

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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Call for applications: Klaus Liebscher Economic Research Scholarship

Please e-mail applications to scholarship@oenb.at by the end of October 2022. Applicants will be notified of the jury's decision by end-November 2022.

The Oesterreichische Nationalbank (OeNB) invites applications for the “Klaus Liebscher Economic Research Scholarship.” This scholarship program gives outstanding researchers the opportunity to contribute their expertise to the research activities of the OeNB's Economic Analysis and Research Department. This contribution will take the form of remunerated consultancy services.

The scholarship program targets Austrian and international experts with a proven research record in economics and finance, and postdoctoral research experience. Applicants need to be in active employment and should be interested in broadening their research experience and expanding their personal research networks. Given the OeNB's strategic research focus on Central, Eastern and Southeastern Europe, the analysis of economic developments in this region will be a key field of research in this context.

The OeNB offers a stimulating and professional research environment in close proximity to the policymaking process. The selected scholarship recipients will be expected to collaborate with the OeNB's research staff on a prespecified topic and are invited to participate actively in the department's internal seminars and other research activities. Their research output may be published in one of the department's publication outlets or as an OeNB Working Paper. As a rule, the consultancy services under the scholarship will be provided over a period of two to three months. As far as possible, an adequate accommodation for the stay in Vienna will be provided.¹

Applicants must provide the following documents and information:

- a letter of motivation, including an indication of the time period envisaged for the consultancy
- a detailed consultancy proposal
- a description of current research topics and activities
- an academic curriculum vitae
- an up-to-date list of publications (or an extract therefrom)
- the names of two references that the OeNB may contact to obtain further information about the applicant
- evidence of basic income during the term of the scholarship (employment contract with the applicant's home institution)
- written confirmation by the home institution that the provision of consultancy services by the applicant is not in violation of the applicant's employment contract with the home institution

¹ We are also exploring alternative formats to continue research cooperation under the scholarship program for as long as we cannot resume visits due to the pandemic situation.

Recent economic developments and outlook

Developments in selected CESEE countries

War in Ukraine disrupts recovery from the pandemic and further heats up prices^{1,2,3}

1 Regional overview

The Russian invasion of Ukraine on February 24, 2022, marked a watershed moment for European post-Cold War history. The economic consequences of the unfolding war for Central, Eastern and Southeastern Europe (CESEE) have been manifold and will evolve further. This text is supposed to give a short overview on macroeconomic conditions in the run-up to the war and shed light on some of the economic ramifications of the conflict for economic developments in CESEE.

Economic activity was recovering from the pandemic's disruptions when the war in Ukraine hit

In the run-up to the events of February 2022, macroeconomic dynamics in CESEE had been generally solid as the region continued to recover from the pandemic-induced disruptions of 2020. The revival was initially driven by dynamic exports and, as time progressed, by capital formation and later by private consumption as well. As a result, annual real GDP growth in 2021 averaged 6.8%, a level last seen 10 years ago (see table 1). Toward the end of the year, economic developments became more heterogenous, however. While short-term growth dynamics in Slovenia and Hungary turned out stronger than expected and the

Table 1

Real GDP growth

	2019	2020	2021	Q3 20	Q4 20	Q1 21	Q2 21	Q3 21	Q4 21
Period-on-period change in %									
Slovakia	2.6	-4.4	3.0	9.1	0.4	-1.4	1.9	0.4	0.3
Slovenia	3.3	-4.2	8.1	11.8	-0.2	1.5	2.0	1.3	5.4
Bulgaria	4.0	-4.4	4.2	3.1	1.4	1.8	0.9	0.8	1.0
Croatia	3.5	-8.1	10.2	3.3	4.3	7.4	0.9	1.4	-0.1
Czechia	3.0	-5.8	3.3	6.7	0.8	-0.3	1.4	1.7	0.8
Hungary	4.6	-4.5	7.1	11.5	1.5	1.7	2.2	0.9	2.0
Poland	4.7	-2.5	5.7	7.6	-0.3	1.6	1.8	2.3	1.7
Romania	4.2	-3.8	6.0	4.8	3.9	1.9	1.6	0.4	-0.1
Turkey	0.9	1.8	11.0	16.4	1.2	2.2	1.7	2.8	1.5
Russia	2.2	-2.7	4.7	0.9	0.5	0.3	0.2	0.1	0.4
CESEE average ¹	2.5	-2.3	6.8	6.6	0.9	1.1	1.0	1.2	0.9
Euro area	1.6	-6.4	5.3	12.6	-0.3	-0.1	2.2	2.3	0.3

Source: Eurostat, national statistical offices.

¹ Average weighted with GDP at PPP.

¹ Compiled by Josef Schreiner with input from Katharina Allinger, Stephan Barisitz, Antje Hildebrandt, Mathias Lahnsteiner, Anna Raggl, Thomas Reininger, Tomáš Slačik and Zoltan Walko.

² Cut-off date: April 13, 2021. This report focuses primarily on data releases and developments from October 2021 up to the cut-off date and covers Slovakia, Slovenia, Bulgaria, Croatia, Czechia, Hungary, Poland, Romania, Turkey and Russia. The countries are ranked according to their level of EU integration (euro area countries, EU member states, EU candidates and potential candidates and non-EU countries). For statistical information on selected economic indicators for CESEE countries not covered in the main text (Albania, Bosnia and Herzegovina, Kosovo, Montenegro, North Macedonia, Serbia and Ukraine), see the statistical annex in this issue.

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

Polish and Turkish economy continued to expand swiftly, economic activity stagnated in Russia and Slovakia and declined slightly in Croatia and Romania.

Growth was firmly based on domestic demand in the second half of 2021

Despite a renewed wave of COVID-19 infections and a subsequent tightening of measures to combat the pandemic in several countries, private consumption was the main pillar of growth in the second half of 2021. Consumer spending was buoyed by pent-up demand and accumulated savings after the lockdowns and a remarkable improvement in the CESEE labor markets. The average unemployment rate in CESEE EU member states declined to 3.9% in February 2022, which was only marginally above the pre-pandemic level. Unemployment rates in Turkey and Russia were even lower than prior to the pandemic. Tight labor supply allowed wage growth to outpace price growth and implied positive real-wage advances in most countries. Faced with rising prices, some consumers possibly also frontloaded planned purchases.

Capital formation was more heterogeneous as financing conditions tightened, capital goods and construction inputs became more expensive and uncertainties around the outlook for the international economy increased. At the same time, stockbuilding contributed notably to growth in several countries as the completion and sale of semifinished industrial goods was still delayed by lingering supply chain issues.

Yet, the improving availability of key inputs had a positive impact on industrial sentiment and industrial activity in the final quarter of 2021 and in the first two months of 2022. This helped to sustain a robust export momentum. Dynamic domestic demand, however, strongly lifted imports so that the external sector on balance hardly contributed to growth.

Highest inflation in more than 15 years

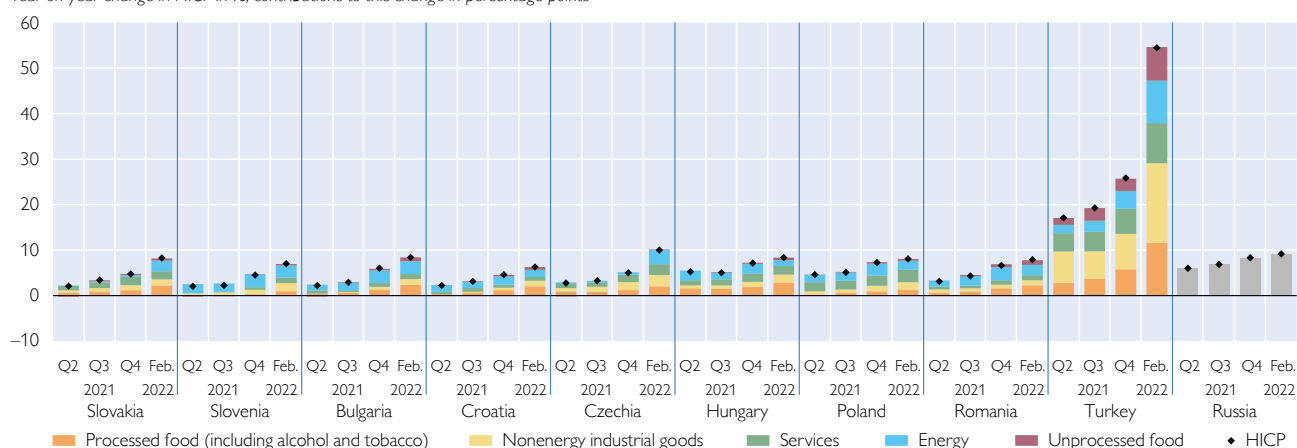
Rising commodity prices, the economic recovery and afterpains from the pandemic lifted inflation in the CESEE countries to its highest level in more than 15 years (see chart 1). Initially mostly propelled by soaring energy prices, price pressures became more broadly based toward the end of the review period: The latest price surge in January and February of 2022 was strongly driven by core inflation (i.e. services, industrial goods and processed food). This development reflected, in part, skyrocketing producer prices fueled by raw material shortages, bottlenecks in the production of certain intermediate goods (e.g. semiconductors), tight international transport capacity (especially in shipping) and higher demand in certain sectors. Many companies probably also used the turn of the year to reset their prices and pass on some of their increased input costs to consumers.

By contrast, the momentum in energy price growth in early 2022 was contained by widespread government intervention to limit price increases for household energy (and in some cases also for food items). These measures ranged from compensatory payments to consumers and companies, to reductions in VAT rates and/or network fees, to direct interventions in the price structure (price cuts or price caps). As these interventions continue, they place an increasing burden on national budgets and the balance sheets of energy suppliers, and they could lead to a renewed price surge once they expire.

Chart 1

HICP inflation and its main drivers

Year-on-year change in HICP in %; contributions to this change in percentage points



Source: Eurostat.

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

Going forward, another important determinant of price dynamics will be the extent to which rising inflation rates and expectations could lead to higher wage demands and thus trigger a price-wage spiral. In Turkey, for example, high inflation has already triggered a rapid increase in government payments for pensions and wages. In the other CESEE countries, several indicators also point to faster wage growth from mid-2021, and nominal wages advanced by some 8% on average in the final quarter of 2021. In general, however, the wage-setting process in CESEE is organized in a much more decentralized manner than e.g. in Austria, thereby reducing the bargaining power of employees. In the CESEE EU member states as a whole, about half of the working population are not subject to any collective bargaining agreements, and for another third, collective agreements are negotiated only at the company level (although there are sometimes marked differences between the individual countries). Moreover, the conflict in Ukraine has probably dented wage expectations in Central Europe, with the crisis adding to supply chain bottlenecks and disruptions to economic activity.

Most CESEE central banks have initiated a remarkable tightening cycle

In any case, CESEE central banks have already responded forcefully to the rise in inflation. Before the outbreak of the war in Ukraine, the Polish central bank had raised its key interest rate in five steps from October, bringing it up from 0.1% to 2.75%. The Czech central bank adjusted its key interest rate in six steps from June 2021, raising it from 0.25% to 4.5%. The Hungarian central bank increased its key interest rate in nine steps from June 2021, i.e. from 0.6% to 3.4%. The Romanian central bank has taken four interest rate steps since October 2021, raising its key rate from 1.25% to 2.5%. The Russian central bank has increased its policy rate in three steps since October 2021, from 6.75% to 9.5% (see chart 2). In addition to raising key interest rates, some monetary policymakers in CESEE have also been tightening their stance by adjusting other interest rates,

by active liquidity management designed to raise money market rates or by withdrawing unconventional monetary policy measures. In several countries, the tightening was reinforced by macroprudential measures (including capital and borrower-based measures) also with a view to preventing real estate markets from overheating. Only the Turkish central bank slashed rates from 19% to 14% between September and December 2021, arguing that inflation was being driven by transitory factors and – in part – by factors beyond the control of monetary policy. The Turkish president Erdoğan strongly supported rate cuts.

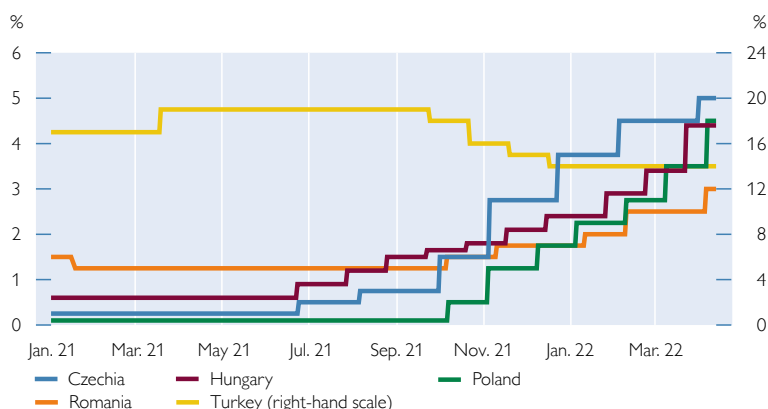
CESEE currencies broadly stable despite growing interest rate differentials

The cycle of monetary easing at a time of widespread (anticipated) global tightening pushed the Turkish lira down and the currency traded at a record level of TRY 20 per EUR in December 2021. The widening

interest rate differential against the euro area (and the prospect of further interest rate hikes) had less of an influence on exchange rates in the CESEE EU member states. The Polish złoty, the Hungarian forint and the Romanian leu were relatively stable or even depreciated slightly against the euro in the second half of 2021 (see chart 3). Only since the turn of the year, a cautious upward trend had been observed. Currencies were supported by an increased credibility of the interest rate turnaround and the central bank communication emphasizing the importance of the exchange rate for achieving the inflation target. At the same time, markets assumed a less loose monetary policy in the euro area and the USA. This was reflected, among other things, in higher capital outflows from CESEE bond markets from mid-September 2021. Among the CESEE EU member states, Romania reported the strongest outflows (partly also driven by existing macrofinancial imbalances in the country), followed by Hungary and Poland. Net flows to Czechia fluctuated relatively little in comparison, and the Czech koruna has also been the only currency in the region to fully recover the losses registered in the first COVID-19 wave in spring 2020.

Chart 2

Policy rates in selected CESEE countries

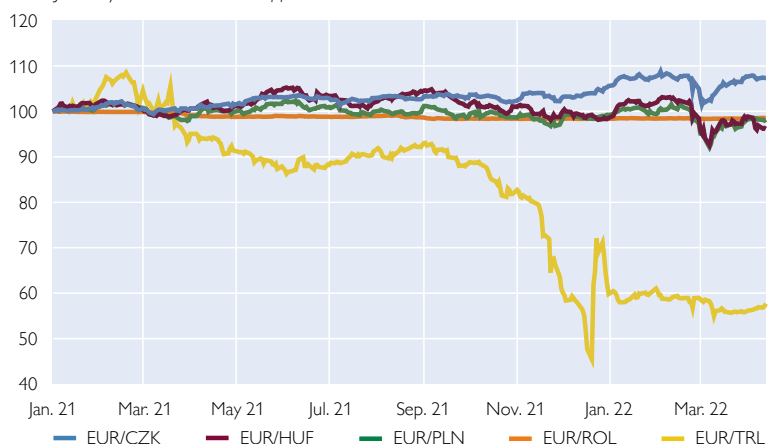


Source: Macrobond.

Chart 3

Exchange rates of selected CESEE currencies vs euro

Index: January 2021 = 100, rise = appreciation



Source: Macrobond.

The invasion of Ukraine: tectonic shift for CESEE

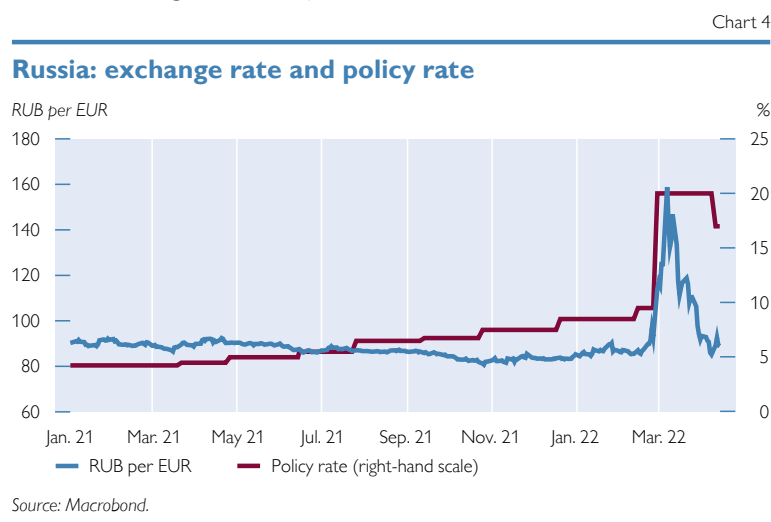
Russia's war of aggression against Ukraine dealt a blow to the international security architecture that had been established after the Cold War. This tectonic shift will drastically alter the political, military and economic situation in Europe in the years to come and has already had profound impacts on the CESEE economies.

Wide-ranging economic sanctions against Russia

In economic terms, Russia was undoubtedly affected the most. Soon after the start of the Russian invasion of Ukraine, a large number of countries, including the EU member states and the USA, imposed sanctions on Russia with the aim of exerting economic pressure to counter the military attack. The sanctions were wide-ranging and targeted Russian individuals, banks (including the central bank) and businesses, monetary exchanges, bank transfers as well as exports from and imports to Russia. From an economic viewpoint, the most important sanctions include (1) the cutting off of major Russian banks from SWIFT (although there is still limited accessibility to ensure the continued ability to pay for gas shipments), (2) asset freezes on some 60% of the Russian central bank's international reserves, (3) restrictions on the import of Russian fossil fuels and/or a commitment to reduce the dependency on these imports in Western countries, (4) export controls focused on restricting Russian access to a range of items, including high-tech components. In addition, a self-imposed disentangling of commercial ties with Russia took place by a multitude of international companies to avoid reputational and/or (sanction-related) legal risks.

Market turbulences on the heels of the invasion did not persist

The sanctions hit the Russian economy very swiftly: The Russian ruble depreciated by some 40% against the US dollar within the first week after the invasion (see chart 4) and Russian equity prices declined by one-third on February 24 alone (shortly before equity trading was suspended altogether). To stabilize markets, the central bank hiked its policy rate from 9.5% to 20%, and Russian authorities introduced several measures targeted at the foreign exchange market (including an obligation imposed on Russian exporters to sell 80% of their foreign currency revenues, the introduction of a commission fee on foreign currency purchases and restrictions on the transfer of foreign currency to other countries). Since then, chaos on Russian markets has largely subsided. The official exchange rate of the ruble recovered most of the losses and the currency traded close to its pre-war level by mid-April 2022 on the Moscow Exchange. However, off the Moscow Exchange it traded at a lower value according to financial analysts' reports. Russian equities recovered somewhat from their trough after trading was resumed in late March and Russians returned much of the cash to their bank accounts.



Following the stabilization, the Russian central bank again reduced the key interest rate to 17% in early April 2022, arguing that the balance of risks related to accelerated consumer price growth, a decline in economic activity and financial stability has shifted. It also highlighted that the latest weekly inflation data showed a deceleration of price growth and that capital control measures were containing financial stability risks.

Real economy seems to have handled the shock reasonably well – at least for the time being

First available evidence on real economic impacts of the sanctioning regime paints a mixed picture. General economic activity seems to have held up well in March. According to the OECD's weekly GDP tracker, Russia's output in the last week of March was broadly comparable to readings for the second half of 2021. According to the Kiel Trade Indicator of the Institute for the World Economy, Russian exports declined by 5% in March compared to the previous months (imports: -9.7%) and container freight traffic has already slumped by half. Many foreign firms have pulled out, cutting the supply of goods, while a weaker currency and sanctions have made imports more expensive. Prices have therefore gone up quite a bit.

The full impact of sanctions will only unfold in the weeks to come

Sanctions, however, might become more biting over time. First, Russian consumers might reduce spending as inflation cuts deeper into purchasing power and uncertainty increases as the war drags on. This is what happened when Russia invaded the Crimea in 2014. A spending tracker produced by Sberbank already suggests quite a sharp deceleration of spending in recent weeks. Spending growth declined from around 25% year on year in the first week of March (reflecting stockpiling of goods such as home appliances, electronics, furniture and computers before inflation gets out of hand or certain goods become altogether unavailable) to around 6% in the first week of April 2022. Second, a lack of imports from the West will inevitably weigh on Russia's industry once existing stocks of Western inputs have been depleted or spare parts are no longer available. Third, Russia is inching closer to a default as foreign banks declined to process about USD 650 million of dollar payments on its bonds in early April. Russia offered to pay in ruble instead, but neither of the two bonds in question allowed such a settlement. S&P has already declared a "selective default" on the two notes, even though the 30-day grace period has not expired yet.

Russian oil sales set to decline noticeably?

The fourth and most important factor relates to Russia's exports of fossil fuel. Despite the imposed sanctions, Russia was still selling substantial quantities of oil and gas to foreign buyers during the past weeks. This provided a valuable stream of foreign currency that upheld the ruble's external value and bolstered the current account.

Yet, the sale of energy commodities might decline noticeably going forward. Most of the oil that has left Russia in recent weeks was bought and paid for before the war started. Worries about sanctions and bad publicity as well as logistical difficulties (as cautious banks cut credit, ship owners struggled to obtain insurance and freight costs soared) have prompted many Western buyers to pause purchases.

Big players in the energy sector are boycotting Russian oil altogether (e.g. Shell and BP) and globally operating shippers are winding down operations in Russia (e.g. Maersk and MSC).

According to the commodity data provider Kpler, seaborne exports of crude oil from Russia averaged 4.6 million barrels per day in March, in line with export volumes in December, January and February. In the first week of April, volumes averaged 1.1 million barrels a day. This is well in line with estimates by the International Energy Agency that suggest that the supply of Russian oil will exceed demand by about 3 million barrels per day in April (other estimates are even higher, i.e. demand of 4.8 million barrels per day versus a total Russian oil supply of around 10 million barrels per day).

As these barrels fail to sell, Russia's Urals crude is trading at an increasing discount: At the cut-off date, Urals crude sold for some USD 35 below Brent crude (see chart 5). The large discount is also a clear indication that non-Western countries are not yet prepared to up their purchases of Russian oil and that the decisive Western sanctioning is constraining the willingness and/or ability to actively profit from price dislocations. This applies to large Chinese energy companies, in particular. The reluctance on the part of China, however, might in part also be related to transport and technical issues: Whereas tanker shipment from Russia to Europe usually takes three or four days, to Asia it takes 40 days. Furthermore, most refineries are optimized to operate with certain types of crude and switching to a Russian type from a different type takes time and money.

CESEE economies will suffer setbacks too

As far as the other CESEE countries are concerned, the outlook prior to the war included a somewhat weaker though still solid GDP expansion in 2022, as economic constraints from the COVID-19 pandemic (including on value chains) were expected to ease and the beginning disbursement of EU funding (with resources from overlapping financial frameworks and the NGEU reconstruction fund) was expected to support investment and construction activity. With the war in Ukraine, the situation has clearly deteriorated. The main transmission channels of this shock relate to higher energy and commodity prices, trade spillovers from a contracting Russian economy and an impaired availability of selected products and general confidence effects resulting from this toxic mixture.

Rising commodity prices are set to heat up inflation even further

Persistently high inflation and the imminent further push to energy, commodity and food prices will lead to losses in purchasing power, and the accompanying tightening of monetary policy will translate into increasingly tighter financing conditions. As mentioned above, inflation in the CESEE

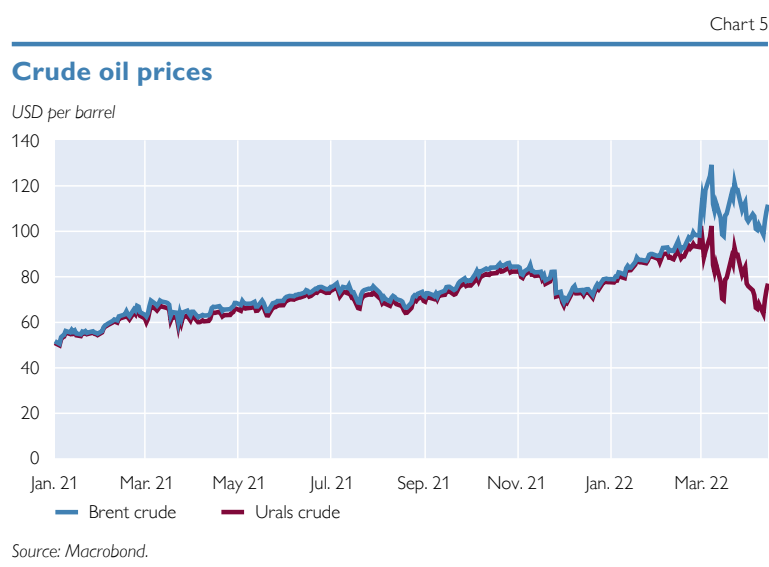
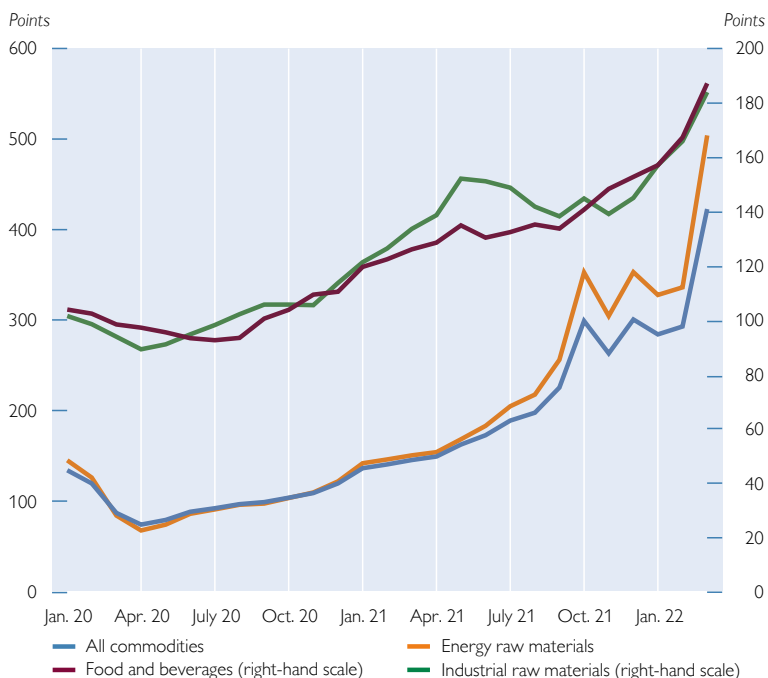


Chart 6

HWI commodity price index



Source: Hamburgisches WeltWirtschaftsinstitut (I-HWWI).

region already reached historically high levels in February, with price growth averaging more than 8% in the CESEE EU member states and as much as 54.4% in Turkey. In March, the HWI commodity price index advanced by 44.4% month on month, with crude oil prices up by 23.4%, coal prices up by 58% and gas prices up by 78% (see chart 6). The FAO Food Price Index went up by 12.6% compared to its February reading, reflecting new all-time highs in the prices for vegetable oils, cereals and meat, while those for sugar and dairy products also rose significantly.

The pass-through of spiraling world market prices on CESEE consumer price inflation will be enhanced, on the one hand, by the relatively large weight of energy and especially food items in CESEE consumption baskets and, on the other hand, by recent currency movements. The moderate upward trend of Central European currencies

came to an end and spillovers from the war in Ukraine cost CESEE currencies quite a bit of their external value against the euro (and, even more so, against the US dollar) in the first days after the invasion. By mid-April, regional currencies had recovered some of their initial losses but generally failed to return to their pre-war levels. Geopolitical risk premiums could continue to weigh on currencies in the weeks to come.

Central banks step up their hiking cycles

Against this backdrop, CESEE central banks have sped up their hiking cycles: Since February 24, policy rates have been raised by 100 basis points to 4.4% in Hungary, by 175 basis points to 4.5% in Poland, by 50 basis points to 5% in Czechia and by 50 basis points to 3% in Romania. The Romanian central bank resumed its government bond purchases in early March to sustain liquidity and to reduce market tension. The Croatian national bank announced two foreign currency market interventions since the start of the war to stabilize the exchange rate of the kuna vis-à-vis the euro. Both the Czech and Polish national banks also reported market interventions in early March and communicated that they stand ready to intervene if they deem exchange rates to be fluctuating excessively. On March 28, the ECB announced that it had agreed to a precautionary swap line of over EUR 10 billion with the Polish national bank, which expires on January 15, 2023. Moreover, it extended the bilateral, temporary repo line (up to EUR 4 billion) with the central bank of Hungary, which was due to expire at the end of March 2022.

War is a major deglobalization event

Economically, the Russian invasion of Ukraine constitutes a major deglobalization event that poses a serious threat to complex value chains due to Russia's important role as an upstream supplier of energy products. This alone impacts on the outlook for the tightly integrated CESEE economies. According to the Kiel Trade Indicator by the Institute for the World Economy, world trade declined by 2.8% in March, month on month. The WTO revised its projection for world trade growth in 2022 to 3% from previously 4.7%.

The trade-related fallout from the expected recession in Russia (and the associated reduction of import demand) alone, however, appears to be limited. The Vienna Institute for International Economic Studies (wiiw), for example, estimated that even in a scenario where Russian demand falls by 10%, imports by 30% and exports by 13%, the negative impact on GDP growth in the other CESEE countries via the trade channel would be -0.3% at most. This scenario, however, does not take into account potential adverse effects on growth and demand from rising costs of energy and raw materials, value chain disruptions or from disruptions in the supply of critical inputs⁴. Especially a stop of energy deliveries from Russia to the CESEE economies would impact negatively on economic activity in the region.

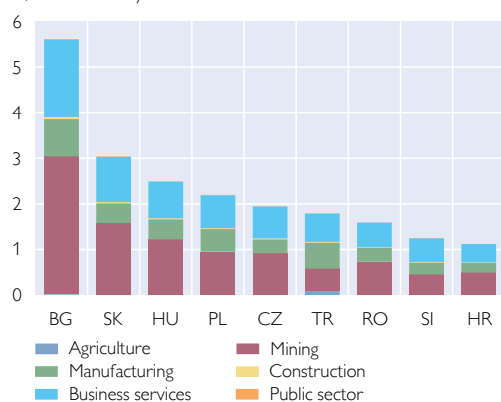
Dependence on Russian inputs above EU average in CESEE

On the import side, the CESEE countries – in a European comparison – show an above-average dependence on Russian inputs for their production. Data from the OECD's Trade in Value-Added database (referring to the year 2018) show that Russia's share in value-added in final demand ranged between 5.7% in Bulgaria and 1.2% in Croatia (EU-27: 1%). Russia's contribution to final demand in CESEE was strongly related to the Russian energy sector and mostly originated from Russian mining and business services (see chart 7). These two categories include, most

Chart 7

Russia's share in value-added in final demand, 2018

%, broken down by individual source industries in Russia

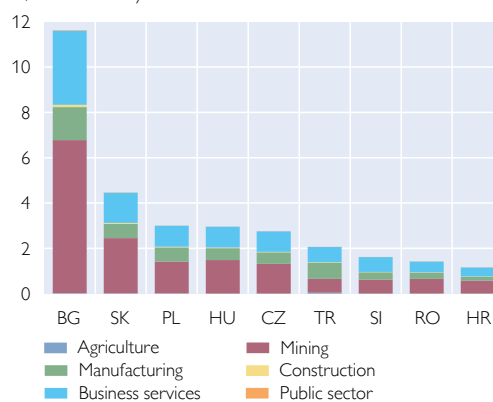


Source: OECD TiVA database, OeNB.

Chart 8

Russia's share in value-added in gross exports, 2018

%, broken down by individual source industries in Russia



Source: OECD TiVA database, OeNB.

⁴ For the OeNB's most recent forecast, please consult *Outlook for selected CESEE countries and Russia* in this issue of *Focus on European Economic Integration*.

prominently, energy-producing products, wholesale and retail trade of fuels, transport via pipelines and warehousing/support activities for transportation. Among the other categories, only manufacturing – and within manufacturing especially coke and refined petroleum products – contributed a notable share.

Russia's share in value-added in gross exports is even higher and ranged from 11.9% for Bulgarian exports to 1.2% for Croatian exports (EU-27: 1.4%). Again, Russia's contribution to gross exports mostly came from the Russian mining industry (especially from energy-producing goods). The respective contributions of business services and manufacturing were somewhat less important (see chart 8).

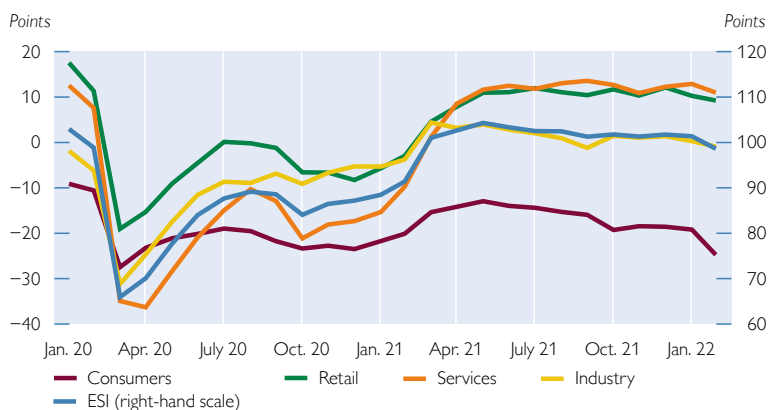
Russia supplies several critical inputs

While those figures – especially aside from items directly related to the Russian energy sector – do not look particularly impressive, it needs to be borne in mind that the significance of an input for an economy is not strictly measured by its contribution to gross value-added. A lack of so-called “risky” products may cause interruptions in production lines, even if missing parts are minor in terms of their value-added. A prominent case in point are semiconductors – their shortage shut down whole production facilities during the COVID-19 pandemic. Knock-on effects of lower (or even zero) imports of key inputs from Russia are therefore difficult to estimate but could potentially be severe.

“Risky” products supplied by Russia include palladium, a precious metal that is embedded in engine exhausts to reduce emissions. Here, shortages have already led to price hikes and could quickly translate into supply chain issues especially for the automotive industry. Russia also accounts for large chunks of the EU's total imports of nickel and aluminum. Disruptions in the trade flows in these areas could therefore severely impact the steel, manufacturing and construction industries. Furthermore, farmers across Europe rely heavily on imported fertilizers from Russia (and Belarus). Some 50% of the world's semiconductor-grade neon, critical for the lasers used to make chips, came from two Ukrainian companies that have halted their operations. The stoppage casts a cloud over the worldwide output of microchips, already in short supply after the pandemic had driven up demand for cell phones, laptops and cars.

Chart 9

Economic sentiment indicator and subcomponents



Source: European Commission.

Economic sentiment remains remarkably stable so far

The challenging geopolitical situation in the very heart of the CESEE region, surging prices across the board, potential supply (chain) disruptions in vital areas and constantly evolving risks have been increasing uncertainty.

Against this backdrop – and somewhat astonishingly – economic sentiment in CESEE has so far deteriorated only moderately. The European Commission's economic sentiment indicator (ESI) on average declined by some 3 points between February and March 2022,

with the largest reductions being reported for Bulgaria, Czechia and Turkey (see chart 9). At the height of the first COVID-19 wave back in April 2020, the ESI had declined by full 37 points. Consumers are currently worrying the most. Consumer sentiment declined by an average 5.6 points, with Czechia and Hungary reporting declines in the double digits. In addition to general economic fears, consumers were increasingly concerned about a deterioration in their own finances, certainly reflecting the loss of purchasing power due to current and expected future inflation. According to survey data, the level of inflation expected by consumers spiked in March, reaching historically high levels in many cases.

Sentiment was more resilient in services and in the retail sector amid expectations of a stronger rebound after the ongoing easing of COVID-19 restrictions. The deterioration in the industrial sector was also rather contained. Purchasing managers' indexes declined somewhat but remained in expansionary territory, at least in Czechia and Poland in March. The indicator on industrial sentiment within the ESI framework retreated by an average of 1.2 points, which is a moderate decline compared to the composite ESI. This was somewhat unexpected as the energy-intensive industrial sector suffers particularly from high electricity and gas prices and would have to bear the main economic burden of any gas rationing. Furthermore, industry surveys also reveal that supplier's delivery times have again increased quite a bit in March (after several months of decline) pointing to recurring supply chain issues. This development, however, could also reflect renewed supply chain blockages due to China's zero-COVID policy.

CESEE takes in millions of Ukrainian refugees within only a few weeks

Over the last weeks, CESEE countries have done a remarkable job in taking in refugees after the outbreak of the war. The figures are staggering: More than 4 million Ukrainian refugees have arrived in neighboring countries since the start of the invasion (some 2.7 million in Poland, 710,000 in Romania, 440,000 in Hungary and 320,000 in Slovakia). The EU has activated its Temporary Protection Directive, which stipulates that all refugees from Ukraine will be granted a temporary residence permit in the EU without the need to apply for asylum and will be granted unrestricted labor market access. While housing and accommodating such large numbers of people in such a short time constitutes a major challenge, the inflow of people will undoubtedly also generate additional demand and public expenditure. This should cushion the ramifications of the war on economic activity in receiving countries at least to some extent. Depending on several factors (ultimate number of refugees, duration of stay, age profile, availability for the labor market, educational attainment and/or professional skills, shortfall of seasonal workers from Ukraine due to the war), refugees may also provide some relief for the CESEE region's tight labor markets.

Ukraine: economy operating under war conditions

Before Russia's war against Ukraine started, the Ukrainian economy had reached a notable degree of stability: progress had been made in rebuilding international reserves, improving the fiscal and external positions, and the banking sector had become more solid during the last few years. After some setbacks, Ukraine had again made progress on the reform agenda ahead of the conclusion of the first review under the latest IMF Stand-By Agreement (SBA) in November 2021, and further reform steps were envisaged under the program.

In light of the urgent balance of payments needs and the severe constraints that the war has imposed on the country's capacity to implement reforms subject to conditionality under the SBA, the Ukrainian authorities requested financial assistance under the IMF's Rapid Financing Instrument (RFI). The disbursement of about USD 1.4 billion was approved by the IMF Executive Board on March 9, 2022. The SBA was canceled. Additional financing was announced (and partly already disbursed) by the EU, EBRD, EIB and the World Bank. Narodowy Bank Polski provided the National Bank of Ukraine (NBU) with a USD/UAH currency swap line in an amount of up to USD 1 billion. In early April, the IMF Executive Board approved the establishment of an administered account for Ukraine, providing donors with a secure vehicle for directing financial assistance to Ukraine. Backed by international financial assistance, Ukraine's international reserves slightly rose to USD 28 billion in March, while Ukraine continued to service and repay its foreign currency-denominated public debt. Yet, pressures on international reserves and public finances will remain very high.

