors

Chart 4

Exchange rate vis-à-vis the euro

National currency per EUR, period average, January 2020 = 100



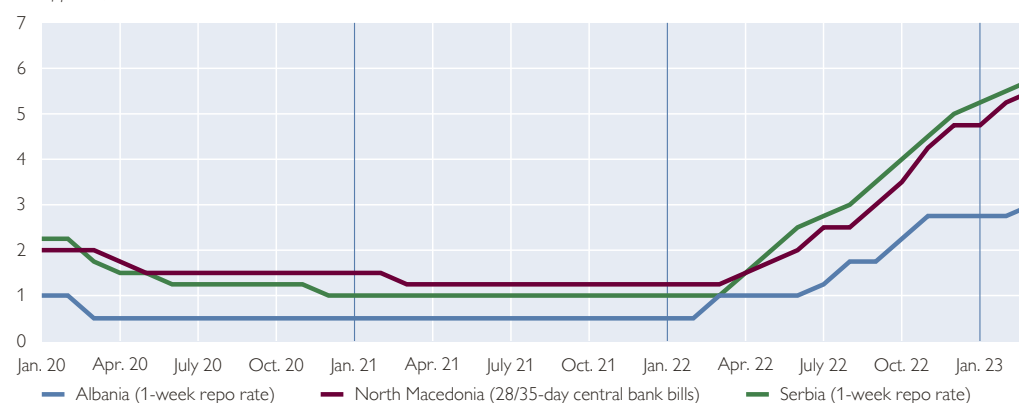
Source: Macrobond.

Note: Upward movement = depreciation; downward movement = appreciation.

Chart 5

Key interest rates

End of period, %



Source: National central banks.

Note: No policy rate available for Bosnia and Herzegovina, Kosovo and Montenegro due to unilateral euroization or currency board.

on the back of easing energy and commodity prices as well as global supply chain frictions, among other factors. Moreover, on the domestic front, the impact of tighter monetary policies will take hold and the base effect will start to kick in. Nonetheless, a watchful eye is warranted in light of the persisting geopolitical tensions, rising core inflation, considerably increased inflation expectations in all countries as well as tight labor markets. The risk of potential second-round effects and particularly of wage-price spirals thus needs to be closely monitored⁸.

Financial sector appears resilient to recent external shocks

The WB financial sector, which is mostly dominated by foreign-owned banks, remains resilient even after the shocks triggered by the pandemic and the war. Bank lending to the nonbank private sector has kept on expanding at a robust pace in the entire region, despite some significant counterweighing factors such as a weakening of the business environment and economic sentiment as well as global and national political uncertainty. Compared to 2021, nominal credit growth accelerated in 2022 in four WB economies and cooled down in Albania and Serbia (table 5) owing to tighter credit conditions and the slowdown of the economy. Nonetheless, real credit expansion was negative in the WB countries barring Kosovo and Albania. The pattern behind the nominal credit expansion was not homogenous either. Hence, whereas in Albania and Bosnia and Herzegovina, it was predominantly loans to households that recorded strong growth (in Albania largely for real estate purposes), in the other countries lending to both businesses and households expanded quite vigorously. As for the currency decomposition, in Serbia and Albania, and to a lesser extent in North Macedonia, credit growth was driven mainly by foreign currency-denominated lending. This was spurred mainly by lower interest rates of euro loans and, on the supply side, by a shift toward foreign currency deposits, especially after the outbreak of the war. In contrast, in

⁸ For instance, following the adoption of the draft law on salary reform, the average monthly salary in Albania will rise from the current EUR 563 to EUR 900 within a year.

Bosnia and Herzegovina, lending in foreign currency had been contracting since 2018, increasingly so in 2022, so that loans in domestic currency dominated. As a result, the share of foreign currency loans dropped to just above 40% in Bosnia and Herzegovina, almost 20 percentage points less than in 2018. In contrast, it has increased somewhat in Albania, North Macedonia and Serbia (table 5). Hence, the de-euroization process in the affected WB countries and particularly the relatively significant dinarization trend observed in recent years in Serbia have been interrupted. However, this has been mainly due to external factors. Data from the OeNB Euro Survey suggest that trust in domestic currencies has somewhat declined (except for Albania). However, this decline affected not only national

Table 5

Banking sector indicators

	2020	2021	2022	Q3 21	Q4 21	Q1 22	Q2 22	Q3 22	Q4 22
<i>End of period, annual change in %</i>									
Bank loans to the domestic nonbank private sector									
Albania ¹	5.9	9.4	8.9	8.4	9.4	10.7	11.3	11.7	8.9
Bosnia and Herzegovina ¹	-2.5	3.7	5.3	2.7	3.7	4.6	4.9	4.7	5.3
Kosovo	7.1	15.5	16.0	13.5	15.5	18.4	17.4	18.4	16.0
Montenegro	3.0	3.2	8.7	1.1	3.2	6.5	8.9	8.9	8.7
North Macedonia ¹	4.3	7.3	8.4	6.2	7.3	8.1	7.8	7.3	8.4
Serbia ¹	10.9	8.5	5.3	6.8	8.5	9.6	9.8	7.4	5.3
<i>End of period, %</i>									
Share of foreign currency loans²									
Albania	48.3	48.8	49.3	47.5	48.8	49.3	49.0	49.6	49.3
Bosnia and Herzegovina	52.2	47.8	41.2	49.1	47.8	45.9	43.9	42.8	41.2
Kosovo	..	..	..	..	..	..	..	..	..
Montenegro ³	2.9	3.2	..	3.1	3.2	3.4	2.7	4.0	..
North Macedonia	41.5	40.7	42.6	41.3	40.7	40.9	41.4	42.3	42.6
Serbia ⁴	62.8	61.7	65.2	61.4	61.7	62.4	63.1	64.4	65.2
%									
NPL ratio									
Albania	8.1	5.7	5.0	6.5	5.7	5.2	5.3	5.1	5.0
Bosnia and Herzegovina	6.1	5.8	4.5	5.5	5.8	5.4	5.2	4.9	4.5
Kosovo	2.7	2.3	2.0	2.4	2.3	2.1	2.1	2.1	2.0
Montenegro	5.5	6.2	5.7	5.6	6.2	6.5	6.3	5.9	5.7
North Macedonia	3.2	3.2	3.1	3.6	3.2	3.3	3.4	3.3	3.1
Serbia	3.7	3.6	3.0	3.6	3.6	3.4	3.3	3.2	3.0
%									
Tier 1 capital ratio									
Albania	17.2	16.9	16.9	17.2	16.9	16.7	17.8	18.1	16.9
Bosnia and Herzegovina	18.1	18.7	18.7	18.4	18.7	18.6	18.6	18.4	18.7
Kosovo ⁵	16.5	15.3	14.8	17.9	15.3	15.1	15.1	15.8	14.8
Montenegro ⁵	18.5	18.5	19.3	18.5	18.5	19.2	18.9	18.4	19.3
North Macedonia	15.3	15.8	16.6	15.9	15.8	15.5	15.9	16.3	16.6
Serbia	21.6	19.7	18.8	20.6	19.7	18.9	18.2	18.2	18.8

Source: National central banks.

¹ Foreign currency component at constant exchange rates.

² In total loans to the nonbank private sector. As far as available, including loans indexed to foreign currencies.

³ Share in total loans to all sectors.

⁴ Including securities.

⁵ Overall capital adequacy ratio.

currencies but also the euro. Naturally, depreciation fears were ignited immediately after the Russian invasion of Ukraine.

Banks in the region remain liquid and well capitalized (table 5) while their profitability has improved in most instances on the back of higher interest rates and lower noninterest costs. The concern that asset quality could noticeably deteriorate after a removal of the pandemic-triggered support measures has not materialized so far. The share of nonperforming loans (NPLs) to total loans decreased in all countries in 2022 (table 5). However, in some instances this was the result of a relatively stronger growth of the credit volume in the denominator since the NPL stock increased somewhat in half of the WB economies. While these figures appear encouraging at first glance, it is warranted to keep a close eye on future asset quality developments, especially in light of potentially mounting credit, exchange and interest rate risks. Apart from the fragile geopolitical situation and challenging macroeconomic environment, the microeconomic perspective also calls for caution. According to the most recent OeNB Euro Survey data, about 20% of interviewed household borrowers in Bosnia and Herzegovina and up to 60% in Albania report that they are unlikely or very unlikely to repay their debt over the next 12 months. The need for a watchful eye is corroborated also from the banks' view. According to the EIB Bank Lending Survey conducted in September 2022, banks in all WB economies expected deteriorating NPLs in the short to medium term. What is more, if credit risks materialize, structural obstacles continue to complicate NPL resolution in the region. In particular, collateral execution remains a difficult task as protection of property rights keeps on lagging behind⁹.

Some notable political and institutional breakthroughs?

At present, the European Union is engaged in accession negotiations with Montenegro and Serbia. Both countries accepted the revised enlargement methodology endorsed in June 2021, which they continue to apply¹⁰. According to the European Commission's 2022 Enlargement Package, which provides a detailed assessment of the state of play and progress made by (potential) candidates on their respective paths toward the EU, Serbia has opened 22 out of 35 chapters since the start of accession negotiations in January 2014. These include all chapters in cluster 1 on the fundamentals and all chapters in cluster 4 on the green agenda and sustainable connectivity. Two chapters have been provisionally closed. Accession negotiations with Montenegro were opened in June 2012. To date, 33 chapters have been opened, three of which have been provisionally closed. The other WB countries will be subject to the revised enlargement methodology in its entirety. In July 2022,

⁹ In 2022, a score provided by The Heritage Foundation that captures the level of property right protection and is normalized between 0 (worst) and 100 (best) ranged between less than 50 in Kosovo and just above 60 in Montenegro. For comparison, the Central and Eastern European region scores between more than 70 in Poland and 90 in Slovenia.

