

# 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

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.<sup>1</sup>

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

Please e-mail applications to *scholarship@oenb.at* by the end of October 2020. Applicants will be notified of the jury's decision by end-November.

<sup>&</sup>lt;sup>1</sup> We assume that the coronavirus crisis will have abated by next year. We are also exploring alternative formats to continue research cooperation under the KLERS program for as long as we cannot resume visits due to the pandemic situation.

Recent economic developments and outlook

### Developments in selected CESEE countries

Coronavirus overruns the region<sup>1, 2, 3</sup>

#### **1** Regional overview

The spread of the coronavirus pandemic to Central, Eastern and Southeastern Europe (CESEE) has led to restrictions on economic life that seemed difficult to anticipate just a few weeks ago, bringing about some of the most severe social and economic disruptions since the revolutions of 1989. The coronavirus crisis is primarily a public health crisis and constitutes an external and symmetric macro-economic shock to all countries, with containment measures adversely affecting both the supply and demand side, though with different implications across countries. This macroeconomic shock will without any doubt fundamentally change the state of affairs in CESEE and send the region into deep recession.

This report gives an overview of the economic situation prior to the coronavirus pandemic and sheds light on macroeconomic strengths and weaknesses and the associated policy space for the CESEE region. It then sketches the development of the coronavirus crisis in CESEE and the policy measures implemented so far.

### Pre-coronavirus: moderating though still broadly robust economic growth amid often slowly rising price pressures

High-frequency activity indicators weakened in the second half of 2019 and in early 2020 in most CESEE countries. The weakening was most pronounced in the (very strongly export-oriented) industrial production sector, which basically stagnated in the CESEE EU Member States and decelerated notably in Russia. This reflected the deteriorating international environment and a pronounced decline in world trade that was strongly influenced by the U.S.-China trade war. Somewhat stronger dynamics were reported for construction output and retail sales, underlining the continuing strength of domestic demand. A clear pickup among all activity indicators was only observed in Turkey as the country recovered from recession in late 2018.

GDP figures for the second half of 2019 were broadly in line with the trends outlined above (see table 1). Real GDP growth in Turkey accelerated to 1.9% (quarter on quarter) in the fourth quarter of 2019 – by far the strongest reading in the CESEE region. Decelerating economic momentum was reported for the CESEE EU Member States, where average GDP growth came in at 0.7% (quarter on quarter) in the final quarter of 2019. This was a rather weak reading compared to the dynamism of the past three years. GDP growth in Russia amounted to 0.6% (quarter on quarter) in the fourth quarter of 2019 and was broadly in line with CESEE EU Member States' figures. Moderating growth amid decelerating international momentum in the second half of 2019

<sup>&</sup>lt;sup>1</sup> Compiled by Josef Schreiner with input from Katharina Allinger, Stephan Barisitz, Markus Eller, Antje Hildebrandt, Mathias Lahnsteiner, Thomas Reininger, Tomáš Slačík and Zoltan Walko.

<sup>&</sup>lt;sup>2</sup> Cutoff date: April 11, 2020. This report focuses primarily on data releases and developments from October 2019 up to the cutoff date and covers Slovakia, Slovenia, Bulgaria, Croatia, the Czech Republic, Hungary, Poland, Romania, Turkey and Russia. The countries are ranked according to their level of EU integration (euro area countries, EU Member States, EU candidate countries and non-EU countries). For statistical information on selected economic indicators for CESEE countries not covered in this report (Albania, Bosnia and Herzegovina, Kosovo, Montenegro, North Macedonia, Serbia and Ukraine), see the statistical annex in this issue.

<sup>&</sup>lt;sup>3</sup> All growth rates in the text refer to year-on-year changes unless otherwise stated.