The IMF projects a GDP contraction of 35% this year. Regions affected directly by the war (at end-March 2022) produced about 50% of GDP when including Kyiv and about 30% when excluding Kyiv. GDP losses are only a small part of total economic losses due to the war, however. At end-March, the Ukrainian ministry of economy stated that total losses due to the war amounted to USD 565 billion (including loss of infrastructure, GDP losses, losses incurred by the civilian population, losses of enterprises and organizations, losses of FDI in the Ukrainian economy and losses of the state budget).

The banking sector, as part of the critical infrastructure, has adapted to the war conditions. Bank branches have been kept open, ATMs have been replenished as far as possible and cashless payments have continued to work. In contrast to previous crises, there have been no bank runs, which is related to limits on cash withdrawals as well as security risks associated with holding cash outside banks and difficulties in exchanging hryvnia abroad (in contrast to the possibility of withdrawing money abroad using ATM/credit cards). Reportedly, several banks voluntarily agreed on repayment holidays. The foreign exchange market switched to operating under significant restrictions imposed by martial law. In areas occupied by Russia, according to the NBU, the occupation forces have taken actions to limit the circulation of cash and cashless hryvnia and to introduce the Russian ruble.

Despite efforts within the agricultural sector to continue working, there is certainly a risk that agricultural output will be constrained this year, particularly in those parts that are most affected by the war. The blockage of main export routes (Ukrainian black sea ports) by Russian forces further aggravates the overall difficult situation. The nearby port of Constanța (Romania) may serve as an alternative export route, but poor railway connections act as a bottleneck.

Western Balkans⁵: some recovery from the COVID-19 pandemic but war in Ukraine brings new economic challenges

Since March 2020, the COVID-19 pandemic has strongly affected the EU candidates and potential candidates (CPCs) of the Western Balkans, with high per capita fatality rates in Bosnia and Herzegovina, Montenegro and North Macedonia. Currently, the latest wave of infections seems to be receding in the region; however, the number of tests has also decreased significantly, and COVID-19-related restrictions have been phased out. Vaccination rates have reached 40% (North Macedonia) to 50% (Serbia) and remain lowest in Bosnia and Herzegovina at less than 30%. Risks related to the pandemic, however, have recently been surpassed in significance by the impact of the war in Ukraine on the Western Balkan economies.⁶

After sharp contractions in 2020, CPC economies expanded in 2021 with full-year growth being weakest in North Macedonia at 4% (year on year) and strongest in Montenegro at 12.4% (year on year). Growth had returned to positive territory in all CPCs in the second quarter of 2021 (chart B1). Except for Montenegro, growth in the third and fourth quarter decelerated somewhat compared to the second quarter but remained positive in all CPCs. The slowdown is partially due to a base effect, i.e. the easing of COVID-19-related restrictions and initial economic recovery in the second half of 2020. In the second half of the year, private consumption growth weakened compared to the first half of 2021 (except for Montenegro) but remained an important pillar of growth in all countries. With the lifting of COVID-19 containment measures, pent-up demand and continuously improving consumer confidence bolstered private consumption throughout 2021. Private consumption also strengthened on the back of crisis support measures as well as increased remittances. For example, in North Macedonia, remittances returned to pre-crisis levels in 2021 and, according to the National Bank of the Republic of North Macedonia, about two-thirds of remittances are used to finance private consumption. Serbia, having experienced a rather mild economic shock in 2020, also recovered strongly in 2021; in the second half of the year, this recovery was driven by solid private consumption and investment growth, which had already cushioned the contraction and contributed to overall GDP growth in the first half of 2021. In North Macedonia, investment was an important pillar of growth throughout 2021, similar to the situation in other CPCs.

The development of public consumption is mixed when comparing the second half with the first half of 2021: In Albania and Kosovo, public consumption growth visibly decelerated while, in Serbia, it strongly increased, which could have been related to the general elections that took place in early April 2022. Overall, however, public consumption only adds little to economic growth in the region.

In Kosovo and Montenegro, net exports significantly contributed to a strong rebound in growth in the third quarter of 2021. Among its peers in the region, Montenegro had been hit worst by the pandemic in 2022, while growth in 2021 was partially bolstered by policy measures to mitigate the effect of the pandemic as well as infection control and most importantly the re-opening of tourism in 2021. In Kosovo, the easing of travel restrictions led to exceptionally strong summer travel by Kosovans living abroad and – like in Montenegro – a strong recovery of services exports.

In the second half of 2021, the year-on-year increase of exports of goods and services slowed down (somewhat) compared to the second quarter of 2021 in Albania, North Macedonia and Serbia and accelerated (somewhat) in Kosovo, Montenegro and Bosnia and Herzegovina. Goods exports recovered against the background of economic recovery in EU trading partners; services exports were mainly driven by the effect of easing restrictions on

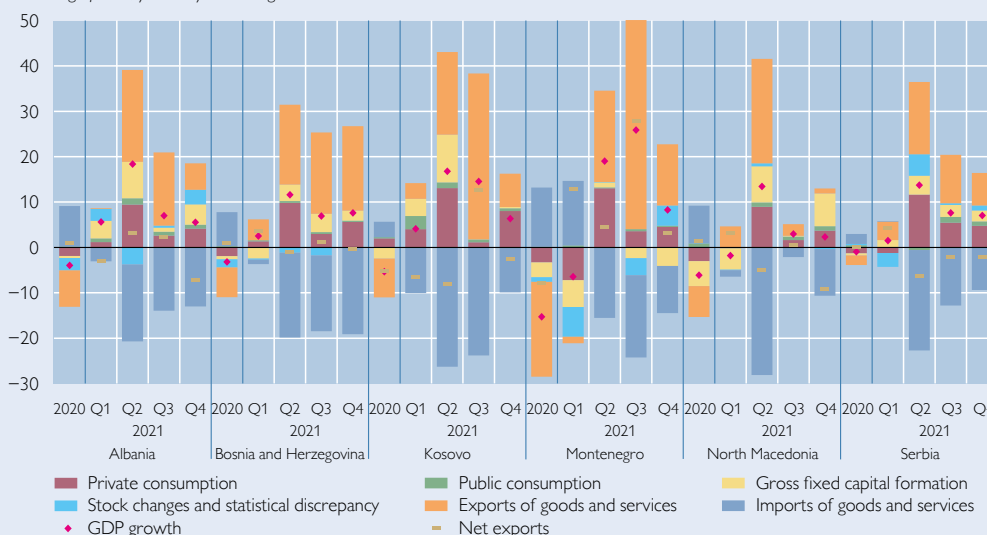
⁵ The Western Balkans comprise Albania, Bosnia and Herzegovina, Kosovo, Montenegro, North Macedonia and Serbia. The designation “Kosovo” is used without prejudice to positions on status and in line with UNSC 1244 and the opinion on the Kosovo Declaration of Independence.

⁶ Although we focus on economic developments in the Western Balkans over the second half of 2021 in this box, we will also mention exposure to the Russia-Ukraine war and the various channels where appropriate.

Chart B1

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 Bosnia and Herzegovina, North Macedonia, Kosovo.

tourism. Recovery, however, was not uninterrupted. Supply chain disruptions affected exports of the automotive industry in North Macedonia. Kosovo's main ferro-nickel producer and exporter had to close production due to power disruptions. Against the background of rebounding private consumption and increasing domestic demand, the negative contribution of imports to growth was 10 percentage points or more in the CPC economies. Except for Montenegro, strong imports kept net exports (slightly) negative in the fourth quarter of 2021. In Serbia, this was the case in the third quarter as well.

The Western Balkans' trade exposure to Russia, Ukraine and Belarus is of limited scope (chart B2), with Serbia reporting the highest share of imports from Russia and the highest share of exports to Russia. However, Bosnia and Herzegovina, North Macedonia and Serbia are highly dependent on Russian gas deliveries, which account for about two-thirds of all gas imports to these countries. Nearly 30% of Albania's imports of fertilizers and 22% of cereals come from Russia. Serbia imports even more than half of its fertilizers from Russia. On the export side, Russia is also an essential market for Montenegro's non-metallic mineral items and for Bosnia and Herzegovina's pharmaceutical exports. Montenegro is to a large extent dependent on tourism and in particular on tourists from Russia. In 2021, tourists from Ukraine also played an important role.

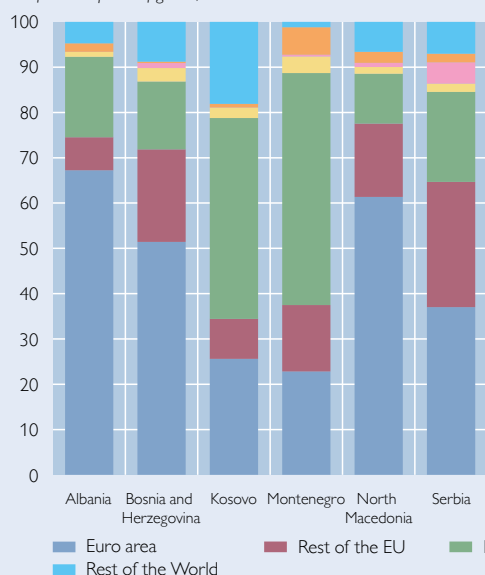
Against the background of the economic recovery, labor market figures improved in Western Balkan CPCs. Unemployment rates returned to or were even below pre-pandemic levels in the second half of 2021 in all countries. For Bosnia and Herzegovina as well as North Macedonia, unemployment also fell because of lower labor force participation – which was also attributable to emigration in both countries. In Montenegro, decreases in unemployment were mainly due to short-term and seasonal employment. In Serbia, by contrast, the employment rate reached a historical high at 50% in the third quarter of 2021 and the labor force participation rate also increased. In Albania an increase in the minimum wage from ALL 30,000 to ALL 32,000 per month entered into force as of January 2022. In North Macedonia, the minimum wage was increased by 18.5% as of February 2022.

Current account deficits narrowed in 2021 compared to 2020 in Albania, Montenegro and Serbia, largely due to higher surpluses in the balance of services. The improvement was most striking in Montenegro, where the surplus of the service balance almost increased fivefold in

Chart B2

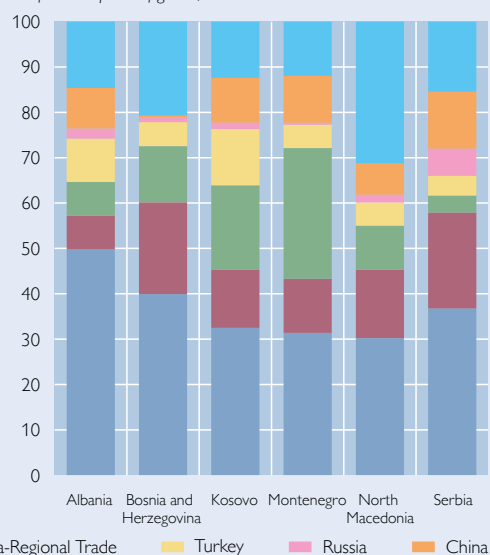
Export shares of Western Balkan CPCs

% of total exports of goods, 2020



Import shares of Western Balkan CPCs

% of total imports of goods, 2020



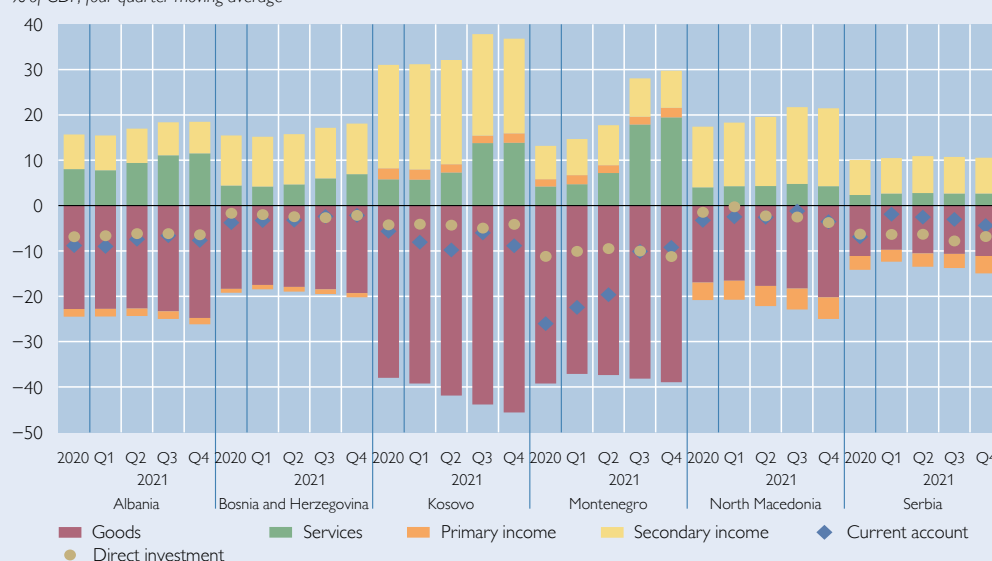
Source: wiw.

the second half of 2021. In Kosovo the current account balance deteriorated due to a widening of the trade deficit but also because of lower remittances, which play a significant role in the external position of Kosovo (remittances amount to more than 20% of GDP). However, in most other CPCs, secondary income increased. Foreign direct investment remained almost unchanged

Chart B3

Current account balances and FDI

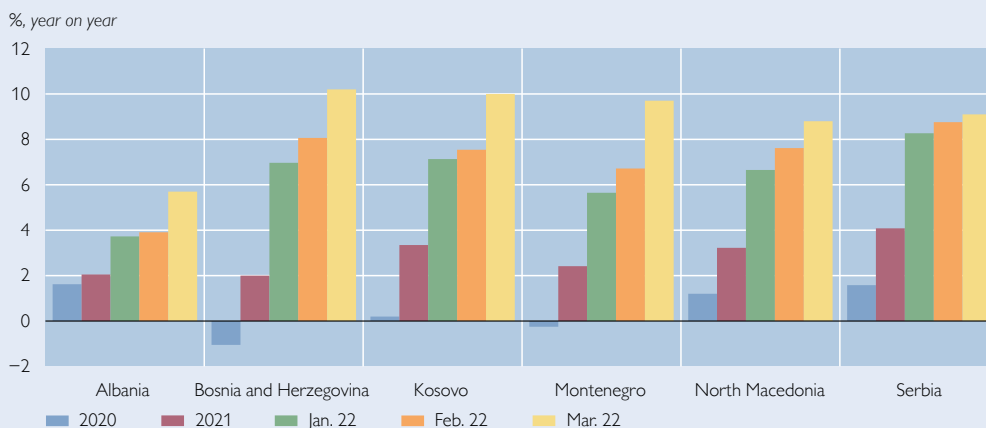
% of GDP, four-quarter moving average



Source: National central banks, national statistical offices.

Note: A positive (negative) value in the category of direct investments indicates that net acquisition of assets is higher (lower) than net incurrence of liabilities.

Chart B4

The same picture everywhere: strong rise in inflation

in 2021 compared to 2020 and covered a large part of the current account deficit. The significant financing gap of 2020 was also closed in Montenegro.

Foreign direct investment from Russia only plays a role in Montenegro, Serbia and Bosnia and Herzegovina. In Montenegro, it amounted to 10.9% of total stocks of inward FDI in 2020; for Serbia, this share is 5.7% and for Bosnia and Herzegovina it is 4%. Although these shares are still quite low, FDI from Russia plays a larger role in Serbia and Montenegro than FDI from the UK and the US combined.

Inflationary pressure in the Western Balkans accelerated toward the end of 2021 and has significantly intensified due to the war in Ukraine (chart B4). The inflation targets in Albania (target of 3%) and in Serbia (upper inflation target of 4.5%) were overshoot by far over the last months. In all countries, the surge in inflation is being fueled by energy and food price increases. In some countries, continuing supply chain problems play a role. Food and transport prices accelerated, in particular affecting the purchasing power of poorer households. In some countries, energy tariffs are regulated. Serbia, for example, has kept energy tariffs unchanged despite rising energy costs.

In Albania and Serbia – the only Western Balkan economies with flexible exchange rate regimes – depreciation pressures have been evident since the start of the war in Ukraine. The National Bank of Serbia intensified interventions, also in an effort to stabilize inflation, and the exchange rate has remained more or less stable. After initial losses, the Albanian lek gained ground thereafter and stood at 120.20 against the euro. Thus, the currency was almost as strong as during its December 2007 high. To address rising inflationary pressure, central banks in the region started to raise their key interest rates: The Bank of Albania increased its key interest rate by 50 basis points to 1% on March 23, 2022, the National Bank of Serbia by 50 basis points to 1.5% on April 7, 2022, and the National Bank of the Republic of North Macedonia raised its interest rate on central bank bills by 25 basis points to 1.5% in mid-April 2022. Responding to increased demand for euro cash due to elevated uncertainty related to the war in Ukraine, both the National Bank of Serbia and the National Bank of the Republic of North Macedonia introduced measures to increase consumers' confidence in the continued availability of foreign currency cash.

Since our last reporting, credit growth (in nominal terms) for corporates and households has accelerated in the CPCs (with the exception of North Macedonia) though at a very uneven pace. In Kosovo, credit increased by an average of roughly 15% year on year in the period from September 2021 to February 2022 (March 2021 to August 2021: 11% year on year, on average), in Albania, by almost 10% year on year (compared to less than 6% in the previous period). In most CPCs, credit to households grew more dynamically than corporate loans; however, the growth of credit to households weakened in North Macedonia and Serbia. Throughout 2021, the share of loans denominated in foreign currency remained stable in the four CPCs that retain a currency of their own but remains rather high at 49% in Albania, 48% in Bosnia and Herzegovina, 41% in North Macedonia and 61% in Serbia. Deposit substitution showed a similar pattern with relatively high but stable rates in the four CPCs.

Nonperforming loans (NPLs) remained more or less stable or decreased over the second half of 2021 compared to the first half in all countries with the exception of Montenegro. The decline was strongest in Albania. In Montenegro NPLs increased from 5.7% at the end of the first half of 2021 to 6.2% at the end of 2021. The percentage of loans under moratoria was substantially lower in 2021 than in 2020; by the end of 2021, the percentage of loans under moratoria was very small. Only in Bosnia and Herzegovina, Montenegro and North Macedonia, some residual loan moratoria or restructuring agreements were still in place at the end of 2021. These residual COVID-19-related debt-relief measures are primarily targeted at vulnerable individuals. In Montenegro, for example, loan restructuring measures were offered to people who lost their employment, suffered wage reductions of more than 10% or did not receive net wage payments for more than three months. Stage 2 loans increased in 2020 and there is some indication that they increased further until the end of 2021. For Albania, the IMF Article IV consultation report from December 2021 estimates that NPLs could increase by more than 15% due to the COVID-19 pandemic.

Following a significant increase in 2020, budget deficits in all Western Balkan CPCs stood at 6% or lower in 2021. North Macedonia and Albania recorded the highest deficits, at 6% of GDP, followed by Serbia at 5% of GDP. Montenegro reduced its deficit by more than 8 percentage points and recorded a deficit of 3% of GDP in 2021. Kosovo's budget was balanced with a surplus of less than 1% largely due to a 29% increase in tax revenues. The debt-to-GDP ratio decreased significantly in Montenegro, by around 20 percentage points to an estimated 85% of GDP, which is, however, still well above Montenegro's fiscal rule of 60% of GDP. In Albania, the country with the second highest debt-to-GDP ratio, the figure increased by 2 percentage points to 78% in 2021. Although tax revenues increased in Albania, the government also raised subsidies to state-owned energy providers in the last quarter of 2021. Contingent liabilities of state-owned enterprises are one of the major risks for sovereign debt sustainability in Albania. Debt-to-GDP increased slightly in North Macedonia and Serbia and remained more or less unchanged in Kosovo and Bosnia and Herzegovina.

North Macedonia asked for a two-year Precautionary and Liquidity Line with the IMF in mid-April 2022. This tool is meant to support countries with sound policies and economic fundamentals in case of external shocks. The IMF is now in the process of deciding on the request. In Serbia, the first review of the IMF Policy Coordination Instrument (approved in June 2021) – a tool to anchor economic policy without drawing on financial resources – was successfully completed in December 2021; the second review is expected for end-June 2022. With respect to EU enlargement, not much has happened since our last reporting. Albania and North Macedonia are still waiting for the opening of accession negotiations, a decision that has been stalled for several years now.

2 Slovakia: brittle economic recovery amid supply shocks and lofty prices

The recovery of the Slovak economy lost steam in the second half of 2021. GDP growth was rather lackluster, averaging just above 1% and thus pushing the figure for 2021 as a whole to 3%. By the end of the year, real output thus still lagged behind the pre-pandemic level reached in 2019 by about 1.5%. The growth structure changed in the second half of the year 2021 as foreign demand weakened. Hence, contrary to the beginning of 2021, in the six months to December, economic growth was determined by domestic demand while net exports were a significant drag. Among the domestic demand components, it was predominantly the buildup of inventories that provided the most significant contribution to growth. This was brought about mainly by supply chain disruptions, in particular missing semiconductors in the crucial automotive industry, which hindered the completion, sale and export of cars and other industrial goods. Also household consumption contributed quite decisively to the rise in domestic demand despite (selective) lockdowns and other restrictive anti-pandemic measures toward year-end resulting from record-high COVID-19 infections. Private consumption has benefited inter alia from rising wages in a tight labor market. While fixed investment accelerated in the final quarter of 2021, its overall contribution to GDP growth in the second half of the year remained moderate, not least due to significant increases in prices of industrial goods and construction input materials. Rising prices along with the spreading Omicron COVID-19 variant were some of the key factors that overshadowed foreign demand as well. Yet, net exports were also hampered on the supply side as a result of the supply chain frictions mentioned above. Accelerating inflation as well as supply chain disruptions have not only persisted since the beginning of 2022, but they have deepened and aggravated in the wake of the war in Ukraine. These factors will thus have continued exercising a detrimental impact on private consumption, investment and net exports also in the first months of 2022. In contrast, public consumption is likely to have received a boost on the back of heightened expenditures induced by the war, particularly those for helping refugees arriving in Slovakia.

Despite the pandemic, the situation on the labor market has improved since mid-2021 as a falling unemployment rate and slightly rising employment suggest. Nonetheless, the Slovak economy suffers from a skill mismatch and thus a lack of skilled labor. This does not only translate into rising wages but is reflected also in a record-high number of vacancies, on the one hand, and a persistently high long-term unemployment rate – one of the highest in the EU – on the other. Headline inflation rose sharply in the review period and came in at 8.3% in February 2022, the highest reading in more than 20 years. This towering inflation rate was broadly based, driven by soaring prices of almost all components, particularly services, industrial goods, processed food but, especially since the start of this year, also swelling energy prices. The Russian invasion of Ukraine and the ensuing sanctions as well as economic disturbances will further exacerbate inflation pressure. On the back of fiscal response measures to the coronavirus crisis worth 3.8% of GDP that had been budgeted for 2021, the general government deficit amounted to 6.2% of GDP. Consequently, public debt is projected to have gone up from 48.1% of GDP in 2019 to about 63.1% of GDP in 2021.

Table 2

Main economic indicators: Slovakia

	2019	2020	2021	Q3 20	Q4 20	Q1 21	Q2 21	Q3 21	Q4 21
<i>Year-on-year change of the period total in %</i>									
GDP at constant prices	2.6	-4.4	3.0	-2.0	-1.8	0.2	9.6	1.3	1.4
Private consumption	2.7	-1.3	1.2	0.8	-2.3	-5.5	5.0	2.5	2.7
Public consumption	4.6	0.9	1.9	1.4	3.2	-1.7	8.1	-1.0	2.1
Gross fixed capital formation	6.7	-11.6	0.6	-8.1	-14.8	-9.3	5.6	-1.9	6.0
Exports of goods and services	0.8	-7.3	10.2	0.9	0.9	10.8	39.3	-3.0	1.6
Imports of goods and services	2.1	-8.2	11.2	-5.7	0.3	6.0	39.2	3.5	3.5
<i>Contribution to GDP growth in percentage points</i>									
Domestic demand	3.8	-5.2	3.8	-7.8	-2.3	-4.4	9.3	6.8	3.1
Net exports of goods and services	-1.2	0.9	-0.8	5.7	0.5	4.5	0.2	-5.3	-1.7
Exports of goods and services	0.8	-6.7	8.7	0.8	0.8	10.2	28.2	-2.5	1.5
Imports of goods and services	-2.0	7.6	-9.5	4.9	-0.3	-5.7	-28.0	-2.8	-3.2
<i>Year-on-year change of the period average in %</i>									
Unit labor costs in the whole economy (nominal, per person)	5.2	6.4	2.1	2.5	5.3	0.9	-1.3	4.4	4.6
Unit labor costs in manufacturing (nominal, per hour)	5.6	4.2	-4.2	-5.0	-5.3	-9.9	-19.0	8.7	5.9
Labor productivity in manufacturing (real, per hour)	1.3	1.2	10.0	7.6	9.5	10.5	23.3	1.6	7.0
Labor costs in manufacturing (nominal, per hour)	6.8	4.9	6.1	2.3	3.7	-0.5	-0.1	10.5	13.3
Producer price index (PPI) in industry	1.8	-0.5	6.8	-1.3	-1.0	-0.8	4.3	9.3	14.5
Consumer price index (here: HICP)	2.8	2.0	2.8	1.5	1.6	1.0	2.1	3.4	4.8
<i>Period average levels</i>									
Unemployment rate (ILO definition, %, 15–64 years)	5.8	6.8	6.9	7.3	7.0	7.2	7.0	6.8	6.6
Employment rate (%, 15–64 years)	68.4	67.5	69.5	67.5	67.8	67.9	68.8	70.3	70.8
Key interest rate per annum (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Nominal year-on-year change in the period-end stock in %</i>									
Loans to the domestic nonbank private sector ¹	6.8	6.8	6.8	5.0	4.5	4.8	4.2	5.2	7.3
of which: loans to households	8.0	8.0	8.0	6.5	6.1	6.0	7.2	8.0	8.8
loans to nonbank corporations	4.4	4.4	4.4	2.1	1.4	2.5	-1.8	-0.2	4.3
<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	0.1	0.1
Return on assets (banking sector)	0.8	0.5	0.7	0.5	0.5	0.5	0.8	0.8	0.7
Tier 1 capital ratio (banking sector)	16.6	18.1	18.3	18.0	18.1	18.8	19.2	18.8	18.3
NPL ratio (banking sector)	2.8	2.3	1.9	2.5	2.3	2.2	2.1	1.9	1.9
<i>% of GDP</i>									
General government revenues	39.4	39.9	40.7	..	..	..	..	..	..
General government expenditures	40.7	45.3	46.8	..	..	..	..	..	..
General government balance	-1.3	-5.5	-6.2	..	..	..	..	..	..
Primary balance	-0.1	-4.2	-5.0	..	..	..	..	..	..
Gross public debt	48.1	59.7	63.1	..	..	..	..	..	..
<i>% of GDP</i>									
Debt of nonfinancial corporations (nonconsolidated)	53.8	54.5	53.2	..	..	..	..	..	..
Debt of households and NPISHs ² (nonconsolidated)	43.7	47.2	48.5	..	..	..	..	..	..
<i>% of GDP (based on EUR), period total</i>									
Goods balance	-1.2	1.1	-0.1	4.2	2.5	4.0	-0.3	-2.5	-0.9
Services balance	1.3	1.2	0.8	2.0	0.2	0.7	0.7	1.5	0.4
Primary income	-2.3	-1.2	-1.7	-1.2	-1.6	-0.4	-1.8	-1.6	-2.9
Secondary income	-1.1	-1.0	-1.0	-1.1	0.0	-1.9	-1.0	-0.8	-0.4
Current account balance	-3.4	0.1	-2.0	3.9	1.0	2.4	-2.4	-3.4	-3.8
Capital account balance	0.7	1.1	1.4	0.6	2.0	0.9	3.7	0.2	0.8
Foreign direct investment (net) ³	-2.3	2.1	0.3	7.1	-0.7	3.0	-1.0	-1.3	0.7
<i>% of GDP (rolling four-quarter GDP, based on EUR), end of period</i>									
Gross external debt	112.7	120.5	137.0	121.0	120.5	119.0	117.6	118.6	137.0
Gross official reserves (excluding gold)	5.3	6.6	8.7	7.0	6.6	8.4	8.1	8.8	8.7
<i>Months of imports of goods and services</i>									
Gross official reserves (excluding gold)	0.7	0.9	1.1	1.0	0.9	1.2	1.1	1.2	1.1
<i>EUR million, period total</i>									
GDP at current prices	94,048	92,079	97,123	24,578	24,325	21,819	24,078	25,637	25,589

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: GDP rebound overshadowed by accelerating inflation

Slovenia's GDP rebounded sharply and grew by 8.1% in 2021. Although year-on-year dynamics eased somewhat during the second half of the year, seasonally adjusted month-on-month growth signaled strengthening dynamics. GDP growth relied heavily on the acceleration of private consumption, which was attributable to a base effect, expansion of employment and by accelerating household credit growth. At the same time, consumer confidence improved only modestly, and real average wage growth decelerated due to both, accelerating inflation and slowing nominal wage dynamics. Gross fixed capital formation expanded at a double-digit rate as well during the second half of 2021, supported by public investments, high industrial capacity utilization and a rebound in corporate credit growth. Strong domestic demand fueled imports, which led to a negative contribution of net real exports despite double-digit export growth.

Slovenia's budget deficit amounted to 5.2% of GDP in 2021, down from 7.8% in 2020. Fiscal developments benefited from the strong cyclical rebound. At the same time, expenditures in 2021 continued to be adversely affected by investment spending and government measures designed to mitigate the effects of the pandemic. For 2022, the government targets a reduction in the budget deficit as expenditures are expected to decline, while revenues will continue to benefit from economic growth. According to Slovenia's independent fiscal council, however, planned expenditures pose a structural risk for public finances and violate fiscal rules, as they raise the concern of inefficient use of budget funds and open room for nontransparent spending in the election year 2022. Moreover, the fiscal council has warned that discretionary measures adopted during, but not related to, the pandemic will worsen public finances by around 2% of GDP per year in the future.

HICP inflation accelerated from around 2.1% in August 2021 to 7% by February 2022 and thus exceeded the euro area average from December 2021. Inflation excluding energy and unprocessed food prices rose from less than 1% to 4.7% during the reporting period. In order to mitigate the effect of rising energy prices on households and businesses, parliament adopted an aid package of around 0.4% of 2021 GDP. The package includes an energy voucher scheme for households and aid for most-affected businesses. In addition, network fees for electricity and excise duties on heating oil, petrol and natural gas were lowered for February-April 2022, while the government has also introduced a cap on retail fuel prices.

The banking sector was recently hit by negative news. In early February 2022, parliament passed a law which introduced a retroactive cap on exchange rate movements for CHF loans signed between June 28, 2004, and December 31, 2010, including those that have been paid off. According to estimates from the banking sector, the implementation of the law would cause them a loss of almost 60% of their combined after-tax profit in 2021. Following constitutional complaints, the constitutional court in mid-March 2022 suspended the implementation of the law until a final decision has been reached.

At the beginning of March 2022, following the ECB's and the Single Resolution Board's decision to close Sberbank Europe AG, Sberbank's Slovene subsidiary was taken over by Slovenia's biggest lender, NLB. The institution was the ninth-largest bank in Slovenia with a market share of nearly 4% in 2020 (in terms of total assets).

Table 3

Main economic indicators: Slovenia

	2019	2020	2021	Q3 20	Q4 20	Q1 21	Q2 21	Q3 21	Q4 21
<i>Year-on-year change of the period total in %</i>									
GDP at constant prices	3.3	-4.2	8.1	-1.4	-3.1	1.5	16.1	5.0	10.4
Private consumption	4.8	-6.6	11.6	1.4	-11.1	-0.8	17.9	7.2	22.8
Public consumption	2.0	4.2	3.9	5.0	3.5	1.2	4.4	3.2	7.0
Gross fixed capital formation	5.5	-8.2	12.3	-5.7	-2.7	8.0	20.4	10.5	11.0
Exports of goods and services	4.5	-8.7	13.2	-8.9	-0.7	1.6	30.5	11.6	12.1
Imports of goods and services	4.7	-9.6	17.4	-12.2	-0.8	1.2	36.1	19.1	16.8
<i>Contribution to GDP growth in percentage points</i>									
Domestic demand	3.0	-4.2	9.8	-3.2	-3.1	1.0	16.9	8.7	12.7
Net exports of goods and services	0.3	-0.1	-1.6	1.8	0.0	0.5	-0.8	-3.7	-2.3
Exports of goods and services	3.8	-7.3	10.3	-7.4	-0.6	1.3	22.0	8.7	9.8
Imports of goods and services	-3.6	7.2	-11.9	9.2	0.6	-0.9	-22.8	-12.4	-12.2
<i>Year-on-year change of the period average in %</i>									
Unit labor costs in the whole economy (nominal, per person)	4.2	7.7	-1.3	3.0	9.0	3.9	-5.4	3.2	-5.8
Unit labor costs in manufacturing (nominal, per hour)	0.1	8.1	-2.8	5.4	3.0	3.3	-15.7	3.8	-1.2
Labor productivity in manufacturing (real, per hour)	4.0	-4.5	9.7	-3.1	-1.2	3.1	23.8	3.1	10.6
Labor costs in manufacturing (nominal, per hour)	4.0	3.1	6.8	2.2	1.8	6.5	4.4	7.0	9.2
Producer price index (PPI) in industry	0.6	-0.3	5.5	-0.3	-0.2	1.1	3.6	7.5	9.9
Consumer price index (here: HICP)	1.7	-0.3	2.0	-0.6	-0.9	-0.6	2.1	2.3	4.5
<i>Period average levels</i>									
Unemployment rate (ILO definition, %, 15–64 years)	4.5	5.0	4.8	5.2	5.1	5.7	4.4	4.5	4.5
Employment rate (%, 15–64 years)	71.9	70.9	71.5	70.8	71.1	68.1	71.9	73.4	72.4
Key interest rate per annum (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Nominal year-on-year change in the period-end stock in %</i>									
Loans to the domestic nonbank private sector ¹	4.3	4.3	4.3	0.1	-1.0	-1.9	0.9	2.2	5.6
of which: loans to households	5.8	5.8	5.8	1.2	0.1	0.8	2.9	3.6	5.0
loans to nonbank corporations	2.8	2.8	2.8	-1.0	-2.2	-4.5	-1.1	0.7	6.2
<i>%</i>									
Share of foreign currency loans in total loans to the nonbank private sector	1.7	1.4	1.1	1.5	1.4	1.3	1.2	1.2	1.1
Return on assets (banking sector)	1.3	1.0	1.1	1.2	1.0	0.8	1.0	1.0	1.1
Tier 1 capital ratio (banking sector)	17.8	16.7	16.8	18.2	16.7	16.5	17.0	17.0	16.8
NPL ratio (banking sector)	2.2	1.9	0.8	1.8	1.9	1.8	1.0	0.9	0.8
<i>% of GDP</i>									
General government revenues	43.8	43.5	43.9	..	..	..	..	..	..
General government expenditures	43.3	51.3	49.1	..	..	..	..	..	..
General government balance	0.4	-7.8	-5.2	..	..	..	..	..	..
Primary balance	2.2	-6.2	-3.9	..	..	..	..	..	..
Gross public debt	65.6	79.8	74.7	..	..	..	..	..	..
<i>% of GDP</i>									
Debt of nonfinancial corporations (nonconsolidated)	48.0	47.8	46.0	..	..	..	..	..	..
Debt of households and NPISHs ² (nonconsolidated)	26.9	27.8	26.5	..	..	..	..	..	..
<i>% of GDP (based on EUR), period total</i>									
Goods balance	2.7	5.0	1.0	5.7	4.3	4.6	1.6	-0.3	-1.3
Services balance	6.0	4.3	4.6	4.6	4.3	4.3	3.8	5.3	5.0
Primary income	-1.7	-0.9	-1.3	-3.0	0.1	-0.9	-1.0	-1.5	-1.7
Secondary income	-1.1	-1.0	-1.0	-0.8	-0.8	-1.6	-0.8	-0.7	-0.9
Current account balance	6.0	7.4	3.3	6.5	7.8	6.5	3.6	2.8	1.0
Capital account balance	-0.4	-0.5	0.1	-0.2	-1.1	1.2	-0.1	0.7	-1.4
Foreign direct investment (net) ³	-1.6	0.6	-1.0	-1.8	4.4	-1.6	-4.0	-2.0	3.4
<i>% of GDP (rolling four-quarter GDP, based on EUR), end of period</i>									
Gross external debt	91.5	101.9	97.0	101.2	101.9	106.4	101.6	103.2	97.0
Gross official reserves (excluding gold)	1.6	1.9	3.5	1.8	1.9	2.0	2.0	3.4	3.5
<i>Months of imports of goods and services</i>									
Gross official reserves (excluding gold)	0.3	0.3	0.5	0.3	0.3	0.4	0.3	0.5	0.5
<i>EUR million, period total</i>									
GDP at current prices	48,397	46,918	52,020	12,308	12,275	11,667	13,027	13,359	13,967

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: economic growth disappointed in 2021, and strong energy dependence on Russia and high inflation pose challenges

After soaring COVID-19 infection numbers in fall 2021, the new year also started with a surge in infections, driven by the spread of the Omicron variant. The level of vaccine hesitancy remains high and the vaccination rate in Bulgaria – at 30% – is still the lowest in all EU countries. Whether the recently started campaign on the benefits of vaccinations will be successful remains to be seen.

Bulgaria went through a difficult political year in 2021: After two failed attempts to form a government, the country held its third round of general elections that year on November 14, 2021. A new four-party coalition government under Prime Minister Kiril Petkov was approved by parliament in December.

In spite of high political uncertainty and high infection numbers in fall, GDP growth recovered to 4.2% in 2021. Not only a strong second quarter, but also a dynamic second half of the year – with private consumption as the main driver – supported the recovery. However, the recovery fell somewhat short of expectations, with declines in investments dragging on growth.

HICP inflation started to pick up in the fourth quarter of 2021 and continued its rise in 2022: Inflation hit a new high in February with 8.4%, predominantly driven by energy prices. In order to tackle the impact of rising energy prices, a freeze on utility prices for households and compensations for businesses were established in end-2021. Despite the newly emerging energy crisis triggered by the war in Ukraine, only the latter had been extended beyond March. At the same time, the Bulgarian energy and water regulatory commission has recently approved increases in the price of natural gas, following sharp price increases on the world market and a restriction on withdrawing gas from the national storage facility that has been imposed to secure reserves in preparation for a worsening energy crisis.

The war in Ukraine is strongly affecting Bulgaria. With 77% of natural gas imports coming from Russia, Bulgaria is highly dependent on Russian gas. Also, the country's sole oil refinery, which covers more than 60% of its domestic demand, is owned by Russia's Lukoil. In order to improve energy security, the state-owned gas operator launched procurement procedures to expand the underground gas storage facility Chiren. This is part of the country's energy strategy, together with the modernization of the distribution infrastructure and the construction of a connection to the liquified natural gas terminal in Alexandroupolis (Greece), in which Bulgaria holds a 20% share. The war is likely also to weigh on the upcoming summer tourism season: with a shortfall of Russian and Ukrainian tourists and the geographical proximity to the war, a recovery of tourism is likely to be further postponed.