¹⁰ The dissatisfaction of some EU countries with the quality of reforms in candidate countries has prompted changes in the methodology of enlargement. The new methodology is based on four principles: credibility, predictability, dynamism and greater political governance. One of the key novelties is the establishment of six negotiation clusters: (1) fundamentals; (2) internal market; (3) competitiveness and inclusive growth; (4) green agenda and sustainable connectivity; (5) resources, agriculture and cohesion and (6) external relations. The new methodology is expected to increase the dynamics and thus the speed of the process if the countries implement the reforms on time. While a greater involvement of the EU in monitoring the process is envisaged the new procedure also allows for reversibility in case of no progress or backsliding.

the Council of the European Union decided to commence long-awaited accession talks with Albania and North Macedonia. Both countries are currently undergoing the screening process to acquaint themselves with the *acquis*, establish the level of alignment with EU legislation and to outline plans for further alignment. Additionally, in December 2022, Bosnia and Herzegovina was granted the EU candidate status while the potential candidate Kosovo officially applied for EU membership. In the meantime, in April 2023, the European Parliament agreed a long-awaited removal of visa requirements for Kosovo citizens to enter the Schengen area from 2024 on. In a similar vein, through the implementation of the SAAs¹¹ as well as other EU programs (e.g. the Economic and Investment Plan), agreements or cooperation frameworks, the EU is keen to accelerate the integration of the WB region prior to full EU membership. In this context and in light of the current energy crisis, the EU is for instance opening its electricity market to the Western Balkans, subject to regulatory reforms. In May 2022, the European Commission thus launched the so-called REPowerEU Plan to help reduce the EU's and the Western Balkans' dependence on Russian gas.

Yet, the integration progress toward the EU is significantly intertwined with domestic political developments. At end-March 2023, presidential elections took place in Montenegro after a year of political deadlock that had threatened the country's advancement in EU accession negotiations. The incumbent Milo Đukanović, who has served the country as president for more than 20 years (and, taken together with the Prime Minister post, for more than three decades) lost the presidential election to the contender Jakov Milatović. The candidate of the Europe Now Movement, who advocates closer ties with both the European Union and Serbia won in a close runoff. Further, general elections scheduled for June 2023 could definitely end the long period of political stalemate and instability after two governments did not survive the no-confidence vote in the parliament during 2022. Another noteworthy parliamentary election was held in Bosnia and Herzegovina last October. A new, state-level government was formed in late January 2023. For the EU prospects of Kosovo and Serbia in the period ahead, the so-called Ohrid Agreement will be of utmost importance (see box 1).

With respect to other important institutional relations, in late 2022, the IMF approved a two-year SBA for Serbia amounting to about EUR 2.4 billion (equivalent to a 290% of quota). The SBA replaced the previous Policy Coordination Instrument and builds on its reform agenda with appropriate modifications to address new policy challenges. In particular, in the context of the energy crisis, the SBA focuses on addressing external and fiscal financing needs, maintaining macroeconomic and financial stability, and fostering structural reforms, especially in the energy sector. In a similar vein, in April 2023, IMF staff and Kosovo authorities reached a staff-level agreement on Kosovo's economic policies to be supported by a precautionary 24-month SBA worth around EUR 100 million (97% of quota), and an arrangement under the Resilience and Sustainability Facility (RSF) of about EUR 78 million (75% of quota). These requests are subject to the approval of the IMF's Executive Board, whose considerations about these arrangements are expected to be

¹¹ All WB countries have established Stabilization and Association Agreements (SAAs) with the EU which, *inter alia*, define the terms and mechanisms for implementing reforms that will bring the respective countries progressively closer to EU policy standards.

concluded in late May. According to the IMF, the SBA would provide liquidity in case downside risks – including those arising from Russia’s war in Ukraine – materialize. In contrast, the RSF is supposed to provide affordable financing to support Kosovo’s climate change mitigation and adaptation efforts, greener electricity production, and long-run growth prospects. Moreover, it is expected to catalyze other climate financing. Kosovo’s RSF is the first in Europe.

Box 1

The Ohrid Agreement

Mediated by the EU, on March 18, 2023, Serbia and Kosovo reached a verbal agreement on the Implementation Annex of the “Agreement on the path to normalization of relations” between the two countries, informally known as the Ohrid Agreement. This agreement, along with the Implementation Annex, will be integral to the EU accession process for both Serbia and Kosovo. The agreement stipulates particularly the following provisions for the two parties:

- Development of normal, good-neighborly relations;
- Mutual recognition of their respective documents and national symbols;
- Respecting each other’s independence, autonomy and territorial integrity and the right of self-determination;
- Any disputes are to be settled exclusively by peaceful means;
- Neither party can represent the other in the international sphere;
- Serbia will not object to Kosovo’s membership in any international organization;
- Neither party will block, nor encourage others to block, the other party’s progress on its EU path;
- Kosovo will ensure the security of the properties of the Serbian Orthodox Church;
- Both parties will exchange permanent missions to be established in each other’s capitals.

In addition, as part of the agreement, Kosovo committed to immediately commence negotiations within the EU-facilitated dialog on establishing specific arrangements and guarantees to ensure an appropriate level of self-management for the Serbian community in Kosovo, in compliance with previous agreements determined by the EU facilitator. Furthermore, Serbia and Kosovo agreed to establish, within 30 days, a Joint Monitoring Committee, chaired by the EU¹² and tasked with supervising the implementation of all provisions. Within 150 days, the EU will organize a donor conference to establish an investment and financial aid package for Serbia and Kosovo. However, disbursement will not occur until the EU confirms that all provisions of the agreement have been fully met. The document also stipulated that any failure to meet obligations stemming from the agreement may result in direct negative consequences for the EU accession paths of Serbia and Kosovo, as well as the financial aid they receive from the EU.

The fact that the agreement is verbal and was not signed has allowed Serbia’s President Vučić to later question his acceptance of the pact and/or present alternative interpretations. In Serbia, the agreement was met with fierce opposition and protests by parts of the political spectrum; it remains to be seen how the country’s president and government will walk the line between the country’s commitments vis-à-vis the EU and the Ohrid Agreement on the one hand and domestic political pressures on the other.

¹² The committee is chaired by EU Special Representative for the Belgrade-Pristina Dialogue and other Western Balkan regional issues, Miroslav Lajčák.

Studies

Green transition in CESEE: sectoral emissions and EU recovery plans

Andreas Breitenfellner, Mathias Lahnsteiner, Thomas Reininger¹

The EU's financial response to the pandemic was designed to also promote climate action. This descriptive study investigates to what extent the recovery and resilience plans (RRPs) of EU member states in Central, Eastern and Southeastern Europe (CESEE) address some of the most pressing issues regarding their greenhouse gas (GHG) emission levels compared with other EU countries (EU-16). We assess that the ex ante allocation of spending within climate-related RRP spending in CESEE EU countries appears to be broadly appropriate. First, their plans' focus on renewable energy and networks is particularly important given that their per capita GHG emissions in energy industries were, on average, more than 50% higher than in the EU-16 in 2019, despite lower per capita GDP levels. These high emissions result, to a large extent, from a small group of economically significant countries that substantially use coal for power generation and district heating/cooling (as well as directly in the household sector). Given generous financial support, more ambitious coal-exit strategies could have been expected. Second, the focus of CESEE EU countries' RRP on energy efficiency is welcome, given high energy intensity in manufacturing and poorly insulated buildings, which are an additional cause of high energy industries' emission levels. In some countries, this area would clearly deserve being made a higher spending priority. Third, the RRP's focus on sustainable mobility is justified by the dynamic rise of transport sector emissions in CESEE EU (particularly in international aviation), even though per capita GHG emissions in transport are still lower in most CESEE countries than in the EU-16. While our findings support the general judgment that the RRP's spending structures indeed correspond to major country-specific climate-related weaknesses, we do not assess whether the plans are sufficient to put countries on track to their net-zero goals or whether individual measures are appropriate. Needless to say, the current energy crisis related to the Russian invasion in Ukraine and Russia's earlier restrictions on gas exports already in 2021 adds to the urgent need to steer energy production and consumption away from fossil sources and to advance energy saving.

JEL classification: O1, O52, Q54, Q56

Keywords: climate change, low-carbon transition, EU fiscal policy instrument, Central, Eastern and Southeastern Europe

Europe has a particular responsibility in the global quest for an effective and efficient response to climate change.² The EU's challenge to deliver appropriate mitigation, adaptation and transition policies is urgent. It is a challenge that has presented itself for a long time and will continue to do so for a long time to come.

The European Green Deal envisaged by the European Commission in 2019 and the emergence of the COVID-19 pandemic in 2020 led to significant adjustments in the European Union's multiannual financial framework (MFF) 2021–2027

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² Europe has a large share in total historical GHG emissions and a still substantial share in total current GHG emissions. Moreover, it has a significant role as an international standard setter, role model and technology exporter.

(European Commission, 2019; European Union, 2020a). Moreover, in response to the pandemic, the European Union agreed on establishing a European Union Recovery Instrument (EURI) complementary to the regular EU budget provided by the MFF.³ The cornerstone of the EURI is the Recovery and Resilience Facility (RRF), which provides funding for EU member states according to national recovery and resilience plans (RRPs) if jointly agreed upon at the EU level. The established common guidelines for these RRFs stipulate a minimum share of 37% for a “green pillar” in the RRF expenditures of each member state (European Union, 2020b, 2021; Reininger, 2021).

After Russia already used its energy export policy for strongly driving up EU gas prices in 2021 and then escalated its war against Ukraine, the implementation of the RRFs’ green pillars is both more challenging and even more urgent in most EU member states. Against this background, the REPowerEU Plan aims to reduce the EU’s energy dependency and greenhouse gas (GHG) emissions faster, even if temporary deviations from its ambitious climate goals are tolerated (European Commission, 2022a). National policies, however, are in part undermining these goals, as several member states have been shielding consumers and companies from rising energy prices by (partially) suspending market mechanisms and thus reducing incentives for emission cuts (Sgaravatti et al., 2022).

Against this policy background, this study provides a stocktaking of issues related to GHG emissions in EU member states, particularly in Central Eastern and Southeastern Europe (CESEE) in the year 2019, prior to the COVID-19 pandemic. It builds on a previous study which focused on the developments regarding the green transition in the period between 1990 and 2018. In our earlier study, we had confirmed broad compliance with climate policy commitments in both sub-aggregates of 11 EU member states in CESEE (CESEE EU) and 16 other EU member states (EU-16) while highlighting the challenges ahead (Breitenfellner et al., 2021).