Real GDP growth												
	2017	2018	2019	Q3 2018	Q4 2018	Q1 2019	Q2 2019	Q3 2019	Q4 2019			
	Period-on-period change in %											
Slovakia	3.0	4.0	2.3	1.0	0.4	0.6	0.3	0.4	0.6			
Slovenia	4.8	4.1	2.4	1.0	0.8	0.5	0.0	0.8	0.4			
Bulgaria	3.5	3.1	3.4	1.0	0.8	1.0	0.7	0.7	0.8			
Croatia	3.1	2.7	2.9	0.2	0.4	1.1	0.6	0.6	0.3			
Czech Republic	4.4	2.8	2.6	0.6	0.9	0.6	0.5	0.4	0.5			
Hungary	4.3	5.1	4.9	1.5	1.2	1.4	1.0	1.1	1.0			
Poland	4.9	5.1	4.1	1.3	0.7	1.4	0.7	1.2	0.3			
Romania	7.1	4.4	4.1	1.7	0.6	1.1	0.9	0.6	1.5			
Turkey	7.5	2.8	0.9	-1.1	-2.4	1.3	1.2	0.4	1.9			
Russia	1.8	2.5	1.3	0.4	0.4	-0.1	0.6	0.5	0.6			
CESEE average <sup>1</sup>	4.0	3.2	2.0	0.3	-0.2	0.6	0.8	0.6	0.9			
Euro area	2.5	1.9	1.2	0.2	0.4	0.5	0.1	0.3	0.1			

Source: Eurostat, national statistical offices <sup>1</sup> Average weighted with GDP at PPP.

Domestic demand remained the backbone of growth in the second half of 2019 as exports

Inflation reflected

strong domestic

price pressures

flagged

Growth remained firmly rooted in domestic demand. Private consumption made the strongest contribution to GDP growth in seven of the ten countries under observation. It continued to benefit from benign labor market conditions and swift wage growth. Furthermore, consumer sentiment was robust until most recently and consumer credit expanded swiftly.

Unemployment rates have been falling consistently in recent years, from an average level of around 10% in early 2013 to 3.4% in February 2020. This represents the lowest reading since the start of transition. Furthermore, employment kept expanding throughout most of the region up to the outbreak of the pandemic, contributing to a convergence of employment rates toward euro area levels.

Investment also supported growth throughout most of CESEE in the second half of 2019. Capital spending was bolstered by high capacity utilization, favorable financing conditions, robust construction activity and the availability of EU funding in many countries. In some countries, however, poor export prospects already led companies to postpone or scale down investment. This was especially the case in Slovenia, where growth in capital formation dipped into the red. A notable deceleration of investment growth was also observed in Croatia, Hungary and Poland, coming down from very high levels, however.

Export growth continued to soften in the review period, mirroring declining world trade amid lower international demand. Given the high import content of CESEE's export production, import growth was also somewhat lower. On balance, the external sector often contributed negatively to GDP dynamics, especially in Russia and Turkey.

Despite somewhat lower growth rates, means of production – especially labor – continued to be utilized in full in the second half of 2019. High GDP growth, emigration and a lack of skilled workers had led to labor shortages in the past years. This translated into high wage growth rates that reached up to 12% annually. The situation has relaxed in recent months and both wage growth and labor shortages came down somewhat (e.g. annual nominal hourly wage growth declined to around 9% by the end of 2019). Nevertheless, the region's economies mostly ran above full

Table 1

potential. The positive output gap for the CESEE EU Member States in 2019 was estimated at an average 2% of GDP by the European Commission.

This translated into higher inflation rates. Average HICP inflation came in at 3.7% in January and 3.6% in February 2020 in the CESEE EU Member States, the highest level since late 2012. While this in part reflects higher energy prices up until February, core inflation was on the rise, too. In February 2020, it reached an average of 3.3%. Several central banks (e.g. in the Czech Republic, Hungary, Poland and Romania) have missed their inflation targets in recent months (at least temporarily).

In Turkey, inflation came down from around 25% in late 2018 to a three-year low of 8.6% in October 2019. However, price growth subsequently reaccelerated to 12.4% in February 2020, owing in part to unfavorable base effects. Among the HICP components, it was especially industrial goods prices that fueled the increase.

Russia was the only country with a clear downward trend in inflation in recent months. In February 2020, price growth declined to 2.3% (from 4% in September 2019), well below the central bank's target of 4%. The most important building block for this development was a base effect from a value-added tax increase in January 2019. Other disinflationary factors included a decline in prices of food products and non-food goods.

Regional central banks reacted to inflation developments. The Czech central bank increased its policy rate by 25 basis points to 2.25% in February 2020 after having missed its inflation target for three months in a row.

The Turkish central bank decreased its policy rate in four steps, from 16.5% in early October 2019 to 10.75% in late February 2020, reversing most of its crisis-induced rate hikes carried out after the turbulences in mid-2018. It argued that the improvement in macroeconomic indicators supported the fall in the country's risk premium. The exchange rate of the Turkish lira vis-à-vis the euro remained broadly stable from October 2019 until the end of February 2020.