Because of political uncertainty until end-2021, the budget for 2022 was only approved in February 2022. A budget deficit of 4.1% of GDP is expected. The budget foresees sizable infrastructure investments, as well as spending increases in the areas of education, health and social protection. Pensions, minimum wages as well as social benefits have been raised by the new government, but if inflation remains elevated these might barely translate into real gains. Adding to the stimuli created by the expansionary budget, also the access to the NextGenerationEU funds will fuel the country's investments. On April 7, 2022, the European Commission endorsed Bulgaria's national recovery and resilience plan, unlocking a total of EUR 6.3 billion in grants.

The Bulgarian government continues to plan for euro adoption by 1 January 2024.

Table 4

Main economic indicators: Bulgaria

	2019	2020	2021	Q3 20	Q4 20	Q1 21	Q2 21	Q3 21	Q4 21
<i>Year-on-year change of the period total in %</i>									
GDP at constant prices	4.0	-4.4	4.2	-2.9	-4.1	0.2	6.5	3.9	5.6
Private consumption	6.0	-0.4	8.0	4.1	-1.5	5.4	9.3	8.3	8.7
Public consumption	2.0	8.3	4.0	7.4	10.8	6.2	1.4	6.3	2.7
Gross fixed capital formation	4.5	0.6	-11.0	4.5	6.9	-6.1	-4.8	-14.5	-15.5
Exports of goods and services	4.0	-12.1	9.9	-16.3	-12.4	-2.0	22.0	7.9	13.8
Imports of goods and services	5.2	-5.4	12.2	-7.6	0.3	4.6	21.8	12.5	10.9
<i>Contribution to GDP growth in percentage points</i>									
Domestic demand	4.7	0.1	5.2	4.2	3.1	3.9	6.4	6.0	4.5
Net exports of goods and services	-0.7	-4.4	-1.1	-6.9	-7.2	-4.2	0.2	-1.7	0.9
Exports of goods and services	2.6	-7.7	5.5	-11.3	-7.0	-1.3	11.5	4.4	6.7
Imports of goods and services	-3.3	3.3	-6.5	4.4	-0.2	-2.9	-11.3	-6.1	-5.8
<i>Year-on-year change of the period average in %</i>									
Unit labor costs in the whole economy (nominal, per person)	3.1	9.4	5.4	8.3	11.2	5.9	3.0	7.9	5.0
Unit labor costs in manufacturing (nominal, per hour)	6.6	-0.1	0.9	-5.7	-4.8	-5.2	-4.5	7.7	6.9
Labor productivity in manufacturing (real, per hour)	4.9	5.2	6.0	3.6	8.7	3.7	6.6	7.4	6.3
Labor costs in manufacturing (nominal, per hour)	11.9	4.9	7.3	-2.2	3.5	-1.7	1.8	15.6	13.6
Producer price index (PPI) in industry	3.0	-2.0	15.5	-2.8	-2.1	3.6	12.1	17.4	28.9
Consumer price index (here: HICP)	2.5	1.2	2.8	0.6	0.3	0.2	2.2	2.9	6.0
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)	4.3	5.2	5.3	4.9	5.3	6.4	5.7	4.6	4.6
Employment rate (%, 15–64 years)	70.1	68.5	68.2	69.6	68.8	66.9	67.8	69.5	68.5
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 the period-end stock in %</i>									
Loans to the domestic nonbank private sector ²	9.4	9.4	9.4	5.8	4.3	4.6	6.3	7.5	8.6
of which: loans to households	9.5	9.5	9.5	7.5	6.6	7.1	10.4	11.8	13.4
loans to nonbank corporations	9.3	9.3	9.3	4.7	2.9	3.0	3.7	4.8	5.5
<i>%</i>									
Share of foreign currency loans in total loans to the non-bank private sector	33.2	31.9	29.3	31.6	31.9	31.6	30.9	30.2	29.3
Return on assets (banking sector)	1.5	0.7	1.1	0.8	0.7	1.1	1.0	1.1	1.1
Tier 1 capital ratio (banking sector)	19.5	22.1	22.0	22.3	22.1	21.9	22.3	21.8	22.0
NPL ratio (banking sector)	4.2	4.3	3.7	4.9	4.3	4.1	4.0	3.8	3.7
<i>% of GDP</i>									
General government revenues	38.4	38.1	39.0	..	..	..	..	..	..
General government expenditures	36.3	42.0	43.1	..	..	..	..	..	..
General government balance	2.1	-4.0	-4.1	..	..	..	..	..	..
Primary balance	2.7	-3.4	-3.6	..	..	..	..	..	..
Gross public debt	20.0	24.7	25.1	..	..	..	..	..	..
<i>% of GDP</i>									
Debt of nonfinancial corporations (nonconsolidated)	78.5	78.9	72.6	..	..	..	..	..	..
Debt of households and NPISHs ³ (nonconsolidated)	23.0	24.4	24.9	..	..	..	..	..	..
<i>% of GDP (based on EUR), period total</i>									
Goods balance	-4.7	-3.2	-4.9	-2.5	-5.3	-3.7	-4.0	-3.6	-7.5
Services balance	7.9	5.0	6.6	5.9	3.9	5.4	6.7	9.1	5.1
Primary income	-4.2	-3.4	-3.3	-3.9	-2.6	-3.7	-3.4	-2.1	-4.0
Secondary income	2.9	1.4	1.1	0.5	-0.4	2.2	1.9	1.1	-0.4
Current account balance	1.8	-0.3	-0.4	0.0	-4.4	0.3	1.3	4.5	-6.8
Capital account balance	1.4	1.5	0.7	1.5	1.3	1.6	1.4	0.6	-0.4
Foreign direct investment (net) ⁴	-2.0	-3.4	-1.7	-8.5	-0.3	-1.5	-1.9	-1.9	-1.4
<i>% of GDP (rolling four-quarter GDP, based on EUR), end of period</i>									
Gross external debt	61.3	64.6	61.8	65.0	64.6	63.1	62.5	63.3	61.8
Gross official reserves (excluding gold)	37.5	47.0	47.9	47.4	47.0	43.3	43.6	46.5	47.9
<i>Months of imports of goods and services</i>									
Gross official reserves (excluding gold)	7.4	10.4	9.2	10.2	10.4	9.4	8.9	9.3	9.2
<i>EUR million, period total</i>									
GDP at current prices	61,558	61,331	67,872	16,681	17,274	13,813	15,941	18,475	19,643

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: excellent recovery momentum in 2021, but murky outlook

Croatia's GDP expanded by 12.4% year on year in the second half of 2021, leading to GDP growth of 10.2% for the full year. Recovery momentum was dynamic, with real GDP surpassing its 2019 level. Strong contributions to growth in the second half of 2021 came from household consumption and net exports, while gross fixed investments made a smaller but positive contribution; changes in inventories made a large negative contribution. On the output side, all sectors expanded, with particularly high growth in the largest sector, wholesale and retail trade, but also strong growth in the ICT sector and in professional, scientific and technical activities. The tourism industry, a vital factor for Croatia's economy, did well in 2021, with tourist arrivals in the peak summer season noticeably above 2019 levels. This contributed to a recovery in the service trade balance compared to 2020 and thus a current account surplus of 3.4% of GDP in 2021.

GDP growth was supported by the fiscal and monetary policy stance. During the second half of 2021, the government largely wound down its job preservation support, but given accelerating inflation, temporary caps on fuel retail prices were implemented at the end of 2021. The government budget deficit was 4.1% of GDP in 2021, roughly as projected. Government debt declined from 87.3% of GDP to 82.3%, as GDP growth surpassed the growth of debt. Croatia's external debt decreased from 79.9% of GDP at end-2020 to 78% of GDP at end-2021. During the second half of 2021, the Croatian National Bank (HNB) did not have to conduct foreign exchange interventions to maintain the exchange rate of the kuna vis-à-vis the euro, and international reserves continued to grow. The precautionary swap line with the ECB expired at the end of March 2022.

The Croatian banking system's profitability improved, with return on assets increasing from 0.6% in 2020 to 1.2% in 2021. The improvement was mostly due to lower net provisions. The tier 1 capital ratio of the banking system stood at the high level of 25.1% at end-2021. The NPL ratio declined mildly throughout 2021 and was 4.3% at end-2021; however, the share of loans with elevated credit risk (IFRS 9 "Stage 2") remained high. The European Systemic Risk Board issued a warning regarding residential real estate dynamics at the end of 2021.

Croatia has accelerated its preparations for its targeted euro adoption on January 1, 2023. In late March 2022, the Croatian government announced that all commitments made under the ERM II Action Plan had been completed. If Croatia will get the green light for euro adoption in 2023 will become clear in mid-2022. Croatian HICP inflation has accelerated quickly to 6.3% in February 2022, shifting the focus of attention for the Convergence Reports to inflation.

Inflation is also an issue for Croatia's private sector, creating uncertainty and eroding spending power. In February 2022, the Croatian government passed a large package (HRK 4.8 billion; about 1.1% of GDP) with measures to mitigate the impacts of inflation. These measures include several VAT rate cuts, energy price regulations and targeted subsidies for households and sectors.

The ongoing war in Ukraine is worsening the outlook for inflation and, generally, economic growth. So far, an immediate policy response has been necessary in financial markets, with the HNB intervening twice to stabilize the kuna, providing liquidity to banks via its regular operations and resolving Sberbank d.d. by sale after assessment by the Single Resolution Board (SRB) that the bank was failing or likely to fail. Further policy action may become necessary, depending on the extent of energy price surges or even energy shortages, supply chain disruptions and weaker economic growth in important trading partners.

Table 5

Main economic indicators: Croatia

	2019	2020	2021	Q3 20	Q4 20	Q1 21	Q2 21	Q3 21	Q4 21
<i>Year-on-year change of the period total in %</i>									
GDP at constant prices	3.5	-8.1	10.2	-10.1	-7.4	-0.6	16.4	15.1	9.7
Private consumption	4.1	-5.3	10.0	-6.5	-3.7	-0.2	17.9	15.8	7.6
Public consumption	3.3	4.1	3.1	5.6	2.9	-5.8	8.5	-4.5	14.4
Gross fixed capital formation	9.8	-6.1	7.6	-4.2	-3.8	5.0	18.1	7.6	0.8
Exports of goods and services	6.8	-22.7	33.3	-31.1	-7.2	-1.0	43.0	48.8	31.7
Imports of goods and services	6.5	-12.3	14.7	-12.0	-5.5	-0.7	32.2	13.9	16.4
<i>Contribution to GDP growth in percentage points</i>									
Domestic demand	3.4	-2.8	3.4	5.5	-6.9	0.8	16.6	-6.7	4.7
Net exports of goods and services	0.1	-5.3	6.8	-17.2	-0.2	0.0	0.5	20.6	4.3
Exports of goods and services	3.4	-11.5	14.0	-22.8	-3.0	-0.3	15.2	26.9	12.9
Imports of goods and services	-3.3	6.3	-7.2	5.5	2.8	0.4	-14.7	-6.3	-8.5
<i>Year-on-year change of the period average in %</i>									
Unit labor costs in the whole economy (nominal, per person)	..	..	..	..	..	..	..	..	..
Unit labor costs in manufacturing (nominal, per hour)	11.4	2.5	-0.7	1.1	-2.6	-3.0	-7.4	2.9	5.2
Labor productivity in manufacturing (real, per hour)	-7.2	-2.4	4.0	-1.6	2.9	4.9	9.6	2.2	-0.4
Labor costs in manufacturing (nominal, per hour)	3.6	-0.1	3.3	-0.5	0.3	1.7	1.5	5.1	4.7
Producer price index (PPI) in industry	0.8	-3.2	11.7	-4.2	-2.9	0.9	8.0	13.1	24.6
Consumer price index (here: HICP)	0.8	0.0	2.7	-0.5	-0.2	0.7	2.2	3.1	4.6
EUR per 1 HRK, + = HRK appreciation	0.0	-1.6	0.1	-1.8	-1.6	-1.1	0.7	0.4	0.6
<i>Period average levels</i>									
Unemployment rate (ILO definition, %, 15–64 years)	6.7	7.6	7.6	7.5	9.2	10.0	7.9	6.3	6.3
Employment rate (%, 15–64 years)	62.1	62.0	63.4	63.0	61.5	61.4	63.6	64.6	64.1
Key interest rate per annum (%)	..	..	..	..	..	..	..	..	..
HRK per 1 EUR	7.4	7.5	7.5	7.5	7.6	7.6	7.5	7.5	7.5
<i>Nominal year-on-year change in the period-end stock in %</i>									
Loans to the domestic nonbank private sector ¹	3.4	3.4	3.4	3.0	2.8	1.3	2.4	2.8	2.4
of which: loans to households	6.7	6.7	6.7	3.2	1.6	1.9	3.7	4.5	4.1
loans to nonbank corporations	-1.3	-1.3	-1.3	2.8	4.8	0.4	0.5	0.2	-0.1
%									
Share of foreign currency loans in total loans to the nonbank private sector	51.5	52.0	52.2	51.1	52.0	52.1	51.8	51.5	52.2
Return on assets (banking sector)	1.4	0.6	1.2	0.7	0.6	0.9	1.1	1.1	1.2
Tier 1 capital ratio (banking sector)	24.0	25.0	25.1	24.3	25.0	24.6	25.0	25.2	25.1
NPL ratio (banking sector)	5.5	5.4	4.3	5.5	5.4	5.3	5.1	4.7	4.3
<i>% of GDP</i>									
General government revenues	46.3	47.2	47.2	..	..	..	..	..	..
General government expenditures	46.0	54.5	51.2	..	..	..	..	..	..
General government balance	0.3	-7.4	-4.1	..	..	..	..	..	..
Primary balance	2.5	-5.4	-2.4	..	..	..	..	..	..
Gross public debt	71.1	87.3	82.3	..	..	..	..	..	..
<i>% of GDP</i>									
Debt of nonfinancial corporations (nonconsolidated)	84.5	93.5	83.8	..	..	..	..	..	..
Debt of households and NPISHs ² (nonconsolidated)	33.7	37.6	34.4	..	..	..	..	..	..
<i>% of GDP (based on EUR), period total</i>									
Goods balance	-18.8	-17.3	-18.1	-15.9	-16.8	-20.4	-18.8	-17.2	-16.6
Services balance	18.5	10.6	17.2	26.6	5.0	3.4	9.6	41.6	8.7
Primary income	-0.1	2.3	0.3	0.3	5.3	1.1	-0.2	-0.8	1.4
Secondary income	3.4	4.4	4.0	3.9	4.7	5.9	3.7	3.5	3.4
Current account balance	3.0	-0.1	3.4	14.9	-1.8	-10.0	-5.7	27.0	-3.1
Capital account balance	1.6	2.1	2.4	1.8	2.7	2.1	2.5	2.1	2.9
Foreign direct investment (net) ³	-6.1	-1.3	-5.0	-1.7	0.5	-3.5	-2.7	-7.4	-5.6
<i>% of GDP (rolling four-quarter GDP, based on EUR), end of period</i>									
Gross external debt	72.2	79.9	78.0	79.9	79.9	86.9	84.4	80.0	78.0
Gross official reserves (excluding gold)	33.3	37.8	43.7	35.6	37.8	42.2	41.1	44.0	43.7
<i>Months of imports of goods and services</i>									
Gross official reserves (excluding gold)	7.8	9.3	9.8	8.8	9.3	10.3	9.7	10.2	9.8
<i>EUR million, period total</i>									
GDP at current prices	55,577	50,192	57,216	13,463	12,622	12,331	14,037	16,415	14,434

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: fragile recovery set back by a new war-induced shock

Czechia was faced with two large waves of COVID-19 infections in fall 2021 and in early 2022. Despite the massive spread of the virus, anti-pandemic measures and restrictions were not significantly tightened. On the contrary, most of them have been removed since the new government took office mid-December 2021. As a result, the harm to the Czech economy has been contained compared to previous waves. Real GDP thus saw a steady though not exuberant recovery and nearly reached its pre-pandemic level by the end of 2021. The economy expanded by nearly 3.5% year on year in the second half of 2021 and the year as a whole. The lion's share of growth was again, quite untypically, attributable to the buildup of inventories. This was due to persisting disruptions to supply chains which strongly affected the highly industrialized Czech economy, particularly its automotive industry. Unfinished products were thus produced on stock to be finished upon arrival of the missing components. Private consumption provided the second-most important contribution to growth in the six months to December, to a large extent owing to the low base caused by lockdowns a year earlier. Household consumption also benefited from pent-up demand and savings as well as rising nominal disposable income on the back of labor market tightening. Fixed capital formation was subdued, dampened by production and supply chain disruptions, elevated raw material and input prices as well as still muted external demand. The latter, in combination with stockpiling and the relatively strong domestic demand, caused net exports to make a deeply negative contribution to growth. Despite some easing of the chip shortages, bottlenecks in global supply chains have continued since the start of 2022. Moreover, the Russian invasion of Ukraine has exacerbated the situation by creating new interruptions of supplies and further ballooning inflation.

A lower surplus in goods trade and a higher primary income deficit on the back of revived outflow of dividends, caused a current account deficit in the second half of 2021, bringing the full-year balance into slightly negative territory.

The general government deficit came in at 5.9% of GDP in 2021. Despite expenditures significantly exceeding revenues owing to high pandemic-related expenses, the abolition of the “super gross wage” and relatively moderate economic growth, the deficit turned out significantly smaller than had been mandated by the parliament. Public debt increased to 41.9% of GDP in 2021. Thanks to government support schemes, the harm of the economic downturn remained contained in the labor market. Moreover, driven by strengthening demand for labor, the unemployment rate declined from its pandemic peak (3.4%) in March 2021 to 2.1% by year-end and has increased only marginally since.

Inflation has sped up dramatically since late summer and reached 10% in February, well above the target set by the Czech National Bank (CNB) ($2\% \pm 1$ percentage point). Both consumer and producer price inflation have reached levels unseen since the beginning of transition. The mounting inflation pressure has been broadly based as persistently high core inflation has received a further boost by soaring energy and administered prices. Core inflation has echoed a substantial discrepancy between excess demand fostered by fiscal support measures, robust wage growth and, until recently, loose monetary policy, on the one hand, and rather constrained supplies, on the other. The war in Ukraine will exacerbate price pressures but the monetary policy response has been vigorous. Since the CNB started its tightening cycle last summer it has continued its hawkish stance: In only seven steps – some of them unprecedentedly large – it raised the key interest rate from 0.25% in June 2021 to 5% effective from April 1, 2022.

Table 6

Main economic indicators: Czechia

	2019	2020	2021	Q3 20	Q4 20	Q1 21	Q2 21	Q3 21	Q4 21
<i>Year-on-year change of the period total in %</i>									
GDP at constant prices	3.0	-5.8	3.3	-5.7	-5.3	-2.6	9.3	3.2	3.7
Private consumption	2.7	-6.8	4.4	-5.1	-9.8	-6.2	8.7	5.9	9.4
Public consumption	2.5	3.4	3.0	0.4	7.0	0.4	1.7	7.2	2.6
Gross fixed capital formation	5.9	-7.5	0.6	-9.0	-11.3	-4.1	4.5	0.8	0.9
Exports of goods and services	1.5	-6.9	5.1	-4.6	3.5	2.6	32.2	-3.2	-5.2
Imports of goods and services	1.5	-6.9	11.5	-6.5	-0.7	4.1	33.4	8.2	4.5
<i>Contribution to GDP growth in percentage points</i>									
Domestic demand	3.0	-5.3	7.1	-6.7	-8.4	-1.8	8.8	10.5	10.7
Net exports of goods and services	0.0	-0.5	-3.8	1.0	3.0	-0.8	0.6	-7.3	-7.1
Exports of goods and services	1.1	-5.1	3.6	-3.2	2.6	1.9	19.9	-2.2	-4.0
Imports of goods and services	-1.1	4.7	-7.4	4.2	0.5	-2.7	-19.4	-5.1	-3.1
<i>Year-on-year change of the period average in %</i>									
Unit labor costs in the whole economy (nominal, per person)	4.3	7.7	2.3	6.4	10.2	3.4	1.5	4.2	0.3
Unit labor costs in manufacturing (nominal, per hour)	9.1	2.3	-2.5	-1.7	-5.4	-5.2	-14.6	5.5	5.8
Labor productivity in manufacturing (real, per hour)	-0.8	2.7	6.7	3.8	11.5	8.1	18.4	1.5	0.9
Labor costs in manufacturing (nominal, per hour)	8.2	4.7	4.5	2.0	5.4	2.5	1.1	7.1	6.8
Producer price index (PPI) in industry	1.7	0.6	6.2	0.1	1.1	2.3	3.3	8.1	11.0
Consumer price index (here: HICP)	2.6	3.3	3.3	3.5	2.7	2.2	2.8	3.3	5.0
EUR per 1 CZK, + = CZK appreciation	-0.1	-3.0	3.2	-2.8	-4.1	-1.7	5.6	3.8	5.1
<i>Period average levels</i>									
Unemployment rate (ILO definition, %, 15–64 years)	2.1	2.6	2.9	2.9	3.1	3.4	3.1	2.8	2.3
Employment rate (%, 15–64 years)	75.1	74.4	74.4	74.4	74.3	73.6	73.7	75.0	75.3
Key interest rate per annum (%)	1.9	0.8	0.9	0.3	0.3	0.3	0.3	0.7	2.4
CZK per 1 EUR	25.7	26.5	25.6	26.5	26.7	26.1	25.6	25.5	25.4
<i>Nominal year-on-year change in the period-end stock in %</i>									
Loans to the domestic nonbank private sector ¹	5.0	5.0	5.0	3.5	3.0	2.6	4.4	6.3	9.7
of which: loans to households	6.1	6.1	6.1	6.3	6.5	6.9	8.1	9.1	9.9
loans to nonbank corporations	3.8	3.8	3.8	0.1	-1.3	-2.7	-0.3	2.8	9.4
%									
Share of foreign currency loans in total loans to the non-bank private sector	14.5	14.6	14.6	16.1	14.6	14.8	13.5	14.1	14.6
Return on assets (banking sector)	1.2	0.6	0.8	0.6	0.6	0.5	0.7	0.8	0.8
Tier 1 capital ratio (banking sector)	20.8	23.6	22.8	22.6	23.6	23.4	23.9	23.2	22.8
NPL ratio (banking sector)	2.4	2.6	2.3	2.2	2.6	2.6	2.6	2.5	2.3
%									
General government revenues	41.4	41.6	40.5	..	..	..	..	..	..
General government expenditures	41.1	47.3	46.4	..	..	..	..	..	..
General government balance	0.3	-5.8	-5.9	..	..	..	..	..	..
Primary balance	1.0	-4.9	-5.2	..	..	..	..	..	..
Gross public debt	30.1	37.7	41.9	..	..	..	..	..	..
%									
Debt of nonfinancial corporations (nonconsolidated)	55.1	56.4	53.2	..	..	..	..	..	..
Debt of households and NPISHs ² (nonconsolidated)	31.7	34.1	35.6	..	..	..	..	..	..
%									
<i>% of GDP (based on EUR), period total</i>									
Goods balance	4.1	5.0	1.2	5.4	7.3	6.6	2.7	-2.0	-1.7
Services balance	1.8	1.8	1.8	2.1	0.6	1.7	2.1	1.9	1.6
Primary income	-5.0	-2.7	-3.3	-1.0	-6.7	-1.9	-3.6	-4.7	-2.9
Secondary income	-0.6	-0.5	-0.5	-0.7	-0.1	-1.6	0.2	-0.5	-0.2
Current account balance	0.3	3.6	-0.9	5.8	1.2	4.8	1.3	-5.3	-3.3
Capital account balance	0.4	1.3	1.6	1.3	0.8	-0.1	1.6	2.4	2.1
Foreign direct investment (net) ³	-2.4	-1.3	-0.1	1.5	-4.4	2.4	-2.1	-0.7	0.3
%									
<i>% of GDP (rolling four-quarter GDP, based on EUR), end of period</i>									
Gross external debt	76.5	76.1	75.3	73.6	76.1	76.7	73.7	73.8	75.3
Gross official reserves (excluding gold)	59.0	62.7	64.0	61.5	62.7	64.7	62.2	62.8	64.0
<i>Months of imports of goods and services</i>									
Gross official reserves (excluding gold)	10.4	11.7	11.0	11.5	11.7	12.0	11.1	11.0	11.0
<i>EUR million, period total</i>									
GDP at current prices	225,579	215,272	238,824	55,130	56,823	53,249	60,103	61,752	63,721

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: economy bounced back in 2021 but inflation is soaring

Economic growth bounced back to 7.1% year on year in 2021. Both domestic consumption and investment growth accelerated in the second half of 2021, though the latter only did so because of a weak base. Economic expansion was underpinned by the strengthening of economic sentiment, improving export prospects, rising capacity utilization in industry, improving consumer confidence, fiscal measures (e.g. pension hike, investment spending, regional development outlays) and prospects for more fiscal support in the 2022 budget. But the sharp acceleration of inflation started to eat into real wages even though nominal wages were growing at a double-digit rate; the negative effect on consumption was mitigated by healthy employment growth. The strengthening of domestic demand was accompanied by a negative contribution of net exports to growth in the second half of 2021.

Hungary's budget deficit amounted to 6.8% of GDP in 2021, down from 7.8% in 2020. The deficit was particularly driven up during the last quarter of 2021 as, for example, extra pension payments were paid out. In mid-December 2021, the government decided to indefinitely postpone investment projects worth nearly 2% of GDP to increase fiscal reserves and lower the 2022 budget deficit target from 5.9% to 4.9% of GDP. At the same time, the 2022 budget foresees substantial expenditure increases and tax cuts, while rising energy prices (with household energy price caps having been in place for years), expected losses of the central bank (which need to be covered by the budget) and higher debt-servicing costs will add to the expected budget deficit. In mid-February 2022, the European Court of Justice confirmed the validity of the "rule of law" mechanism for the suspension of EU funds. Since no progress on this issue seems to have been achieved in negotiations with the EU Commission, the approval of funds to Hungary under the Recovery and Resilience Facility (RRF) is still pending.

Inflation kept accelerating and reached 8.4% in February 2022. Inflation excluding energy and unprocessed food prices also accelerated from 4.1% in August 2021 to 7.8% in February 2022. In response, the Hungarian central bank (MNB) continued its rate hiking cycle into 2022. Between September 2021 and March 2022, it raised the base rate in monthly steps from 1.65% to 4.4% to anchor medium-term inflation expectations. To stabilize short-term financial market developments, starting in late November 2021, it decoupled the interest rate on its one-week deposit facility from the base rate. This "operative" policy rate reached 6.15% in early April 2022 in reaction to the forint temporarily falling to historic lows as a result of the war in Ukraine. In order to additionally tighten monetary conditions, MNB also gradually phased out its quantitative easing programs.

In late December 2021, the government fixed the interest rate on households' mortgage loans at their end-October 2021 level for the first half of 2022. The measure will cost banks an estimated 3.7% of 2021 consolidated after-tax profit and may limit the contractionary effect of the central bank's rate hikes. On the other hand, the government has introduced temporary price caps on selected fuel and basic food prices, which – together with the long-standing fixation of household energy prices – MNB estimates to have taken around 4.2 percentage points off the headline inflation rate in March 2022.

Following the ECB's and the SRB's decision to shut down Sberbank Europe AG, MNB revoked the operating license of the Hungarian Sberbank subsidiary, ordered its winding-up and provided the deposit insurance fund with a short-term bridge loan and a repo deal. According to data at end-2020, Sberbank accounted for around 1% of total assets and 1.2% of total deposits of the banking sector.

Table 7

Main economic indicators: Hungary

	2019	2020	2021	Q3 20	Q4 20	Q1 21	Q2 21	Q3 21	Q4 21
<i>Year-on-year change of the period total in %</i>									
GDP at constant prices	4.6	-4.5	7.1	-4.1	-2.7	-1.9	17.8	6.2	7.1
Private consumption	5.0	-1.2	4.6	-1.5	-2.5	-5.5	9.5	6.5	8.0
Public consumption	4.3	-0.9	3.7	-0.3	-1.4	7.5	3.0	3.6	1.1
Gross fixed capital formation	12.8	-7.0	5.9	-13.4	1.6	-3.0	9.3	11.5	3.2
Exports of goods and services	5.4	-6.1	10.3	-3.9	3.4	5.6	36.1	2.8	2.6
Imports of goods and services	8.2	-4.0	8.7	-4.8	2.3	2.5	26.7	7.0	2.0
<i>Contribution to GDP growth in percentage points</i>									
Domestic demand	6.5	-2.6	5.7	-4.8	-3.7	-4.8	11.6	9.2	6.6
Net exports of goods and services	-2.0	-1.8	1.4	0.7	0.9	2.7	6.3	-3.0	0.5
Exports of goods and services	4.5	-5.0	8.1	-3.1	2.6	4.8	25.7	2.2	2.1
Imports of goods and services	-6.5	3.1	-6.7	3.8	-1.7	-2.0	-19.4	-5.3	-1.6
<i>Year-on-year change of the period average in %</i>									
Unit labor costs in the whole economy (nominal, per person)	3.4	6.7	4.0	5.8	5.7	9.2	-2.5	4.5	5.2
Unit labor costs in manufacturing (nominal, per hour)	7.8	7.6	-0.2	2.7	-0.1	-0.6	-15.5	7.5	10.6
Labor productivity in manufacturing (real, per hour)	4.3	-0.2	5.9	2.4	6.1	4.7	20.8	0.4	0.4
Labor costs in manufacturing (nominal, per hour)	12.5	6.8	6.4	5.2	6.0	4.0	2.1	8.0	11.1
Producer price index (PPI) in industry	2.2	4.3	13.5	4.0	6.1	8.0	10.9	14.4	20.7
Consumer price index (here: HICP)	3.4	3.4	5.2	3.8	2.9	3.3	5.3	5.0	7.1
EUR per 1 HUF, + = HUF appreciation	-2.0	-7.4	-2.0	-7.2	-7.9	-6.1	-0.8	-0.1	-1.0
<i>Period average levels</i>									
Unemployment rate (ILO definition, %, 15–64 years)	3.5	4.3	4.1	4.5	4.2	4.5	4.1	3.9	3.7
Employment rate (%, 15–64 years)	70.1	69.7	73.1	70.2	70.2	71.8	72.8	73.6	74.1
Key interest rate per annum (%)	0.9	0.8	1.1	0.6	0.6	0.6	0.6	1.3	2.0
HUF per 1 EUR	325.2	351.2	358.5	353.6	360.5	361.0	354.7	353.9	364.3
<i>Nominal year-on-year change in the period-end stock in %</i>									
Loans to the domestic nonbank private sector ¹	12.5	12.5	12.5	10.3	11.0	8.7	10.5	11.6	12.0
of which: loans to households	15.5	15.5	15.5	14.9	14.1	13.4	15.5	16.1	15.0
loans to nonbank corporations	10.4	10.4	10.4	7.1	8.8	5.4	6.8	8.3	9.8
<i>%</i>									
Share of foreign currency loans in total loans to the non-bank private sector	23.8	22.3	20.3	23.4	22.3	21.9	20.0	20.3	20.3
Return on assets (banking sector)	1.2	0.4	1.0	0.5	0.4	1.1	1.3	1.2	1.0
Tier 1 capital ratio (banking sector)	16.4	17.4	17.1	15.8	17.4	17.3	17.2	16.6	17.1
NPL ratio (banking sector)	2.6	2.4	1.7	2.8	2.4	2.3	2.2	1.8	1.7
<i>% of GDP</i>									
General government revenues	43.9	43.4	41.1	..	..	..	..	..	..
General government expenditures	46.0	51.2	47.9	..	..	..	..	..	..
General government balance	-2.1	-7.8	-6.8	..	..	..	..	..	..
Primary balance	0.1	-5.5	-4.5	..	..	..	..	..	..
Gross public debt	65.5	79.6	76.8	..	..	..	..	..	..
<i>% of GDP</i>									
Debt of nonfinancial corporations (nonconsolidated)	62.7	67.6	72.2	..	..	..	..	..	..
Debt of households and NPISHs ² (nonconsolidated)	18.2	20.0	20.1	..	..	..	..	..	..
<i>% of GDP (based on EUR), period total</i>									
Goods balance	-2.5	-0.9	-2.5	-0.2	0.0	3.7	-1.3	-6.0	-4.9
Services balance	4.9	3.0	3.2	4.1	2.2	2.1	3.6	4.2	2.9
Primary income	-2.5	-2.6	-3.2	-2.8	-2.5	-4.0	-2.9	-3.3	-2.9
Secondary income	-0.5	-0.6	-0.6	-0.2	-0.3	-0.8	-0.7	-0.3	-0.7
Current account balance	-0.7	-1.1	-3.1	0.9	-0.5	1.2	-1.3	-5.4	-5.7
Capital account balance	1.8	2.0	2.5	2.1	2.1	2.0	1.6	1.8	4.3
Foreign direct investment (net) ³	-0.7	-1.7	-1.4	-1.7	0.5	-0.1	0.3	-1.8	-3.5
<i>% of GDP (rolling four-quarter GDP, based on EUR), end of period</i>									
Gross external debt	72.6	80.1	82.3	80.1	80.1	85.9	83.2	85.5	82.3
Gross official reserves (excluding gold)	18.5	23.4	21.7	22.0	23.4	20.2	18.2	22.6	21.7
<i>Months of imports of goods and services</i>									
Gross official reserves (excluding gold)	2.8	3.6	3.2	3.4	3.6	3.1	2.8	3.4	3.2
<i>EUR million, period total</i>									
GDP at current prices	145,983	137,300	154,121	35,099	38,334	32,121	38,838	39,813	43,349

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).

8 Poland: further rate hikes to ensure credibility and avoid second-round effects

Poland's GDP grew by 5.7% in 2021 as year-on-year growth remained high in the second half of 2021 when quarter-on-quarter growth averaged 2%, far above average quarter-on-quarter growth in the two years before the pandemic. While both domestic and foreign demand contributed substantially to growth throughout the year, domestic demand grew at a faster pace, causing import growth to outpace export growth. Thus, 2021 saw a negative contribution of net exports to annual GDP growth that increased up to the fourth quarter. Correspondingly, the surplus in the goods and services balance melted down considerably to 2.1% in the fourth quarter of 2021, almost exclusively due to the trade balance, and in parallel, the current account surplus turned into a deficit of 2.9% of GDP. The capital account surplus (thanks to EU funds) declined somewhat, while net FDI inflows rose in full-year terms. Within domestic demand, both private consumption and gross fixed capital formation showed strong average growth in the second half of 2021. In addition, the accelerated buildup of inventory lifted growth substantially. These developments reflected demand that had been pent up because of the pandemic, rising employment and substantially improved consumer and business confidence. Already in late 2021, however, the military buildup by the Russian leadership and the intensifying tensions started to affect consumer and business confidence indicators in Poland. The especially strong real growth of retail sales in early 2022 may have been related not only to base effects but also to precautionary motives. At the same time, real wage growth slowed down moderately in the review period.

In manufacturing, nominal unit labor cost (ULC) in Poland was unchanged in the second half of 2021 against the previous year, while nominal ULC was slightly higher in the euro area. The exchange rate further enhanced Poland's external competitiveness, as the złoty's value in euro was lower than a year earlier in that period. Thereafter, the złoty depreciated against the euro by about 4.5% in March in the wake of Russia's invasion of Ukraine.

According to HICP (and national CPI) definition, annual headline inflation rose from 4.1% (4.4%) in June to 8.0% (8.6%) in December and further to 10.2% (11.0%) in March. In parallel, core inflation increased from 3.1% (3.5%) in June to 7.5% (6.9%) in March, also markedly accelerating in month-on-month terms in early 2022. Services continued to be the main inflation driver within core inflation. The Polish central bank's Monetary Policy Council (MPC), pursuing a CPI inflation target of $2.5\% \pm 1$ percentage point, hiked its main policy rate in monthly steps from October to April, bringing it to 4.5%, having kept it at 0.1% during the pandemic. In mid-November 2021, the MPC conducted its last outright purchases of government(-guaranteed) debt securities in the secondary market for the time being. In April 2022, the MPC stated that its recent rate hike served to reduce the persisting risk of inflation running above the target in the medium term and to curb inflation expectations. Further decisions would depend on incoming information, including the impact of the Russian military aggression against Ukraine. The MPC will take all necessary actions to ensure macroeconomic and financial stability and it may intervene in the foreign exchange market, in particular to limit fluctuations of the złoty inconsistent with the direction of monetary policy.

Regarding fiscal policy, the general government deficit declined from 6.9% of GDP in 2020 to 1.9% in 2021, benefiting from higher nominal growth. General government debt declined from 57.1% of GDP in 2020 to 53.8% of GDP in 2021.