This study focuses on the status quo in the year 2019 and only occasionally refers to developments in the decade following the global financial crisis in 2008. Moreover, it provides comprehensive country-specific information as well as deeper sectoral insights. Following a descriptive and comparative approach regarding the European Union, it uses the EU-27 aggregate and the 16 other EU member states, both individually and as EU-16 aggregate, as benchmarks for CESEE EU member states and their aggregate. Methodologically, like in the previous study, we apply the Kaya decomposition to gain a deeper understanding of the relative intensities involved in these countries and sectors (Kaya and Yokoburi, 1997; Umweltbundesamt, 2021). According to the Kaya identity, total anthropogenic GHG emissions of an economy are the product of four multiplying factors: GHG emission intensity of the energy mix, energy intensity of GDP, GDP per capita, and population. In our paper, the term “carbon intensity” refers to the product of emission intensity and energy intensity and, hence, relates GHG emissions to GDP. After presenting an overview on the size of the national RRFs and on the structure and quantitative design of their respective green pillars, the study explores whether the ex ante allocation of spending under these RRFs is appropriate to address general or country-specific weak spots that emerged in the preceding stocktaking exercise. In no way, however, do we claim to comprehensively assess whether these

³ The EURI is also called *NextGenerationEU recovery plan (NGEU)*.

plans are adequate or whether individual measures envisaged therein are sufficient or timely.

The study is structured as follows: Section 1 provides an analysis of various aspects of GHG emissions in EU member states, with subsection 1.1 focusing on GHG emissions per capita and their structure by sectors, and subsection 1.2 dealing with the economy-wide and sectoral decomposition of these emissions into intensities. Section 2 gives an overview of the RRP and their green transition pillars, especially in CESEE EU member states. In section 3, we wrap up and draw some conclusions.

1 Analysis of GHG emissions in EU member states

This chapter provides a stocktaking of the level and structure of GHG emissions in EU member states, particularly in CESEE, as well as of the relative intensities involved in these economies and their sectors.

1.1 GHG emissions per capita and structure by sectors

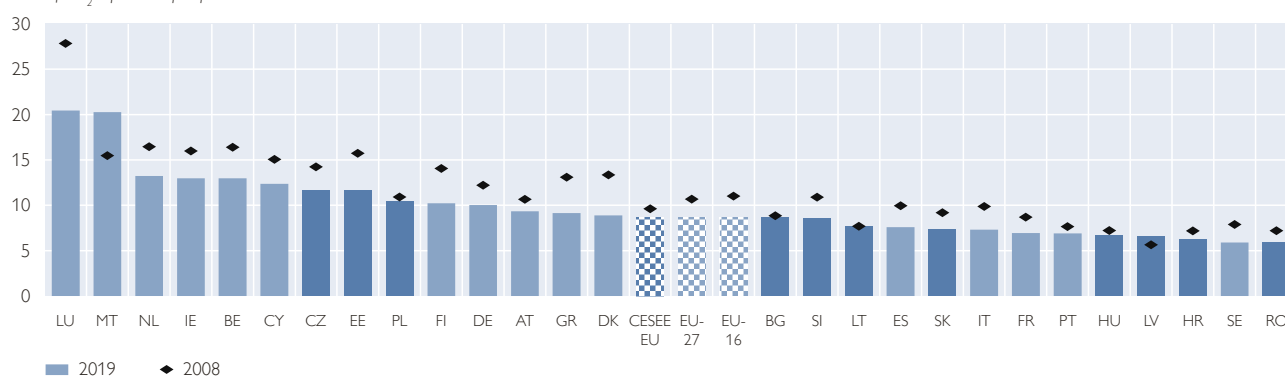
1.1.1 GHG emissions per capita in 2019

At first glance, CESEE EU member states do not seem to contribute more to climate change than other EU member states, relative to the size of their population. The subaggregates of the CESEE EU member states (in the following: CESEE EU) and the other EU member states (in the following: the EU-16) had almost the same level of *GHG emissions per capita* in 2019, and hence were almost equal to the EU-27 average of 8.7 tons CO₂ equivalent of GHG emissions (see chart 1).⁴ These aggregate figures mask pronounced heterogeneity within both country groups. The highest GHG emissions per capita in the EU-27 are recorded by the Benelux countries, Cyprus, Malta and Ireland, with readings that are about 50% higher than the EU-27 average. These are followed by Czechia, Estonia and Poland, a group of countries that comprises two heavyweights within the CESEE EU subaggregate, with per capita emissions 20% to 35% above average. At the other end of the

Chart 1

Greenhouse gas emissions per capita

Tons of CO₂ equivalent per person



Source: Authors' calculations, Eurostat, UNFCCC.

⁴ These GHG emissions include allotted emissions released from international bunkers related to international navigation and aviation. They exclude the impact of land use, land use change and forestry (LULUCF).

spectrum, with the lowest GHG emissions per capita, are Sweden and Romania with per capita emissions about 30% below average. These are followed by Croatia, Latvia, Hungary, Portugal and France with slightly higher per capita emissions that are still at least 20% below average.

However, this comparison does not condition on different GDP per capita levels, and we will turn to this issue further below.

1.1.2 Uneven decline in GHG emissions between 2008 and 2009

A brief look at the development of *GHG per capita levels from 2008 to 2019* shows that the EU-27 average declined by almost 20% in this period, resulting from decreases in all EU member states except Malta and Latvia (see chart 1). However, these decreases differed markedly in size. The CESEE EU subaggregate posted a decline of only 10%, as most of the included member states had a below-average decline of their per capita emissions, particularly Bulgaria, Poland and Hungary. Estonia is the only CESEE country among those EU member states that have recorded very large decreases of per capita emissions, namely by more than 25% and up to 33%. On a positive note, two CESEE countries, Slovakia and even more so Romania, registered substantial reductions of per capita GHG emissions, i.e. close to the EU-27 average, despite starting at already far below-average per capita emissions in 2008.

In general, the dynamics observed from 2008 to 2019 do not fundamentally change when considering demographics and looking at *GHG total*. Not only per capita but also in terms of total GHG emissions, the decline was far more pronounced in the EU-27 than in CESEE EU, as population figures changed only modestly, rising by 2% in the EU-27 but declining by 3% in CESEE EU.⁵ However, the relative position of a few CESEE EU member states shifts considerably when looking at total emissions. In Romania, where the decline in per capita emissions roughly equaled the EU-27 average, the accompanying substantial population decline resulted in a decline of total emissions that was larger than the EU-27 average. In Croatia, substantial population decline coupled with a decline in per capita emissions that was smaller than the EU-27 average resulted in a decline of total emissions that roughly equaled the EU-27 average.

1.1.3 The sectoral structure of GHG emissions

International data on GHG emissions differ slightly depending on the source and the underlying concept. Regarding the *sectoral structure of GHG emissions*, according to data provided by the *United Nations Framework Convention on Climate Change (UNFCCC)*⁶, emissions of transport have the largest share in total GHG emissions in the EU-27 aggregate at close to 30%. These are followed by emissions from energy industries, comprising (1) generation of electricity and heating/cooling and (2) refineries for oil and petroleum products and coke ovens, with a combined share of 23%, emissions from manufacturing with 20% (breaking down into roughly equal parts stemming from energy use and from industrial processes and

⁵ Among EU-16 countries, only Greece and Portugal recorded declines in population figures, which in both countries roughly equaled the average decline in CESEE EU.

⁶ This subsection includes allotted GHG emissions released from international bunkers related to international navigation and aviation. We use emissions data without the impact of land use, land use change and forestry (LULUCF).

product use) and emissions from agriculture with 12% (the bulk of which coming from agricultural processes, mainly emitting non-CO₂ GHG, rather than energy use). Finally, there are the emissions from the residential sector (8%), resulting from the burning of fossil energy like coal, oil and gas within households for heating, as well as the emissions from other items (8%), which comprise (1) emissions from the burning of fossil energy within commercial/institutional buildings for heating, (2) emissions from wastewater treatment and solid waste disposal sites and (3) emissions from fossil energy mining and exploration (as “fugitive emissions from fuel”).

Moderately different sector structure results from *Eurostat’s Air Emissions Accounts (AEA)* data. The AEA data follow the residence principle, with emissions assigned to the country where the economic operator causing the emission (the operator of the ship/aircraft in the case of international navigation and aviation) is resident and are classified by economic activity (NACE) (Eurostat, 2022). The UNFCCC data, reported to international conventions, follow the territory principle, with emissions assigned to the country where the emission takes place (or, in the case of international navigation and aviation, where the associated fuel is bunkered), and are classified by the type of technical process (UNFCCC, 2006).⁷ On aggregate, for the EU-27, the difference between the AEA total GHG emissions and the UNFCCC total GHG emissions⁸ was about 0.5% in 2019. However, in some small and open countries (especially those considerably involved in international navigation and/or aviation) the difference may be substantial.⁹

For the sectoral structure, part of AEA emissions may be clustered into the category of “services,” both commercial and public services, which, in turn, comprise some emissions covered by the categories “transport sector” and “other items” in the UNFCCC reporting. On the EU-27 aggregate level, the share of services accounted for slightly more than 10% of total emissions in 2019, lowering, in turn, the transport sector’s share according to AEA data to the still large size of nearly 25%.

This subsection continues to focus primarily on the sector structure derived from the *UNFCCC data*, while subsection 1.2 uses AEA data when investigating sectoral decomposition and intensities, as the classification of these emissions data is comparable to that of economic structure.

1.1.4 Differences in the sectoral structure of GHG emissions

Accordingly, the *sectoral structure of GHG emissions clearly differs between the CESEE EU and EU-16 subaggregates*, with the EU-16 sector structure dominating the EU-27 structure given its coverage of more than three-quarters of the EU. In 2019, the sector structure of the CESEE EU subaggregate was set apart from that of the EU-16 and EU-27, particularly in three categories: first, the considerably larger share

⁷ Note that the volume of emissions caused by nonresidents in the territory of any country is not just an unavoidable result of nonresidents’ decision-making but may well be influenced by policy, like, for instance, tax policy that aims at lifting government revenues via fuel taxes instead of aiming at containing GHG emissions.