The Russian central bank cut its key rate in three steps, from 7% in early October 2019 to 6% in late February 2020, citing disinflationary pressures and – in its February move – rising risks of a substantial global economic slowdown.

## Coronavirus crisis: macroeconomic strengths and weaknesses and policy space for the CESEE region

The CESEE region entered the current slump from a state of moderating, though still broadly robust economic growth amid often slowly rising price pressures. Compared to 2008, general macrofinancial risks remain broadly contained at the onset of the downturn. The upcoming section provides an overview of important indicators on the external, the general government and the banking sectors in the CESEE region and outlines specific strengths and weaknesses.

The period before the great financial crisis was characterized by twin deficits in the external and public sector accounts in many countries of the CESEE region. At the outbreak of the coronavirus crisis, the region reported a combined current and capital account surplus of 2.2% of GDP (end-2019). Among the individual CESEE countries, only Romania recorded a notable current account deficit in 2019 (see chart 1). The external adjustment of the region was driven predominantly by better outcomes in the goods and services balances. The momentum in the trade balance initially rested on strongly reduced domestic demand at the height of the Czech central bank tightens monetary policy while key rates in Russia and Turkey decline further

External sector: current accounts mostly in surplus and rising external debt buffered by an even larger increase in reserves



Chart 2



Combined current and capital account balance



global financial crisis that led to a substantial decline of imports. Trade in goods, however, also benefited from the close integration of the CESEE (EU) region in international supply chains as the associated rise in competitiveness bolstered export growth after the acute crisis years. In recent quarters, pronounced (productivity-adjusted) wage increases in the manufacturing sector have already shaved off some of the competitive edge of the region, however.

Yet, some CESEE countries belong to the world's most tightly integrated in terms of global value chains (see chart 2), which implies a high vulnerability in the current crisis. All countries under observation are more strongly integrated than the OECD average, and the degree of integration in countries like the Czech Republic, Hungary and Slovakia is even five to six times as high. Global production networks could be an important transmission mechanism for shocks throughout the global economy and have already been disrupted at an early stage by the stoppage of production in China. Furthermore, global value chains not only transmit shocks in supply, they also transmit shocks in demand. As an example, the automobile industry in CESEE will not only be impaired by a lack of Chinese inputs into domestic production, but also by a decline in Chinese auto demand via falling sales of international (especially German) car producers that usually obtain inputs from CESEE.

International trade also acts as a transmission mechanism for coronavirusrelated shocks. Chart 3 shows that the degree of openness has mostly increased since the global financial crisis and is especially high in the Central European EU Member States (up to three times as high as in the EU-15). Even though the geographical distribution of CESEE countries' trade remains very much centered on the EU-15, the weight of China and the U.S.A. as the largest and second-largest global economies (in terms of purchasing power parity) in final demand for CESEE products must not be ignored given the strong integration in international value chains.

Further, tourism will be one of the sectors most strongly affected by the coronavirus recession; this warrants a closer look at the importance of this sector for CESEE (see chart 4). In terms of dependence on tourism, the CESEE countries can be broken down into roughly three groups. The first group includes Poland, Russia, Romania, Slovakia, the Czech Republic and Hungary. These countries reported a share of tourism in total GDP of between 5% to 8%. The second group includes Bulgaria, Turkey and Slovenia, with a share of tourism of around 11% to 12% in total GDP. Finally, Croatia is in a league of its own, with a share of tourism in GDP and employment of around 25%, making it the country most dependent on tourism in the whole region (and in fact also throughout much of Europe).

Finally, we take a look at foreign capital flows and external debt to get an idea of the sustainability of the external position of the CESEE region. For the region





as a whole, external liabilities in the international investment position (IIP) increased by some 20 percentage points of GDP between 2008 and 2019 (see chart 5), mostly on account of FDI inflows (+16.3 percentage points of GDP) but also on account of higher portfolio liabilities (+10.7 percentage points of GDP). Other investments were the only component of IIP liabilities that posted a notable decline (-6.4 percentage points of GDP). The latter mainly reflected two things: The deleveraging of international banking groups in the region and the change in the refinancing structure of CESEE banking sectors away from external liabilities to domestic deposits. The outlined dynamics in IIP liabilities translated into a somewhat higher gross external debt of the CESEE region (+4.9 percentage points of GDP, reaching 48.7% of GDP in 2019; see chart 6). At the same time – supported by current account surpluses – reserves (including gold) also trended higher (+7.4 percentage points of GDP) and covered more than 50% of total external debt by the end of 2019.