Table 8

Main economic indicators: Poland

	2019	2020	2021	Q3 20	Q4 20	Q1 21	Q2 21	Q3 21	Q4 21
<i>Year-on-year change of the period total in %</i>									
GDP at constant prices	4.7	-2.5	5.7	-1.7	-2.6	-1.2	10.8	5.6	7.7
Private consumption	3.9	-2.9	6.0	0.3	-3.0	-0.2	13.2	4.6	7.7
Public consumption	6.5	4.9	1.1	3.6	8.2	1.1	2.7	1.4	-0.3
Gross fixed capital formation	6.1	-9.0	7.9	-7.0	-15.3	1.3	5.2	9.1	12.3
Exports of goods and services	5.2	0.1	12.0	2.2	8.2	6.8	29.0	8.6	6.7
Imports of goods and services	3.0	-1.2	17.4	0.7	8.5	10.8	34.4	14.9	13.1
<i>Contribution to GDP growth in percentage points</i>									
Domestic demand	3.5	-3.2	7.6	-2.6	-2.8	0.3	11.3	8.3	10.4
Net exports of goods and services	1.3	0.7	-1.9	0.8	0.3	-1.6	-0.3	-2.7	-2.7
Exports of goods and services	2.9	0.1	6.7	1.2	4.2	4.0	15.3	4.9	3.8
Imports of goods and services	-1.6	0.6	-8.6	-0.4	-3.9	-5.5	-15.6	-7.6	-6.5
<i>Year-on-year change of the period average in %</i>									
Unit labor costs in the whole economy (nominal, per person)	2.4	6.3	1.9	4.3	7.1	7.4	-0.9	1.5	-0.2
Unit labor costs in manufacturing (nominal, per hour)	4.2	4.9	-4.6	-1.1	-0.8	-4.1	-13.0	0.6	-0.7
Labor productivity in manufacturing (real, per hour)	2.4	1.6	12.9	4.9	7.2	10.2	23.0	9.2	10.2
Labor costs in manufacturing (nominal, per hour)	6.7	6.2	8.0	3.7	6.4	5.7	7.1	9.8	9.4
Producer price index (PPI) in industry	1.4	-0.5	8.1	-1.1	-0.1	2.6	6.6	9.6	13.6
Consumer price index (here: HICP)	2.1	3.7	5.2	3.7	3.6	3.9	4.6	5.1	7.3
EUR per 1 PLN, + = PLN appreciation	-0.9	-3.3	-2.6	-2.7	-4.9	-4.9	-0.6	-2.8	-2.4
<i>Period average levels</i>									
Unemployment rate (ILO definition, %, 15–64 years)	3.4	3.2	3.4	3.3	3.2	4.1	3.6	3.1	2.9
Employment rate (%, 15–64 years)	68.2	68.7	70.3	69.0	69.4	69.2	70.0	71.0	71.0
Key interest rate per annum (%)	1.5	0.5	0.3	0.1	0.1	0.1	0.1	0.1	1.1
PLN per 1 EUR	4.3	4.4	4.6	4.4	4.5	4.5	4.5	4.6	4.6
<i>Nominal year-on-year change in the period-end stock in %</i>									
Loans to the domestic nonbank private sector ¹	5.0	5.0	5.0	-0.8	-1.2	-2.2	0.3	2.6	5.1
of which: loans to households	5.6	5.6	5.6	2.1	1.6	1.3	3.0	4.0	4.3
loans to nonbank corporations	4.1	4.1	4.1	-5.6	-6.0	-8.0	-4.4	-0.1	6.5
<i>%</i>									
Share of foreign currency loans in total loans to the non-bank private sector	19.2	19.6	17.5	19.6	19.6	19.3	18.1	18.0	17.5
Return on assets (banking sector)	0.7	0.0	0.4	0.4	0.0	0.4	0.5	0.5	0.4
Tier 1 capital ratio (banking sector)	17.0	18.5	17.3	18.5	18.5	18.6	18.5	18.0	17.3
NPL ratio (banking sector)	6.6	7.0	5.7	7.0	7.0	6.7	6.5	6.3	5.7
<i>% of GDP</i>									
General government revenues	41.0	41.3	42.3	..	..	..	..	..	..
General government expenditures	41.8	48.2	44.2	..	..	..	..	..	..
General government balance	-0.7	-6.9	-1.9	..	..	..	..	..	..
Primary balance	0.6	-5.6	-0.8	..	..	..	..	..	..
Gross public debt	45.6	57.1	53.8	..	..	..	..	..	..
<i>% of GDP</i>									
Debt of nonfinancial corporations (nonconsolidated)	44.5	44.7	43.3	..	..	..	..	..	..
Debt of households and NPISHs ² (nonconsolidated)	34.7	33.9	32.4	..	..	..	..	..	..
<i>% of GDP (based on EUR), period total</i>									
Goods balance	0.3	2.4	-0.1	2.4	3.3	2.1	1.6	-1.5	-2.0
Services balance	4.5	4.4	4.6	4.3	4.0	4.9	5.0	4.6	4.1
Primary income	-4.0	-3.5	-4.5	-4.6	-4.1	-3.5	-5.1	-5.3	-3.9
Secondary income	-0.3	-0.3	-0.7	-0.2	-0.7	-1.0	-0.5	-0.2	-1.0
Current account balance	0.5	2.9	-0.6	1.9	2.5	2.5	1.0	-2.4	-2.9
Capital account balance	2.0	2.3	1.6	1.4	3.3	0.6	2.2	2.0	1.6
Foreign direct investment (net) ³	-1.9	-2.1	-3.7	-1.7	-0.6	-6.0	-1.8	-5.4	-1.8
<i>% of GDP (rolling four-quarter GDP, based on EUR), end of period</i>									
Gross external debt	59.2	58.4	56.2	57.2	58.4	59.0	57.2	57.4	56.2
Gross official reserves (excluding gold)	19.6	21.8	23.6	20.3	21.8	23.7	22.7	24.1	23.6
<i>Months of imports of goods and services</i>									
Gross official reserves (excluding gold)	4.6	5.3	5.0	5.0	5.3	5.7	5.1	5.3	5.0
<i>EUR million, period total</i>									
GDP at current prices	533,674	523,576	569,951	131,573	144,956	129,210	136,237	141,798	162,706

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).

9 Romania: growth weakens as inflation rises markedly, twin deficits persist

Romania's GDP grew by 6% in 2021 after shrinking by 3.8% in 2020. Yet, after a steady and relatively quick economic recovery in the first half of 2021, year-on-year GDP growth decelerated markedly in the second half of the year. A noticeable deterioration in quarter-on-quarter growth was also seen from the third to the final quarter of 2021.

After showing strong growth in the third quarter, agricultural production contracted in the final quarter of 2021. Moreover, the growth contribution coming from changes in inventories turned negative in the final quarter. Private consumption, the main growth pillar since mid-2020, remained vivid in the third quarter, largely due to the release of pent-up demand and self-consumption of agricultural products. However, as households' purchasing power was more and more eroded by rising inflation and as some COVID-19 restrictions were tightened again, private consumption growth lost momentum in quarter-on-quarter terms in the final quarter. Even though domestic credit growth accelerated in the second half of 2021 on the back of state guarantee programs, gross fixed capital formation contracted in the same period (in terms of both year-on-year and quarter-quarter growth). Though the export-oriented automotive sector was still constrained by supply chain bottlenecks, net exports delivered a slightly smaller negative contribution to growth in the second half of the year.

Nevertheless, the current account deficit did not improve and hence ended up at 7% of GDP for the full-year 2021. Compared to 2020, also the net borrowing position from the current and capital account deteriorated markedly, though the capital account surplus rose slightly. Net FDI inflows increased somewhat in 2021 and accounted for 63% of this position (compared to 43% in 2020). In contrast to the first half of 2021, unit labor costs in the manufacturing sector rose considerably in the second half of the year. At the same time, the Romanian leu weakened only slightly vis-à-vis the euro.

The general government budget deficit amounted to 6.7% of GDP in cash terms in 2021 (i.e. 7.1% of GDP in ESA terms). The general government budget plan for 2022 was based on a GDP forecast of 4.6% and envisages a deficit of 5.8% of GDP in cash terms (i.e. 6.2% of GDP in ESA terms). Public wages and compensations were frozen at the end-2021 level for all state employees except for those working in social assistance, healthcare and education. Within the framework of the excessive deficit procedure, Romania should put an end to the excessive deficit situation by 2024 at the latest and gradually reduce its deficit until then. It is worth noting that the European Commission disbursed EUR 1.8 billion to Romania in pre-financing at end-2021 (equivalent to 13% of the country's grant allocation under the Recovery and Resilience Facility). Against the background of rising energy prices, the government introduced a support scheme (including price caps for electricity and natural gas as well as subsidies) mainly for households and small companies in November 2021. The scheme was modified earlier this year and extended until end-March 2023.

Inflation moved further away from the National Bank of Romania's (NBR) upper bound of the inflation target variation band of $2.5\% \pm 1$ percentage point. Headline consumer price inflation reached 7.9% in February, while core inflation went up to 5.7%. From November 2021, the NBR hiked its key policy rate to 3% – in four steps by a total of 150 basis points.

Table 9

Main economic indicators: Romania

	2019	2020	2021	Q3 20	Q4 20	Q1 21	Q2 21	Q3 21	Q4 21
<i>Year-on-year change of the period total in %</i>									
GDP at constant prices	4.2	-3.8	6.0	-5.4	-1.5	-0.1	15.4	6.9	2.4
Private consumption	3.8	-4.8	7.6	-4.2	-6.1	0.9	11.7	9.0	9.4
Public consumption	8.0	1.5	5.3	-2.6	1.2	-4.3	2.1	-2.4	12.5
Gross fixed capital formation	12.7	4.4	2.5	3.2	3.5	11.3	12.9	-1.3	-6.0
Exports of goods and services	4.6	-9.3	12.8	-5.0	-1.5	1.0	41.7	7.2	7.8
Imports of goods and services	8.8	-5.9	15.0	-3.8	1.7	3.1	42.0	11.2	8.2
<i>Contribution to GDP growth in percentage points</i>									
Domestic demand	5.8	-2.3	7.3	-4.7	0.3	3.0	15.1	8.7	3.3
Net exports of goods and services	-1.6	-1.5	-1.4	-1.0	-1.7	-2.2	-2.2	-1.4	-0.4
Exports of goods and services	2.2	-3.8	4.7	-2.5	-1.1	0.3	13.2	2.9	3.0
Imports of goods and services	-3.9	2.3	-6.1	1.5	-0.6	-2.5	-15.3	-4.3	-3.4
<i>Year-on-year change of the period average in %</i>									
Unit labor costs in the whole economy (nominal, per person)	6.5	4.5	-9.1	7.1	3.3	-5.7	-13.7	-10.6	-6.2
Unit labor costs in manufacturing (nominal, per hour)	13.3	7.6	4.2	3.2	1.8	0.5	-4.9	9.3	12.6
Labor productivity in manufacturing (real, per hour)	-0.8	0.4	3.1	1.8	6.8	5.4	11.6	0.3	-4.0
Labor costs in manufacturing (nominal, per hour)	12.5	8.0	7.5	5.1	8.7	5.9	6.1	9.6	8.1
Producer price index (PPI) in industry	4.0	0.0	14.9	-0.8	-0.5	2.3	10.1	16.4	30.8
Consumer price index (here: HICP)	3.9	2.3	4.1	2.4	1.8	2.3	3.1	4.3	6.6
EUR per 1 RON, + = RON appreciation	-1.9	-1.9	-1.7	-2.3	-2.1	-1.7	-1.7	-1.8	-1.6
<i>Period average levels</i>									
Unemployment rate (ILO definition, %, 15–64 years)	4.0	5.2	5.6	5.4	5.4	6.1	5.1	5.3	5.9
Employment rate (%, 15–64 years)	65.8	65.6	61.9	66.0	65.8	60.8	62.4	62.3	62.1
Key interest rate per annum (%)	2.5	1.9	1.4	1.6	1.5	1.3	1.3	1.3	1.6
RON per 1 EUR	4.7	4.8	4.9	4.8	4.9	4.9	4.9	4.9	4.9
<i>Nominal year-on-year change in the period-end stock in %</i>									
Loans to the domestic nonbank private sector ¹	5.5	5.5	5.5	3.2	4.8	6.2	10.6	12.7	14.2
of which: loans to households	6.7	6.7	6.7	4.8	4.2	4.6	7.5	8.8	9.3
loans to nonbank corporations	4.2	4.2	4.2	1.4	5.5	7.9	14.3	17.3	19.8
<i>%</i>									
Share of foreign currency loans in total loans to the non-bank private sector	32.4	30.5	27.6	31.4	30.5	29.9	28.9	28.4	27.6
Return on assets (banking sector)	1.4	1.0	1.4	1.2	1.0	1.3	1.4	1.5	1.4
Tier 1 capital ratio (banking sector)	20.1	23.2	19.8	20.8	23.2	22.7	22.1	21.4	19.8
NPL ratio (banking sector)	4.1	3.8	3.4	4.1	3.8	3.9	3.8	3.7	3.4
<i>% of GDP</i>									
General government revenues	31.9	32.7	32.8	..	..	..	..	..	..
General government expenditures	36.2	42.0	39.9	..	..	..	..	..	..
General government balance	-4.3	-9.3	-7.1	..	..	..	..	..	..
Primary balance	-3.2	-7.9	-5.7	..	..	..	..	..	..
Gross public debt	35.3	47.2	48.8	..	..	..	..	..	..
<i>% of GDP</i>									
Debt of nonfinancial corporations (nonconsolidated)	32.2	33.2	32.4	..	..	..	..	..	..
Debt of households and NPISHs ² (nonconsolidated)	15.3	16.1	15.7	..	..	..	..	..	..
<i>% of GDP (based on EUR), period total</i>									
Goods balance	-8.0	-8.7	-9.6	-7.9	-8.0	-10.9	-9.3	-9.5	-9.3
Services balance	3.9	4.3	4.0	4.2	3.8	4.6	3.8	3.6	4.1
Primary income	-1.4	-1.6	-1.7	-3.5	-1.5	0.3	-3.1	-2.8	-1.1
Secondary income	0.7	0.9	0.4	0.8	1.1	0.1	0.6	0.8	0.2
Current account balance	-4.9	-5.0	-7.0	-6.4	-4.7	-5.9	-8.0	-7.8	-6.2
Capital account balance	1.3	1.9	2.2	1.0	2.4	1.1	1.4	1.5	4.2
Foreign direct investment (net) ³	-2.2	-1.3	-3.0	-1.1	-1.9	-4.5	-2.8	-4.2	-1.3
<i>% of GDP (rolling four-quarter GDP, based on EUR), end of period</i>									
Gross external debt	49.1	58.0	56.1	54.1	58.0	56.2	56.3	56.9	56.1
Gross official reserves (excluding gold)	14.7	17.1	16.9	14.9	17.1	16.2	16.1	17.5	16.9
<i>Months of imports of goods and services</i>									
Gross official reserves (excluding gold)	4.0	4.9	4.3	4.3	4.9	4.7	4.4	4.7	4.3
<i>EUR million, period total</i>									
GDP at current prices	223,085	218,706	239,991	58,911	67,395	46,743	55,871	65,172	72,205

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 Turkey: unorthodox policies show strong impact on exchange rate and inflation

In 2021, Turkey's GDP growth accelerated strongly to 11%. Year-on-year growth was high in the second half of 2021, when quarter-on-quarter growth averaged more than 2%, considerably above the average in the two years before the pandemic. Published figures show that both domestic demand (excluding inventory change) and foreign demand contributed substantially to growth in the second half of 2021, and that export growth outpaced import growth, implying a substantial growth contribution of net exports. These contributions add up to year-on-year GDP growth of about 15% in the second half of 2021, as opposed to published GDP growth of about 8% in that period. The implied large negative contribution of inventory change relates mainly to the inventory of nonmonetary gold, the import of which declined sharply due to regulatory measures. Nonmonetary gold imports form part of imports so that their decline helps explain low import growth rates and strong net exports, while the counterpart of (gold-related) inventory changes does not enter published domestic demand. Goods and services trade was almost balanced in full-year 2021 but slightly positive in the second half of 2021, and the current account deficit came in below 2% of GDP in full-year 2021 and roughly balanced in the second half of 2021. The improvement on a year earlier resulted almost exclusively from the decline of gold imports. Net FDI inflows remained meager at close to 1% of GDP. Domestic demand growth in the review period stemmed almost only from private consumption, while fixed investment even shrank despite the support provided by state bank credit. In late 2021 and early 2022, consumer and confidence indicators clearly deteriorated in the wake of the military buildup by the Russian leadership.

Official foreign currency reserves declined by 7% in EUR terms and by 12% in USD terms from end-August 2021 to end-February 2022 when they covered 2.7 months of imports and exceeded the scheduled off-balance and public sector's on-balance net drains due in three months only moderately. These off-balance sheet liabilities consist primarily in foreign currency swaps that have been incurred to a large extent vis-à-vis domestic commercial banks. The latter have been prohibited to enter swaps abroad for closing their open foreign currency position since 2018. Annual headline inflation accelerated moderately until November. After the Turkish central bank cut the key interest rate by 1 percentage point to 18% in September, further decreases amounted to 2 percentage points in October and 1 percentage point each in November and December so that the key rate stood at 14% during the first quarter of 2022, implying a large, negative real key rate. Reserve requirements, however, were tightened in early November 2021. In response to this unorthodox interest rate policy and accompanying statements by the Turkish president, the lira depreciated sharply from mid-November to mid-December by about 43% in EUR terms. This led to an immediate jump in inflation, resulting in annual figures of 61.1% (headline) and 51.8% (core) in March 2022. Authorities reacted by introducing measures, like budget-financed exchange rate-linked deposit schemes, to boost "liraization" and decrease both nonmonetary gold deposits and foreign exchange deposits and, hence, central bank's contingent foreign exchange liabilities. In addition, since January 1, exporters have been obliged to convert 25% of their foreign exchange earnings into lira. So far, these policies have been partially successful, causing the lira to re-appreciate somewhat and stabilize at about lira 16 per euro.

Table 10

Main economic indicators: Turkey

	2019	2020	2021	Q3 20	Q4 20	Q1 21	Q2 21	Q3 21	Q4 21
<i>Year-on-year change of the period total in %</i>									
GDP at constant prices	0.9	1.8	11.0	6.3	6.2	7.3	21.9	7.5	9.1
Private consumption	1.5	3.2	15.1	8.5	7.9	7.0	23.3	9.1	21.3
Public consumption	4.1	2.2	2.1	2.0	3.7	-0.1	3.2	7.9	-1.9
Gross fixed capital formation	-12.4	7.2	6.4	22.6	11.7	12.4	20.8	-1.9	-0.8
Exports of goods and services	4.6	-14.8	24.9	-21.4	0.5	3.9	60.9	25.5	20.7
Imports of goods and services	-5.4	7.6	2.0	16.4	3.0	-1.0	19.9	-8.9	2.6
<i>Contribution to GDP growth in percentage points</i>									
Domestic demand	-2.1	4.0	10.9	10.4	8.1	7.2	19.9	6.0	11.9
Net exports of goods and services	2.5	-5.7	5.1	-9.6	-0.7	1.2	7.1	7.4	4.3
Exports of goods and services	1.2	-4.0	5.6	-5.9	0.1	1.0	11.5	5.3	5.0
Imports of goods and services	1.3	-1.8	-0.5	-3.7	-0.8	0.2	-4.4	2.2	-0.7
<i>Year-on-year change of the period average in %</i>									
Unit labor costs in the whole economy (nominal, per person)	..	..	..	..	..	..	..	..	..
Unit labor costs in manufacturing (nominal, per hour)	21.9	10.0	19.1	3.6	7.0	9.0	13.2	29.2	26.7
Labor productivity in manufacturing (real, per hour)	1.7	8.3	-0.3	7.0	8.2	4.4	-6.9	-1.1	3.1
Labor costs in manufacturing (nominal, per hour)	23.8	18.9	19.0	10.8	15.8	13.8	5.4	27.8	30.6
Producer price index (PPI) in industry	17.6	12.2	43.9	11.4	22.2	28.2	38.8	44.8	60.6
Consumer price index (here: HICP)	15.2	12.3	19.6	11.8	13.5	15.6	17.1	19.2	25.9
EUR per 1 TRY, + = TRY appreciation	-10.4	-21.0	-23.2	-25.5	-31.8	-24.3	-25.2	-15.9	-26.4
<i>Period average levels</i>									
Unemployment rate (ILO definition, %, 15–64 years)	14.0	13.4	12.2	13.4	13.0	13.8	12.0	11.9	11.2
Employment rate (%, 15–64 years)	50.3	47.5	50.3	48.8	47.7	48.0	49.7	51.6	51.7
Key interest rate per annum (%)	20.6	10.2	17.8	8.4	12.5	17.3	19.0	18.9	15.9
TRY per 1 EUR	6.4	8.0	10.5	8.5	9.4	8.9	10.1	10.1	12.8
<i>Nominal year-on-year change in the period-end stock in %</i>									
Loans to the domestic nonbank private sector ¹	11.0	36.3	36.1	41.3	36.3	31.9	20.7	14.5	36.1
of which: loans to households	15.9	40.1	20.4	48.4	40.1	35.4	24.9	15.9	20.4
loans to nonbank corporations	9.5	35.0	41.9	39.1	35.0	31.3	20.1	14.7	41.9
<i>%</i>									
Share of foreign currency loans in total loans to the nonbank private sector	35.2	30.9	38.1	32.0	30.9	32.4	32.7	32.2	38.1
Return on assets (banking sector)	1.1	1.0	1.3	1.2	1.0	1.0	1.0	1.1	1.3
Tier 1 capital ratio (banking sector)	13.9	14.1	13.2	14.5	14.1	13.4	13.2	12.9	13.2
NPL ratio (banking sector)	5.7	4.4	3.4	4.4	4.4	4.1	3.9	3.8	3.4
<i>% of GDP</i>									
General government revenues	..	..	..	..	..	..	..	..	..
General government expenditures	..	..	..	..	..	..	..	..	..
General government balance	-4.4	-4.7	-3.6	..	..	..	..	..	..
Primary balance	..	..	..	..	..	..	..	..	..
Gross public debt	32.6	39.7	39.1	..	..	..	..	..	..
<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	-2.2	-5.3	-3.6	-5.7	-4.4	-3.7	-3.4	-3.2	-4.2
Services balance	4.5	1.6	3.3	2.0	1.9	1.2	1.9	5.4	4.0
Primary income	-1.7	-1.3	-1.5	-0.9	-1.2	-1.6	-1.9	-1.2	-1.3
Secondary income	0.1	0.0	0.1	0.2	0.1	0.1	0.2	0.1	0.0
Current account balance	0.7	-5.0	-1.7	-4.3	-3.7	-4.0	-3.2	1.2	-1.5
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	-0.8	-0.6	-0.9	-0.5	-0.6	-0.7	-0.7	-1.5	-0.8
<i>% of GDP (rolling four-quarter GDP, based on EUR), end of period</i>									
Gross external debt	52.3	51.3	51.7	50.1	51.3	53.8	53.1	53.3	51.7
Gross official reserves (excluding gold)	10.3	6.5	9.4	5.0	6.5	6.5	7.5	10.7	9.4
<i>Months of imports of goods and services</i>									
Gross official reserves (excluding gold)	4.1	2.4	3.2	1.9	2.4	2.4	2.7	3.8	3.2
<i>EUR million, period total</i>									
GDP at current prices	678,772	625,264	683,223	167,165	162,128	155,985	156,492	190,618	180,128

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: heading from strong recovery to strong recession triggered by Ukraine war and sanctions

Russia's GDP growth in 2021 of 4.7% more than offset the COVID-19-related shrinkage of 2020. Brisk growth in 2021 was driven by private consumption and fixed investment. Russia's economy in 2021 and early 2022 continued to benefit from the oil price upswing, helped by the global recovery and the OPEC+ agreement. Thus, the average Urals price rose by almost two-thirds to USD 69 per barrel in 2021 against 2020, and by even more in January to February 2022 (year on year). The jobless rate declined below the pre-pandemic level to 4.2% (ILO methodology) in December 2021 – the lowest post-Soviet level ever attained.

But Russia's invasion of Ukraine that started on February 24, 2022, and the unprecedented package of Western punitive sanctions that followed profoundly changed the playing field. Western sanctions include the freezing of assets of the Bank of Russia (CBR) and of some large Russian banks located in EU/G7 countries, the prohibition of funding in EU/G7 financial markets for the Russian sovereign, the CBR and several large Russian banks, the exclusion of some Russian banks (though not the largest, Sberbank, and the third-largest, Gazprombank) from the international payment system SWIFT, and additional export controls (on top of already existing controls) for high-tech products and aircraft parts and components. The G7 further decided to strip Russia of its “most favored nation” status in trade with G7 members. The USA furthermore imposed an embargo on purchases of oil, gas and gold, and the EU on purchases of coal from Russia. The freezing of almost half (about USD 300 billion) of the CBR's international reserves (a total of USD 643 billion or 38% of GDP in mid-February 2022) – the part that had been placed in Western countries' jurisdictions – is a particularly remarkable and unprecedented step.

In response, the CBR more than doubled its key rate to 20.0% on February 28 after it had already raised it in the previous six months (in four steps totaling a raise from 3% to 9.5%). Moreover, exporters were instructed to exchange 80% of their foreign currency proceeds into ruble, and some other capital controls were installed (e.g. retail foreign currency purchase surcharges). The CBR also intervened with the unfrozen part of its reserves, which, together with foreign currency refinancing and asset valuation changes, contributed to a decline of its unfrozen reserves by USD 39 billion (about 12%). The Moscow Exchange was closed for a couple of weeks, then opened again in late March, although a “temporary” ban was imposed on foreign firms and nonresidents selling Russian assets and/or repatriating proceeds. The ruble – no longer fully convertible – lost almost half of its value against the US dollar and the euro from mid-February to mid-March, then regained most of the lost terrain. In the course of April, it came close to the level prior to the invasion. In early April, the key policy rate was lowered by 300 basis points to 17%.

CPI inflation, which previously had been pushed by strong domestic demand and structural bottlenecks, grew from 7.4% in September 2021 to 9.2% in February 2022, and further accelerated to 16.7% in March (the highest level seen since 2015). Apart from the (limited) devaluation, the sharp rise is also due to supply chain disruptions and consumers' temporary hamster purchases of food and durables. The government invoked its own anti-inflation measures, including export restrictions on some commodities and products (e.g. sugar, grain, fertilizers).

In mid-March, the CBR stated that the Russian economy has entered a phase of far-reaching “structural transformation” toward more self-reliance and less dependence on Western imports, which will also modify the domestic price structure. Despite economic woes, GDP is estimated (Refinitiv Datastream, OECD) to have expanded by 5% to 6% in the first quarter of 2022.

In 2021, the federal budget had produced a surplus of 0.8% of GDP, buoyed by the recovery of the oil price. Fiscal surpluses continued in January and February 2022. As of end-January 2022, the assets of the National Welfare Fund – most of which constitute Russia’s now partially frozen international reserves – came to USD 175 billion. In reaction to the sanctions, the authorities have announced stepped-up social assistance payments, pension adjustments, tax breaks and financial support for enterprises. That said, a substantial anticyclical fiscal stimulus is reportedly not planned. The oil price rise contributed to boosting the country’s current account surplus to 6.9% of GDP in 2021. The first quarter of 2022 delivered another substantial current account surplus. Despite the partial freeze of reserves, debt service has so far been upheld.

Banks’ NPL ratio slightly declined over 2021 to 15.1% at end-2021. Following the imposition of massive Western sanctions, the CBR provided extensive regulatory lenience for the measurement of banks’ assets and encouraged banks to grant temporary credit holidays for distressed borrowers. In mid-March, the authorities introduced a credit subsidy program. While fully up-to-date monthly data are not yet available, mass bank runs following the plunge of the ruble have so far not materialized, possibly due to the sharp upward key rate adjustment which pushed up deposit rates, albeit rising inflation may soon put more pressure on banks.

Table 11

Main economic indicators: Russia

	2019	2020	2021	Q3 20	Q4 20	Q1 21	Q2 21	Q3 21	Q4 21
<i>Year-on-year change of the period total in %</i>									
GDP at constant prices	2.2	-2.7	4.7	-3.3	-1.3	-0.3	10.5	4.0	5.0
Private consumption	3.8	-7.3	9.5	-7.2	-4.9	-2.1	27.2	9.5	7.1
Public consumption	2.4	1.9	1.5	2.1	2.1	1.2	2.6	1.3	1.1
Gross fixed capital formation	1.0	-4.6	6.8	-9.0	-1.9	1.8	12.2	8.2	5.2
Exports of goods and services	0.7	-4.1	3.5	-7.9	-6.2	-0.6	-1.1	8.7	7.1
Imports of goods and services	3.1	-11.9	16.9	-19.9	-5.0	0.0	32.2	19.2	17.7
<i>Contribution to GDP growth in percentage points</i>									
Domestic demand	3.0	-4.7	7.4	-6.4	-1.0	-0.3	17.1	6.0	7.1
Net exports of goods and services	-0.5	1.7	-2.7	2.9	-0.4	-0.2	-6.9	-1.8	-2.4
Exports of goods and services	0.2	-1.1	0.9	-2.0	-1.6	-0.2	-0.3	2.1	1.7
Imports of goods and services	-0.7	2.9	-3.7	4.9	1.2	0.0	-6.5	-3.9	-4.1
<i>Year-on-year change of the period average in %</i>									
Unit labor costs in the whole economy (nominal, per person)	..	..	..	..	..	..	..	..	..
Unit labor costs in manufacturing (nominal, per hour)	3.9	7.6	4.3	8.7	5.6	7.3	1.0	4.2	5.1
Labor productivity in manufacturing (real, per hour)	3.7	-1.4	6.2	-2.8	0.3	0.0	10.7	6.8	7.3
Labor costs in manufacturing (nominal, per hour)	7.8	5.9	10.9	5.6	5.9	7.3	11.9	11.3	12.8
Producer price index (PPI) in industry	2.3	-3.7	24.6	-1.9	1.7	10.6	31.2	28.2	28.3
Consumer price index (here: HICP)	4.6	3.4	6.7	3.6	4.5	5.5	6.0	6.9	8.3
EUR per 1 RUB, + = RUB appreciation	2.2	-12.3	-5.3	-16.8	-22.4	-17.9	-11.0	-0.3	9.3
<i>Period average levels</i>									
Unemployment rate (ILO definition, %, 15–64 years)	4.6	5.8	4.8	6.3	6.1	5.6	5.0	4.4	4.3
Employment rate (%, 15–64 years)	..	..	..	..	..	..	..	..	..
Key interest rate per annum (%)	7.3	5.0	5.7	4.3	4.3	4.3	5.0	6.3	7.5
RUB per 1 EUR	72.5	82.6	87.2	86.3	90.9	89.7	89.5	86.6	83.1
<i>Nominal year-on-year change in the period-end stock in %</i>									
Loans to the domestic nonbank private sector ¹	10.6	10.6	10.6	9.9	9.6	9.4	12.7	13.9	15.3
of which: loans to households	19.0	19.0	19.0	12.9	12.9	13.5	20.3	20.7	22.1
loans to nonbank corporations	7.1	7.1	7.1	8.5	8.0	7.5	9.3	10.8	12.2
%									
Share of foreign currency loans in total loans to the non-bank private sector	11.8	12.6	10.8	13.3	12.6	12.3	10.8	10.8	10.8
Return on assets (banking sector)	2.2	1.9	2.4	1.8	1.9	2.4	2.5	2.6	2.4
Tier 1 capital ratio (banking sector)	9.2	9.7	9.6	10.4	9.7	10.8	10.3	9.8	9.6
NPL ratio (banking sector)	17.0	17.1	15.1	17.4	17.1	17.0	16.2	15.8	15.1
<i>% of GDP</i>									
General government revenues	36.0	35.6	36.7	..	..	..	..	..	..
General government expenditures	34.1	39.6	35.9	..	..	..	..	..	..
General government balance	1.9	-4.0	0.8	..	..	..	..	..	..
Primary balance	..	..	..	..	..	..	..	..	..
Gross public debt	12.4	17.6	16.0	..	..	..	..	..	..
<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	9.8	6.3	10.7	5.0	6.1	7.9	9.3	11.6	12.8
Services balance	-2.2	-1.1	-1.1	-1.0	-1.3	-0.8	-0.9	-1.4	-1.1
Primary income	-3.2	-2.3	-2.4	-2.5	-2.8	-0.4	-4.0	-2.2	-2.7
Secondary income	-0.6	-0.4	-0.3	-0.4	-0.4	-0.5	-0.1	-0.3	-0.2
Current account balance	3.8	2.5	6.9	1.1	1.7	6.2	4.2	7.6	8.7
Capital account balance	0.0	0.0	0.0	0.0	-0.1	0.1	-0.1	0.0	0.0
Foreign direct investment (net) ³	-0.6	-0.2	1.4	-1.4	-0.2	0.9	0.8	0.9	2.8
<i>% of GDP (rolling four-quarter GDP, based on EUR), end of period</i>									
Gross external debt	29.4	30.0	28.2	29.1	30.0	31.5	30.6	30.8	28.2
Gross official reserves (excluding gold)	26.1	28.7	29.1	27.5	28.7	30.3	29.6	30.3	29.1
<i>Months of imports of goods and services</i>									
Gross official reserves (excluding gold)	15.0	16.8	16.4	16.3	16.8	17.5	16.6	16.8	16.4
<i>EUR million, period total</i>									
GDP at current prices	1,515,749	1,298,180	1,509,221	321,684	342,021	301,956	345,451	395,248	466,566

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).

Outlook for selected CESEE countries and Russia

Accelerating inflation and war in Ukraine weigh on growth in the CESEE-6 region; attack on Ukraine severely hits Russia's economy^{1,2}

At 5.5%, the economies of Bulgaria, Croatia, Czechia, Hungary, Poland and Romania (CESEE-6) saw a solid rebound of annual GDP growth in 2021, moderately above our October 2021 forecast of 5.1%. However, growth dynamics started to weaken already in the fourth quarter owing to renewed infection waves and accelerating inflation. Looking ahead, the ongoing war in Ukraine and surging inflation rates in early 2022 lead us to lower our growth forecast for the current year by 1.3 percentage points to 3.2% year on year. For the years 2023 and 2024, we expect GDP to expand by 3.7% and 3.8% year on year. Regarding the composition of growth, all GDP components will weaken in 2022 except for gross fixed capital formation. In particular, export growth will halve. With import growth declining more strongly, the negative contribution of net exports will diminish. Over the entire forecast horizon, the contribution of private consumption growth will remain robust, whereas the contribution of gross fixed capital formation will strengthen notably in 2023 along with the increased disbursement of EU funds. Neither exports nor imports are expected to post a strong recovery in 2023 and 2024. Although the war impact is stronger in the CESEE-6 economies than in the euro area, a positive growth differential of 1 percentage point will reemerge in 2022 based on the severe scenario of the March MPE forecast. In general, this forecast is subject to an exceptionally high degree of uncertainty with political and economic risks tilted to the downside.

Russia's war on Ukraine markedly hurts the Russian economy. In light of uncertainty in Russia, increased Western economic and trade sanctions as well as the country's own countersanctions, we expect Russian GDP to contract by about 10% this year and thereafter remain at levels seen a decade ago, i.e. prior to the annexation of Crimea and initial sanctions on Russia. The ruble's exchange rate has fallen sharply, and Russia's imports are expected to halve to levels reminiscent of the mid-2000s. The volume of Russian exports will decline, particularly as the EU reduces its energy imports from Russia. High inflation will depress household consumption, and fixed investment will suffer. The risks to this forecast are exceptionally large and concern e.g. the war, sanctions, inflation and fixed investment. Government budget spending could grow strongly.

¹ Cutoff date for data underlying the CESEE-6 outlook: March 21, 2022. The projections for the CESEE-6 countries were prepared by the OeNB, those for Russia by the Bank of Finland in cooperation with the OeNB. All projections are based on the assumptions of the March 2022 ECB staff macroeconomic projection exercise (MPE) for the euro area, using the figures from the severe scenario, according to which real annual GDP growth in the euro area is projected to amount to 2.3% in 2022 and 2023, and to 1.9% in 2024. Forecast oil prices are based on the average for oil futures contracts for the ten days preceding March 25, 2022, and yield the following Brent oil prices per barrel: USD 100 in 2022 and USD 89 in 2023.

² Compiled by Julia Wörz with input from Katharina Allinger, Stephan Barisitz, Mathias Lahnsteiner, Anna Raggl, Thomas Reininger, Tomáš Slačák and Zoltan Walko.

Table 1

OeNB-BOFIT GDP projections for 2022 to 2024 compared with the IMF forecast

	Eurostat/ Rosstat	OeNB-BOFIT projections April 2022			IMF WEO forecast April 2022		
	2021	2022	2023	2024	2022	2023	2024
Year-on-year growth in %							
CESEE-6	5.5	3.2	3.7	3.8	3.1	3.4	3.5
Bulgaria	3.8	2.9	3.5	3.2	3.2	4.5	4.2
Croatia	10.0	2.4	3.7	3.5	2.7	4.0	3.0
Czechia	3.3	0.7	3.5	3.7	2.3	4.2	3.6
Hungary	7.1	3.4	3.0	3.3	3.7	3.6	3.7
Poland	5.6	4.5	4.1	4.1	3.7	2.9	3.2
Romania	5.8	2.5	3.3	3.5	2.2	3.4	3.8
Russia	4.7	−10.0	0.0	..	−8.5	−2.3	1.5

Source: IMF World Economic Outlook (WEO) of April 2022, Rosstat, OeNB-BOFIT projections.

1 CESEE-6: inflation curbs private consumption and external demand weakens in the near term; investments strengthen in the medium term

The year 2021 was characterized by a solid rebound in economic activity. Yet, in the last months of the year, developments were shaped by partly diverging factors: The COVID-19 Delta wave led to renewed restrictions in some cases, which in tandem with accelerating inflation impacted negatively on economic sentiment.³ The Russian invasion of Ukraine on February 24, 2022, substantially worsened the outlook. We base our forecast on the assumption that fighting will abate in the course of this year, but we do not anticipate a stable peace solution to take hold any time soon. Hence, current sanctions against Russia will remain in place throughout the whole projection horizon, as the situation will not improve sufficiently to give rise to a lifting of the sanctions. While we do not presume notable Russian countersanctions – in particular, we do not assume oil and gas deliveries from Russia to be suspended – we expect commodity prices to remain elevated. We further expect war-related supply shortfalls of inputs from Ukraine to cause protracted disturbances in European supply chains, which will only be dissolved rather gradually, even though economic restrictions related to the pandemic should abate further. In the longer term, the CESEE-6 countries will reduce their dependency on oil and gas imports from Russia.⁴

Inflation will dampen real disposable income

One of the decisive factors shaping our current forecast is inflation. While the energy component was driving up consumer prices throughout most of 2021, the recent surge in January and February 2022 arose primarily from core inflation. The transition to a new year may have been a welcome moment for many producers to reset their prices and pass on part of the increased cost pressure for inputs to

³ For further details on the most recent developments, see the section on *Developments in selected CESEE countries* in this issue.

⁴ For further information on the economic linkages of the CESEE-6 countries with Russia prior to the invasion, see the section on *Developments in selected CESEE countries* in this issue.

consumers. The increase in the contribution of energy was somewhat contained due to government support measures in recent months aimed at limiting price increases for household energy (and to some extent also for fuel). The measures range from compensation payments, reductions in VAT rates and/or network charges to direct intervention in the form of price reductions or price caps. Going forward, these interventions are increasingly burdening national budgets and/or the balance sheets of energy suppliers and could lead to sudden price surges if energy prices remain elevated for a longer period of time. In January, the Czech economy experienced a sudden pick-up in inflation when the expiration of the temporary VAT exemption on electricity and gas pushed energy prices substantially upward. The prospects for a considerably longer period of high price pressures have increased substantially since the start of the war in Ukraine.

Monetary policy will be challenged to rein in inflation while not suppressing economic activity in the current environment. Sharply accelerating inflation pressures will likely affect the monetary policy stance in Czechia and Hungary, and somewhat less so in Romania, while ERM II requirements reduce the monetary policy space in Bulgaria and Croatia.

Fiscal policy tightening will be somewhat delayed for many reasons. As mentioned above, government support aimed at mitigating rising energy prices will burden public budgets, as will additional expenses for refugees. In most countries, spending on pensions will rise (Bulgaria, Czechia, Hungary and Romania). Also, the green transition will cause fiscal costs in the near term; for instance, Czechia plans to increase subsidies for renewable resources. Further additional social spending is envisaged in Bulgaria and Croatia (i.a. maternity and unemployment benefits).