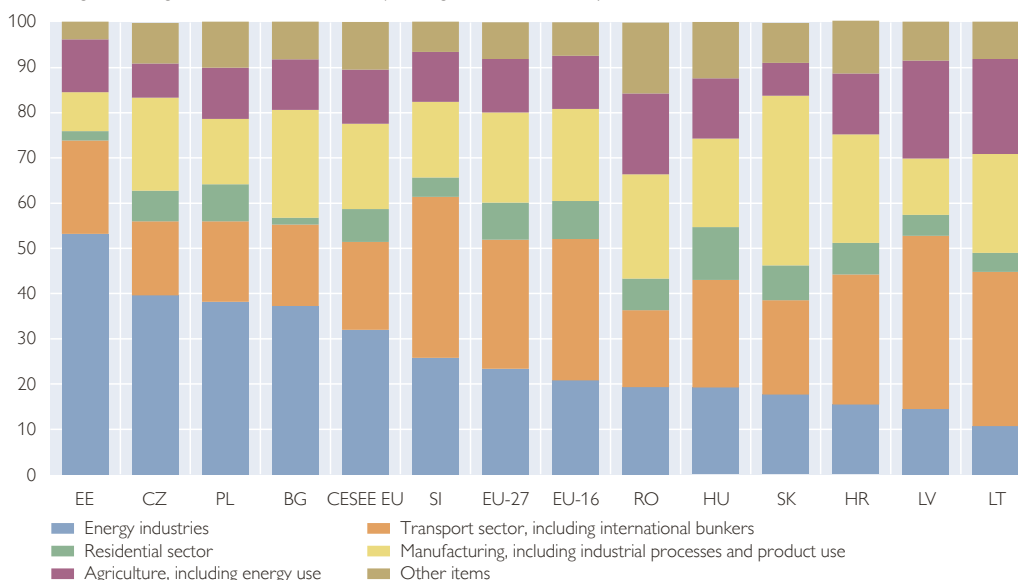
⁸ Including allotted emissions released from international bunkers related to international navigation and aviation. We use emissions data without the impact of land use, land use change and forestry (LULUCF).

⁹ In Lithuania, Denmark and Ireland, the AEA data for total GHG emissions are 15% or more higher than the UNFCCC totals, while in Belgium, Cyprus, Luxembourg, Malta and the Netherlands the AEA data are 10% or more below those totals.

Chart 2

Sectoral structure of greenhouse gas emissions (2019)

% of total greenhouse gas emissions without LULUCF (including international bunkers)



Source: UNFCCC.

Note: Countries ordered by size of energy industries' share of emissions in % of total GHG emissions. LULUCF = land use, land use change and forestry.

of emissions from energy industries (about 32%); second, the considerably smaller share of emissions from the transport sector (about 19%); and third, the larger share of emissions summarized under “other items” (about 11%), on account of emissions from waste and from fugitive emissions from fuel (see chart 2). Note that, when using AEA data, similarly sized deviations result for energy industries and the transport sector. Moreover, both the UNFCCC and AEA data clearly indicate that in CESEE EU more than half of the difference vis-à-vis the EU-27 figures for the transport sector is attributable to the comparatively lower level of emissions from international navigation and aviation.¹⁰

The highlighted differences in the sector shares are also reflected in the differences in 2019 *sector-specific per capita GHG emissions between CESEE EU on the one hand and the EU-16 and EU-27 on the other hand*, given the almost equal level of total per capita emissions.

To put these differences into perspective, note that the (still) lower shares and per capita emissions of the transport sector in CESEE EU do not leave room for complacency. First, these emissions have been growing very dynamically in the relevant CESEE EU subaggregate in both the international and the domestic segment while declining in the EU-16 in both segments in recent years. And second, particularly the per capita emissions from international aviation in CESEE EU are very likely to rise further from their current, comparatively lower level.

¹⁰ Besides, the AEA data show that in 2019 slightly less than half of the transport sector emissions stemmed from households both in CESEE EU and in the EU-16, while in 2008 the household share was just above 40% of total transport emissions in CESEE EU but already about 50% in the EU-16.

More obviously, the higher shares of energy industries, fugitive emissions and waste emissions and the higher per capita emissions in these sectors in CESEE EU call for specifically targeted climate policy action.

At the same time, even shares and per capita emission levels in manufacturing, the residential sector and agriculture, which are comparable to the EU average, are no excuse for inaction in these countries.

At this point, let us emphasize the distinction between emissions from fuel combustion by the residential sector, which is an activity category in the UNFCCC statistics, and all emissions caused by the energy supply for residential buildings demanded by households. As pointed out above, emissions by the residential sector comprise only emissions directly generated within residential buildings, e.g. by burning fossil fuels. In addition, there are emissions indirectly caused by energy supply for residential buildings, namely emissions generated by the energy industry when producing electricity and heating/cooling for delivery to households. The latter emissions are part of total emissions by energy industries. For emissions from fuel combustion by the commercial/institutional sector, the case is similar. Avoiding this confusion is so important, as for both residential and commercial buildings there is large scope for energy saving via thermal insulation and a change of heating systems both in CESEE EU and in the EU-16. These energy-saving measures do not only help reduce per capita emission levels in the residential sector but also the per capita emission levels in energy industries, which are generally far higher than those in the residential sector and – as mentioned above – comparatively even higher in CESEE EU than in the EU-16.¹¹

In which sectors do individual CESEE countries differ markedly from the overall regional structure? If we compare chart 2 and table 1, we find that differences in the sector structure of emissions reflect differences not only in the countries' economic

Table 1

Sectoral greenhouse gas emissions per capita (2019)

	CZ	EE	PL	CESEE EU	EU-27	EU-16	BG	SI	LT	SK	HU	LV	HR	RO
Tons of CO ₂ equivalent per person														
Total greenhouse gas emissions	11.7	11.6	10.4	8.7	8.7	8.7	8.6	8.5	7.6	7.3	6.7	6.6	6.2	5.9
Energy industries	4.6	6.2	4.0	2.8	2.0	2.0	3.2	2.2	0.8	1.3	1.3	1.0	1.0	1.1
Manufacturing (including industrial processes and product use)	2.4	1.0	1.5	1.6	1.7	1.7	2.1	1.4	1.7	2.8	1.3	0.8	1.5	1.4
Transport sector (including international bunkers)	1.9	2.4	1.9	1.7	2.5	2.5	1.6	3.0	2.6	1.5	1.6	2.5	1.8	1.0
Residential sector	0.8	0.2	0.9	0.6	0.7	0.7	0.1	0.4	0.3	0.6	0.8	0.3	0.4	0.4
Agriculture (including energy use)	0.9	1.4	1.2	1.0	1.0	1.0	1.0	0.9	1.6	0.5	0.9	1.4	0.8	1.1
Other items	1.0	0.5	1.1	0.9	0.7	0.7	0.7	0.6	0.6	0.6	0.8	0.6	0.7	0.9

Source: Authors' calculations, Eurostat, UNFCCC.

¹¹ Also note that equal (or, in fact, slightly lower) per capita emission levels in CESEE EU manufacturing where FDI from the EU-16 have a strong or even dominant role, cast doubts over a specific form of carbon leakage hypothesis according to which the EU-16's outward FDI in CESEE EU member states consisted largely in transferring above-average polluting industries to CESEE. However, these data do not allow rejecting this hypothesis either, as the counterfactual is unknown.

structure but also in (past) energy and climate policy. The share of energy industries as well as related per capita emissions are markedly lower in Croatia, Slovakia, Hungary and Romania, and particularly high in Estonia, Czechia, Poland and Bulgaria. In manufacturing, Slovakia and Czechia do not only have above-average shares but also above-average per capita emission levels. In the transport sector, Slovenia, Lithuania and Latvia stand out with above-average figures, and in the residential sector, Poland, Hungary and Czechia. In agriculture, Romania and Croatia have above-average figures in terms of shares, Poland in terms of per capita emissions and the Baltic countries in terms of both shares and per capita emissions. In the category “other items,” Romania has a particularly high share and Poland clearly above-average per capita emissions; in both cases, this is attributable to the subitem of fugitive emissions from fuel. In addition, within “other items,” per capita emissions from waste are particularly high in Czechia, Croatia, Bulgaria and Hungary. Finally, note that there is sizable heterogeneity in sectoral per capita emissions also among the EU-16 countries.

1.2 Intensities in the overall economy and in different sectors

1.2.1 Carbon intensity: GHG emissions per unit of GDP and GVA

In this subsection, GHG emissions of the total economy and of sector clusters of economic activities are related to an economy’s total GDP and the corresponding gross value added (GVA) of these sector clusters, respectively. The GHG emissions allotted to each sector cluster stem from Eurostat’s AEA data (see subsection 1.1.3). Conditioning on related GDP or GVA levels implicitly means that, for an appropriate assessment, not only costs (in terms of GHG emissions) but also benefits (in terms of products and services for well-being) must be considered.

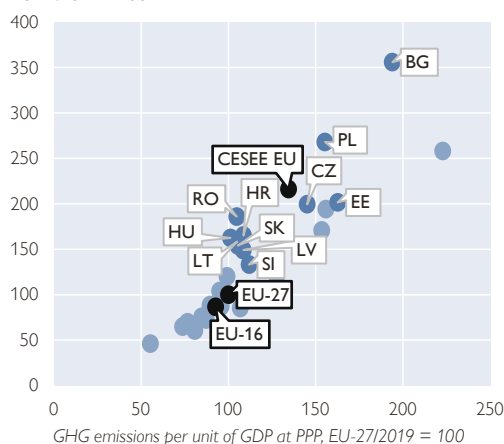
Obviously, for cross-country comparison, the question arises whether GDP and GVA are measured in euro at purchasing power parity (PPP) or at market exchange rates. Focusing on the volume of GHG emissions associated with

comparative income levels would suggest applying PPP. In contrast, focusing on the volume of GHG emissions associated with international competition in tradable goods and economic activities related to their production would suggest using the market exchange rate. Hence, for GDP we consider PPP more appropriate, while for the GVA of internationally exposed sectors we prefer using the market exchange rate. However, for the sake of transparency and comparability between the total economy and individual sectors, we will look at both measures regarding GDP, focusing primarily on the PPP-related measure while highlighting if the exchange rate-related measure yields considerably different results. The sub-

Chart 3

Carbon intensity of the whole economy

GHG emissions per unit of GDP at market exchange rates, EU-27/2019 = 100



Source: Authors' calculations, Eurostat, UNFCCC.

stantially higher *GDP-based carbon intensity* levels in CESEE EU (according to both measures) reveal the need of their further lowering in order to allow per capita income convergence within ecologically sustainable limits. Based on GDP at PPP, average carbon intensity for CESEE EU was one-third above the EU-27 average, while the EU-16 carbon intensity was 7% below this average in 2019 (see table 2, first column). Based on GDP at market exchange rates, CESEE EU carbon intensity was more than 110% higher than in the EU-27 while EU-16 carbon intensity was 13% lower (see table 2, second column). Thus, in chart 3, the dot for CESEE EU lies clearly above the 45° line. According to both measures, carbon intensity was above the EU-27 average in each CESEE EU country, with Bulgaria, Estonia, Poland and Czechia belonging to the most carbon-intense economies in the EU-27. Among the EU-16 member states, only Malta, Greece and Cyprus were close to such high levels of carbon intensities. On a PPP basis, Belgium and the Netherlands had carbon intensities below those in the four CESEE EU member states mentioned above (and thus also below the CESEE EU average) but higher than those in the remaining seven CESEE EU member states¹², which in turn had carbon intensities up to 12% above the EU-27 level on a PPP basis (but exceeded that level by at least 30% on an exchange rate basis).