Ukrainian refugees will not immediately support labor supply

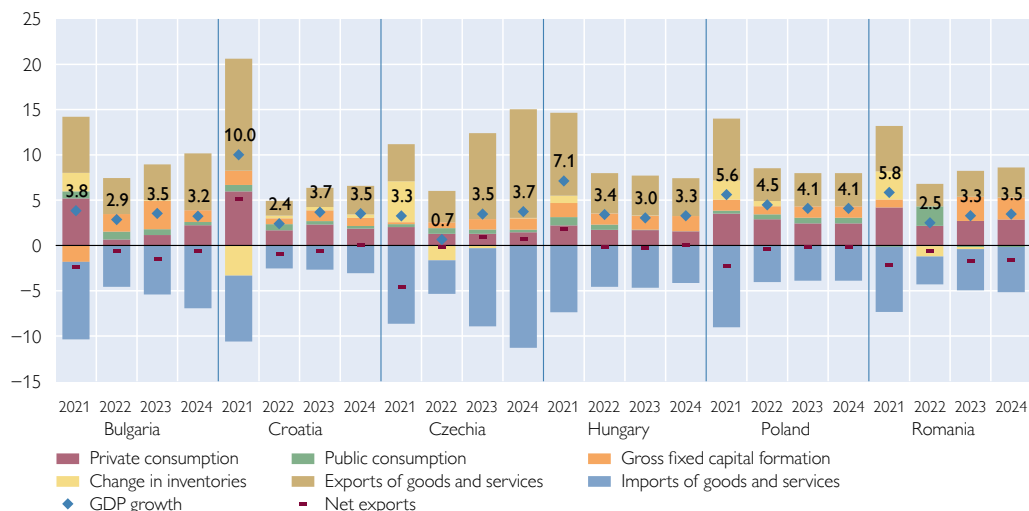
Labor markets should develop favorably; employment growth is supported by stimuli in Bulgaria and Croatia. Job retention schemes have kept unemployment low during the pandemic, and the pick-up in domestic demand, supported by increasing EU-funded investments over the forecast horizon, will lead to further demand for labor. While most governments intend to support the swift labor market integration of Ukrainian refugees, it remains to be seen how this influx of people will contribute to the labor supply within our forecast horizon. Mostly women and children were allowed to leave Ukraine, while men fit for work were prohibited from leaving the country. The participation rate for the female population in Ukraine stood at roughly 60% in 2021. The fact that many refugees stayed in neighboring countries is likely related to the hope to be able to return quickly. If these hopes should be disappointed, refugees might relocate to other destinations with an already existing large diaspora, such as Germany, Italy and Spain. Also, skill mismatches are likely to exist. Finally, it remains to be seen whether, and to what extent, the loss in seasonal workers and commuters from Ukraine, induced by the war and general mobilization, can be counterbalanced by the refugees.

Nominal wage growth will be strong, but given even stronger inflation dynamics, real wages are likely to remain flat or decrease. Minimum wages are being increased in all countries, bringing them closer to average wages. Bulgaria, Czechia and Hungary will also see strong public wage growth, while Romania has imposed a wage freeze in most public sector areas, except for moderate increases in education and health.

Chart 1

CESEE-6: GDP and GDP components

GDP contributions in percentage points, year-on-year GDP growth in %



Source: Eurostat, OeNB.

Note: Realized data for 2021, projections for 2022 to 2024.

Private consumption will remain a stable, albeit smaller, growth factor

Over the projection horizon, private consumption will expand steadily at just below 4% year on year, adding somewhat more than 2 percentage points to overall GDP growth in each year. While high inflation will weigh on real income, these negative effects on private consumption should be countered by positive labor market developments over the projection horizon. Furthermore, the inflow of refugees will immediately support private consumption, even if their integration into CESEE labor markets will take longer as outlined above.

As mentioned before, public spending will increase so as to mitigate price effects for households and corporates, to cushion the effects from the war and related sanctions and to provide assistance for refugees from Ukraine. In 2022, annual public consumption growth will be at 3% in all countries except for Romania, where fiscal space is limited by the ongoing excessive deficit procedure. For the CESEE-6 region in total, the GDP growth contribution of public consumption growth will triple to almost 1 percentage point in the current year, before falling back to around 0.3 percentage points in the subsequent years. Apart from Hungary, where some pre-election spending continued until April 2022, no further elections are scheduled in the CESEE-6 this year.

Investment growth will accelerate in 2023

Gross fixed capital formation is the only demand component to show a growth acceleration from 2021 to 2022, even though developments at the country level are mixed. Due to extremely low base effects, Bulgaria will show the strongest growth rate (+11% year on year), followed by Romania (+7% year on year). Hungary and Poland will post continuous growth in gross fixed capital formation of about 5% year on year, while the rather moderate annual growth rate of 2.5% in Czechia also implies a notable rebound from the previous year. Only in Croatia will investment

growth halve to slightly over 3% year on year. We expect gross fixed capital formation growth to accelerate more notably in 2023 in line with our baseline assumption of fading uncertainty and growing private investments, given the prospect of additional funding through the NextGenerationEU (NGEU) recovery instrument and the EU's multiannual financial framework (MFF) for 2021–2027. Much of the NGEU funds will be used to support the greening of the economy and its digital transformation, while military expenditure (also recorded as investments) may go up as well. Especially in the near term, a more vigorous expansion of investments is impaired by the elevated uncertainty, deteriorating business sentiment, continued supply chain frictions, higher prices for raw and construction materials, uncertain demand prospects (especially concerning export demand) and tighter financing conditions.

External demand is set to weaken

The outlook for exports is rather muted. Not only has Russia become less important as an export market, but the outlook for major export markets in the EU has clouded as well. Russian tourists make up an important share of tourism revenues in many CESEE-6 countries, especially in Bulgaria, Hungary and Poland. Croatia on the other hand is likely to become more attractive as a tourist destination for guests from Central Europe and could well profit from the situation. While Russia has generally not been an important export destination for the CESEE-6 economies (besides having generated not an insignificant amount of tourist revenues in some countries), it has been an important market for cars produced in Czechia (and partly hosts the production of Czech cars).

What is more important, foreign demand will recede in general, as the growth projections for all export markets, in particular in the euro area, have been revised downward. We revised export growth for the CESEE-6 region down by 3.3 percentage points to 5.3% year on year in 2022. At the same time, import growth will decelerate by 3.7 percentage points to 5.8% year on year, due to the strong import-export nexus, rising uncertainty and lower real income (thus also reducing import demand for final goods). Hence, the strong negative growth contribution from net exports will narrow to remain at –0.4 percentage points throughout the forecast horizon. Both export and import dynamics should marginally increase again in 2023 and 2024, as the geopolitical situation should stabilize and delivery bottlenecks and hence supply shortages should soften again.

Risks to CESEE-6 projections are strongly tilted to the downside; uncertainty is exceptionally high

The current environment is characterized by an extremely elevated degree of uncertainty both in political and economic terms. The two major risks affecting the outlook are the future evolution of inflation (and related second-round effects of a prolonged high-inflation scenario) and the developments in Ukraine. Both factors can turn our growth projections to the upside or the downside, whereby we consider the balance of risks to be tilted clearly to the downside at the moment.

A rapid and lasting peace in Ukraine seems unrealistic at the current juncture; hence, the severe and unprecedented sanctions against Russia are more likely to stay in place (as assumed in our baseline) than to be relaxed or lifted. On the contrary, it cannot be ruled out that the sanctions against Russia are intensified or

further countersanctions are imposed by Russia, also restricting oil and gas deliveries to the rest of Europe. This would constitute a major downside risk to our GDP forecasts, as the dependency on energy from Russia is particularly high in the CESEE-6 countries.

In the same vein, supply disruptions are likely to prevail longer than assumed in our baseline. In particular, the war has extended the range of products affected by supply shortages to more inputs, including neon from Ukraine, palladium from Russia and, most importantly, steel with a strong impact on almost all industrial sectors, including construction. Building on the flexibility observed for global value chains during previous crisis events (such as the earthquake in Japan in 2011), we assume that shortfalls of inputs from Russia and Ukraine will, to a large extent, be substituted with other sources. Yet, this process may take longer than expected or remain incomplete, given its magnitude and suddenness, which would pose a serious threat to industrial production, not least in the important automotive sector.

While we do not expect widespread restrictive measures to be re-imposed in the region in response to new surges in COVID-19 infection rates, renewed supply chain disruptions arising from the pandemic cannot be ruled out. In particular, China's zero-COVID strategy represents a risk, as closures of production sites and ports in China have the potential to shake supply chains worldwide – especially given concurrent interruptions on land routes from China due to the war in Ukraine.

While financial market reactions to the military attack have been contained so far, negative confidence effects could intensify and worsen risk sentiment further, leading to higher financial market volatility beyond the current level and to a strong rise in risk premia, which would match badly with burdened public budgets in the region.

Inflation may stay high for a longer period of time than currently anticipated by policymakers. This would bring central banks increasingly under pressure and could – if not sufficiently addressed in time – also trigger turbulences on financial markets, worsen financial conditions beyond expectations and negatively impact on financial market stability.

Apart from geopolitics, political uncertainty in the region itself prevails. It remains to be seen how the dispute with the EU about the conformity of Hungarian and Polish national regulations with EU law develops against the background of a more united EU against an external aggressor. Thus, uncertainty about the disbursement of EU funds, including NGEU funds, to Hungary and Poland remains high for the moment.

Finally, climate risks are no longer relevant in the long term only. Recent extreme events, such as floodings and droughts, have exposed the vulnerability to natural disasters of economies in moderate climate zones. In combination with imminent food shortages caused by the war raging in Ukraine, such events would yield stronger effects on food supplies and prices than under normal circumstances. More generally, the green transition coupled with currently high levels of uncertainty and depressed consumer sentiment may also affect consumer behavior and curb demand for automobiles in the near term and in the longer term alike, with a detrimental impact on this dominant sector in many CESEE-6 economies, unless structural reforms reduce dependency on the sector.

2 Projections for Bulgaria, Croatia, Czechia, Hungary, Poland and Romania

Bulgaria: consumption depressed by inflation; investment will lead growth in the medium term

Growth in 2021 remained below expectations in Bulgaria, and political uncertainty throughout the year and soaring COVID-19 infection cases slowed the recovery. In light of current developments, we revised our forecast for 2022 down and expect a growth rate of 2.9% in 2022, followed by 3.5% and 3.2% growth in the subsequent two years.

We expect that domestic demand will be the key contributor to growth over the next years. Private consumption, entering with a high base from 2021, will support growth over the forecast horizon, although only to a limited extent in 2022. The government adopted increases in minimum wages, pensions and social benefits, but these are likely to barely offset the increases in price levels that are expected to continue through 2022. Labor market participation rates and employment rates have been rising recently, but they are not yet back to pre-pandemic levels. The uncertainty related to the war in Ukraine, including its consequences for tourism and trade, can hinder a swift progression and constitute an obstacle for strong consumption growth.

Gross fixed capital formation is expected to be a key driver of Bulgaria's growth over the next years. This is in part due to a low base effect resulting from a sharp decline in investment in 2021 which was related to ongoing political and pandemic-induced uncertainty throughout the year. More substantially, we expect a boost to investments from the accommodative budget, effective as of April 1, 2022. The budget focuses on increasing public investment to strengthen the recovery after the pandemic. Apart from raising social spending, the government plans to bolster the education and health sector and make sizable capital investments, in particular to update infrastructure. The budget will be revised in mid-2022, and the revised budget should provide buffers to address accelerating inflation and spending related to refugees from Ukraine.

The political instability in 2021 led to a postponed submission of the country's Recovery and Resilience Plan, the approval of which is a precondition for accessing NGEU funds. Bulgaria submitted its plan in mid-October 2021, requesting a total of EUR 6.6 billion in grants under the Recovery and Resilience Facility. At the time of writing, Bulgaria's Recovery and Resilience Plan is still under review by the European Commission. Funds are not expected to flow before the second half of 2022, but we expect them to promote further investment growth in 2023.

The number of international tourists remained well below pre-pandemic levels in 2021. A shortfall in Russian and Ukrainian tourists and the geographical proximity to the war raging in Ukraine combined with the very low and stagnating level of COVID-19 vaccination rates are likely to severely hamper a recovery of the tourism industry in 2022. Subdued growth in other EU countries, the ongoing disruptions in global value chains and the high degree of uncertainty, now fueled by the war in Ukraine, will be a further drag on exports. For 2022, we expect a moderately negative contribution of net exports to growth, due to moderate growth in imports. For 2023, however, we expect imports to pick up, triggered by investment activities. Overall, net exports are expected to slow down GDP growth over the forecast horizon.

Croatia: accelerating inflation and geopolitical crisis weigh on outlook

GDP growth surprised on the upside in 2021, reaching 10% year on year. In recent months, though, the growth momentum slowed down, amidst the spread of the COVID-19 Omicron variant, accelerating inflation and Russia's invasion of Ukraine. The latter two factors have led us to revise our forecast for Croatia downward to 2.4% year on year in 2022. Growth is expected to pick up to 3.7% and 3.4% year on year in 2023 and 2024, respectively.

We expect GDP growth to be mostly driven by domestic demand, which is however difficult to predict, given the multitude of growth-retarding and -enhancing factors currently at work. Uncertainties relating to the pandemic and the geopolitical crisis, elevated and accelerating inflation and potentially also some monetary and macroprudential tightening⁵ will likely dampen domestic demand. However, the Croatian government has already undertaken measures to limit the impact of higher inflation on the private sector: It passed a substantial package that includes VAT cuts, energy price regulations and subsidies for vulnerable households and sectors. Private consumption will also be supported by another increase in minimum wages and a renewal of the housing subsidy program. On the investment side, the absorption of funds and start of projects related to the EU's MFF and the Recovery and Resilience Facility are expected to outweigh the negative effects on private investments from the factors mentioned above. Anticipating growth-retarding factors to abate over time, we see growth of private consumption accelerating from 2.8% year on year in 2022 to 3.8% year on year in 2023, and investment growth rising from 3.2% year on year in 2022 to 5.7% year on year in 2023.

Public consumption growth will make mildly positive and declining contributions to growth over the forecast horizon. Croatia must balance the need for fiscal support with the need for fiscal prudence, given high public debt levels.

We expect another successful tourist season in 2022, as the geographic proximity and perceived predictability and safety of a holiday in Croatia will likely continue to be important factors drawing (mostly) Central European tourists to the Croatian coast. This will not only support growth of exports but also feed back positively to domestic demand, given the high share of the tourism sector in gross value added and employment. We are more pessimistic about goods exports in 2022, given likely disruptions to supply chains and fluctuations of prices of raw materials. Export growth is expected to accelerate over the forecast horizon. Net exports make a negative contribution to growth in 2022 and 2023.

While there is some upside risk to our forecast, on the whole, we still consider that the risks are mostly on the downside. Upside risks would arise from a quicker-than-expected softening of inflation, an even better-than-expected tourist season and stronger investments. Downside risks largely stem from spillovers from the external environment related e.g. to the war and the pandemic, and are exacerbated by high domestic public and private debt levels.

Czechia: pandemic- and war-induced frictions turn recovery into stagflation

The relatively modest pace of economic recovery recorded in 2021 was expected to gain some momentum in the medium term. Nonetheless, owing to protracted supply chain frictions in the wake of the pandemic and elevated inflation with

⁵ The European Systemic Risk Board warned of risks in residential real estate markets in late 2021.

resultant monetary policy tightening, no exuberant economic growth was in the cards even before February 24. The war in Ukraine will curb global growth and demand, further accelerate the already surging inflation rates and hamper the still battered supply chains for much longer than expected in our last projections. As a result, apart from higher public expenditures e.g. on refugee support and military equipment, all demand-side components will face noticeable cuts. From the current perspective which is, obviously, subject to an exceptional level of uncertainty and risks, there is no chance for the long-wished-for robust economic recovery of the Czech economy to resume before the second half of the forecasting horizon.

Apart from the impact of demand related to a significant number of Ukrainian refugees, private consumption growth in 2022 will benefit from a low base in the first half of 2021 and pent-up savings. However, the buoyant nominal disposable income growth on the back of a tight labor market, rising wages and pensions will be more than offset by very high and rising inflation. Moreover, owing to the war-induced supply disruptions and other factors, including domestic ones, inflation rates will not only peak at higher levels than previously expected but will also stay high noticeably longer. Hence, in the months ahead, real wages are set to experience a plunge unseen since the beginning of transition. This will put a significant drag on household consumption growth in 2022 and beyond as is also echoed in still subdued consumer confidence. Even before the war, frictions in raw material and component supplies, particularly the shortage of semi-conductors, were expected to continue – despite some easing – in the short to medium term. Large stocks of unfinished products waiting for completion upon arrival of missing components have been driven down significantly. Nonetheless, supply chain bottlenecks translated, i.a., into reduced production in the first quarter of this year. The war in Ukraine has exacerbated the situation, as the supplies of some key components from Russia and Ukraine, particularly in the automotive industry, have been interrupted and will lead to outright production reductions at least until provisions can be recovered or substituted. As a result, supply chain disturbances and dearth of inputs in combination with impaired foreign demand not only in the EU but also in Russia – which is, for instance, the third biggest sales market for the car producer Škoda – will significantly hamper net exports and fixed investment.

To contain domestic inflationary forces and prevent inflation expectations from unanchoring, the Czech National Bank has repeatedly signaled that it will continue its monetary policy tightening, and with more vigor in light of the impact of the war on prices. Dearer credits and stricter lending conditions will thus pose an additional damper on private consumption and especially on fixed investment in the short to medium term before strengthening. While the fiscal stance was expected to be broadly neutral over the forecast horizon, with unexpected expenditures triggered by the war and the massive migration wave, it is likely to turn significantly accommodative.

Hungary: GDP bounced back in 2021, but growth outlook deteriorates

GDP grew by 7.1% year on year in 2021, sharply rebounding from the nearly 5% recession in 2020. However, dynamics slowed in the second half of the year. Prior to the war in Ukraine, we would have expected fiscal impulses to start dissipating, following the start of monetary tightening in the second half of 2021. We are

substantially revising our forecasts for 2022–2024 compared to the no-war baseline. Given the inflationary impact and heightened financial market uncertainties, monetary policy will pursue further tightening for a longer period than previously expected until inflation risks become evenly balanced. By contrast, fiscal policy tightening may be delayed if fiscal compensation becomes necessary to cushion the negative economic and social effects of the war and accommodate additional costs of care for refugees.

As for 2022, we expect negative repercussions both for private consumption and business investments to dominate. Consumer sentiment, export expectations and overall business sentiment will likely be dented by the war, while supply chains will likely be disrupted both upstream (e.g. deliveries from Russia, shortage of raw materials and semi-products) and downstream (e.g. production disturbances in major export markets/industries, export sanctions, loss of Russian tourists). Rising prices for raw materials, transport costs and potential supply shortages will burden both producers and consumers with higher costs.

As far as not consumed by higher inflation, households will likely use additional income from tax rebates/cuts, wage and pension hikes to increase their savings rate, but in 2022 private consumption will still be supported by various price and interest rate caps. Housing investments will likely remain supported by home construction subsidies, but the substantial rise in financing costs will deter credit financing.

We expect government consumption to accelerate in 2022 on the back of increased transfer payments, public sector wage hikes and operating costs (e.g. energy prices, election costs, costs of care for refugees). Thereafter, we expect government consumption to reverse owing to the need to tighten the fiscal stance (less favorable financing conditions, need to cover the expected annual losses of the central bank).

The outlook for investments remains good but less favorable than at the time of the last forecast. On the one hand, interest rates on corporate loans have started to rise in reaction to higher central bank interest rates and the end to the central bank's preferential facilities. Also, in late 2021, the government postponed investment projects worth nearly 2% of GDP, and public investments will increasingly hinge on the inflow of EU funds, notwithstanding unresolved issues concerning the release of Recovery and Resilience Facility funds by the EU. Business investments will likely be put on hold, given major uncertainties about short- to medium-term domestic and global demand conditions, deteriorating corporate earnings and high financing costs. On the other hand, the corporate sector's net financial asset position improved during 2021. Also, the economic recovery pushed capacity utilization in industry again beyond its long-term average.

We expect the contribution of net real exports to worsen in 2022, as the deteriorated global environment hampers the outlook for exports more than for imports, which will be supported by domestic demand. Overall, net exports should have a slightly negative or neutral impact on the GDP growth rate over the forecast horizon.

Poland: growth slows in 2022 as most demand components weaken

In Poland, GDP growth is forecast to decelerate year on year to 4.5% in 2022 and 4.1% in 2023, after a rebound of 5.6% in 2021 from the contraction by 2.5% in 2020. In 2022, foreign demand growth will contribute significantly less than domestic demand to total final demand (and hence GDP growth) and moderately less so in 2023. Exports, having a weight of almost 40% in total final demand, will expand by about 6% annually in 2022 and 2023, substantially less than in 2021 when their growth stood at 12%. The war in Ukraine will have both a direct and indirect negative effect on Polish exports, with Russian and Ukrainian demand for Polish goods shrinking and euro area growth slowing. Domestic demand is expected to grow by about 5.3% in 2022, substantially less than in 2021 when it expanded by as much as 8.2%. Domestic demand growth will be smaller than that of exports but render a relatively larger growth contribution given its larger weight. In 2023, domestic demand growth is expected to slow further to 4.4% in annual terms.

As a result, in both 2022 and 2023, the slowdown of foreign and domestic demand growth will decelerate import growth sharply, after imports ballooned by more than 17% annually in 2021. Likely, supply chain problems will further contribute to the weakening of real import growth, while higher import prices may somewhat uphold imports in nominal terms. In both years, real import growth is forecast to exceed real export growth, albeit to a lesser extent than in 2021. Despite starting from a sizable external surplus, the growth differential will be sufficiently large to continue rendering a negative contribution of net exports to GDP growth, but a much smaller one than in the previous year.

Private consumption is expected to grow year on year at about 5% in 2022 and 4.2% in 2023, after growing by 6.1% in 2021 when it benefited from the partially favorable base effect and from anti-COVID-19 crisis measures. Post-pandemic pent-up demand on the back of accumulated extra savings together with hikes in minimum wages will constitute supportive factors. Moreover, refugees fleeing from the war in Ukraine will provide additional private consumption demand, using both own private savings and transfers received in Poland. At the same time, the rise of inflation and the expectation of a somewhat prolonged period of higher inflation (given supply bottlenecks) will dampen private consumption, as wage increases are unlikely to reflect this acceleration of inflation to the full extent. Moreover, employment growth will slow in the wake of shrinking foreign demand, and consumer sentiment is bound to deteriorate. Public consumption growth will accelerate, given measures related to infrastructure for incoming refugees in 2022 and likely also in view of upcoming elections in 2023.

Fixed investment is expected to grow at about 5% annually in 2022, after growing by about 7% in 2021. After all, both public and corporate sector fixed investment benefit from the new MFF funding cycle and the post-pandemic National Reconstruction Plan, and corporate investment receives further support from substantial corporate savings. Yet, supply chain bottlenecks will be a partially limiting factor. Moreover, weaker foreign demand and war-related uncertainty

will prevent fixed investment growth from accelerating at high rates. For 2023, no substantial acceleration is expected either in view of these factors. Besides, the forecast incorporates a moderate growth contribution from inventory increases in 2022, albeit a far smaller one than in 2021 when increases contributed almost 3 percentage points to annual GDP growth.

Romania: moderate growth expected with EU fund inflows playing a key role

Following weakening economic dynamics in the second half of 2021, we expect GDP growth to be muted at 2.5% year on year in 2022, before slightly accelerating to 3.3% in 2023 and 3.5% in 2024. In particular in 2022, economic growth will be negatively affected by the economic ramifications related to Russia's war against Ukraine through higher inflation, supply chain disruptions and adverse confidence effects. Romania's fiscal room for maneuver seems limited against the background of the commitments made under the excessive deficit procedure. Though COVID-19 restrictions were lifted in March 2022, pandemic-related uncertainties continue to be a factor. As vaccination progress has remained subdued, further COVID-19 waves could entail the reintroduction of some restrictions.

Gross fixed capital formation will be an important growth driver over the forecast horizon due to sizable EU fund inflows (from the EU's multiannual budget frameworks and the NGEU recovery instrument). Yet, there is quite some uncertainty about effective EU fund absorption and the implementation of the national Recovery and Resilience Plan as a requirement for disbursements from the Recovery and Resilience Facility. Robust domestic credit growth (largely on the back of state guarantee programs) will support private investments. While Russia's war on Ukraine will entail negative confidence effects, Romania could benefit from foreign direct investments related to production reallocations from Ukraine and Russia.

We expect rather moderate private consumption growth figures in the coming years. The lifting of COVID-19 restrictions should underpin private consumption particularly in the first half of 2022. The minimum wage hike as well as the increase of pensions and other social security benefits effective from the beginning of 2022 will also support private consumption. High inflation rates will erode real disposable income, but high inflation expectations will likely also result in higher renegotiated wages in sectors facing labor shortages. Moreover, the extension of the energy price cap until end-March 2023 increases the leeway for consumption spending. Yet, the continued public sector wage freeze (with exceptions for state employees working in social assistance, healthcare and education) will clearly have a dampening effect on private consumption growth.

Based on the assumption of continued positive growth in the euro area, Romanian exports are projected to rise over the forecast horizon. However, their growth will be restrained by supply chain disruptions in particular in the automotive industry. Moreover, unit labor costs in the manufacturing sector started to rise markedly again in the second half of 2021, while the nominal exchange rate vis-à-vis the euro weakened only a little. Domestic demand growth will keep up import growth so that the contribution of net exports will remain negative.

3 Attack on Ukraine severely hits Russia's economy

Russia's war on Ukraine is strongly hurting the Russian economy. The most significant immediate economic effects were a roughly 40% drop in the ruble's exchange rate after the attack and a spike in inflation to record heights. Russian economic output and imports are contracting. EU countries and many others have imposed unprecedented economic and trade sanctions on Russia. The punitive measures i.a. restrict exports of selected goods to Russia, further restrict access to finance for Russian banks, firms and the government, ban certain Russian banks from using SWIFT messaging services for international payments and prohibit transactions with the central bank as well as various companies. The EU recently also set a goal of phasing out energy imports from Russia in the next few years. Russia's counter-sanctions tend to focus on imported and exported goods. Russia has also e.g. restricted outbound payments by foreign firms operating in Russia. Russian firms are now required to convert 80% of their export earnings to rubles.

We expect the Russian economy to contract in 2022 even with higher prices for oil and other key export commodities produced in Russia. Markets expect energy prices to fall especially next year, and international sanctions and Russia's countersanctions to remain in place throughout the forecast period. The EU's fresh energy goal means that EU energy imports from Russia are to decline steadily. Moreover, the pandemic is expected to subside during this year. Facing very large uncertainty, we estimate that Russian GDP will contract by about 10% this year, to the level seen in 2011–2012. The economy is not seen to turn to recovery next year, being strained by instability, sanctions and Russia's own restrictive measures. The long-term growth outlook, tepid already earlier at around 1%–1.5% a year, has now weakened further, as it is increasingly unlikely that Russia moves ahead with needed economic reforms. Russian imports are foreseen to decline by about half this year, and to remain at that lower level for the remaining forecast period. It may be possible to substitute some imports with domestic products, but unlike in earlier recessions, Russia's domestic production will, this time, suffer from import disruptions due to export bans imposed by foreign countries.

Private consumption should fall this year to levels seen a decade ago, as inflation, already relatively high at 9% before the invasion, erodes purchasing power and depresses real household income. With the ruble's collapse, inflation has accelerated and is anticipated to accelerate further with supply and production disruptions as well as higher world market prices. Russian inflation could reach as much as 20% or more this year. Distress in corporations will, like in earlier recessions in Russia, probably lead to larger cuts in real wages than in employment. Nevertheless, unemployment is expected to rise. Real wages in the government sector are also foreseen to decrease. Under the Russian constitution, pensions need to be adjusted to keep up with inflation, while other social supports have already been scheduled to increase. Consumer credit turned to rise after the 2020 recession, but is now likely to come to a halt.

Inflation will also depress public consumption. In order to mitigate harms in the current downturn, the country's leadership may also focus on easily implementable transfers of funds, i.e. social supports that will feed into private consumption and corporate subsidies that keep the economy going.

Fixed investment should contract to levels last seen a decade and a half ago. The business environment for private firms has become exceptionally unstable and lacks perspective. The decline in foreign corporate investment to a necessary minimum will be felt, as investment by foreign-owned firms has represented almost 15% of total investment. The leadership will likely seek to stave off a deeper collapse in fixed investment by increasing orders from oligarch and other private companies and commanding state-owned enterprises. While government sector investment may increase, the effects are likely to be relatively limited, as it represents no more than about 20% of total fixed investment. We expect to see an exceptionally large drop in inventories that significantly exacerbates the declines in GDP and imports.

The paradigm that growth of the world economy fuels Russian exports is changing, as the EU pursues its goal of reducing energy imports from Russia and some non-EU countries and large corporations have decided to stop importing Russian oil. While Russia may be able to shift a tangible part of its oil exports to other markets, a particularly large part of its gas exports is tied to pipeline transmission. Russia's own export bans will reduce exports further. In the worst previous recessions, the drops in GDP and the ruble's exchange rate have knocked down Russian imports by 30%. In addition to these two factors, imports will now also be reduced by bans on exports, payment restrictions and voluntary decisions by foreign firms to cease exporting to Russia. The expectation that imports fall by half this year means a decline to a level last seen in the mid-2000s.

The ruble's exchange rate is expected to remain at its current level during the forecast period. The central bank is unable to support the exchange rate through purchasing rubles on the market, as the EU and the US have prohibited transactions with the central bank. On the other hand, the fresh requirement for Russian firms to convert 80% of their foreign exchange export earnings to rubles will provide coverage for payments going abroad, especially as imports have fallen sharply. High export prices and falling imports will push up Russia's current account surplus, which already reached nearly 7% of GDP last year. Nevertheless, the surplus should shrink considerably during our forecast period, as export prices are expected to come down and EU countries cut back on their energy imports from Russia.

Russia's shrinking economy will undermine the fiscal balance following an episode in which a rapid expansion of budget revenues after the 2020 recession had turned the deficit into surplus last year. Although the economy is now shrinking, budget revenues stand to increase markedly faster than inflation in 2021, but not beyond, as dollar-based proceeds from exports by and production taxes on the oil and gas sectors rise sharply in rubles due to the collapse of the ruble's exchange rate. Markets also expect oil and gas prices this year to remain higher on average than in 2021. Other budget revenues will shrink this year due to the severe economic slump. In the next few years, total government revenues will decline in real terms, as changes in oil prices and the ruble's exchange rate no longer support revenues, while inflation probably remains rather brisk. Government spending increases scheduled so far do not look very large, so that high government revenues this year should keep the government budget in surplus. Russia could afford further increases in government spending, as revenues are up this year, but not over a longer term. The National Welfare Fund, the state's reserve fund, appears to be

Table 2

Russian GDP growth and oil prices

	2019	2020	2021	2022	2023
<i>Year-on-year growth in %</i>					
GDP	2.2	-2.7	4.7	-10	0
Private and public consumption	3.4	-4.9	7.1	-14	..
Fixed investments	1.0	-4.4	7.0	-20	..
Exports	0.7	-4.1	3.2	-2	..
Imports	3.1	-12.1	16.7	-50	..
Brent oil price (bbl) in USD	64.0	42.0	70.4	100	89

Source: BOFIT.

Note: Realized data for 2019 to 2021, projections for 2022 and 2023. Forecast oil prices are based on the average for oil futures contracts for the ten days preceding March 25, 2022.

largely blocked due to the central bank transaction ban imposed by the EU and the US, unless the state and/or the central bank handle the conversion of the Fund's foreign exchange assets into rubles in a way that does not violate the ban.

Soon after Russia's invasion, the central bank raised its key rate to 20%, which staved off a run on household bank deposits. At the same time, the central bank increased the liquidity supply to banks as much as needed and granted a variety of regulatory relaxations. State banks dominate Russia's banking sector, and various funds are available to keep other banks afloat. Nevertheless, banks may face some difficulties, as falling household and corporate income hurts the deposit intake and the weak economic outlook depresses bank lending.

Forecast risks are exceptionally large

Most of the many large risks surrounding this forecast for the Russian economy are tilted to the downside. The growth of the global economy and changes in oil prices could diverge from their expected paths. The war Russia started may take unexpected turns. International economic and trade sanctions on Russia, as well as Russia's own countersanctions, could escalate and further hurt Russian exports and imports. The impacts of interruptions in supply and logistics on Russian production and imports could be surprisingly large. Russian inflation could accelerate more than expected and continue longer than anticipated, which would further erode private consumption in particular. Fixed investment by private firms could contract sharply if, for example, large firms are unable to meet their orders.

Government budget spending could increase significantly during the forecast period, including the possibility of reliance on central bank funding to cover spending.

Studies

Mitigating the impact of the pandemic on personal finances in CESEE: descriptive evidence for 2020

Thomas Scheiber, Melanie Koch¹

This study describes the economic consequences the COVID-19 pandemic had on people in Central, Eastern and Southeastern Europe until October 2020. We use data from an annual survey of individuals in ten different countries. Specifically, we employ a special module from the OeNB Euro Survey in 2020 to assess what kind of measures individuals took to mitigate negative effects of the pandemic and how this relates to income shocks. Reducing expenditure was by far the most common measure, followed by reducing savings, informal support and borrowing against future income. Only very few respondents stated that they had been forced to move. Descriptive results seem to suggest that experiencing income shocks and being financially vulnerable are related to taking significantly more mitigating measures and, hence, that the mere number of different measures taken can be a proxy for how severely an individual is affected by the pandemic. However, taking more measures can also be related to having more options to actually smooth out negative effects. Therefore, classifying those who report a larger number of different mitigating measures as more vulnerable without taking other socioeconomic characteristics into account can be misleading.

JEL classification: D14, G50

Keywords: household finance, COVID-19, survey data, Central, Eastern and Southeastern Europe

The COVID-19 pandemic has been an unprecedented event in many respects. It has triggered waves of supply and demand shocks across the global economy, laying bare the weak spots of global value chains. But it has also fostered historically unique global efforts to develop and roll out vaccines, and spurred digitalization. The pandemic is leaving its traces around the globe, also on the economies of Central, Eastern and Southeastern Europe (CESEE). Swift public policy responses have supported personal incomes in CESEE during the pandemic and mitigated the amplification of income and confidence shocks through macrofinancial linkages (Grieverson et al., 2021) – reflecting a lesson learned from the global financial crisis (Soric, 2018).

Nevertheless, early evidence suggests that the economic impact within countries was felt rather unevenly (e.g. Alstadsæter et al., 2020, for Norway; Adams-Prassl et al., 2020, for Germany, the UK and the US; Bundervoet et al., 2022, for 34 countries). The crisis has affected different people in different ways and, therefore, the impact on different groups cannot be assessed based on macroeconomic figures (Basselier and Minne, 2021; Bundervoet et al., 2022). However, a better understanding of how different groups of people have been mitigating the adverse effects

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of the COVID-19 pandemic is important from a policy perspective as it could shape the recovery of private consumption and therefore GDP. Moreover, such an understanding makes it possible to identify more financially vulnerable groups of people, i.e. those people who suffer severe consequences when hit by an income shock, hence informing the policy debate. It is therefore crucial to use more granular microdata to complement the general picture. In this sense, the COVID-19 pandemic is also unprecedented in terms of the production and use of microdata, in particular, survey data – probably another lesson learned from the global financial crisis. Aspects that deserve further exploration are an improved understanding of individuals' adjustment behavior during the pandemic and, related to this, finding ways to measure how strongly an individual is affected by the pandemic in overall economic terms.

This study provides additional microlevel evidence shedding some light on these two aspects based on data from a special module of the OeNB Euro Survey conducted in October 2020. With our paper, we contribute to understanding how the COVID-19 pandemic has economically affected individuals in different regions of the world. Our sampled economies mostly consist of middle-income countries in CESEE which are often overlooked in the literature and for which survey data are less frequently assessed. The study is descriptive in nature and briefly addresses the following questions: Which common measures did individuals take to mitigate the effects of the pandemic? How do these measures relate to income shocks? And does the mere number of different mitigating measures an individual took tell us something about how severely a person was affected by the pandemic? We present comprehensive descriptive evidence to establish some stylized facts for the early phase of the pandemic in CESEE.

The special module of the OeNB Euro Survey collected information on varying mitigating measures, like reducing consumption, dissaving and borrowing, and on which respondents were actually hit by an income shock. A caveat regarding the module is that it covers only the extensive, not the intensive margin of measures taken. Still, we find that for every single measure elicited, those who were hit by an income shock were more likely to have taken this measure. Moreover, individuals who experienced an income shock took more different measures at once than those who did not experience a shock. The measure reported most often in both groups (income shock, no income shock) was reducing consumption, which was followed by reducing savings and informal support, and eventually by borrowing against future income and, apparently as a last resort, by moving. With the help of generalized ordered logit regressions with partial proportional odds, we analyze if the mere number of measures taken is a good indicator for how severely a person was affected by the pandemic. We find that financially vulnerable people who experienced an income shock are significantly more likely to take more measures, which speaks in favor of this interpretation. However, we also see that more affluent people are more likely to take measures if hit by a shock. This could be driven by the ability and desire to optimally distribute the negative impact across several measure categories. Finally, we find some evidence that individuals taking measures even if not hit by an income shock might be driven by restricted consumption opportunities due to lockdowns but also by precautionary motives. Summarized, considering merely the number of measures an individual took to counteract the negative effects of the pandemic is an imperfect proxy for how severely that person was

affected. Socioeconomic characteristics should also be considered. These characteristics might lead to differing motives for how many mitigating measures are taken.

The differing impact of the pandemic, at least in terms of income shocks, was already documented in several studies. For example, based on real-time unemployment register data from Norway, Alstadsæter et al. (2020) find that layoffs hit financially vulnerable populations and had a high socioeconomic gradient. Moreover, layoffs were more common in less productive and financially weaker firms so that employment loss may cause an overestimation of total output loss. Adams-Prassl et al. (2020) employ real-time survey data for Germany, the UK and the US. They show that institutional factors and implemented policies explain a lot of the variation in labor market impacts. Within countries, the impacts are very unequal and aggravate existing inequalities. Moreover, Bundervoet et al. (2022) conclude that the crisis induced dynamic risks cementing inequality of opportunity and undermining social mobility. They use survey data from 34 countries and show that the pandemic disproportionately affected vulnerable segments of the population, i.e. women, lower-skilled workers and children. Similar to the aforementioned study, we go a step further, not only looking at the prevalence of income shocks but what potentially happens beyond that shock and what this might tell us about the general impact the pandemic has had.

Several central banks in Europe have produced and employ survey data to gauge the impact of the pandemic on household balance sheets, preferences and sentiments, or consumption behavior (e.g. Goldfayn-Frank et al., 2020; Bernard et al., 2020).² The European Central Bank launched the pilot of its future monthly consumer expectations survey in January 2020, an online household panel covering six euro area countries. Using the data elicited by this pilot survey, Christelis et al. (2020) find that the adverse effects of the COVID-19 pandemic on consumption expenditure mainly came from households' perceptions of financial repercussions of the shock and not from their concerns about potential health implications. Moreover, controlling for socioeconomic factors, financial concerns due to the COVID-19 pandemic amplify the negative consumption effect of a negative income shock, while consumption adjustment due to a positive income shock is rather insensitive to COVID-19-related financial concerns. Our study tries to add to the existing literature by providing descriptive evidence on more detailed individual economic responses to mitigate the impact of the pandemic, particularly for countries for which, usually, much less information is available.

This paper is structured as follows: In section 1, we describe the data and variables we use. Then, section 2 presents the descriptive results and an in-depth analysis of the measures taken to mitigate the impact of the COVID-19 pandemic and how they are related to income shocks and other socioeconomic characteristics. Section 3 concludes.

1 Data and variables

We use data from the OeNB Euro Survey, an annual, cross-sectional face-to-face survey of individuals, aged 18 years or older, commissioned by the Oesterreichische

² The use of high-frequency microdata became increasingly important in the wake of the pandemic. Data like transaction, mobility or social network data allow for timely analyses (see, for example, Baker et al., 2020; Bounie et al., 2020; Carvalho et al., 2021; Chen et al., 2020; Chetty et al., 2020; and Delle Monache et al., 2020).

Nationalbank (OeNB). The survey intends to capture euroization and financial decisions of individuals from non-euro area CESEE countries. It covers six non-euro area EU member states (Bulgaria, Croatia, Czechia, Hungary, Poland and Romania) and four (potential) EU candidates (Albania, Bosnia and Herzegovina, North Macedonia and Serbia).³ In each country and in each survey wave, a sample of 1,000 individuals is polled based on multistage random sampling procedures. Data weighting is used to ensure a nationally representative sample for each country; sampling weights use census population statistics on gender, age, region and, where available, education as well as ethnicity (separately for each country). Our analysis is based on data from the 2020 wave. The wave was conducted mainly in October 2020 and included a special module on the impact of the COVID-19 pandemic on individuals' economic and financial situation.⁴

1.1 The economic impact of the COVID-19 pandemic on individuals

When the survey was conducted in 2020, the COVID-19 pandemic had been ongoing for over half a year in the ten countries surveyed. Although the first wave of the pandemic in CESEE that hit around March 2020 saw relatively low infection rates (see chart A1 in the annex), all ten countries repeatedly imposed lockdowns, curfews and traveling restrictions over the course of the year. Moreover, the disruption in global value chains was felt in every country, irrespective of actual infection rates within an individual country. Tourism and mobility plummeted, especially hurting those CESEE economies that heavily rely on the tourism sector. In our sample, the average drop in GDP was 4.2% from 2019 to 2020, ranging between 0.9% in Serbia and 8.1% in Croatia (see chart A2 in the annex). Still, the unemployment rate did not even increase by 1 percentage point for all countries except Romania. In Bosnia, North Macedonia, Poland and Serbia, the unemployment rate was lower by the end of 2020 than in end-2019. All governments implemented work and income support schemes over the course of the pandemic (see Enzinger et al., 2021). These seem to have buffered some unemployment shocks. However, losing a job is not the only income shock a person can experience. Several individuals did not lose their jobs but received reduced incomes because of lockdowns and furloughs. Even if wage replacement schemes are in place, individuals usually never receive the full wage they would receive under business-as-usual conditions.

Thus, one certain way how the pandemic initially affected people's finances is through income shocks. According to economic theory, individuals can react in several ways when experiencing an income shock. They may adjust expenditure, and hence the consumption of durable and nondurable goods, or adjust their savings behavior. In case of a negative shock, they may moreover take out a loan or delay payments to the future, meaning borrowing against future income. In the OeNB

³ For more information and technical details on the OeNB Euro Survey, see <https://www.oenb.at/en/Monetary-Policy/Surveys/OeNB-Euro-Survey.html>.

⁴ Data collection could be finished mostly before severe infection waves hit the survey countries. Using tablets, the survey was exclusively conducted face-to-face, as in all previous waves and appropriate precautionary measures were taken by the survey institutes in all countries. Nonresponse rates increased in Albania, Croatia, Czechia, Hungary, Poland, Romania and Serbia but were in range of previous years. Only Bosnia and Herzegovina experienced an unprecedented increase in nonresponse. In Bulgaria and North Macedonia, the nonresponse rate actually declined.

Euro Survey 2020, respondents were asked how the pandemic affected their economic situation and, indirectly, about the actions they had taken to mitigate a potential negative income shock. The question was phrased very broadly (see below).

Ad hoc question for the OeNB Euro Survey 2020: How did respondents try to mitigate the impact of the COVID-19 pandemic on their personal finances?

[ASK ALL] If you think about your economic and financial situation, since the outbreak of the Corona crisis have you been affected in any of the following ways? Please name all that apply.

1. I had to reduce the amount spent on everyday expenses
 2. I had to reduce or postpone larger expenditures
 3. I had to reduce money set aside for savings
 4. I had to utilize savings or sold possessions
 5. I had to reduce help to friends or relatives whom I helped before
 6. I had to delay payment of loan installments
 7. I had to delay payment of rent
 8. I had to delay payment of other bills
 9. I had to take out a loan from a bank
 10. I had to over-draft my bank account
 11. I received financial help from family or friends
 12. I had to borrow money from another source
 13. I received social benefits or other financial aid from the state
 14. I had to decrease work hours and received a reduced salary
 15. I was laid off from a job / lost a job
 16. I was forced to move
- For each item: Yes / No / Don't know / No answer*

This is because there are several other ways in which people could be financially affected by the pandemic besides an income shock. They could suffer from other shocks like confidence and health shocks. They could be affected because consumption opportunities have been limited since the start of the pandemic or because new kinds of expenses, e.g. health-related expenses, have become necessary. The question tries to capture all these aspects at once.⁵ Overall, it elicits information on two different kinds of negative income shocks and 14 possible measures to counteract a drop in income that are, however, not exclusively related to income shocks. Moreover, strictly speaking, these measures are not always in the hands of an individual because, for example, item 13 captures whether people received social benefits from their governments. The wording for most items deliberately implies necessity instead of preference (“I had to...”) to highlight the crisis character of the pandemic. We still refer to the items as mitigating measures rather than as “economic affectedness” because we think there is often still an element of choice in which measures to take and how many. We are also aware that

⁵ The order of items was not rotated. Instead, those measures that seem more likely to have been taken were put first. Still, respondents could not skip items. Enumerators read out all items carefully and respondents had to provide an answer for each single item, otherwise tablets would not continue. Moreover, straight-lining answers occurred very rarely (32 cases answered all items either “yes,” “don’t know” or refused to answer all items).

the list does not include all potential financial consequences of the pandemic, especially not consequences of positive income shocks and a higher preference for precautionary savings. For example, aggregated bank deposits of private households increased in CESEE, indicating that at least some persons may have increased rather than reduced their savings. Still, we will briefly discuss the role of precautionary savings in subsection 2.4.2.

Since negative income shocks are directly linked to financial vulnerability, we want to focus our analysis on how the presence of income shocks relates to the other ways in which an individual was affected. Using items 14 and 15, we construct a COVID-19-related income shock dummy variable that is measured on the individual level whereas the other items are often added up together. An important point is that individuals are not only affected by income shocks that happen to themselves but also by those that happen to other persons within their household. For this reason, we also use another income shock variable derived from a question that asks respondents more generally whether their household has experienced any significant reduction of income over the last 12 months. The caveat regarding this question is that it likely includes some income shocks that are not related to COVID-19. Our main results will focus on all shocks together, but we will also present results for COVID-19-related income shocks separately.

1.2 Descriptive statistics on sociodemographics

In our later analysis, we will relate several sociodemographic characteristics to the number of mitigating measures taken to understand if a larger number of measures indicates that individuals have been more severely affected by the pandemic. 52% in the sample are female and the median respondent is between 45 and 54 years old. At the time of the interview, 58% were employed; of these, around 14% were self-employed. 14% were unemployed. Most respondents have a medium level of education. Their household comprises, on average, three members including themselves, and in 88% of the cases, the respondent's household owns the dwelling the household is living in. Only 42% in the sample have any kind of savings – ranging from 22% in Bosnia and Herzegovina to 75% in Czechia; the share of refused answers averages 2.8%. About one-third has some form of bank debt and around 12% have some kind of informal debt.

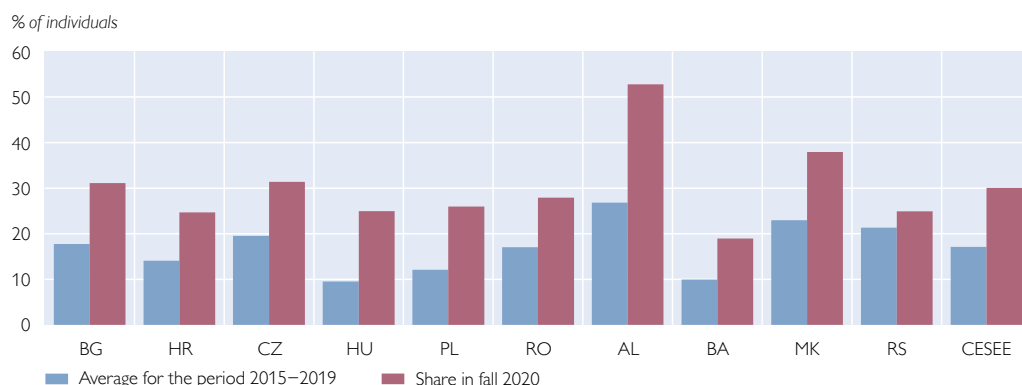
2 Descriptive analysis

2.1 Incidence of income shocks during the first half year of COVID-19

Although the weighted share of individuals reporting to be unemployed in the OeNB Euro Survey exceeds official unemployment statistics, the change in the unemployment rate over the years is reflected well in the survey data (see Enzinger et al., 2021). We have no reason to believe that this does not hold for income shocks in general, which are broader measures and not only include unemployment. As described above, the 2020 wave of the OeNB Euro Survey assesses whether individuals suffered from an income shock due to the pandemic but also whether the household the individual is living in experienced any kind of income shock in the previous year. This variable is measured regularly in the OeNB Euro Survey so that we can compare responses over the years. Chart 1 shows that, in every country, the share of households having experienced an income shock is significantly

Chart 1

Share of individuals with income shocks in their household: fall 2020 vs 2015–2019

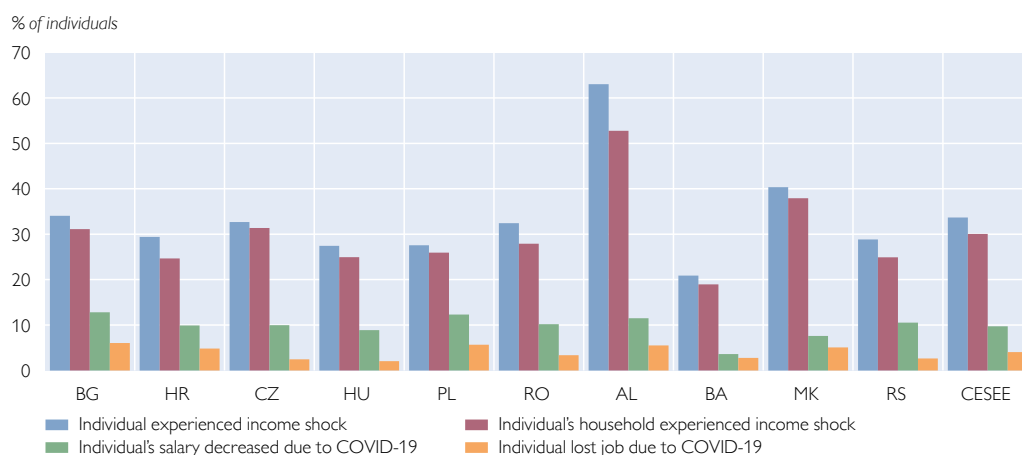


Source: OeNB Euro Survey 2015–2020.

Note: Share of individuals who report their household experienced a significant drop in income in the last 12 months. Results are weighted based on weights that are calibrated on census population statistics for age, gender, region and, where available, education and ethnicity (separately for each country). CESEE average not adjusted for population size. Respondents answering “Don’t know” or who refused to answer included as zero.

Chart 2

Self-reported shocks over the last 12 months



Source: OeNB Euro Survey 2020.

Note: The blue bar represents a dummy (“any income shock”) equaling 1 if the individual reports a reduced salary due to the pandemic (green bar), lost a job due to the pandemic (orange bar) and/or the individual’s household experienced a significant drop in income in the last 12 months (burgundy bar). Results are weighted based on weights that are calibrated on census population statistics for age, gender, region and, where available, education and ethnicity (separately for each country). CESEE average not adjusted for population size. Respondents answering “Don’t know” or who refused to answer included as zero.

higher in 2020 than the average share of previous years. On average, the share increased by 76%, with the increases ranging from 17% in Serbia to 160% in Hungary.⁶ The chart already indicates that the COVID-19 pandemic negatively affected (at least some) people in our sample. Moreover, the correlation between the respondent’s household having experienced any income shock and the individual

⁶ The absolute number of households hit by an income shock is substantially larger in Albania than in the other countries. This is most likely due to the fact that Albania was not only hit by the pandemic but also by a massive earthquake in November 2019, which resulted in devastating damage and an economic downturn that started at the end of 2019 (see Bank of Albania, 2020).

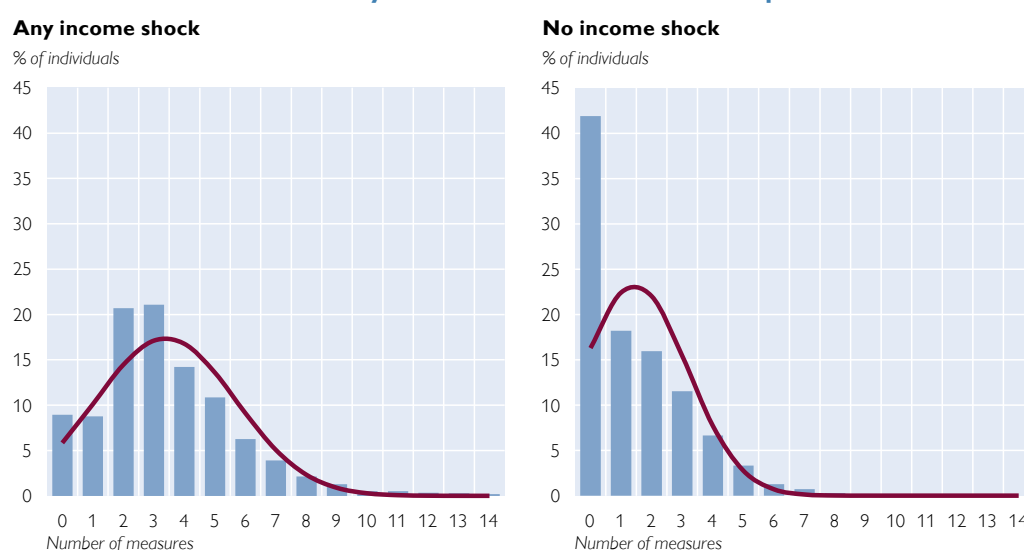
respondent being hit by an income shock due to the pandemic is high. This is natural given that any shock reported on the individual level should also have an effect on the whole household. Still, this shows that the unspecified household income shock indeed captures income shocks related to COVID-19. As for pandemic-related income shocks, we find that, on average, almost a tenth of the surveyed individuals report a reduction in income and around 4% lost a job due to COVID-19. As can be seen in chart 2, the lowest incidences of individual shocks are reported in Bosnia and Herzegovina, where only 3.6% reported an income reduction (green bars) and 2.8% a lost job (yellow bars). Bulgaria has the highest incidences with 12.8% and 6%, respectively. On average, almost one-third of the individuals experienced some kind of income shock in 2020 (blue bars).

2.2 Number of measures taken to mitigate negative effects of the pandemic

As previously mentioned, income shocks are a crucial aspect of financial vulnerability, which is one reason why we have separated the shock items from the other items detailing economic consequences of the pandemic. The remaining 14 items are separate areas in which individuals have been affected, which can also be seen as mitigating measures to counteract a (future) negative income shock. When discussing these measures, we will differentiate between people who said they experienced an income shock and those who did not. Although measures are asked on the individual level, we consider the household income shock in addition to the COVID-19 shocks, unless stated otherwise. It is likely that even though individuals themselves did not experience a shock, they still were affected if other members of the household were hit by an income shock.

Chart 3

Number of measures taken by individuals with and without reported income shocks



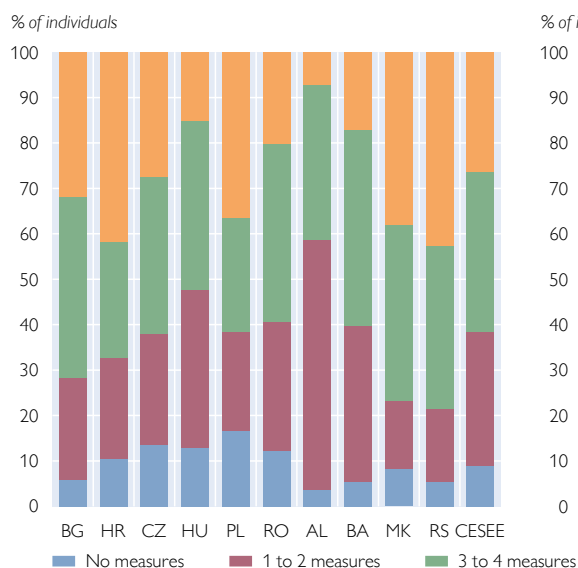
Source: OeNB Euro Survey 2020.

Note: "Any income shock" is a dummy equaling 1 if the respondent has a reduced salary due to the pandemic, lost a job due to the pandemic and/or if the respondent's household experienced a significant drop in income in the last 12 months, and zero otherwise. Results are weighted based on weights that are calibrated on census population statistics for age, gender, region and, where available, education and ethnicity (separately for each country). Respondents answering "Don't know" or who refused to answer are included in the variable category "no measures."

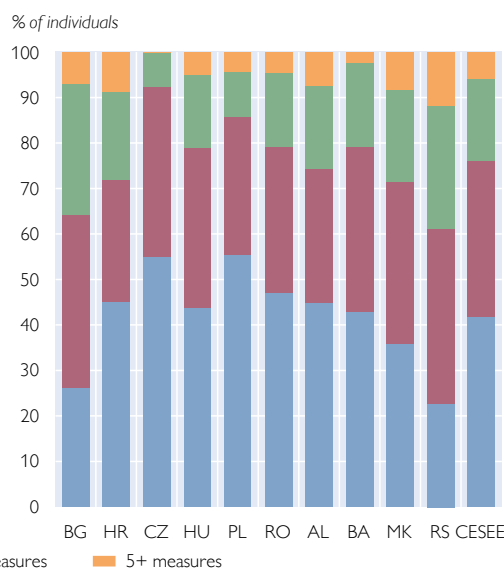
Chart 4

How many measures did individuals take in response to the pandemic?

Any income shock



No income shock



Source: OeNB Euro Survey 2020.

Note: Number of mitigating measures out of a list of 14 measures respondents report to have taken in response to the pandemic. Results are weighted based on weights that are calibrated on census population statistics for age, gender, region and, where available, education and ethnicity (separately for each country). CESEE average not adjusted for population size. Respondents answering "Don't know" or who refused to answer are included in the variable category "no measures."

Before we look at the prevalence of certain measures in detail, we first describe the number of measures taken, meaning how many measures at once individuals took. In total, around two-thirds of the individuals at least took one mitigating measure.⁷ Given that only one-third were hit by any income shock, this already tells us that some individuals seem to have taken a measure without having experienced an income shock. Thus, as expected, negative income shocks are not the only way in which respondents may be economically affected by the pandemic. Separating the sample into those who have experienced any shock and those who did not, we still clearly see that mostly those who were hit by an income shock are those who took more than five different measures to cope with the pandemic (see chart 3). Only 10% of those with an income shock did not take any measure at all, most took two or three measures (20% each). The distributions of mitigating actions of those who were or were not hit by a shock are significantly different from each other. It is striking that still more than 55% of those who did not experience an income shock chose at least one mitigating measure.

The number of measures varies across countries, not only because the prevalence of shocks is different. Chart 4 shows that the variations are also conditional on either having experienced an income shock (left panel) or not (right panel). Especially for the first group, Bulgaria, Croatia, North Macedonia and Serbia stand out on the "negative" side. They have relatively low shares of shock-affected respondents with

⁷ Few individuals could not answer the questions on mitigating measures and stated "don't know," some even gave no answer at all. In total, these nonresponse shares are, on average, 3.5% and range from 1.8% (for consumption-related items) to 7.1% (for savings-related items). We include these cases in our analyses and always treat them as if the item was not chosen, so as if the answer would be "no" to the respective item.

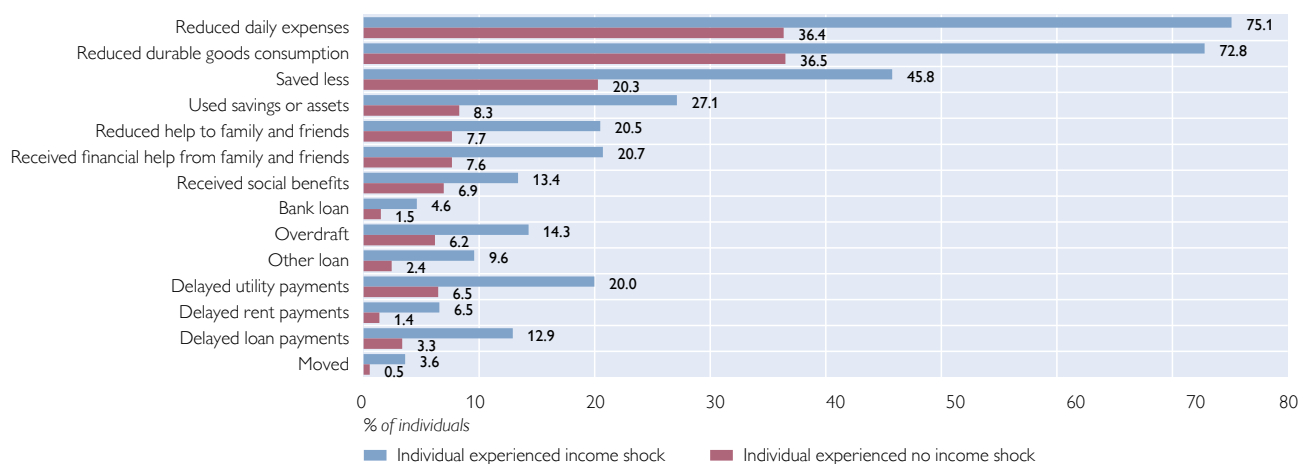
no mitigating measures (around 5% to 11%) and comparatively large shares with more than five reported items (32% to 46%). In Poland, the share of respondents reporting more than five items is also around 37%, but the share of people taking no action at all is somewhat higher than in the other four countries. Albania has the lowest share of individuals who suffered from a shock and did not take a mitigating measure (around 4%); most of the respondents there reported one or two measures (around 55%). Czechia, Hungary and, interestingly, Romania stand out on the rather “positive” side, with the highest shares of shock-affected respondents who took no action in response to the pandemic and the lowest shares of respondents who took three or more measures. The picture is similarly diverse for those respondents who were not hit by an income shock. Strikingly, in every country except Czechia even some of those who did not report a shock took more than five mitigating measures. Czechia and Poland are the only two countries in which the majority of those without reported shocks did not take any action. In subsection 2.4, we will discuss what the number of measures taken can tell us about the overall impact the pandemic has had on an individual.⁸

2.3 Type of measures taken to counteract negative effects of the pandemic

The 14 mitigating measures can be broadly categorized into six different areas: consumption (items 1 and 2), savings (items 3 and 4), formal and informal support (items 5, 13 and 11), borrowing (items 9, 10 and 12), delaying payments (items 6, 7 and 8) and moving (item 16). There might be some natural order or logic in the likelihood of making use of these categories. There is empirical evidence for this conjecture as can be seen in chart 5. It is important to note that this ordering is determined by what is actually feasible, not by the theoretical preference of individuals. Persons owning the dwelling they live in, which is most people in the sample, cannot delay payment of rent. Persons who do not have savings – a

Chart 5

Which mitigating measures did individuals take?



Source: OeNB Euro Survey 2020.

Note: Share of individuals who took a specific measure in response to the pandemic. Results are weighted based on weights that are calibrated on census population statistics for age, gender, region and, where available, education and ethnicity (separately for each country). Respondents answering “Don’t know” or who refused to answer included as zero.

⁸ For a regional distribution of the number of measures, see figure A3 in the annex, which shows regional averages on a map.

substantial share of the sample, as it is a stylized fact that most people do not have savings in CESEE (Koch and Scheiber, 2022) – cannot save less. The same holds true for delaying loan repayments. This is only possible if you have a loan.

Chart 5 shows which share of individuals took the respective measures, again broken down into those who were and were not hit by any income shock.⁹ The mitigating measures that were mentioned by the largest shares of respondents in both groups were consumption-related items. More than 70% of those who experienced a shock reduced daily and/or durable consumption. That more than one-third of those with no reported shock did so as well could be a sign of restricted consumption opportunities or precautionary motives; this will be discussed in subsection 2.4.2. Another rather common measure was to reduce the amount saved, reported by roughly 46% (shock) and 20% (no shock) of respondents, respectively. Utilizing savings or selling possessions was less commonly mentioned by both groups but still more often than the remaining items. Thus, the first resort after an income shock seems to be reduced consumption, followed by dissaving, relying on informal or formal support¹⁰ and delaying payments. Borrowing comes in fifth and seems to be rather focused on short-term liquidity as using overdraft was the most-cited measure in this category. As expected, moving is only the last resort.

2.4 Regression analysis: Do more mitigating measures imply that a respondent has been more severely affected?

In subsection 2.2, we simply added up the number of measures mentioned by the respondent. This means we counted how many times the respondent said “yes” to items 1 to 16, excluding items 14 and 15. One could think that we at least indirectly interpret the number of measures as a proxy for the degree to which the individual was affected by the pandemic. The fact that those who suffered from income shocks indeed took more measures also seems to support this interpretation. However, that reporting more mitigating measures indicates that an individual has been more severely affected by the pandemic is not clear at all. Most importantly, we do not know the size of the measures taken, which is a major limitation. Theoretically, the number of measures taken is influenced, first, by the need to adjust, e.g. the severity of the individual shock, and second, the capacity to counteract and smooth any kind of adverse shock, i.e. based on the individual’s socioeconomic situation and balance sheet. For instance, respondent A and respondent B might have to reduce their expenses due to an income shock by the same overall amount, but respondent A achieves this by only reducing everyday consumption (item 1), while respondent B might need to take three measures to achieve the same reduction of expenses. Moreover, it is not clear – when facing an income shock and individual capacity is high – what is optimal: to opt for one single action or to take several mitigating measures to spread the shock impact. Distributing the “pain” associated

⁹ For results by country, see charts A3 to A5 in the annex.

¹⁰ It is worth mentioning that receiving informal support via the social network does not seem to be a substitute for lacking formal support via social benefits in our sample. The correlation between receiving informal and formal support is significantly positive. Furthermore, regressing the baseline controls and the dummy for receiving social benefits on the number of mitigating measures (categorical variable excluding social benefits) yields a significant positive coefficient for both split samples confirming the complementary nature of social benefits or other public financial aid measures.

with an income loss across several measure categories might be minimizing the utility loss, in particular, when balancing consumption cuts, dissaving and helping family and friends (see, for example, Gossen's second law on equalizing marginal utility per price). On the other hand, the concept of consumption smoothing would suggest to only cut savings/increase borrowing and not to touch consumption if possible because the shock might be transitory and interest rates are low. Furthermore, the countermeasures are to some extent hierarchical. The "pain" associated with reducing daily consumption is likely lower than that of moving out of one's house. Moving presumably is a last resort if other measures prove insufficient.

Summarized, it is not clear a priori how the number of mitigating measures taken relates to being affected by the pandemic. Looking at how certain personal characteristics are empirically correlated to the number (and type) of measures taken could yield some insights as to whether this number is a good proxy for how severely an individual was affected by the pandemic. In the following, we use generalized ordered logit (gologit) regressions with partial proportional odds to analyze which factors are associated with the number of measures taken to better understand what this number might tell us about the degree to which individuals have been affected by the pandemic. Against this background, we control for the need to adjust using information whether the individual has been hit by an income shock over the last 12 months, whether related to the COVID-19 pandemic or not. More specifically, we split the sample into those with income shocks and those without. In each specification, we additionally control whether the respondent is or was employed in an industry class that was severely hit by lockdowns and other containment measures. These industry classes comprise transportation, trade, personal services, tourism and food services, as well as art, entertainment and recreation. Concerning the capacity to smooth out shocks, we include socioeconomic factors both at the individual and at the household level. The individual factors are age, gender and employment status; the household factors are household net income, remittances, household size and whether there are children in the household. Concerning wealth and liabilities, we include information whether respondents (personally or together with their partners) have any loans, savings or secondary residences and whether the dwelling is in excellent, good or poor condition. The latter variable is a proxy for wealth reported by the interviewer.¹¹

To derive the dependent variable, we recode the number of mitigating measures into an ordinal variable with four categories: no measures, 1 to 2 measures, 3 to 4 measures and 5+ measures (analogous to chart 4), balancing the need for a sufficiently high number of observations per category and imposing arbitrary restrictions through categorization. Economically, the difference between taking no measure and some measures and between 1 to 2 measures and 3 to 4 measures might not be equidistant, which favors an ordinal interpretation.¹² When using models for ordinal dependent variables, we need to test whether the proportionality assumption (parallel lines assumption) holds. Since the Brant test (Brant, 1990) and the Wolfe-Gould test (Wolfe and Gould, 1998) rejected the null hypothesis of

¹¹ A complete list and description of all control variables used can be found in table A1 in the annex. To retain as many observations as possible and to take nonresponse into account, we use income categories instead of PPP-adjusted income (as reported in table A1 in the annex) in the regressions.

¹² As robustness, we also used five instead of four ordered categories and results are qualitatively the same. We further estimated OLS regressions, which yields similar results.

proportional odds, we explore whether a more generalized specification with variable parameters for selected explanatory factors may be a better fit. In our analysis, following the procedure of Williams (2006, 2016), we detect some explanatory variables for which variable parameters could potentially increase the goodness-of-fit. Thus, the gologit regressions take the following form (Peterson and Harrel, 1990; Williams 2016):

$$Pr(y_m > m) = \frac{\exp(\alpha_m + X^1\beta + X^2\gamma_m)}{1 + \exp(\alpha_m + X^1\beta + X^2\gamma_m)} + \varepsilon, \quad m = 1, 2, \dots, M - 1$$

where m is an ordered response category, X^1 and X^2 are vectors of independent variables, α_m is a cut point, β is the vector of logit coefficients which are fixed across cut point equations, and γ is a vector of logit coefficients which vary across cut point equations, i.e. for those variables that empirically violate the proportional odds assumption.

We pool our sample over all ten OeNB Euro Survey countries due to sample size restrictions. Regressions are estimated with country dummies using sampling weights and robust standard errors which are clustered at the primary sampling unit level. For each country, we create income tercile categories and another category for nonresponse. For the same reason, we add a dummy variable capturing item nonresponse for accumulated savings. There is valid concern that country-specific characteristics like economic structure, unemployment benefits, health and social security systems, containment measures or furlough schemes might affect how severely individuals are hit by potential health, income and confidence shocks and how they respond to such shocks. This cannot be adequately addressed with country dummies. A closer microlevel inspection of how different countries are weathering the pandemic is an interesting avenue for future research. However, figures A1 and A2 in the annex show that there is considerable regional variation in the prevalence of income shocks, meaning that within-country differences might be even larger than cross-country differences. This might reflect differences in income levels and the presence of different industrial sectors in different regions, which we hope to catch with our control variables as well.

2.4.1 Main results

Table 1 reports the average marginal effects for the gologit regressions with partial proportional odds as explained above.¹³ Specification 1 relates to individuals without income shock, specification 2 to those with any type of income shock.¹⁴ The proportional odds assumption is violated in specification 1 for the variables having accumulated savings and having a loan (and for all the country dummies except Bulgaria), and in specification 2, for the variables being below 25 years, receiving

¹³ Note that table 1 does not report the average marginal effects of the country dummies and of the insignificant gologit coefficients. See table A2 in the annex for the gologit coefficients.

¹⁴ As a robustness exercise, we re-estimated the regressions only using the individual income shock explicitly related to the COVID-19 pandemic instead of the “any income shock” variable (see specifications 3 and 4 in table 1). Results stay qualitatively the same, yet the significance level varies due to lower number of observations in specification 4. Moreover, we excluded those who answered “don’t know” or gave “no answer” to the income shock questions. Results are almost identical compared to the less strict definition. Table available from authors upon request.

remittances and having savings (and the country dummies for Albania, Bosnia and Herzegovina, and Poland).¹⁵

A close inspection of the average marginal effects in specification 1, i.e. the sample without the income shock, shows that there are two types of factors. First, there are factors that significantly decrease the likelihood of being in category 1 (no measures taken) and increase the likelihood mainly of being in category 3 (3 to 4 measures taken), namely working in an industry class that was potentially affected by containment measures, belonging to a household with children, and having a loan. Having savings weakly increases the likelihood for being in the highest category (5+ measures taken). Second, there are factors that produce the opposite pattern of marginal effects, increasing the likelihood of having taken no measures and decreasing particularly the likelihood of being in category 3, namely being an individual from a household of the third net income tercile (that is, more affluent) or who refused to report the household net income, living in a relatively better maintained dwelling and being below 25 years (only weakly significant).

Specification 2, i.e. the sample with the income shock, exhibits the two patterns for the marginal effects too, yet size and significance level of the effects are even higher. Additionally to the aforementioned four factors, belonging to a household of the first net income tercile (less affluent) and owning a secondary residence significantly decrease the likelihood of having taken only a few or no measures at all and increase the likelihood of having taken more measures, in particular 5+ measures. As before, high or nonreported income, living in a relatively better maintained dwelling and being below 25 years increase the likelihood of being in the first and second category while they decrease the likelihood of being in the third and fourth category. Another significant factor turns out to be whether the individual's household receives remittances. Average marginal effects exhibit a u-shaped pattern, pushing observations either into the no-measures category or into the 5+ measures category. Regressions by country show that Albanians drive the significant effect for the no-measures category while remittances in Bosnia and Herzegovina, North Macedonia, Romania and Serbia are significantly associated with the 5+ measures category.¹⁶

What do the regression results tell us about the relationship between the number of measures taken and how severely people were affected by the pandemic? Financially vulnerable groups, i.e. indebted individuals, individuals from low-income households or individuals working in an industry class that was potentially affected by containment measures, who have experienced an income shock have a significantly higher likelihood of having taken 5+ measures. This speaks in favor of the number of mitigating measures being an indicator of the severity of the

¹⁵ Significant country dummies indicate sizeable cross-country variation, whereas the violation of the proportional odds assumptions for some country dummies indicates substantial within-country variation for the relevant economies.

¹⁶ Highly significant country dummies in all specifications warrant a closer inspection of whether the results are driven by the inclusion or exclusion of a single country. Therefore, we execute a type of jackknife test, re-estimating the main specifications 1 and 2 of table 1 by excluding one country at a time. The significant coefficients turn out to be robust except for the variables low household income, receiving remittances, owning a secondary residence, and refusing to report savings. For those four variables, country-specific factors seem to have some influence on the size and significance of effects. Regressions by country reveal that signs of the four variables may change for few countries, yet the low number of observations ranging from 234 to 731 warrants caution in interpreting the results. Furthermore, the positive significant effect for individuals working in key lockdown industries increases monotonically for countries with stricter lockdown policies as measured by the Oxford Stringency Index.

Table 1

Generalized ordered logit regression: number of mitigating measures by category

Type of income shock	Any income shock		Income shock related to COVID-19	
Shock experience in 2020: yes/no	No (1)	Yes (2)	No (3)	Yes (4)
Average marginal effects by outcome				
Job in a lockdown industry (dummy)				
No measures	−0.066*** (0.016)	−0.018** (0.007)	−0.062*** (0.013)	−0.023 (0.017)
1 to 2 measures	0.015*** (0.004)	−0.031*** (0.012)	0.002 (0.001)	−0.069*** (0.024)
3 to 4 measures	0.035*** (0.008)	0.007** (0.003)	0.036*** (0.007)	0.080*** (0.030)
5+ measures	0.016*** (0.004)	0.041*** (0.016)	0.024*** (0.005)	0.011 (0.028)
Respondent aged under 25 years				
No measures	0.047* (0.028)	0.054*** (0.017)	0.074*** (0.022)	−0.007 (0.013)
1 to 2 measures	−0.011* (0.006)	−0.009 (0.028)	−0.003 (0.002)	−0.014 (0.029)
3 to 4 measures	−0.025* (0.015)	0.045 (0.038)	−0.043*** (0.013)	−0.003 (0.007)
5+ measures	−0.011* (0.007)	−0.089** (0.037)	−0.029*** (0.009)	0.024 (0.049)
Household net income: 1 st tercile				
No measures	0.028 (0.018)	−0.016* (0.009)	0.014 (0.015)	−0.013 (0.010)
1 to 2 measures	−0.007 (0.004)	−0.027* (0.015)	−0.001 (0.001)	−0.028 (0.020)
3 to 4 measures	−0.015 (0.010)	0.006* (0.004)	−0.008 (0.009)	−0.006 (0.004)
5+ measures	−0.007 (0.004)	0.036* (0.020)	−0.005 (0.006)	0.048 (0.034)
Household net income: 3 rd tercile				
No measures	0.047*** (0.018)	0.017** (0.008)	0.051*** (0.014)	0.007 (0.009)
1 to 2 measures	−0.011*** (0.004)	0.030** (0.014)	−0.002 (0.001)	0.014 (0.019)
3 to 4 measures	−0.025*** (0.009)	−0.007** (0.003)	−0.030*** (0.008)	0.003 (0.004)
5+ measures	−0.011*** (0.004)	−0.040** (0.018)	−0.020*** (0.006)	−0.024 (0.032)
Household net income: not reported				
No measures	0.095*** (0.020)	0.018** (0.009)	0.076*** (0.016)	0.010 (0.011)
1 to 2 measures	−0.022*** (0.005)	0.032** (0.016)	−0.003 (0.002)	0.022 (0.025)
3 to 4 measures	−0.051*** (0.010)	−0.008* (0.004)	−0.044*** (0.009)	0.005 (0.006)
5+ measures	−0.022*** (0.005)	−0.043** (0.021)	−0.029*** (0.006)	−0.036 (0.041)
Household receives remittances				
No measures	0.005 (0.024)	0.028* (0.017)	0.037 (0.024)	0.054*** (0.020)
1 to 2 measures	−0.001 (0.006)	−0.045 (0.029)	−0.058*** (0.020)	0.001 (0.037)
3 to 4 measures	−0.003 (0.013)	−0.053* (0.032)	−0.015 (0.018)	−0.045 (0.042)
5+ measures	−0.001 (0.006)	0.070** (0.029)	0.036*** (0.012)	−0.011 (0.047)
Children (dummy)				
No measures	−0.051*** (0.017)	−0.014* (0.008)	−0.038*** (0.014)	−0.009 (0.009)
1 to 2 measures	0.012*** (0.004)	−0.024* (0.014)	0.001 (0.001)	−0.020 (0.020)
3 to 4 measures	0.027*** (0.009)	0.006* (0.003)	0.022*** (0.008)	−0.004 (0.005)
5+ measures	0.012*** (0.004)	0.032* (0.018)	0.015*** (0.005)	0.034 (0.034)

Source: OeNB Euro Survey 2020.