Looking at the dynamics (on PPP basis), carbon intensity declined in each EU member state from 2008 to 2019 and on average by 26% in the EU-27. On the positive side, the decline was stronger on average in the CESEE EU member states, amounting to 32%, with above-average declines in Poland and Estonia, two of the four countries with still above-average levels in 2019. However, among the CESEE countries, Bulgaria together with Latvia and Croatia showed less progress than the EU-27.

1.2.2 Possible explanations for country differences in carbon intensity

Analytically, one way to explore these differences is the decomposition of carbon intensity (GHG emissions per unit of GDP) into *emission intensity*, that is GHG emissions per unit of energy used, and *energy intensity*, that is energy used per unit of GDP¹³.

Emission intensities of total economies in CESEE EU were on average 29% higher than in the EU-27 in 2019 (see table 2, third column). This mirrors the above finding that CESEE EU carbon intensity (based on GDP at PPP) was 34% higher than in the EU-27. Moreover, those four CESEE EU countries with carbon intensity above the CESEE EU average (Bulgaria, Estonia, Poland, Czechia) were those (together with Romania) that had above-average emission intensities. The same applies to Greece as one of the three EU-16 countries with above-average carbon intensity. Congruently, five of the seven CESEE EU countries with the lowest carbon intensities (Hungary, Lithuania, Slovakia, Croatia, Slovenia), which exceeded the EU-27 level by only 12% or less, had emission intensities close to the

¹² While the exceptionally high level of per capita GHG emissions and carbon intensity in Malta may be attributed exclusively to the far above-average emissions associated with international navigation and aviation, the latter may explain only part of the above-average per capita GHG emissions and carbon intensities in Cyprus, Belgium and the Netherlands. In the Netherlands, per capita emissions in energy industries and in agriculture are extraordinarily high, while in Belgium emissions from manufacturing are particularly high.

¹³ To be precise, total final energy consumption is used for calculating energy intensity.

Table 2

Decomposition of total emissions

	Carbon intensity (with GDP at PPP)	Carbon intensity (with GDP at market exchange rates)	Emission intensity	Energy intensity (with GDP at PPP)	Energy intensity (with GDP at market exchange rates)
Malta	223	258	89	251	291
Bulgaria	194	356	165	118	216
Estonia	163	202	136	120	148
Greece	156	194	137	114	142
Poland	155	268	146	107	184
Cyprus	153	171	121	127	141
Czechia	145	200	134	108	149
CESEE EU	134	216	129	104	167
Belgium	128	113	90	142	125
Netherlands	117	102	97	120	105
Slovenia	112	133	97	115	137
Croatia	109	165	98	110	168
Latvia	108	149	77	141	193
Finland	107	85	59	181	145
Slovakia	105	154	99	107	156
Lithuania	105	158	101	104	157
Romania	105	186	132	79	141
Hungary	101	162	96	105	169
EU-27	100	100	100	100	100
Portugal	99	120	101	99	119
Germany	96	87	102	94	85
Spain	95	104	100	95	104
EU-16	93	87	94	98	92
Italy	90	88	99	90	89
Luxembourg	87	73	70	125	104
Austria	85	75	78	108	96
Denmark	81	60	89	91	68
France	77	69	84	91	82
Ireland	74	65	129	57	50
Sweden	55	46	49	114	95

Source: Authors' calculations, Eurostat, UNFCCC.

Note: Indexed values, EU-27/2019 = 100.

EU-27 average. (Latvia was the only CESEE country with an emission intensity far below the EU-27 average.)

Thus, the emission intensity ranking of most CESEE countries among all EU-27 countries matched their ranking with respect to carbon intensity and, in addition, the heterogeneity in carbon intensity resulted mainly from the heterogeneity in emission intensity. This means that in the CESEE EU countries energy intensity, i.e. the second factor determining carbon intensity, was relatively close to the EU-27 average. At the same time, in each CESEE EU country (except for Romania), energy intensity was above the EU-27 level (see table 2, fourth column). Romania and Latvia were the outliers among CESEE countries, with their emission and carbon intensity rankings not matching each other and their energy intensity deviating strongly from the EU-27 average, as Latvia had particularly high and Romania particularly low energy intensity in 2019.

Besides, if measuring carbon intensity and hence energy intensity is based on GDP at market exchange rates, then the energy intensity of CESEE EU countries is driven up and is shown to be even more important than emission intensity for

determining the above-average carbon intensity levels of CESEE EU countries and the heterogeneity in carbon intensity within the EU-27 (see table 2, fifth column).

This decomposition shows that both saving energy and expanding low-emission energy sources, particularly renewable energy, are even more urgent challenges for the CESEE EU than the EU-16 countries. The scope for reducing carbon intensity toward the lower EU-16 levels is particularly large with respect to emission intensity.

1.2.3 Why was emission intensity so much higher in CESEE EU than in EU-16 countries?

From a sectoral perspective, energy industries for generation of electricity and heating/cooling are a prime candidate to look at, not least because of their large share in total GHG emissions. Indeed, emission intensities of *energy industries for generation of electricity and heating/cooling* were on average almost 70% higher in CESEE EU than in the EU-27 in 2019, while 17% lower in the EU-16 (see table 3, first column). At the far end of the spectrum, Poland exceeded the EU-27 level by about 150%, roughly matched only by Greece and Cyprus with deviations by 120% and then followed by Estonia, the only other EU country above the CESEE EU average. Slovenia and Hungary were close to the EU-27 average, while only Latvia, Lithuania and Slovakia were below that level; Lithuania and Slovakia were also below the EU-16 average. Energy industries' emission intensity is determined first by the share of fossil energy in total energy used in this sector, proxied by the combined share of coal, oil and natural gas (see table 3, second column), and second by the importance of coal within fossil energy sources (compare table 3, third column, showing the share of coal in total energy used, with the second column).¹⁴ In 2019, more than one-third (35%) of total coal used in energy industries for generation of electricity and heating/cooling of the EU-27 aggregate were employed in Germany, further 28% in Poland, 10%

Table 3

Energy industries

	Emission intensity	Share of coal, oil and gas	Share of coal
	%	%	%
Poland	253	85	77
Cyprus	221	94	0
Greece	220	81	33
Estonia	187	5	0
CESEE EU	169	59	47
Germany	162	51	34
Malta	158	93	0
Bulgaria	145	48	40
Czechia	143	53	46
Netherlands	139	71	16
Ireland	135	61	3
Romania	128	55	32
Croatia	120	48	17
Italy	110	61	8
Slovenia	108	37	32
Hungary	101	36	11
EU-27	100	39	19
Portugal	95	58	15
Latvia	87	48	0
EU-16	83	34	12
Luxembourg	79	23	0
Denmark	67	26	13
Finland	66	16	8
Spain	65	40	7
Belgium	61	21	0
Lithuania	60	17	0
Slovakia	55	24	10
Austria	53	28	4
Sweden	14	1	0
France	14	7	1

Source: Authors' calculations, Eurostat.

Note: Indexed values in the first column, EU-27/2019 = 100, percentage shares in total energy used in the second and third columns.

¹⁴ Note that Estonia is a special case where the high emission intensity results from the high share of two special sources of fossil energy, namely shale oil and oil sands as well as manufactured gases, both not included in oil and natural gas in the table below.

Table 4

Residential sector

	Energy used to generate E&H directly within HH	Thereof:			Emission intensity
		Share of coal and peat	Share of oil	Share of gas	
	% of total energy for E&H used in HH	%			
Ireland	76	16	54	27	158
Malta	29	0	53	0	145
Belgium	80	1	37	52	133
Luxembourg	83	0	30	64	126
Netherlands	76	0	1	92	118
Poland	71	34	4	25	114
Portugal	61	0	23	16	111
Greece	62	0	45	15	108
Bulgaria	43	11	2	9	106
Germany	74	1	28	52	106
Spain	57	1	29	42	104
Cyprus	58	0	53	0	103
EU-16	67	1	21	51	102
Italy	79	0	8	66	100
EU-27	67	5	17	48	100
France	62	0	18	46	95
Hungary	74	2	2	66	94
CESEE EU	69	16	4	35	92
Czechia	67	14	1	38	92
Slovakia	67	2	0	63	85
Austria	65	0	21	33	81
Romania	77	1	5	43	64
Lithuania	52	6	8	21	63
Slovenia	65	0	18	15	57
Denmark	43	0	11	33	57
Croatia	71	0	6	29	53
Latvia	57	1	8	16	52
Estonia	47	0	2	13	38
Finland	37	0	14	1	34
Sweden	14	0	19	2	30

Source: Authors' calculations, Eurostat.

Note: E&H = electricity and heating, HH = households; percentage shares in columns 1 to 4; indexed values in column 5, EU-27/2019 = 100. Columns 2 to 4: shares in 100 = energy used to generate E&H directly within HH in the respective countries.

in Czechia, 4% each in Bulgaria, Romania and Italy, and 3% each in the Netherlands, Spain and Greece.

A considerable part of electricity and heating/cooling provided by energy industries is delivered to households' residential buildings. In turn, these deliveries constituted a substantial part of total energy used in households for electricity and heating, namely about 33% in the EU-16 and 31% in CESEE EU. The other part is made up by energy that is used to generate electricity and mainly heating directly within households. The relative size of these two parts varies substantially within both country groups as can be seen from table 4, first column.

The generation of electricity and heating directly within households causes those GHG emissions that are attributed to the *residential sector's activity*. Relating these GHG emissions to the energy used for producing electricity and heating

directly within households yields the corresponding emission intensity. Unlike in energy industries, households' residential sector had emission intensity levels that in CESEE EU were moderately lower (by 8%) than the EU-27 average, while slightly higher by 2% in the EU-16 in 2019 (see table 4, fifth column). However, these average figures also mask considerable heterogeneity within both country groups. At the high-intensity end of the spectrum, there are EU-16 countries (Ireland and Benelux) where the emission intensities were higher than the EU-27 average by 18% (Netherlands) to 58% (Ireland), driven by the overall high share of fossil energy (that is, the combined share of coal, peat, oil and natural gas), partly coupled with a substantial share of oil (and coal and peat in Ireland). This is followed by the country with the highest emission intensity in CESEE EU, which is Poland, exceeding the EU-27 average by almost 15%. Here, the high share of coal played a decisive role in the relative level of emission intensity. While Poland had a visibly lower overall share of fossil energy than the Netherlands, the large weight of coal within that share caused Poland's emission intensity to be almost as high as that of the Netherlands (see table 4, second, third and fourth column).¹⁵ In 2019, more than three-quarters (76%) of total coal used by the residential sector (households) in the EU-27 aggregate were used in Poland, further 10% in Czechia, 5% in Ireland and 2% in Bulgaria. Note again that these emission intensities do not provide any information about the extent to which above-average volumes of energy may be employed in residential heating and, more generally, about the varying scope for energy saving (e.g. via thermal insulation) across countries in this sector.

1.2.4 Carbon intensity of industry and its decomposition

In how far does CESEE EU's relative position with respect to carbon, emission and energy intensity differ between the internationally strongly exposed part of the economy and the total economy? Here, the focus is on *industry*, defined as comprising the economic activities of mining (NACE B), manufacturing (NACE C¹⁶) and construction (NACE F). As pointed out above, for industry as an internationally exposed sector, measuring carbon intensity and energy intensity on the basis of GVA at market exchange rates is considered more appropriate. Accordingly, the *carbon intensity of industry* was on average almost 85% higher in the CESEE EU member states than in the EU-27, and 13% lower in the EU-16 (see table 5, first column). Thus, in CESEE EU countries, the order of magnitude by which industry's carbon intensity exceeded the EU-27 average was comparable to that of carbon intensity of GDP measured at market exchange rates. In Bulgaria but also Slovakia, Poland, Romania and Croatia, carbon intensities in industry were above the CESEE EU average, and again their levels were matched only by Cyprus and Greece among the EU-16. Industry's carbon intensities in Lithuania, Czechia and Hungary were ranked next, below the CESEE EU average but still 30% to 50% above the EU-27

¹⁵ Note that for a few economically smaller countries the resulting data are quite a bit surprising: For Malta and Cyprus and even more so for Portugal and Bulgaria, the share of fossil energy was strikingly low, implying a high share of renewables and biofuels. The fact that emission intensity was nevertheless above the EU-27 average might partly be explained by the share of coal in Bulgaria and the share of oil and petroleum in Malta and Cyprus, which made up the entire fossil energy share while there was no use of natural gas. Both explanations do not work for Portugal, however. At least, these data would suggest sub-optimal technology in using fossil energy in households resident in these countries.

¹⁶ Excluding C19 (manufacture of coke and refined petroleum products) categorized under energy industries and C33 (repair and installation of machinery and equipment) categorized under services.

Table 5

Decomposition of industry emissions

	Carbon intensity	Emission intensity	Energy intensity
Bulgaria	319	133	240
Greece	294	197	149
Slovakia	237	120	197
Cyprus	228	256	89
Poland	206	140	147
Romania	201	148	135
Croatia	197	140	141
CESEE EU	184	127	145
Luxembourg	148	97	154
Lithuania	145	144	101
Belgium	143	93	153
Portugal	142	107	133
Czechia	140	109	129
Hungary	131	86	153
Spain	120	116	103
Ireland	118	123	96
Slovenia	117	113	103
Latvia	112	69	161
Netherlands	112	90	124
Austria	101	92	110
EU-27	100	100	100
Estonia	96	104	92
France	93	105	89
Other EU	87	94	93
Italy	85	111	76
Finland	77	34	228
Germany	66	87	76
Sweden	64	47	138
Malta	49	102	48
Denmark	46	105	44

Source: Authors' calculations, Eurostat.

Note: Indexed values, EU-27/2019 = 100.

level, and close to their levels were those of the EU-16 subgroup with the second-highest levels (Luxembourg, Belgium, Portugal).

Emission intensities of industry in CESEE EU were on average 27% higher than in the EU-27 in 2019 (see table 5, second column). Thus, in CESEE EU countries, the extent to which industry's emission intensity surpassed the EU-27 average was roughly equally pronounced as in the case of the total economy's (GDP's) emission intensity. At the same time, both emission intensities surpassed the EU-27 average to a considerably lesser extent than the respective carbon intensities of industry and GDP exceeded the EU-27 average.

The combination of the carbon intensity of industry in CESEE EU that exceeded the EU-27 average to a very large extent and emission intensity that surpassed the EU-27 average to a considerably lesser albeit still substantial extent implies that the *energy intensity of industry* in CESEE EU was much higher than the EU-27 average, namely by 45% (see table 5, third column). Thus, like for carbon intensity, in CESEE EU countries, the order of magnitude by

which industry's energy intensity exceeded the EU-27 average was comparable to that observed for energy intensity of GDP measured at market exchange rates, which was 67% higher than in the EU-27. Hence, CESEE EU's relative position with respect to industry's intensities was roughly comparable to its relative position with respect to GDP's intensities measured at exchange rates. In contrast, for GDP measured at PPP, CESEE EU's energy intensity and thus its carbon intensity exceeded EU-27 levels to a considerably smaller extent, leaving its emission intensity as the considerably more important factor for explaining its higher carbon intensity.

Note that four of the five CESEE EU countries whose industrial sectors recorded carbon intensity levels above the CESEE EU average (Bulgaria, Poland, Romania, Croatia but not Slovakia) were those (together with Lithuania) that showed above-average emission intensities. The same applies to Greece and Cyprus among the EU-16 countries. Slovakia registered particularly high energy intensity, and the same is true for Bulgaria, in addition to its emission intensity being only moderately above the CESEE EU average.

In almost all EU countries, more than half of industry's GHG emissions stem from *three manufacturing branches*: metal industry, chemical and petrochemical

industry and non-metallic minerals. On average, their combined share amounted to 65% of GHG emissions in industry in the EU-27, 58% in CESEE EU and 67% in the EU-16 in 2019 (reaching even close to 80% in Lithuania, Luxembourg, Cyprus, Austria and Belgium, hence in several of the EU countries with the highest per capita emissions in industry). In contrast, these three branches together accounted for not more than 13.8% of total industry's GVA (at market exchange rates) in the EU-27, 11% in CESEE EU and 14.3% in the EU-16, with the highest share among the EU-16 countries seen in Belgium (32%) and, among CESEE EU countries, in Slovenia (21%). However, the output of these manufacturing branches constitutes important intermediate consumption goods for other branches of industry, like e.g. machinery, with substantial gross value added.

If we briefly turn to *agriculture, forestry and fishing as the other internationally exposed sector of the economy*¹⁷, we see that the average carbon intensity in CESEE EU (based on GVA at market exchange rates) surpassed the EU-27 level by 40% – thus less strongly than in industry. Moreover, unlike what we saw for industry, there are more EU-16 countries (Ireland, Luxembourg, Belgium, Denmark) than CESEE countries (Poland, Bulgaria, Lithuania) in the group of countries whose carbon intensities are above the CESEE EU average, with intensity levels in Ireland and Luxembourg exceeding the Polish level. Overall in the EU-27, carbon intensity in agriculture is seven times higher than in industry. Note that agricultural GHG emissions do not primarily stem from final energy used but from agricultural processes, which would render decomposition into emission intensity and energy intensity less meaningful.

For the sake of completeness, note that *services* comprise a large number of economic activities as classified by NACE (C33, E, G, H52–53, I to S, and U) and their GVA constitutes a predominant share of the total economy's GVA (and GDP), but their overall carbon intensity based on PPP (given the largely nontradable character of services) amounts to only about one-sixth of total economy's carbon intensity in absolute terms in the EU-27. Thus, differences relative to the EU-27 average in services, have an only minor effect on the overall ranking of most economies' carbon intensity. Carbon intensity was about two-thirds higher on average in the CESEE EU member states than in the EU-27, while 10% lower in the EU-16.

2 The green transition pillar within recovery and resilience plans

The EU's Recovery and Resilience Facility (RRF), which was created with the intention to strengthen and steer EU member states' economic recovery after the adverse economic effects of the COVID-19 pandemic, provided an opportunity to advance the green transition agenda in CESEE EU member states. Having identified several areas where the need for action is particularly evident, this section looks at the green transition pillar forming part of each country's national recovery and resilience plan (RRP)¹⁸.

¹⁷ Note that, also in this paragraph, we use emissions data without the impact of land use, land use change and forestry (LULUCF).

¹⁸ Data used in this chapter were obtained from the European Commission (2022g, 2022h), including in particular the European Commission's Recovery and Resilience Scoreboard (2022f). Hungary's RRP data were not available at the time of writing. Information on measures included in the RRP's were taken from European Commission fact-sheets and European Commission assessments (2021a–p and 2022b–e).