Note: Dependent variable with four ordered categories: (1) no measures, (2) 1 to 2 measures, (3) 3 to 4 measures and (4) 5+ measures. Average marginal effects from a generalized ordered logit estimation with country dummies using sampling weights; robust standard errors are adjusted for clustering at the primary sampling unit (PSU) level and reported in parentheses. ***, **, * denote that the coefficient is statistically different from zero at the 1%, 5% and 10% level, respectively. For definition of explanatory variables with proportional parameters (=betas) see annex table A2 for specifications 1 and 2 and A3 for specifications 3 and 4. For a definition of variables, see annex table A1. Base categories are: respondent aged 35 to 44 years; 2nd income tercile; unemployed, inactive, retired or student; dwelling in poor condition, needs major repair; accumulated no savings; and Czech resident. The sample comprises all ten OeNB Euro Survey countries.

Table 1 continued

Generalized ordered logit regression: number of mitigating measures by category

Type of income shock	Any income shock		Income shock related to COVID-19	
	No (1)	Yes (2)	No (3)	Yes (4)
Shock experience in 2020: yes/no				
Average marginal effects by outcome				
Secondary residence (dummy)				
No measures	0.019 (0.017)	−0.019** (0.008)	0.015 (0.014)	−0.024*** (0.010)
1 to 2 measures	−0.005 (0.004)	−0.034** (0.014)	−0.001 (0.001)	−0.054*** (0.020)
3 to 4 measures	−0.010 (0.009)	0.008** (0.003)	−0.008 (0.008)	−0.012** (0.006)
5+ measures	−0.005 (0.004)	0.045** (0.019)	−0.006 (0.005)	0.090*** (0.033)
Dwelling is excellent and well maintained				
No measures	0.091*** (0.023)	0.046*** (0.012)	0.097*** (0.020)	0.044*** (0.014)
1 to 2 measures	−0.021*** (0.006)	0.080*** (0.020)	−0.004 (0.002)	0.096*** (0.028)
3 to 4 measures	−0.049*** (0.012)	−0.019*** (0.005)	−0.056*** (0.011)	0.021** (0.009)
5+ measures	−0.022*** (0.006)	−0.107*** (0.027)	−0.037*** (0.008)	−0.160*** (0.047)
Dwelling in good condition				
No measures	0.051** (0.022)	0.028*** (0.010)	0.046*** (0.018)	0.034*** (0.013)
1 to 2 measures	−0.012** (0.005)	0.049*** (0.017)	−0.002 (0.001)	0.075*** (0.026)
3 to 4 measures	−0.027** (0.011)	−0.012*** (0.004)	−0.027*** (0.010)	0.016** (0.007)
5+ measures	−0.012** (0.005)	−0.065*** (0.024)	−0.018*** (0.007)	−0.125*** (0.043)
Respondent has accumulated savings				
No measures	−0.014 (0.017)	−0.012 (0.012)	−0.006 (0.015)	−0.013* (0.008)
1 to 2 measures	−0.020 (0.015)	−0.078*** (0.017)	−0.039*** (0.014)	−0.029** (0.017)
3 to 4 measures	0.019 (0.012)	0.042** (0.019)	0.022* (0.012)	−0.006 (0.004)
5+ measures	0.016** (0.007)	0.048** (0.019)	0.023*** (0.008)	0.048* (0.028)
Refused to reveal the extent of savings				
No measures	−0.077** (0.039)	−0.007 (0.026)	−0.047 (0.034)	−0.011 (0.031)
1 to 2 measures	0.018* (0.009)	−0.013 (0.046)	0.002 (0.002)	−0.025 (0.068)
3 to 4 measures	0.041** (0.021)	0.003 (0.011)	0.027 (0.020)	−0.005 (0.015)
5+ measures	0.018* (0.009)	0.017 (0.062)	0.018 (0.013)	0.042 (0.113)
Respondent has a loan				
No measures	−0.125*** (0.017)	−0.055*** (0.008)	−0.116*** (0.015)	−0.047*** (0.010)
1 to 2 measures	0.018 (0.015)	−0.097*** (0.011)	−0.007 (0.014)	−0.103*** (0.015)
3 to 4 measures	0.060*** (0.012)	0.023*** (0.005)	0.046*** (0.011)	−0.023*** (0.007)
5+ measures	0.047*** (0.007)	0.129*** (0.015)	0.077*** (0.008)	0.173*** (0.025)
Country dummies	Yes	Yes	Yes	Yes
Other control variables (insignificant)	Yes	Yes	Yes	Yes
Log-likelihood	−7,243.6	−3,777.0	−10,187.8	−1,344.4
Probability > Chi squared (df_m)	407.91 (51)	441.16 (43)	511.29 (43)	221.17 (41)
Pseudo R-squared (McFadden)	0.049	0.074	0.045	0.095
BIC	14,959.5	7,924.5	20,790.5	3,000.6
Number of observations	6,300	3,152	8,253	1,199
Unconditional mean of dependent variable	0.88	1.82	1.07	2.03

Source: OeNB Euro Survey 2020.

Note: Dependent variable with four ordered categories: (1) no measures, (2) 1 to 2 measures, (3) 3 to 4 measures and (4) 5+ measures. Average marginal effects from a generalized ordered logit estimation with country dummies using sampling weights; robust standard errors are adjusted for clustering at the primary sampling unit (PSU) level and reported in parentheses. ***, **, * denote that the coefficient is statistically different from zero at the 1%, 5% and 10% level, respectively. For definition of explanatory variables with proportional parameters (=betas) see annex table A2 for specifications 1 and 2 and A3 for specifications 3 and 4. For a definition of variables, see annex table A1. Base categories are: respondent aged 35 to 44 years; 2nd income tercile; unemployed, inactive, retired or student; dwelling in poor condition, needs major repair; accumulated no savings; and Czech resident. The sample comprises all ten OeNB Euro Survey countries.

pandemic impact on these persons. On the other hand, individuals who experienced some kind of income shock but who own a secondary residence or have savings, i.e. economically more affluent persons, also report significantly more measures than the average person. It seems that this group prefers to distribute the painful impact of an income shock by taking several measures and is able to do so.

Summarized, the number of mitigating measures alone is an insufficient proxy for how severely an individual was affected by the pandemic, as completely opposing groups of the population took more measures than the “average” person. Depending on socioeconomic characteristics, taking more measures is more likely related to the need to adjust or the capacity to adjust. Among the group of individuals who did not experience an income shock but still, on average, report a higher number of mitigating measures are individuals working in an industry that was potentially affected by containment measures, individuals from households with children and indebted individuals. In these cases, precautionary motives or limited consumption possibilities (forced savings) might be the driving forces behind the number of measures taken.

2.4.2 Restricted consumption vs precautionary savings?

National monetary statistics from 2020 suggest that, despite the prevalence of negative income shocks in the ten CESEE countries, aggregate household savings have increased (see Koch and Scheiber, 2022). The most likely reasons for this increase are limited consumption opportunities, i.e. forced savings and/or an increase in voluntary precautionary savings. Both kinds of savings could also reflect the need to adjust to the pandemic. Indeed, as shown before, many respondents without an income shock still took mitigating measures and, in particular, reduced their consumption. If expenses go down, assuming that income stayed stable for these persons (or maybe even increased), then something else has to go up. Hence, focusing on persons without an income shock, we run additional regressions for mitigating measures 1 and 2, i.e. reducing daily expenses and reducing or postponing larger expenditures (durable goods). We treat these two measures as proxies for increased savings, trying to understand if savings increased due to limited consumption opportunities alone or whether precautionary motives could also play a role.

We hypothesize that individuals with a rather pessimistic outlook are more inclined to increase precautionary savings and, thus, reduce consumption (e.g. Dees and Brinca, 2013, for the US and the euro area; Soric, 2018, for CESEE; Binder, 2020; Christelis et al., 2020, for the euro area during the pandemic). Therefore, we try to approximate pessimistic outlooks with some additional control variables. We include three indicators of economic sentiments in the regression, looking at those individuals who did not experience any income shock and/or who did not experience a COVID-19-related income shock. The economic indicators comprise respondents’ agreement on a 7-point Likert scale to the following two statements: “Over the next five years, the economic situation of [MY COUNTRY] will improve” and “Over the next 12 months, I expect the financial situation of my household to get better.” The third indicator captures inflation expectations over the next 12 months. Inflation expectations were recoded into a variable with three categories (i.e. prices will stay the same or decrease a little, prices will increase a little, prices will increase a lot). Thus, we

look directly at future expectations. Moreover, we already control indirectly for a more pessimistic outlook by having included the dummy for working in a key lockdown industry. For persons working in such industries, income expectations should be less optimistic, and they should be more likely to expect a negative income shock.¹⁷ Table 2 reports the average marginal effects from gologit regressions with partial proportional odds, in which the dependent variable is an ordinal variable with three categories for no, one and two consumption-reducing measures (items 1 and 2). Again, we include country dummies, sampling weights and robust standard errors adjusted for clustering at the primary sampling unit level and follow the procedure of Williams (2006, 2016) to determine which explanatory variable will have proportional parameters.¹⁸ The results on economic sentiments show that individuals holding more pessimistic views about the economic situation of their country tend to take more consumption-reducing measures. However, results are only significant for the group of individuals who did not experience a COVID-19-related income shock (specification 2). Furthermore, individuals expecting rising inflation over the next 12 months are associated with reducing consumption significantly stronger in both specifications. Binder (2020) shows that many consumers associate bad events with high inflation. Accordingly, greater concern about the COVID-19 pandemic is associated with expectations of higher inflation and more pessimistic unemployment expectations, which should give rise to higher precautionary savings (see Bernard et al., 2020, for Germany).¹⁹ Looking at socioeconomic background, we find a higher likelihood for reducing consumption for individuals working in key lockdown industries, indebted individuals and individuals living in larger households. By contrast, significantly fewer measures to reduce consumption are associated with higher income, being self-employed, having accumulated savings, living in a dwelling in excellent condition and owning a secondary residence. But also individuals below 25 years and individuals from income-poor households report significantly more outcomes of no measures.

Macroeconomic literature on the business cycle stresses the role of durable goods for intertemporal substitution and as an important signal regarding households' expectations and the strength of the recovery (Beraja and Wolf, 2021). Hence, we rerun the regressions of table 2 with the binary dependent variable capturing whether the respondent had to reduce or postpone larger expenditures. The estimations for the group of individuals who did not experience any shock qualitatively yield the same results. Pessimistic economic sentiments, higher inflation expectations, working in key lockdown industries and indebtedness increase the likelihood of reducing or postponing the consumption of durable goods, while more affluent individuals exhibit a lower likelihood of doing so during the first six month of the pandemic. Thus, we find some support in our sample for the existence of precautionary savings and for the hypothesis that a pessimistic

¹⁷ Naturally, there is a positive correlation between working in a key lockdown industry and already having experienced an income shock. This decreases the sample size of those working in such industries without a shock, but in each country, we still have more than 100 observations for such cases.

¹⁸ Table 2 does not report the average marginal effects of the country dummies and of the insignificant gologit coefficients. See table A4 in the annex for the gologit coefficients and the information on explanatory variables with proportional parameters.

¹⁹ Note that the coefficients of the indicator on the future financial situation of an individual's own household are insignificant in both specifications.

outlook is related to taking more consumption measures. This is also in line with what Ercolani et al. (2021) argue for Italy. They find that the amounts people think their household should set aside for unexpected events, i.e. precautionary savings, are positively related to perceived income uncertainty and health risks. Using almost the same microdata, Guglielmetti and Rondinelli (2021) conclude that not only economic conditions but also fear of infections and uncertainty about the future explain the observed drop in consumption during the pandemic; for some parts of the population, like the self-employed, the latter motives are even more important than the first.

Still, we cannot rule out forced savings completely. For example, reduced consumption opportunities could lead to both more savings and expecting stronger price increases in the future, meaning the regressions suffer from omitted-variable bias. The same might be true for the lockdown industry dummy as people working in such industries might be living in areas in which more lockdowns were imposed. Nevertheless, it is harder to explain why individuals with a loan should suffer more from suppressed consumption. Furthermore, that very affluent individuals who own secondary real estate and live in “high-class” dwellings are less likely not more likely to report reduced consumption, suggests that survey respondents were less inclined to report forced savings through restricted consumption opportunities as a mitigating measure.

Table 2

Generalized ordered logit regression: number of consumption-reducing measures

Type of income shock	Any income shock	Income shock related to COVID-19
Shock experience in 2020: yes/no	No (1)	No (2)
Average marginal effects by outcome		
Job in a lockdown industry (dummy)		
No measures	−0.048** (0.019)	−0.050*** (0.016)
1 measure	0.030* (0.016)	0.035** (0.014)
2 measures	0.018 (0.015)	0.015 (0.015)
Economic situation will improve over the next 5 years (7-point Likert scale)		
No measures	0.005 (0.004)	0.008** (0.004)
1 measure	−0.001 (0.001)	−0.001** (0.000)
2 measures	−0.004 (0.003)	−0.008** (0.004)
Expected inflation over the next 12 months (3 categories)		
No measures	−0.083*** (0.012)	−0.095*** (0.011)
1 measure	0.019*** (0.003)	0.008*** (0.002)
2 measures	0.065*** (0.009)	0.088*** (0.010)
Respondent aged under 25 years		
No measures	0.063** (0.032)	0.065** (0.027)
1 measure	−0.014** (0.007)	0.036* (0.019)
2 measures	−0.049** (0.025)	−0.101*** (0.028)
Self-employed (dummy)		
No measures	0.050* (0.028)	0.040* (0.024)
1 measure	−0.011* (0.006)	−0.003 (0.002)
2 measures	−0.039* (0.022)	−0.037* (0.022)
Household net income: 1 st tercile		
No measures	0.053** (0.022)	0.024 (0.017)
1 measure	−0.035** (0.015)	−0.002 (0.001)
2 measures	−0.018 (0.018)	−0.022 (0.016)
Household net income: 3 rd tercile		
No measures	0.041** (0.019)	0.038** (0.016)
1 measure	−0.009** (0.004)	−0.003** (0.001)
2 measures	−0.032** (0.015)	−0.035** (0.015)
Household net income: not reported		
No measures	0.075*** (0.023)	0.052*** (0.018)
1 measure	−0.039** (0.016)	−0.004** (0.002)
2 measures	−0.035* (0.019)	−0.048*** (0.017)

Source: OeNB Euro Survey 2020.

Note: Dependent variable with three ordered categories: (1) no measures, (2) 1 measure and (3) 2 measures. Average marginal effects from a generalized ordered logit estimation with country dummies using sampling weights; robust standard errors are adjusted for clustering at the primary sampling unit (PSU) level and reported in parentheses. ***, **, * denote that the coefficient is statistically different from zero at the 1%, 5% and 10% level, respectively. For definition of explanatory variables with proportional parameters (=betas), see annex table A4. For a definition of variables, see annex table A1. Base categories are: respondent aged 35 to 44 years; 2nd income tercile; unemployed, inactive, retired or student; dwelling in poor condition, needs major repair; accumulated no savings; and Czech resident. The sample comprises all ten OeNB Euro Survey countries.

Table 2 continued

Generalized ordered logit regression: number of consumption-reducing measures

Type of income shock	Any income shock	Income shock related to COVID-19
Shock experience in 2020: yes/no	No (1)	No (2)
Average marginal effects by outcome		
Household receives remittances		
No measures	0.064** (0.027)	0.065** (0.026)
1 measure	-0.014** (0.006)	-0.005** (0.002)
2 measures	-0.049** (0.021)	-0.060** (0.024)
Household size (number of persons)		
No measures	-0.008 (0.008)	-0.018*** (0.007)
1 measure	0.002 (0.002)	0.001** (0.001)
2 measures	0.006 (0.006)	0.017*** (0.006)
Secondary residence (dummy)		
No measures	0.031* (0.018)	0.050*** (0.015)
1 measure	-0.007* (0.004)	-0.004*** (0.001)
2 measures	-0.024* (0.014)	-0.046*** (0.014)
Dwelling is excellent and well maintained		
No measures	0.077*** (0.026)	0.080*** (0.023)
1 measure	-0.017*** (0.006)	-0.025** (0.012)
2 measures	-0.060*** (0.020)	-0.055** (0.021)
Respondent has accumulated savings		
No measures	0.031* (0.018)	0.035** (0.016)
1 measure	0.019 (0.014)	0.017 (0.012)
2 measures	-0.051*** (0.016)	-0.051*** (0.015)
Respondent has a loan		
No measures	-0.086*** (0.017)	-0.089*** (0.014)
1 measure	0.019*** (0.004)	0.007*** (0.002)
2 measures	0.067*** (0.013)	0.082*** (0.013)
Country dummies	Yes	Yes
Other control variables (insignificant)	Yes	Yes
Log-likelihood	-5,806.0	-7,775.5
Probability > Chi squared (df_m)	284.55 (39)	441.28 (40)
Pseudo R-squared (McFadden)	0.040	0.054
BIC	11,967.9	15,927
Number of observations	5,891	7,739
Unconditional mean of dependent variable	0.74	0.92

Source: OeNB Euro Survey 2020.

Note: Dependent variable with three ordered categories: (1) no measures, (2) 1 measure and (3) 2 measures. Average marginal effects from a generalized ordered logit estimation with country dummies using sampling weights; robust standard errors are adjusted for clustering at the primary sampling unit (PSU) level and reported in parentheses. ***, **, * denote that the coefficient is statistically different from zero at the 1%, 5% and 10% level, respectively. For definition of explanatory variables with proportional parameters (=betas), see annex table A4. For a definition of variables, see annex table A1. Base categories are: respondent aged 35 to 44 years; 2nd income tercile; unemployed, inactive, retired or student; dwelling in poor condition, needs major repair; accumulated no savings; and Czech resident. The sample comprises all ten OeNB Euro Survey countries.

3 Conclusion

Early empirical evidence made it clear that the economic impact of the COVID-19 pandemic was felt very unevenly across different socioeconomic groups, with individual income and/or confidence shocks varying greatly. The degree to which people were affected in combination with public policy responses to the pandemic shaped the kind and number of measures people took to mitigate the effects of the pandemic. Given the uneven impact at the microlevel, macroeconomic data alone cannot adequately inform public policy when, for example, designing relief measures.

In this study, we use data from the OeNB Euro Survey, an annual survey of individuals conducted in ten different countries in CESEE, to analyze which factors potentially determine how individuals have responded to the crisis in financial terms. With a special module in 2020, the survey assessed what kind of measures individuals have taken so far to mitigate negative effects of the pandemic. We compile descriptive evidence on the prevalence of income shocks in CESEE and how individual shocks relate to the number of mitigating measures taken. Then, we use regressions to establish correlations between the number of measures taken and personal characteristics, including if individuals were hit by an income shock, to understand if the total number of mitigating measures taken is a good proxy for how severely an individual was economically affected by the pandemic.

We find that income shocks in 2020 (income shocks in general and purely COVID-19-related shocks) are related to taking significantly more measures to mitigate the adverse effects of the pandemic, even when controlling for other personal characteristics. Moreover, for financially vulnerable individuals, the number of measures taken might indeed reveal the severity of the effect the pandemic had. For the less financially vulnerable, it might be different, however. For them, several measures might merely indicate that they are in a position to distribute the negative impact of the pandemic across different measure categories. They might even take some measures for precautionary reasons. Thus, the number of mitigating measures alone is not a good indicator for how severely individuals were affected by the first half-year of the COVID-19 pandemic. At least, socioeconomic characteristics should be considered. Additionally, asking people directly how severely they have been affected by the pandemic could serve as an anchor for what the number of measures taken actually indicates.

Still, as the pandemic goes on, more and more measures will be needed to counteract the impact of lasting negative income shocks, savings might become exhausted, reducing consumption might not be enough and borrowing against future income might increase. Inequality will continue to widen due to rich households increasing their wealth while poor households have to increase their debt. Beyond unexpected income shocks, differences in educational outcomes among children and labor force participation by women in poor and rich households will add to long-run inequality if not addressed. The policy implications are neither new nor innovative: policies should restore confidence, support vulnerable people and dampen the effects the pandemic has on income inequality. To identify vulnerable individuals, it is important to continue collecting microdata and exploring how data can actually reveal vulnerability. Simply counting the variety of mitigating measures people had to take can only serve as an insufficient proxy.

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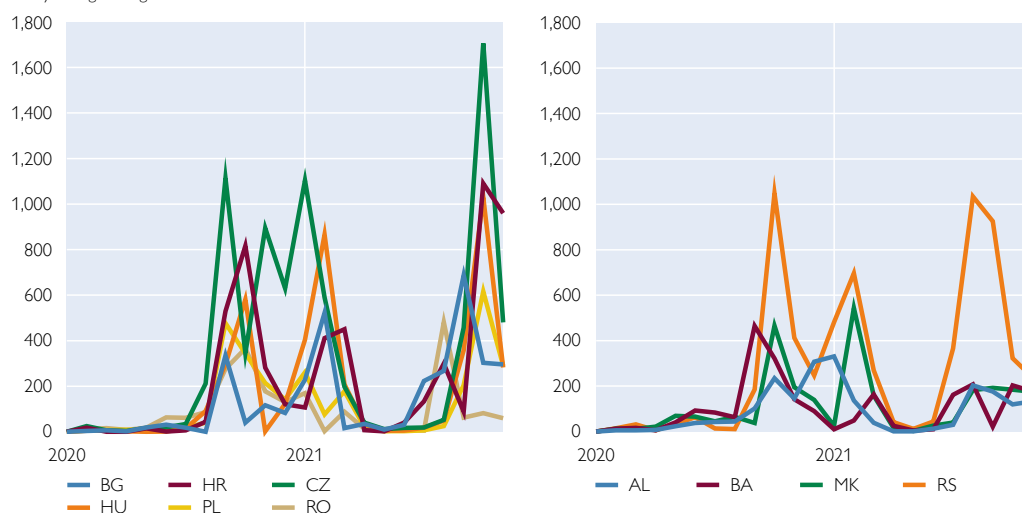
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Annex

Chart A1

Confirmed COVID-19 cases per million inhabitants

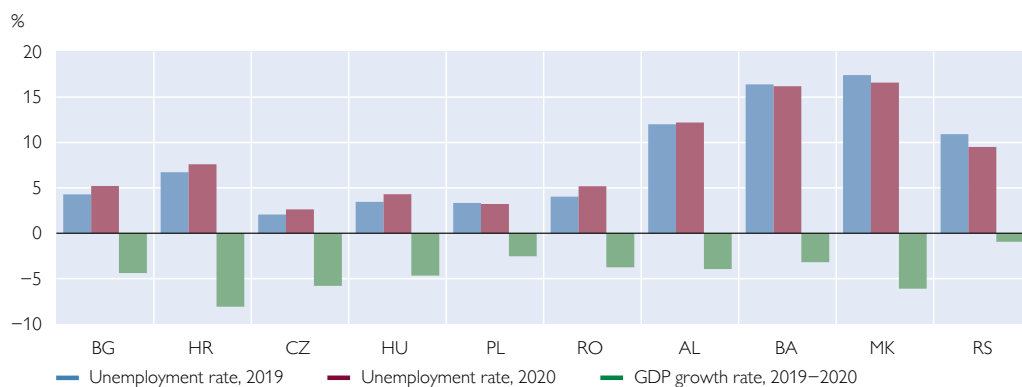
7-day rolling average



Source: Johns Hopkins University and Our World in Data.

Chart A2

GDP growth and unemployment rate in CESEE, 2019–2020



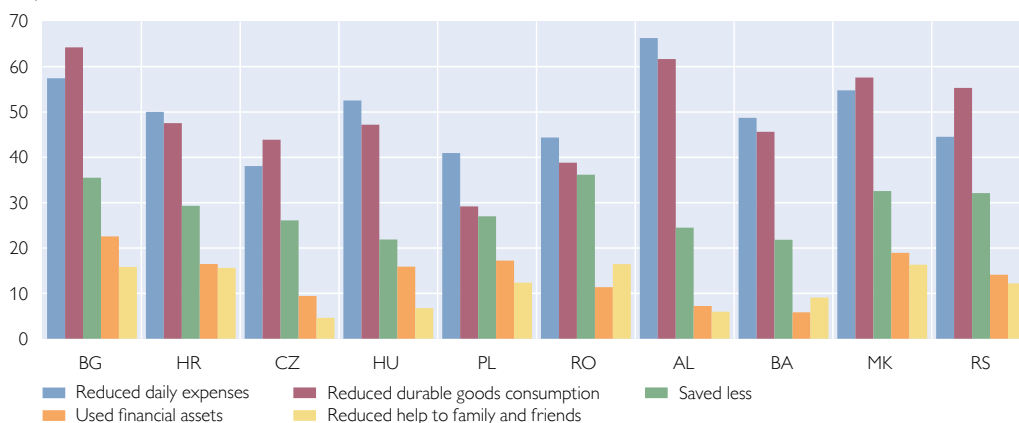
Source: Eurostat, national central banks.

Note: GDP at constant prices.

Chart A3

Crisis response: reducing expenditure and using financial assets

% of individuals



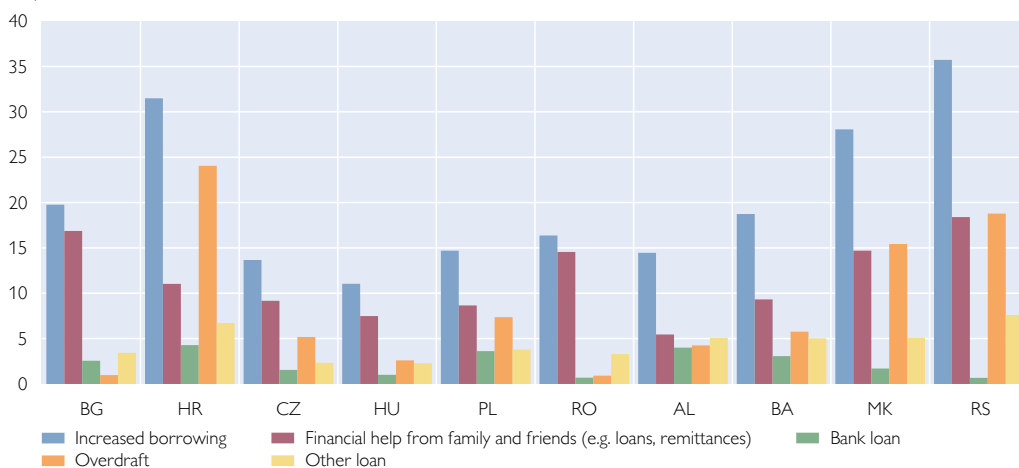
Source: OeNB Euro Survey 2020.

Note: Results are weighted based on weights that are calibrated on census population statistics for age, gender, region and, where available, education and ethnicity (separately for each country). Respondents answering "Don't know" or who refused to answer excluded.

Chart A4

Crisis response: increasing borrowing

% of individuals



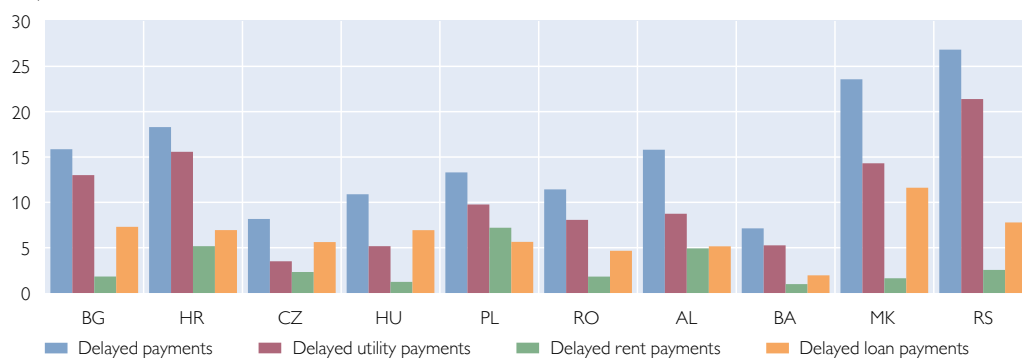
Source: OeNB Euro Survey 2020.

Note: Results are weighted based on weights that are calibrated on census population statistics for age, gender, region and, where available, education and ethnicity (separately for each country). Respondents answering "Don't know" or who refused to answer excluded.

Chart A5

Crisis response: delaying payments and installments

% of individuals



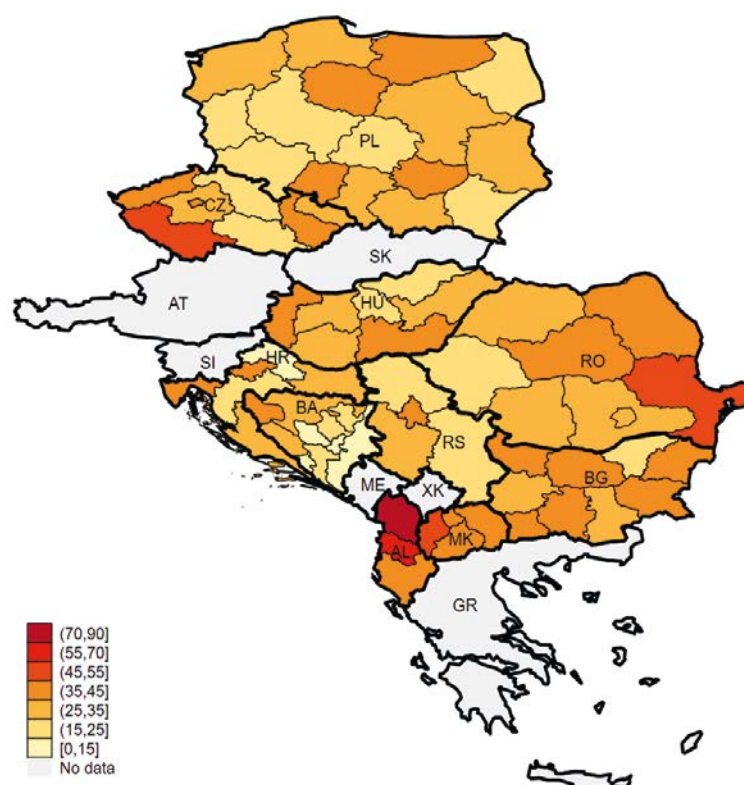
Source: OeNB Euro Survey 2020.

Note: Results are weighted based on weights that are calibrated on census population statistics for age, gender, region and, where available, education and ethnicity (separately for each country). Respondents answering "Don't know" or who refused to answer excluded.

Figure A1

Any income shock

% of individuals



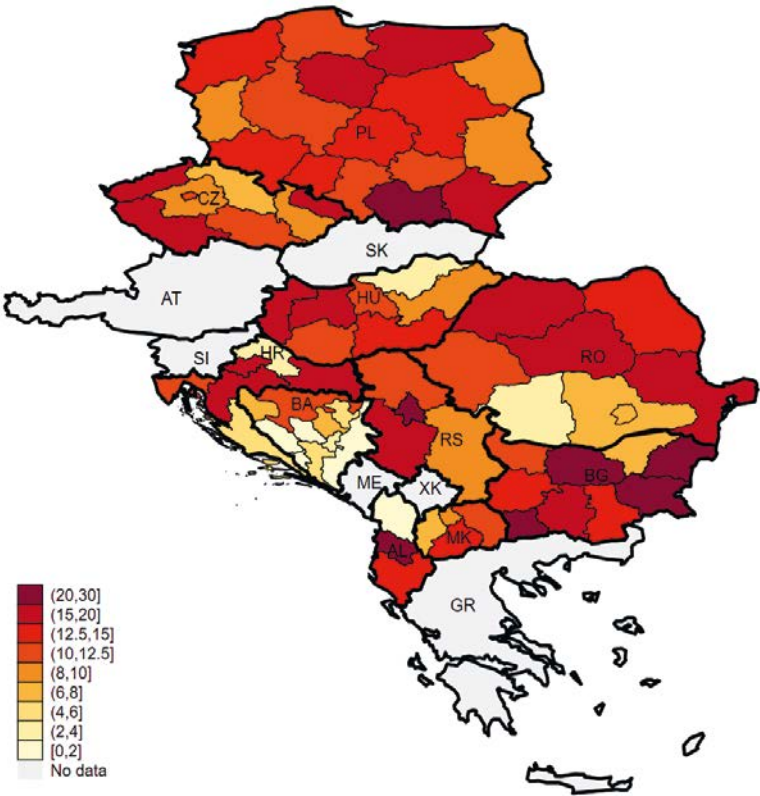
Source: OeNB Euro Survey 2020.

Note: Weighted regional averages based on weights that are calibrated on census population statistics for age, gender, region and, where available, education and ethnicity (separately for each country); respondents answering "Don't know" or who refused to answer excluded.

Figure A2

Income shock related to COVID-19

% of individuals



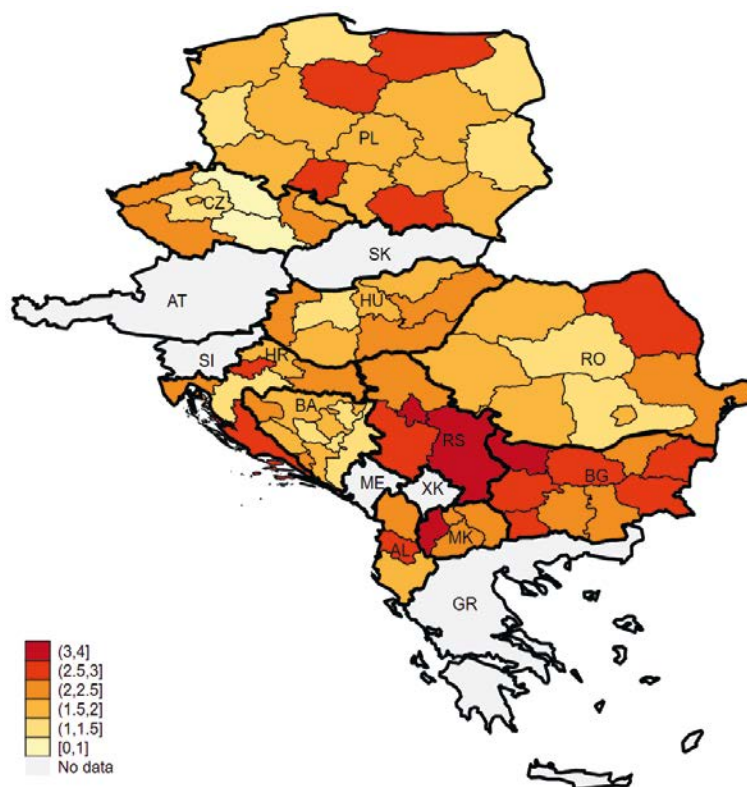
Source: OeNB Euro Survey 2020.

Note: Weighted regional averages based on weights that are calibrated on census population statistics for age, gender, region and, where available, education and ethnicity (separately for each country); respondents answering "Don't know" or who refused to answer excluded.

Figure A3

Average number of mitigating measures

% of individuals



Source: OeNB Euro Survey 2020.

Note: Weighted regional averages based on weights that are calibrated on census population statistics for age, gender, region and, where available, education and ethnicity (separately for each country); respondents answering "Don't know" or who refused to answer excluded.

Table A1

Control variables used in the regression analysis

Label	Description
Any income shock (dummy)	The respondent has experienced one or more of the following income shocks: Lost job due to COVID-19, reduced salary due to COVID-19 and/or the household of the respondent had a significant reduction of income in the last 12 months.
Income shock related to COVID-19 (dummy)	The respondent has experienced one or more of the following income shocks: Lost job due to COVID-19 and/or reduced salary due to COVID-19.
Job in a lockdown industry (dummy)	Dummy variable that equals 1 if the respondent has worked or works in one or more of the following industries: transportation; trade; personal services; tourism and food services; art, entertainment and recreation.
Respondent aged [...]	7 variables for the age of the respondent: age brackets with a span of (mostly) 10 years, starting from 25 years to 69 years, one open age bracket for 24 years or younger, and one open age bracket for 75 years or older.
Male (dummy)	Dummy variable that equals 1 if the respondent is male and zero if the respondent is female.
Employed (dummy)	Dummy variable that equals 1 if the respondent is employed and zero otherwise (retired, unemployed, inactive, student).
Self-employed (dummy)	Dummy variable that equals 1 if the respondent is self-employed and zero otherwise (including nonworking).
Household net income [...]	Household income per month (after taxes) divided into three percentiles per country: low, middle and high. Nonresponse to income is coded as fourth category.
Household receives remittances	Dummy variable that equals 1 if the respondent has received remittances in the previous year and zero otherwise.
Household size (number of persons)	Number of people living in the household of the respondent (including the respondent).
Children (dummy)	Dummy variable that equals 1 if the respondent lives with children below 18 years and zero otherwise.
Secondary residence (dummy)	Dummy variable that equals 1 if the respondent's household owns a secondary residence or other real estate and zero otherwise.
Dwelling is excellent and well maintained	Dummy variable that equals 1 if the interviewer assesses the respondent's dwelling as being in an "excellent condition and well maintained" and zero otherwise.
Dwelling in good condition	Dummy variable that equals 1 if the interviewer assesses the respondent's dwelling as being in a "good condition" and zero otherwise.
Respondent has accumulated savings	Dummy variable that equals 1 if the respondent has savings and zero otherwise.
Refused to reveal the extent of savings	Dummy variable that equals 1 if the respondent refused to report if there are savings and zero otherwise.
Respondent has a loan	Dummy variable that equals 1 if the respondent has a loan and zero otherwise.
Economic situation will improve over the next 5 years (7-point Likert scale)	Answer to "Over the next five years, the economic situation of [MY COUNTRY] will improve" on a scale from 1 – "strongly agree" to 6 – "strongly disagree." Recoded to a 7-point Likert scale with "don't know" as middle category.
Better financial situation of the household over the next 12 months (7-point Likert scale)	Answer to "Over the next 12 months, I expect the financial situation of my household to get better" on a scale from 1 – "strongly agree" to 6 – "strongly disagree." Recoded to a 7-point Likert scale with "don't know" as middle category.
Expected inflation over the next 12 months (3 categories)	Answer to "Over the next year, prices will strongly increase in [MY COUNTRY]" categorized into 1 – "prices will stay the same or decrease a little," 2 – "prices will increase a little" and 3 – "prices will increase a lot."

Source: OeNB Euro Survey 2020.

Table A2

Generalized ordered logit regression: number of mitigating measures by category

Sample split by income shock	Any income shock: no (1)			Any income shock: yes (2)		
	Betas	Gammas (variable parameters)		Betas	Gammas (variable parameters)	
	No measures	1 to 2 measures	3 to 4 measures	No measures	1 to 2 measures	3 to 4 measures
Dependent variable base category	Coefficients			Coefficients		
Job in a lockdown industry (dummy)	0.295*** (0.070)			0.231*** (0.087)		
Respondent aged under 25 years	-0.210* (0.125)			-0.704*** (0.224)	-0.213 (0.169)	-0.502** (0.209)
Respondent aged 25 to 34 years	-0.050 (0.088)			-0.088 (0.110)		
Respondent aged 45 to 54 years	0.030 (0.086)			-0.030 (0.108)		
Respondent aged 55 to 64 years	0.012 (0.097)			-0.050 (0.122)		
Respondent aged 65 to 74 years	0.085 (0.128)			-0.294 (0.184)		
Respondent aged 75 years and above	0.075 (0.158)			-0.631 (0.402)		
Male (dummy)	0.043 (0.051)			-0.064 (0.070)		
Employed (dummy)	-0.098 (0.082)			-0.153 (0.097)		
Self-employed (dummy)	-0.152 (0.112)			-0.021 (0.137)		
Household net income: 1 st tercile	-0.127 (0.082)			0.204** (0.111)		
Household net income: 3 rd tercile	-0.210*** (0.080)			-0.226** (0.102)		
Household net income: not reported	-0.426*** (0.088)			-0.241** (0.118)		
Household receives remittances	-0.021 (0.110)			-0.373* (0.222)	0.081 (0.167)	0.394** (0.165)
Household size (number of persons)	0.009 (0.032)			-0.038 (0.043)		
Children (dummy)	0.229*** (0.075)			0.178* (0.102)		
Secondary residence (dummy)	-0.087 (0.075)			0.251** (0.105)		
Dwelling is excellent and well maintained	-0.410*** (0.105)			-0.599*** (0.148)		
Dwelling in good condition	-0.228** (0.097)			-0.367*** (0.131)		
Respondent has accumulated savings	0.065 (0.074)	0.200** (0.080)	0.297** (0.126)	0.156 (0.157)	0.426*** (0.098)	0.269** (0.109)
Refused to reveal the extent of savings	0.346** (0.175)			0.097 (0.347)		
Respondent has a loan	0.561*** (0.079)	0.624*** (0.083)	0.898*** (0.127)	0.722*** (0.088)		
Alphas: cut point parameters	-0.132 (0.228)	-2.113*** (0.221)	-4.381*** (0.291)	2.286*** (0.293)	0.453* (0.275)	-1.136*** (0.275)
Country dummies	Yes			Yes		
Log-likelihood	-7,243.6			-3,777.0		
Probability > Chi squared (df_m)	407.91 (51)			441.16 (43)		
Pseudo R-squared (McFadden)	0.049			0.074		
BIC	14,959.5			7,924.5		
Number of observations	6,300			3,152		
Unconditional mean of dependent variable	0.88			1.82		

Source: OeNB Euro Survey 2020.

Note: Dependent variable with four ordered categories: (1) no measures, (2) 1 to 2 measures, (3) 3 to 4 measures and (4) 5+ measures. Coefficients from a generalized ordered logit estimation with country dummies using sampling weights; robust standard errors are adjusted for clustering at the primary sampling unit (PSU) level and reported in parentheses. ***, **, * denote that the coefficient is statistically different from zero at the 1%, 5% and 10% level, respectively. Variable parameters are assumed for two and three explanatory variables (=gammas), respectively; proportional parameters for all other explanatory variables (=betas) as well as for all country dummies except for Bulgaria in specification 1 and except for Albania, Bosnia and Herzegovina and Poland in specification 2. For a definition of variables, see annex table A1. Base categories are: respondent aged 35 to 44 years; 2nd income tercile; unemployed, inactive, retired or student; dwelling in poor condition, needs major repair; accumulated no savings; and Czech resident. The sample comprises all ten OeNB Euro Survey countries.

Table A3

Generalized ordered logit regression: number of mitigating measures by category

Sample split by income shock related to COVID-19	Income shock related to COVID-19: no (1)			Income shock related to COVID-19: yes (2)		
	Betas	Gammas (variable parameters)		Betas	Gammas (variable parameters)	
Dependent variable base category	No measures	1 to 2 measures	3 to 4 measures	No measures	1 to 2 measures	3 to 4 measures
	Coefficients			Coefficients		
Job in a lockdown industry (dummy)	0.295*** (0.060)			0.412 (0.303)	0.521*** (0.163)	0.055 (0.139)
Respondent aged under 25 years	−0.353*** (0.107)			0.120 (0.244)		
Respondent aged 25 to 34 years	−0.107 (0.076)			0.142 (0.167)		
Respondent aged 45 to 54 years	0.034 (0.076)			0.160 (0.164)		
Respondent aged 55 to 64 years	0.046 (0.081)			−0.072 (0.213)		
Respondent aged 65 to 74 years	−0.140 (0.107)			−0.137 (0.642)		
Respondent aged 75 years and above	−0.274** (0.137)			−0.836 (0.639)		
Male (dummy)	−0.004 (0.044)			−0.082 (0.113)		
Employed (dummy)	−0.157** (0.068)			−0.546*** (0.175)		
Self-employed (dummy)	−0.039 (0.101)			0.073 (0.221)		
Household net income: 1 st tercile	−0.066 (0.072)			0.236 (0.168)		
Household net income: 3 rd tercile	−0.244*** (0.068)			−0.120 (0.158)		
Household net income: not reported	−0.361*** (0.076)			−0.180 (0.205)		
Household receives remittances	−0.176 (0.116)	0.102 (0.109)	0.446*** (0.143)	−0.984*** (0.340)	−0.315 (0.229)	−0.053 (0.235)
Household size (number of persons)	0.049* (0.028)			0.009 (0.069)		
Children (dummy)	0.179*** (0.065)			0.168 (0.166)		
Secondary residence (dummy)	−0.070 (0.065)			0.446*** (0.165)		
Dwelling is excellent and well maintained	−0.462*** (0.094)			−0.796*** (0.234)		
Dwelling in good condition	−0.221*** (0.084)			−0.621*** (0.217)		
Respondent has accumulated savings	0.031 (0.069)	0.222*** (0.070)	0.286*** (0.098)	0.239* (0.139)		
Refused to reveal the extent of savings	0.226 (0.162)			0.207 (0.563)		
Respondent has a loan	0.553*** (0.072)	0.608*** (0.070)	0.947*** (0.091)	0.860*** (0.131)		
Alphas: cut point parameters	0.318 (0.202)	−1.302*** (0.200)	−3.009*** (0.211)	3.104*** (0.577)	1.045** (0.464)	−0.585 (0.448)
Country dummies	Yes			Yes		
Log-likelihood	−10,187.8			−1,344.4		
Probability > Chi squared (df_m)	511.29 (43)			221.17 (41)		
Pseudo R-squared (McFadden)	0.045			0.095		
BIC	20,790.5			3,000.6		
Number of observations	8,253			1,199		
Unconditional mean of dependent variable	1.07			2.03		

Source: OeNB Euro Survey 2020.

Note: Dependent variable with four ordered categories: (1) no measures, (2) 1 to 2 measures, (3) 3 to 4 measures and (4) 5+ measures. Coefficients from a generalized ordered logit estimation with country dummies using sampling weights; robust standard errors are adjusted for clustering at the primary sampling unit (PSU) level and reported in parentheses. *** ** * denote that the coefficient is statistically different from zero at the 1%, 5% and 10% level, respectively. Variable parameters are assumed for three and two explanatory variables (=gammas), respectively, proportional parameters for all other explanatory variables (=betas) as well as for all country dummies except for Albania, Bosnia and Herzegovina and North Macedonia in specification 1 and except for Albania, Poland and Romania in specification 2. For a definition of variables, see annex table A1. Base categories are: respondent aged 35 to 44 years; 2nd income tercile; unemployed, inactive, retired or student; dwelling in poor condition, needs major repair; accumulated no savings; and Czech resident. The sample comprises all ten OeNB Euro Survey countries.

Table A4

Generalized ordered logit regression: number of consumption-reducing measures

Sample split by type of income shock	Any income shock: no (1)		Income shock related COVID-19: no (2)	
	Betas	Gammas (variable parameters)	Betas	Gammas (variable parameters)
	No measures	1 measure	No measures	1 measure
	Coefficients		Coefficients	
Dependent variable base category	No measures	1 measure	No measures	1 measure
Job in a lockdown industry (dummy)	0.204** (0.080)	0.099 (0.085)	0.220*** (0.072)	0.072 (0.071)
Economic situation will improve over the next 5 years (7-point Likert scale)	-0.022 (0.019)		-0.036** (0.017)	
Better financial situation of the household over the next 12 months (7-point Likert scale)	-0.013 (0.021)		-0.003 (0.019)	
Expected inflation over the next 12 months (3 categories)	0.356*** (0.053)		0.420*** (0.049)	
Respondent aged under 25 years	-0.271** (0.135)		-0.286** (0.118)	-0.484*** (0.134)
Respondent aged 25 to 34 years	-0.124 (0.097)		-0.121 (0.084)	
Respondent aged 45 to 54 years	0.081 (0.092)		0.105 (0.080)	
Respondent aged 55 to 64 years	0.044 (0.103)		0.098 (0.085)	
Respondent aged 65 to 74 years	0.008 (0.133)		-0.138 (0.111)	
Respondent aged 75 years and above	0.087 (0.168)		-0.234 (0.151)	
Male (dummy)	0.003 (0.055)		-0.028 (0.048)	
Employed (dummy)	-0.031 (0.086)		-0.066 (0.072)	
Self-employed (dummy)	-0.215* (0.120)		-0.175* (0.106)	
Household net income: 1st tercile	-0.226** (0.093)	-0.101 (0.097)	-0.104 (0.077)	
Household net income: 3rd tercile	-0.174** (0.083)		-0.167** (0.070)	
Household net income: not reported	-0.318*** (0.098)	-0.194* (0.104)	-0.229*** (0.082)	
Household receives remittances	-0.271** (0.116)		-0.290** (0.115)	
Household size (number of persons)	0.035 (0.035)		0.080*** (0.030)	
Children (dummy)	0.122 (0.086)		0.060 (0.072)	
Secondary residence (dummy)	-0.133* (0.078)		-0.220*** (0.068)	
Dwelling is excellent and well maintained	-0.330*** (0.111)		-0.353*** (0.103)	-0.263** (0.103)
Dwelling in good condition	-0.090 (0.101)		-0.042 (0.090)	

Source: OeNB Euro Survey 2020.

Note: Dependent variable with three ordered categories: (1) no measures, (2) 1 measure and (3) 2 measures. Coefficients from a generalized ordered logit estimation with country dummies using sampling weights; robust standard errors are adjusted for clustering at the primary sampling unit (PSU) level and reported in parentheses. ***, **, * denote that the coefficient is statistically different from zero at the 1%, 5% and 10% level, respectively. Variable parameters are assumed for four explanatory variables (=gammas), proportional parameters for all other explanatory variables (=betas) as well as for all country dummies except for North Macedonia in specification 1 and except for Albania and North Macedonia in specification 2. For a definition of variables, see annex table A1. Base categories are: respondent aged 35 to 44 years; 2nd income tercile; unemployed, inactive, retired or student; dwelling in poor condition, needs major repair; accumulated no savings; and Czech resident. The sample comprises all ten OeNB Euro Survey countries.

Table A4 continued

Generalized ordered logit regression: number of consumption-reducing measures

Sample split by type of income shock	Any income shock: no (1)		Income shock related COVID-19: no (2)	
	Betas	Gammas (variable parameters)	Betas	Gammas (variable parameters)
Dependent variable base category	No measures	1 measure	No measures	1 measure
	Coefficients		Coefficients	
Respondent has accumulated savings	-0.134* (0.078)	-0.278*** (0.087)	-0.153** (0.070)	-0.246*** (0.072)
Refused to reveal the extent of savings	0.064 (0.168)		0.033 (0.160)	
Respondent has a loan	0.367*** (0.074)		0.394*** (0.064)	
Alphas: cut point parameters	-0.564** (0.257)	-1.630*** (0.259)	-0.273 (0.230)	-1.248*** (0.228)
Country dummies	Yes		Yes	
Log-likelihood	-5,806.0		-7,775.5	
Probability > Chi squared (df_m)	284.55 (39)		441.28 (40)	
Pseudo R-squared (McFadden)	0.040		0.054	
BIC	11,967.9		15,927	
Number of observations	5,891		7,739	
Unconditional mean of dependent variable	0.74		0.92	

Source: OeNB Euro Survey 2020.

Note: Dependent variable with three ordered categories: (1) no measures, (2) 1 measure and (3) 2 measures. Coefficients from a generalized ordered logit estimation with country dummies using sampling weights; robust standard errors are adjusted for clustering at the primary sampling unit (PSU) level and reported in parentheses. ***, **, * denote that the coefficient is statistically different from zero at the 1%, 5% and 10% level, respectively. Variable parameters are assumed for four explanatory variables (=gammas), proportional parameters for all other explanatory variables (=betas) as well as for all country dummies except for North Macedonia in specification 1 and except for Albania and North Macedonia in specification 2. For a definition of variables, see annex table A1. Base categories are: respondent aged 35 to 44 years; 2nd income tercile; unemployed, inactive, retired or student; dwelling in poor condition, needs major repair; accumulated no savings; and Czech resident. The sample comprises all ten OeNB Euro Survey countries.

Event wrap-ups

89th East Jour Fixe

CESEE countries in (e-)motion: trends in the automotive industry and individual mobility

Compiled by Katharina Allinger, Tomáš Slačik, Julia Wörz¹

After 120 years of producing and developing petrol and diesel engines, the automotive industry is racing to switch to all-electric cars – at least across Europe. Having ramped up their efforts to go green, car manufacturers in Central, Eastern and Southeastern European (CESEE) countries are keeping the pace of electrification. The OeNB's most recent East Jour Fixe² on March 28, 2022, highlighted the opportunities and challenges associated with the electrification of the car industry, including the localization of battery production, the deployment of charging infrastructures, the future of combustion engines in emerging markets as well as innovation and future mobility trends.

In his opening remarks, OeNB Governor Robert Holzmann recalled the importance of the car industry for the CESEE region: It is not only a key manufacturing segment but also a major export driver and an important determinant of economic growth in several CESEE countries. In terms of aggregate output and employment, the automotive sector in CESEE is comparable to, and closely intertwined with, the automotive sector in Germany. Governor Holzmann also pointed to recent events that have revealed the vulnerability of the car industry and the risks associated with the region's high dependence on this sector: The COVID-19 pandemic has brought about significant disruptions in global supply chains, and the human and political tragedy in Ukraine has created an additional massive exogenous shock and source of risks for the sector. In addition, other long-term challenges loom high. In particular, the global value chain integration of CESEE's car industry has been strongly related to foreign direct investment flows which seem to have lost steam in the last decade. Moreover, many CESEE countries are locked in a functional middle-income trap, generating comparatively little value added.

The future of automotive mobility

In his keynote address, Klaus Schmitz, Partner at the consulting firm Arthur D. Little, provided global survey-based evidence on some of the key questions regarding consumers' attitudes and preferences with respect to future automotive mobility and megatrends in the industry. Polls suggest that the primary reason for using the car is commuting in and out of cities, particularly for work. Consumers share similar motivational patterns for car ownership across all major global markets; these include in particular comfort, independence, fun and convenience. A large majority of consumers (ranging between some 70% in France or Japan and 90% in China) believe that possessing a car in 10 years' time will be at least as important as it is today, a belief reinforced by the pandemic. Yet, despite the stated importance of owning a car, 60% of respondents would at least consider giving up their

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² The presentations and the workshop program are available at <https://www.oenb.at/en/Calendar/2022/2022-03-28-east-jour-fixe.html>.

own vehicle for new mobility services if they match their needs. According to Schmitz, it is rather traffic congestion than environmental considerations that will prompt people to change their mobility patterns.

With respect to autonomous driving, respondents across all regions are most concerned about safety risks. In view of these results, Schmitz argues that once robo-taxis overcome technical and safety issues, they will replace short-distance means of transport, particularly privately owned vehicles and public transport. However, the prerequisite for robo-taxis is i.a. smart regulation, without which road congestion would significantly increase.

Schmitz then turned to the issue of powertrains and presented survey evidence showing that nearly one in two European owners of a combustion engine vehicle is likely to opt for an alternative drivetrain vehicle when replacing their current car. To date, the transport sector accounts for 20% of CO₂ emissions, most of which come from road traffic, and it is the only sector that has not yet reduced emissions. Still high prices of electric vehicles (EVs), limited charging options and too short a driving range persist as the most discouraging factors for consumers to choose a battery EV.

Schmitz concluded by making a plea for large-scale photovoltaic systems in more favorable regions than in Europe, which only has limited space and hours of sunshine. The energy thus produced should be used for the green production of hydrogen, which, in turn, should be used in fuel cell cars and synthetic fuels. Especially synthetic fuels, based on green hydrogen, will play a key role in decarbonizing the existing car fleet, an objective without which the Paris climate goals cannot be achieved. Schmitz left the audience with a clear message – namely that there is a large market potential for electrolyzers and that cars can be a sustainable means of mobility, even though they are not seen as such today. In this context, e-fuels are the necessary prerequisite.

The ensuing discussion centered on space in cities in the age of robo-taxis and on the future of mobility in less advanced world regions, such as India, Latin America or Africa.

The electric car revolution in Europe: Are CESEE countries ready?

In session 1, Matteo Ferrazzi (European Investment Bank – EIB) and Doris Hanzl-Weiss (Vienna Institute for International Economic Studies – wiiw) presented the first part of a study conducted jointly with the OeNB,³ complemented with country perspectives on Czechia and Slovakia provided by Michal Hrubý (EUROPEUM) and Soňa Muzikářová (GLOBSEC). The session was moderated by Birgit Niessner (OeNB) and Robert Stehrer (wiiw). Ferrazzi noted that many factors have a strong impact on the automotive industry, including long-term trends, such as moving production capacities to emerging markets, and pandemic- and war-related changes to e.g. supply chains. Technology also plays a key role: In Europe, the share of EVs in new vehicle sales has increased strongly over the past years and stood at around 40% in 2021. By 2035, all car sales will be EVs if the goals outlined in the “Fit for 55” initiative of the European Commission are achieved. Two key issues regarding EVs are battery production and charging infrastructures. Regarding the

³ The joint EIB-OeNB-wiiw study can be downloaded at https://www.eib.org/attachments/publications/econ_recharging_the_batteries_en.pdf.

latter, capacities need to be expanded rapidly to make EVs attractive for consumers. Regarding batteries, their price is a key determinant of EV prices and is projected to decrease, but at a much slower pace than in the previous decade. Giga-factories for battery production are being built and planned across Europe to reduce reliance on Asian producers. Referring to Ferrazzi's presentation, Schmitz added that while the 2035 EV goal might be feasible from the perspective of large car producers, it is questionable whether consumer demand and energy supply can adapt fast enough.

In her remarks, Hanzl-Weiss focused on the CESEE region, with many of her points being emphasized and reiterated by Hrubý and Muzikárová. The speakers showed that the CESEE region is heavily specialized in the automotive industry, in particular Czechia, Slovakia, Hungary and, to a somewhat lesser extent, Romania and North Macedonia. The transformation of the sector is thus critical for the region's economic outlook. Muzikárová presented estimation results indicating a strong hit to Slovakia's GDP and employment if production capacities are not adequately adapted to EV production. On a positive note, the share of EVs in exported vehicles has increased rapidly in most CESEE countries, reaching 40% in Slovakia and Slovenia in 2021. The panelists pointed out that EV penetration of CESEE passenger car markets is still low and that EU funds from the Recovery and Resilience Facility for the automotive sector and supporting infrastructures are thus lower than in many Western EU countries.

One issue for CESEE countries is that they still show a much higher concentration of low-value-added functions in the automotive industry than e.g. Germany. As headquarter functions are largely located in other countries, this implies a high degree of foreign control.

In the general discussion with the audience, the role of national governments versus that of car producers in shaping the future of CESEE's automotive industry was raised. The panelists noted that while the influence of car producers is clearly large, national governments can still influence developments, for instance, via industrial policy and incentives as well as subsidies and investments (e.g. by getting involved in the European Battery Alliance).

Risks, challenges and opportunities for a sector in transition: A bumpy road ahead for CESEE countries?

Session 2 was chaired by Debora Revoltella (EIB) and provided a forward-looking view on the sector. Tomáš Slačák (OeNB) started his presentation of the second part of the joint EIB-OeNB-wiiw study by questioning the exclusive focus on electrification as the answer to current problems. He referred to energy and raw material use related to EV production, affordability, distributional aspects and a certain lock-in induced by European regulation, which might preclude the development of other technical solutions. In his view, cars will become more expensive, while, at the same time, their average age will increase. Big tech firms will enter the market, curbing the market power of current car producers. Rising demand for inputs will meet limited and inelastic supply and thus boost prices. Slačák also pointed to geopolitical, environmental and social consequences as well as fiscal costs (arising from financing the transition and foregoing tax revenues from fuels in the long-term) and a potential "big market illusion" (related to enormous market expectations on EV producers implying large margins and quantities). He concluded by underlining the importance for CESEE economies to be part of the e-trend and

to seize the opportunities it provides – for new players and sectors but also for serving combustion engine customers longer. He also emphasized the need to shift activities to higher value-added sectors beyond automobiles and secure affordable energy sources beyond fossils. It is equally important to transition into a digital economy, keeping an eye on risks, including financial risks.

Petr Pavlínek (University of Nebraska Omaha and Charles University Prague) highlighted CESEE's high degree of dependence on foreign capital ("integrated periphery" position) that goes hand in hand with low innovation in the region and weak governments. In his view, this will not change any time soon, as he observes a reversal of the investment trends that have prevailed since the start of the transition 30 years ago: New production sites are no longer built in CESEE, while old-type combustion engine production increasingly concentrates in the region. Building on the latter is a risky strategy which undermines future competitiveness.

Nils Poel (European Association of Automotive Suppliers – CLEPA) presented results from a study focusing on powertrains which show that investment in EV production is taking place in the region, in particular in Poland and Hungary. Germany and France are spearheading this development which has significant implications for employment. An EV-only scenario will shed half a million jobs in the EU (around 84% of current jobs in combustion engine production), notwithstanding some replacement in other sectors. A mixed-tech scenario would provide for a better manageable transition without compromising climate goals. Employment effects differ widely, with some regions within countries being more affected than others.

Georg Zaccharia (Raiffeisen Bank International – RBI) completed the list of speakers and turned the audience's attention to the impact of the war in Ukraine which has led to a shortage of materials and inputs. While Russia is also a market for European cars, the impact on trade in finished cars has been negligible to date, given Russia's (and Ukraine's) small market size. Yet, missing inputs have caused production stops at BMW and VW and pose an additional downward risk on the already existing chip shortage. Furthermore, aluminum production will be increasingly affected by the war on a global scale, putting additional pressure on an already tight market. Also, steel prices have surged, given that Russia and Ukraine together account for 20% of total steel supply in Europe. Zaccharia expects large and longer lasting disruptions in supply chains and considerably lower output levels. While demand will be impaired i.a. by inflation and monetary policy tightening (thus causing consumers to postpone buying decisions), it will remain higher than supply capacity in his view.

The subsequent discussion centered on the further development of demographic pressure in CESEE and whether the decline in working age population and the brain drain will be fueled by future investment trends. Pavlínek supported this view, alluding to an already existing lack of skilled labor in the region and illustrating that not only labor costs but also labor supply play an important role. Revoltella closed the session by asking all panelists about key policy measures to address short- and long-term challenges. Slačik was concerned by too little diversification across technologies and sectors and regional dependency; his view was supported by Poel. Zaccharia pointed to infrastructure needs, Pavlínek to necessary investments in labor force quality and availability. He concluded by expressing his concern that post-COVID-19 fiscal consolidation needs will lead to cuts in research and education.

Statistical annex

Statistical annex

This section provides tables detailing selected economic indicators for Albania, Bosnia and Herzegovina, Kosovo, Montenegro, North Macedonia, Serbia and Ukraine, i.e. CESEE countries not covered in the “Recent economic developments and outlook” section.

Table 1

Output, unemployment and prices

	2019	2020	2021	Q3 20	Q4 20	Q1 21	Q2 21	Q3 21	Q4 21
Gross domestic product	<i>Annual real change in %</i>								
Albania	2.1	-3.5	8.5	-3.1	2.9	4.3	17.7	6.8	5.5
Bosnia and Herzegovina ¹	2.8	-3.1	7.1	-4.9	-2.5	2.6	11.6	6.9	7.5
Kosovo	4.8	-5.3	10.5	-7.7	0.1	4.1	16.8	14.5	6.4
Montenegro	4.1	-15.3	12.4	-27.1	-7.8	-6.5	19.0	25.8	8.3
North Macedonia	3.9	-6.1	4.0	-5.9	-0.8	-1.8	13.4	3.0	2.3
Serbia	4.3	-0.9	7.4	-1.3	-1.0	1.5	13.7	7.6	7.0
Ukraine	3.2	-3.8	3.4	-3.3	-0.1	-2.2	6.0	2.8	6.1
Industrial production	<i>Annual real change in %</i>								
Albania	-1.1	-6.3	26.6	-3.1	3.2	22.9	51.5	14.9	21.1
Bosnia and Herzegovina ²	-5.3	-6.4	10.7	-7.0	-0.5	7.2	19.6	9.4	7.4
Kosovo	1.4	2.5	3.9	2.9	2.6	0.5	6.5	3.6	4.3
Montenegro	-2.0	-4.6	3.5	-4.7	-7.9	9.3	-5.2	-3.4	9.5
North Macedonia	3.7	-9.6	1.4	-7.5	-2.3	-6.1	22.3	-3.5	-2.3
Serbia	0.3	0.4	6.4	3.4	1.7	4.1	16.3	2.5	3.8
Ukraine	-0.5	-4.5	1.9	-3.5	0.4	-1.7	7.5	1.2	1.1
Average gross wages – total economy	<i>Annual change in %</i>								
Albania	3.8	2.7	6.3	1.8	2.8	5.2	4.7	6.9	8.4
Bosnia and Herzegovina	4.3	4.0	4.4	3.9	3.7	3.5	4.3	4.5	5.1
Kosovo	5.3	-2.3	9.4	..	..	..	..	..	..
Montenegro	0.8	1.3	1.4	1.1	0.8	0.3	1.5	1.7	1.9
North Macedonia	5.1	8.3	5.7	9.1	7.3	4.0	8.7	4.8	5.4
Serbia	10.5	9.5	9.4	9.5	9.3	7.1	9.6	9.0	11.8
Ukraine	18.5	10.4	20.9	9.5	13.9	16.6	27.1	20.8	19.4
Unemployment rate³	<i>%</i>								
Albania	12.0	12.2	12.1	12.1	12.3	12.6	12.1	11.6	11.9
Bosnia and Herzegovina	16.4	16.2	17.5	..	..	..	..	..	..
Kosovo	25.7	26.0	..	24.6	27.0	25.8	..	..	..
Montenegro	15.4	18.4	16.9	19.6	21.5	19.6	17.3	15.0	15.7
North Macedonia	17.5	16.6	15.8	16.7	16.3	16.1	16.0	15.9	15.3
Serbia	10.9	9.5	11.4	9.5	10.5	13.2	11.4	10.8	10.2
Ukraine	8.6	9.9	10.3	9.9	10.5	10.9	9.7	9.4	11.2
Consumer price index	<i>Period average, annual change in %</i>								
Albania	1.4	1.6	2.0	1.4	1.6	0.9	1.8	2.4	3.1
Bosnia and Herzegovina	0.6	-1.1	2.0	-1.4	-1.6	-1.2	1.4	2.4	5.3
Kosovo	2.7	0.2	3.3	-0.3	-0.1	0.6	2.0	4.3	6.4
Montenegro	0.4	-0.3	2.4	-0.3	-0.8	0.0	2.3	3.1	4.3
North Macedonia	0.8	1.2	3.2	1.5	2.2	2.0	2.8	3.6	4.6
Serbia	1.9	1.6	4.1	1.9	1.6	1.4	3.2	4.4	7.3
Ukraine	7.9	2.7	9.3	2.4	3.8	7.4	9.1	10.5	10.4

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

¹ Expenditure-side data.

² Value added in the national accounts.

³ Labor force survey.

Table 2

External accounts

	2019	2020	2021	Q3 20	Q4 20	Q1 21	Q2 21	Q3 21	Q4 21
Trade balance	% of GDP								
Albania	-22.8	-22.5	-24.8	-23.3	-24.4	-22.5	-20.9	-25.5	-29.9
Bosnia and Herzegovina	-22.6	-18.3	-19.3	-18.4	-18.1	-15.7	-19.4	-20.4	-21.2
Kosovo	-40.3	-38.0	-45.6	-36.8	-41.1	-44.1	-45.8	-44.4	-48.0
Montenegro	-41.7	-39.2	-39.0	-34.2	-34.4	-36.8	-44.2	-37.4	-37.9
North Macedonia	-17.3	-17.0	-20.2	-14.6	-16.8	-19.4	-20.2	-17.0	-23.7
Serbia	-12.2	-11.1	-11.1	-10.2	-11.0	-8.4	-12.4	-10.5	-12.7
Ukraine	-9.2	-4.3	-3.3	-4.9	-5.1	-4.9	-0.7	-2.4	-4.8
Current plus capital account balance	% of GDP								
Albania	-7.4	-7.6	-5.4	-4.5	-8.2	-6.0	-4.5	-0.4	-10.5
Bosnia and Herzegovina	-1.7	-2.8	-1.4	-3.5	-2.3	-0.5	-3.0	-0.4	-1.7
Kosovo	-5.8	-6.7	-8.0	-5.3	-7.9	-9.3	-15.2	8.7	-18.2
Montenegro	-14.3	-26.1	-9.2	-18.0	-19.7	-18.6	-22.1	10.2	-15.3
North Macedonia	-3.2	-3.3	-3.5	-1.8	-2.2	-2.2	-4.0	3.3	-10.2
Serbia	-7.1	-4.2	-4.4	-4.0	-1.8	0.7	-5.1	-5.6	-6.8
Ukraine	-2.6	3.5	-1.3	1.3	1.4	-1.3	0.7	-2.3	-1.8
Foreign direct investment¹	% of GDP								
Albania	-7.5	-6.7	-6.4	-6.5	-6.1	-6.7	-5.5	-6.4	-7.1
Bosnia and Herzegovina	-1.5	-1.7	-2.1	-1.9	0.4	-3.8	-4.4	-2.7	2.0
Kosovo	-2.7	-4.2	-4.1	-3.3	-3.7	-5.7	-4.7	-5.7	-0.7
Montenegro	-6.2	-11.2	-11.2	-7.1	-10.6	-9.6	-10.8	-9.3	-15.1
North Macedonia	-3.2	-1.5	-3.7	0.3	-1.6	0.1	-7.8	-0.8	-5.9
Serbia	-7.7	-6.3	-6.8	-2.5	-9.6	-7.3	-5.7	-8.4	-5.8
Ukraine	-3.3	0.1	-3.3	0.0	-0.7	-4.2	-2.8	-4.5	-2.3
Gross external debt	End of period, % of GDP								
Albania	59.9	64.4	63.1	67.2	64.4	65.3	60.8	60.0	63.1
Bosnia and Herzegovina	62.9	64.4	60.1	63.7	64.4	62.7	59.6	60.2	60.1
Kosovo	31.2	37.2	38.1	35.1	37.2	36.7	37.6	37.7	38.1
Montenegro	169.0	224.1	..	..	..	..	..	..	..
North Macedonia	72.4	80.3	81.4	85.4	80.3	92.1	91.2	86.8	81.4
Serbia	82.6	85.6	84.9	85.8	85.6	88.5	84.9	87.4	84.9
Ukraine	78.1	75.3	67.1	75.2	75.3	77.6	74.6	70.9	67.1
Reserve assets excluding gold	Period average, annual change in %								
Albania	23.5	28.7	31.3	30.3	28.7	29.0	26.3	27.3	31.3
Bosnia and Herzegovina	34.8	39.7	43.8	37.7	39.7	38.9	39.2	41.9	43.0
Kosovo ²	12.2	13.3	14.1	13.1	13.3	11.9	13.2	16.3	14.1
Montenegro	27.6	41.5	33.7	24.4	41.0	33.4	30.9	32.1	33.7
North Macedonia	26.3	28.4	28.0	29.4	28.4	34.0	33.2	29.6	28.0
Serbia	26.2	25.1	27.2	24.4	25.1	26.7	25.0	29.3	27.2
Ukraine	15.4	16.5	15.2	15.4	16.5	16.1	16.0	15.4	15.2

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

¹ + = 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).

² Reserve assets (including gold).

Table 3

Banking sector indicators

	2019	2020	2021	Q3 20	Q4 20	Q1 21	Q2 21	Q3 21	Q4 21
Bank loans to the domestic nonbank private sector	<i>End of period, annual change in %</i>								
Albania ¹	6.9	5.9	9.4	4.0	5.9	5.7	7.5	8.4	9.4
Bosnia and Herzegovina ¹	6.7	-2.5	3.7	-0.5	-2.5	-0.4	1.9	2.7	3.7
Kosovo	10.0	7.1	15.5	6.4	7.1	7.7	12.2	13.5	15.5
Montenegro	6.8	3.0	3.2	7.3	3.0	1.5	2.2	1.1	3.2
North Macedonia ¹	5.2	4.3	7.3	7.1	4.3	6.1	5.7	6.2	7.3
Serbia ¹	8.1	10.9	8.5	14.0	10.9	10.4	8.1	6.8	8.5
Ukraine ¹	-3.6	-10.5	10.9	-7.8	-10.5	-9.4	-3.4	4.7	10.9
Share of foreign currency loans²	<i>End of period, %</i>								
Albania	48.8	48.3	48.8	48.0	48.3	47.9	47.7	47.5	48.8
Bosnia and Herzegovina	52.6	52.2	47.8	52.0	52.2	51.2	49.8	49.1	47.8
Kosovo	..	..	..	..	..	..	..	..	..
Montenegro ³	3.1	2.9	..	2.8	2.9	3.7	3.1	3.1	..
North Macedonia	41.5	41.5	40.7	41.4	41.5	41.6	41.3	41.3	40.7
Serbia ⁴	66.1	62.1	61.2	62.8	62.1	61.7	60.8	61.0	61.2
Ukraine	37.0	37.1	28.6	38.2	37.1	35.5	32.1	29.1	28.6
NPL ratio	<i>%</i>								
Albania	8.4	8.1	5.7	8.3	8.1	8.0	7.1	6.5	5.7
Bosnia and Herzegovina	7.4	6.1	5.8	6.6	6.1	6.0	5.7	5.5	5.8
Kosovo	2.0	2.7	2.3	2.7	2.7	2.7	2.5	2.4	2.3
Montenegro	4.7	5.5	6.2	5.6	5.5	5.5	5.7	5.6	6.2
North Macedonia	3.8	3.2	3.2	3.4	3.2	3.3	3.6	3.6	3.2
Serbia	4.1	3.7	3.6	3.4	3.7	3.9	3.6	3.6	3.6
Ukraine	48.4	41.0	30.0	45.6	41.0	39.9	37.2	33.3	30.0
Tier 1 capital ratio	<i>%</i>								
Albania	17.1	17.2	16.9	17.5	17.2	17.0	16.9	17.2	16.9
Bosnia and Herzegovina	17.5	18.1	18.7	17.3	18.1	17.9	18.2	18.4	18.7
Kosovo ⁵	15.9	16.5	15.3	16.9	16.5	17.1	17.3	17.9	15.3
Montenegro ⁵	17.7	18.5	18.5	19.3	18.5	19.3	19.2	18.5	18.5
North Macedonia	14.8	15.3	15.8	15.5	15.3	15.4	15.9	15.9	15.8
Serbia	22.4	21.6	19.7	21.5	21.6	21.4	21.1	20.6	19.7
Ukraine	13.5	15.7	12.0	16.1	15.7	16.2	16.1	15.2	12.0

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.

Table 4

Monetary and fiscal policy indicators

	2019	2020	2021	Q3 20	Q4 20	Q1 21	Q2 21	Q3 21	Q4 21
Key interest rate	End of period, %								
Albania (one-week repo rate)	1.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Bosnia and Herzegovina ¹	..	..	..	..	..	..	..	..	..
Kosovo ¹	..	..	..	..	..	..	..	..	..
Montenegro ¹	..	..	..	..	..	..	..	..	..
North Macedonia (28/35-day central bank bills)	2.3	1.5	1.3	1.5	1.5	1.3	1.3	1.3	1.3
Serbia (one-week repo rate)	2.3	1.0	1.0	1.3	1.0	1.0	1.0	1.0	1.0
Ukraine (discount rate)	13.5	6.0	9.0	6.0	6.0	6.5	7.5	8.5	9.0
Three-month interbank rate	Period average, %								
Albania	1.4	1.5	1.4	1.4	1.4	1.5	1.4	1.3	1.4
Bosnia and Herzegovina	..	..	..	..	..	..	..	..	..
Kosovo	..	..	..	..	..	..	..	..	..
Montenegro	..	..	..	..	..	..	..	..	..
North Macedonia	1.5	1.4	1.3	1.4	1.4	1.4	1.3	1.3	1.3
Serbia	2.5	1.2	0.9	1.0	1.0	0.9	0.9	0.9	0.9
Ukraine	14.8	10.0	7.2	8.4	8.1	7.7	7.0	6.9	7.3
Exchange rate	Period average, national currency per EUR								
Albania	123.0	123.8	122.5	123.9	123.8	123.5	123.0	121.8	121.6
Bosnia and Herzegovina	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Kosovo	..	..	..	..	..	..	..	..	..
Montenegro	..	..	..	..	..	..	..	..	..
North Macedonia	61.5	61.7	61.6	61.7	61.7	61.7	61.6	61.6	61.7
Serbia	117.9	117.6	117.6	117.6	117.6	117.6	117.6	117.6	117.6
Ukraine	28.9	30.8	32.3	32.3	33.7	33.7	33.2	31.7	30.5
	2019	2020	2021	2019	2020	2021			
	General government balance			General government debt					
	End of period, % of GDP								
Albania	-1.9	-6.8	-5.9	65.8	75.7	77.6			
Bosnia and Herzegovina	1.9	-5.3	3.5	32.8	36.6	35.2			
Kosovo	-2.9	-7.6	-1.3	17.0	22.0	23.0			
Montenegro	-1.9	-11.7	-3.4	76.5	105.3	85.0			
North Macedonia	-2.0	-8.2	-6.1	40.7	51.2	54.5			
Serbia	-0.2	-8.0	-4.9	52.8	57.8	58.1			
Ukraine	-2.2	-5.3	-3.4	50.2	60.4	46.7			

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

¹ No policy rate available (unilateral euroization or currency board).**Conventions used**

.. = data not available.

Discrepancies may arise from rounding.