2.1 Overall size and structure of national recovery and resilience plans

As pointed out in the introduction, this section offers a bird's-eye view on the RRP's size and structure, instrumental to the aim of this study to complement the country-specific and sectoral stocktaking of GHG emissions and related intensities with a broad comparison of the structure of emissions and the allocation of green spending under the RRP. For more detailed as well as more comprehensive assessments of RRP, please refer to the official assessments by the European Commission and the critical assessments of draft RRP provided by the Green Recovery Tracker (see Green Recovery Tracker, 2021a–i), a project launched by the Wuppertal Institute and E3G. Reviewing the work done in this framework, Heilmann and Lehne (2021) concluded that most early drafts fell short of the 37% climate spending target. Subsequent drafts did improve in their view but were still not seen as transformational. Further criticism touched upon the lack of decisive reforms (such as tackling national regulatory hurdles that are holding back renewable energy development) and weak points with respect to the drafting processes (which in part involved the compilation of pre-existing projects rather than strategic thinking and suffered from a lack of public involvement). In addition, the Climate Action Network (CAN) Europe and CEE Bankwatch Network (2022) published a report that provides detailed critical assessments of individual climate-related measures envisaged in the RRP of seven CESEE EU member states. Moreover, the report also identifies investments and reforms that were not included but should have been included in the view of the authors.

Turning to the overview on RRP, it is worth noting that CESEE EU member states are among those EU countries that are entitled to receive comparatively large amounts of RRF grants when compared to their GDP. Maximum allocation of multiannual RRF grants (for payout in the years 2021 to 2026) as a percentage of annual GDP in the year 2021 amounts to between 8% and 10% in Bulgaria and Croatia and stands between about 3% (Estonia, Slovenia, Czechia) and 6% (Slovakia) in the remaining CESEE EU countries. In the CESEE EU aggregate, this ratio amounts to 4.5%. Among the EU-16 member states, Greece (9.5%) matches the level of Croatia and Bulgaria, followed by Portugal (7.5%); Spain (6%), Cyprus and Italy (each 4%) come next, lying in the range of the other CESEE EU countries. In contrast, Luxembourg, Ireland and Denmark receive the lowest amounts of multiannual RRF grants, reaching not more than 0.5% of GDP 2021. On top of grants, EU member states are entitled to apply for loans amounting to 6.8% of GNI at terms and conditions that are favorable for the majority of member states, including all CESEE EU member states. Remarkably, among CESEE countries, only Romania requested the full amount of available loans, as did Italy and Greece. While the RRP of Poland and Slovenia involved requests for portions of the available loans, other CESEE countries opted for relying on grants only. Hence, the full potential of the RRF is not going to be used. In several CESEE countries, this might signal authorities' awareness of some limits of absorption capacity and/or their aim to contain the rise in public indebtedness already pushed up by the pandemic-related crisis.

The RRF regulation (European Union, 2021) obliged each member state to dedicate at least 37% of total RRF expenditures (i.e. grants) contained in its RRP to measures contributing to climate objectives (and at least 20% to digital

objectives)¹⁹. Within CESEE countries, Bulgaria surpassed this benchmark with the widest margin (59%). Most CESEE countries (Slovakia, Poland, Slovenia, Czechia, Estonia, Romania and Croatia) show a climate spending share between 40% and 45%. Thus, this share tends to be somewhat higher in CESEE EU countries than in those EU-16 countries that are also set to receive similarly high amounts of RRF grants relative to GDP. In Greece, Italy, Portugal, Spain and Cyprus the share of expenditures devoted to climate objectives ranges from 37% to 41%. For all EU member states taken together (referred to as the “EU-27” but effectively EU-26, as Hungary’s RRP data were not available at the time of writing), estimated climate expenditures amount to about 40% of their total RRF grants.

2.2 The structure of expenditure toward climate objectives under the RRs

The *breakdown of expenditure toward climate objectives into policy areas* in chart 4 shows that, in most CESEE countries, the three most important areas are renewable energy and networks, energy efficiency and sustainable mobility. While in the EU-27 aggregate the combined share of these three areas makes up about two-thirds of expenditures toward climate objectives, in the CESEE EU countries the combined share ranges from about 50% in Slovenia to 95% in Bulgaria.

The relative importance of the three individual areas also varies widely across CESEE countries.

Bulgaria stands out with a particularly high share of expenditure for *renewable energy and networks*; Lithuania, Poland, Estonia, Croatia and Czechia also are above the EU average in this respect. Bulgaria inter alia defined the aim of tripling the power generation from renewables, and, at the same time, committed to set out a framework for the coal phaseout (phaseout as soon as possible and at the latest by 2038). In this context, Bulgaria’s RRP also includes binding targets for the reduction of the CO₂ emissions associated with electricity generation by 40% below 2019 levels to be achieved by 2025²⁰ as well as a regulatory cap on carbon dioxide emissions from coal and lignite power plants applicable as of January 1, 2026. Various types of investments in renewables and grid and storage capacity are part of most CESEE countries’ RRs. The Polish RRP envisages funding for off-shore wind energy plants and terminal infrastructure, as well as regulatory changes facilitating the construction of onshore wind energy plants. In parallel, the Polish RRP is based on the National Energy and Climate Plan 2021–2030 and a strategy entitled Energy Policy of Poland until 2040 (Polish Ministry of Climate and Environment, 2021), which provides for a reduction of the share of coal in electricity generation to 56% by 2030 (from 73.6% in 2019) and 11% to 28% in 2040 as well as the abandonment of direct use of coal in households in cities by 2030 and in rural areas by 2040. This strategy is currently under review, following the Russian invasion of Ukraine. On top of this, in late 2020, the Polish government and trade unions agreed a plan to phase out coal mines by 2049. Czechia had a coal phaseout

¹⁹ The RRs had to specify and justify to what extent each measure contributes fully (100%), partly (40%) or has no impact (0%) on climate and/or digital objectives. The contributions to climate and digital objectives have been calculated using Annexes VI and VII of the RRF Regulation, respectively. Combining the coefficients with the cost estimates of each measure makes it possible to calculate to which degree the plans contribute to climate and digital targets.

²⁰ However, in early 2023, Bulgaria’s parliament agreed that the interim government should start talks with the European Commission and backtrack from this commitment.

target of 2038 at the time of drafting the RRP. However, in early 2022, the Czech government announced plans to prepare for the phaseout of coal already by 2033. In Romania, the RRP includes reforms to phase out coal-based power production by 2032.

In some CESEE countries, the *use of biomass as a renewable energy source* for heating and electricity generation is a critical issue due to sustainability concerns (see Heilmann et al., 2020). In the context of the EU recovery and resilience plans, an important criterion is the “Do no significant harm” (DNSH) principle²¹. It is worth mentioning that in the framework of Czechia’s RRP investment in biomass (with the aim of reducing coal combustion for heat production and electricity generation) is subject to specific conditions and the sustainability criteria for renewable energy sources set out in the EU’s Renewable Energy Directive (RED II)²². Only biomass waste and residues that can be extracted in a sustainable manner shall be used. Moreover, milestones under the RRP include an assessment for the decarbonization of district heating as well as of the trajectories of sustainable use of bioenergy and supply of biomass to be prepared by the Czech authorities (see Council of the European Union, 2021). Within other CESEE countries’ RRP, biomass projects are also linked to certain criteria and conditions and must comply with the RED II. In Romania, reform measures contained in the RRP aim at combating illegal logging and setting out sustainability criteria for forest biomass for energy use.

The share of spending for *energy efficiency* is particularly high in Slovakia, and it is also above EU average in Latvia, Czechia, Bulgaria and Romania. Expenditures in this area reflect, to a considerable extent, renovation initiatives with regard to public and private buildings. (For a more general discussion on EU policies aimed at reducing emissions related to buildings, see Rochet et al., 2021.) Yet, some countries’ RRP also contain measures to promote energy efficiency in industry (e.g. Croatia, Romania, Slovenia, Slovakia and Poland), hence supporting industry decarbonization.

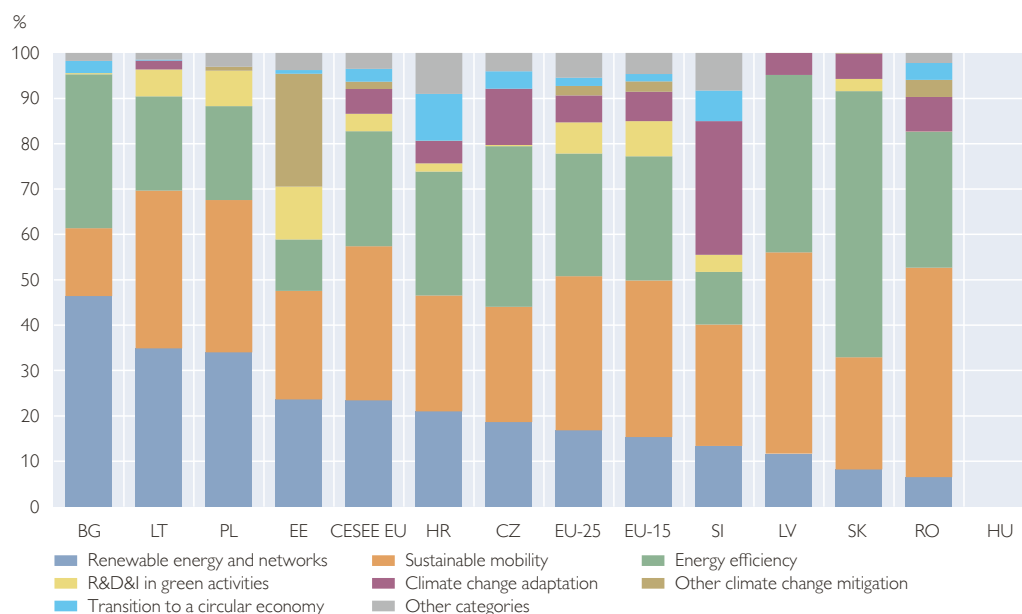
In Romania, Latvia and Lithuania, the share of planned expenditures for *sustainable mobility* is above the EU average share. Key measures include: investments in railway and urban transport infrastructure in Romania; an overhaul of the Riga metropolitan area transport in Latvia; phasing out the most polluting road transport vehicles (private, public and commercial); and increasing the share of renewable energy sources in the transport sector in Lithuania. Hanzl-Weiss (2022) points to the fact that CESEE’s automotive industry lags behind in car electrification, possibly also due to dependency arising from foreign ownership. In a joint EIB-OeNB-wiiw study (Delanote et al., 2022), the authors criticize the apparent lack of attention given to this issue in the RRP of most countries. One might, however, argue that the gap in public transport is even more critical.

Going beyond these main three policy areas, chart 4 shows that some CESEE countries (Estonia, Poland, Lithuania, Slovenia, Slovakia and Croatia) have earmarked RRF funds for *research, development and innovation (R&D&I) in green activities*, with Estonia and Poland lying above the EU average.

²¹ ‘Do no significant harm’ technical guidance (2021/C58/01).

²² In particular, see Article 29 of Directive 2018/2001 on the promotion of the use of energy from renewable sources (Renewable Energy Directive, RED II).

Chart 4

Breakdown of expenditure toward climate objectives into policy areas

Source: European Commission.

Note: Each recovery and resilience plan must dedicate at least 37% of the plan's total allocation to climate objectives. To this end, the plans have to specify and justify to what extent each measure contributes fully (100%), partly (40%) or has no impact (0%) on climate objectives, using Annex VI of the RRF Regulation. Combining the coefficients with the cost estimates of each measure makes it possible to assess to what degree the plan contributes to climate objectives and whether it meets the 37% target. No data available for Hungary and the Netherlands (hence EU-15 instead of EU-16). Countries ordered by size of the share of renewable energy and networks in % of total expenditures.

It is also worth highlighting that Estonia shows a relatively high share of expenditure in the area of *other climate change mitigation*. This reflects measures aimed at speeding up the green transition in the business sector, inter alia through a green fund set up to finance innovative green technologies that contribute to solving environmental problems.

Expenditure for *climate change adaptation* plays a large role in Slovenia and is also above the EU average in Czechia and Romania, with measures addressing flood risks being part of the RRP in these three countries.

Croatia's RRP features a relatively high share of expenditures devoted for the *transition to a circular economy* (e.g. investments to upgrade water and wastewater systems). Compared to the EU average, this policy area also plays a larger role in Slovenia (e.g. upgrading energy-efficient wastewater and drinking-water systems), Czechia (e.g. constructing recycling infrastructure and generating water savings in the industrial sector), Romania (e.g. investments in municipal waste management systems) and Bulgaria (e.g. support for companies in modernizing their technology and in their transition to green and circular business practices).

3 Conclusions

Taking stock of GHG emissions in the European Union in 2019 shows that *emissions per capita were equal on average in CESEE EU and in the EU-16* (i.e. non-CESEE EU), with sizable heterogeneity in both country groups. The *CESEE EU aggregate showed considerably larger shares of total GHG emissions from energy industries* (reflecting inter

alia the demanded volume of energy supply) and *from waste* and *from fugitive emissions from fuel*, implying correspondingly higher per capita emissions in these sectors. While a comparison of per capita emissions is useful as a first point of orientation, one also must consider that per capita income levels are still lower in the CESEE EU country aggregate than in the EU-16 country aggregate. Hence, the *carbon intensity (measuring GHG emissions per unit of GDP)* was substantially higher in CESEE EU than in the EU-16. This reveals the urgent need for further lowering emissions in order to enable further per capita income convergence within ecologically sustainable limits.

The comparatively *higher GDP-based carbon intensity* in all CESEE EU countries resulted mainly from *higher emission intensity* (measuring GHG emissions per unit of energy used), but also from *above-average energy intensity* (measuring energy used per unit of GDP). This outcome indicates that both saving energy and expanding low-emission sources of energy, particularly renewable energy, are even more urgent challenges for the CESEE EU countries than for the EU-16. The *higher GDP-based emission intensity* in CESEE EU resulted mainly from energy industries for generation of electricity and heating/cooling. Moreover, higher GDP-based emission intensity is being driven up by the emission intensity of industry and, particularly in Poland, by the intensity of emissions directly generated within residential buildings due to the widespread use of coal. The comparatively *higher carbon intensity of industry* in CESEE EU resulted mainly from higher energy intensity.

How do the results of our stocktaking exercise relate to the CESEE EU countries' spending preferences within climate-related RRP expenditures? Overall, the ex ante allocation of spending within climate-related expenditures in the framework of CESEE EU RRP described in section 2 appears to be broadly appropriate, in as far as the *three largest spending categories* relate to areas where weaknesses emerged in CESEE. We caution that in no way should this be regarded as a sufficiently detailed assessment of whether the RRP are adequate in general or whether individual measures envisaged in these plans are sufficient in terms of content or timeliness. The focus on *renewable energy and networks* is particularly important in view of the fact that, in CESEE EU, per capita GHG emissions in energy industries (generation of electricity and heating/cooling as well as refineries for oil products and coke ovens) were on average more than 50% higher than in the EU-16 despite the lower per capita GDP level. At the same time, we appreciate that the RRP do not endorse the expansion of any type of renewable energy production but must comply with the “do no significant harm” principle and sustainability criteria. Therefore, regarding the use of biomass, only biomass waste and residues that can be extracted in a sustainable manner shall be used and reforms and milestones that advance such types of biomass shall be implemented in the context of the RRP. The focus on *energy efficiency*, that is the inverse of energy intensity, at first glance does not appear to be much more important in CESEE EU than in the EU-16 if energy intensity based on GDP at PPP is taken as the yardstick, while in fact it certainly is an urgent challenge for the EU-16 and hence for CESEE EU, too. Moreover, if we look at energy intensity based on GDP at exchange rates or at energy intensity in industry, the need for catching-up in CESEE EU is still quite substantial indeed. More specifically, energy-saving measures, particularly in residential and commercial or institutional buildings, would be instrumental in lowering per capita emissions generated directly within these buildings and lowering per capita emis-

sions in energy industries, which are far higher in CESEE EU than in the EU-16. The focus on *sustainable mobility* at first sight appears to be even less important in CESEE EU than in the EU-16 when looking at per capita GHG emissions in transport. However, as argued above, both the far more dynamic rise of these emissions in CESEE EU and the expectation of gradual structural alignment of CESEE's participation in international aviation call for sustainability-oriented action in the transport sector early on.

Looking into country-specific spending preferences generally confirms the broad picture for the three largest climate-related spending categories in RRP, even though some questions arise. In the area of *renewable energy and networks*, the above-average shares of expenditure in Bulgaria, Poland, Estonia and Czechia address these countries' far above-average per capita GHG emissions in energy industry. In this area, coal phaseout is an important issue in the small group of countries that still use coal to a non-negligible extent in energy industries for generation of electricity and heating/cooling and directly in the residential sector (households). It appears that this issue is generally addressed in the RRP or in related plans and strategies, but to different extents and with quite different time frames concerning the coal phaseout. While the RRP of Bulgaria and Romania refer explicitly to their plans to phase out the use of coal, Czechia and Poland published phaseout targets only in related documents. Romania appears to pursue the most ambitious target, while Poland seems to have positioned itself at the other end of the spectrum with reduction targets for coal-based power production to be achieved by 2030 and 2040 but no clear target year for the ultimate phaseout. It would be highly welcome if Poland set an ambitious target date for the ultimate phaseout of coal-based power production and adopted a more ambitious approach with respect to the phaseout of coal use by households in rural areas (combined with a strong effort to promote heat pumps).

In the area of *energy efficiency*, the above-average shares of expenditure in Latvia and Bulgaria address their considerably above-average energy intensity based on GDP at PPP, and in Slovakia and Czechia, spending reflects intensities that exceed the average as well, albeit by a smaller margin. In the case of Estonia, which also shows high GDP-based energy intensity, only a rather modest share of total RRP spending explicitly addresses energy efficiency (especially in dwellings); but the particularly large and somewhat opaque item of "green transition in business" may *inter alia* advance economy-wide energy efficiency. For Latvia and Bulgaria, it would be important that their energy efficiency plans also comprise significant measures for industry, given the high intensity levels in their industrial sectors. However, the Bulgarian RRP measures for industry contain an only moderate share that contributes to climate objectives and the Latvian RRP hardly mentions climate issues related to industry. In contrast, it is particularly welcome that Slovakia's energy efficiency plans also cover the industrial sector, given the particularly high energy intensity of that sector. In this context note that also the RRP of Croatia, Romania and Poland address their above-average energy intensities in industry. In view of the above-mentioned fact that energy-saving measures also help lower per capita emissions in energy industries, a larger general effort to promote energy-saving measures would be very welcome in Poland, given its far above-average per capita emissions in energy industries.

In the area of *sustainable mobility*, the above-average shares of expenditure in Lithuania, Latvia and Romania address the fact that the per capita GHG emissions in transport were considerably above the EU-27 average in Lithuania and Latvia and that the growth rates of these emissions were particularly high in these two countries and in Romania. In Slovenia, characterized by high per capita GHG emissions in transport, and in Poland, where transport emissions grew particularly rapidly, expenditures for sustainable mobility also play an important role, accounting for the largest share in both countries' total RRP spending, though they do not exceed the corresponding spending share for the EU-27.

Apart from these three major climate-related spending categories, note that the category of *transition to a circular economy*, which particularly includes waste management and wastewater treatment, accounts for an above-average share of spending within the RRP's climate-related expenditures in Croatia, Czechia and Bulgaria (among others), hence in those countries where (together with Hungary) per capita GHG emissions from waste are above the CESEE EU average and between 50% and 110% higher than in the EU-16.

To sum up, the national recovery and resilience plans of CESEE EU member states form part of a sizable EU-coordinated policy intervention effort. Overall, the ex ante allocation of spending within climate-related expenditures under these plans appears to be broadly appropriate in general, in as far as the three largest spending categories relate to areas where CESEE countries exhibit particular weaknesses. Future research may use the updated dataset on climate-related intensities for deriving an output-/performance-based ex post assessment of the actual achievements of this policy effort. But there is ample room for further research even today. One strand could be to add further elements to the emission-related analysis. For instance, a country- and sector-specific dynamic perspective could enrich the analysis and add to policy insights. Also, a look at the country-specific efficiency in electricity and heat supply (e.g. relating energy input to energy output) would be interesting. Another strand would be to scrutinize in depth the wide range of measures envisaged under the RRP's to derive detailed policy assessments and recommendations on top of the already existing literature.

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