Developments at the country level were heterogeneous, however. Between 2008 and 2019, a large degree of external deleveraging was observed for Hungary and Bulgaria (and to a lesser extent also for Croatia). In all three countries, the decline in IIP liabilities was almost exclusively driven by other investments, leading to a corresponding decline in gross external debt. The Czech Republic and Slovakia, by contrast, reported an increase in their external liabilities of more than 50 percentage points of GDP. Strongly rising portfolio and other investment liabilities – amid an also substantial upward trend in FDI – pushed up external debt in the two countries. In Turkey and Poland, the increase in IIP liabilities amounted to some 25 percentage points of GDP in the past decade. While, in the case of Poland, the increase rested on FDI and portfolio flows only, all IIP components contributed to the rise in Turkey. Hence, external debt in Turkey also posted a relatively large increase. Comparatively little change could be observed in Slovenia, Romania and Russia, where increases in FDI and decreases in other investments broadly leveled out.

Summing up, the region entered the current downturn with its external accounts in broadly solid shape. Combined current and capital accounts were mostly in surplus and an increase in external debt was buffered by an even larger

Chart 4

Chart 5

Chart 6

RU



International investment position liabilities



% of GDP 180 160 140

ΒG

**External debt and reserves** 

SK

Source: National central banks.

Gross external debt

SI

increase in reserves. On the country level, Romania was the only country to report a notable current account deficit in 2019. Most of the shortfall, however, was covered by capital (mostly FDI) inflows. Given the high degree of openness and the strong integration in global value chains, Central European countries (especially Hungary, the Czech Republic and Slovakia) will most likely be more affected by a slowdown in global demand. The sudden stop in international mobility will particularly dampen the Croatian economy, as the country is highly dependent on tourism. Finally, Turkey experienced a rather large increase in external debt amid

ΗU

PL

RO

TR

CZ

HR

Gross official reserves (excluding gold)

General government sector: lower budgetary shortfalls than in 2008 despite a lack of consolidation in recent years; debt levels generally higher with partly unfavorable financing structures broadly unchanged international reserves, leaving the coverage of external debt by foreign exchange reserves among the lowest of the region. Furthermore, exchange rate risks are high given the Turkish lira's strong volatility in recent years and the country is also rather susceptible to the effects of a sudden stop in tourism.

A central question on the eve of the recession is whether fiscal policy has enough room for maneuver to weather the fallout from the coronavirus crisis. Ideally, policymakers would want to rely on automatic fiscal stabilizers, discretionary fiscal stimuli and favorable financing conditions to shield companies, workers and households from the most severe consequences of the coronavirus-induced economic slump. The ability to do so crucially depends on a country's fiscal space.

A look at general government net lending in the region reveals that most CESEE countries managed to substantially bring down headline deficits as well as cyclically adjusted budget deficits from the heights after the global financial crisis (see chart 7). Measures to improve revenue collection combined with strong economic growth in recent years have underpinned a notable improvement in public finances. In fact, most countries reported notably lower deficits in 2019 than they did before the outbreak of the global financial crisis in 2008.

The reform momentum, however, stalled somewhat in 2019. Six of the ten countries under observation reported higher headline deficits (lower surpluses) than in 2018, despite continuing robust economic momentum. An expansionary fiscal stance was also documented by the deterioration in the (projected) cyclically adjusted deficits of most CESEE EU Member States.

In Romania, the headline deficit increased to 4.3% of GDP, 1.3 percentage points of GDP above the Maastricht threshold. Romania has been in a significant deviation procedure (SDP) since 2017. In November 2019, the European Commission commented that the Romanian authorities do not intend to act upon the recommendations issued within the SDP and that the new pension law poses a significant upward risk to the public deficit in 2020 and beyond. Against this background, an excessive deficit procedure (EDP) was launched in spring 2020. Hungary – the second country subject to an SDP – was on a better trajectory before the coronavirus hit the region. In its November 2019 report, the European Commission noted that the Hungarian economy was experiencing good times, with an improvement in the overall fiscal situation.

After the start of transition, CESEE public sectors had been known for their low indebtedness for a long time. The global financial crisis thoroughly altered this situation, however (see chart 8). Discretionary fiscal spending and large-scale banking sector support in several countries drove up general government debt to more "normal" European levels after 2008. Strong economic dynamics in recent years reversed some of these increases, but debt levels mostly remain substantially higher than ten years ago. In Turkey, government debt even displayed a clear upward trend in the past two years as the country went through a recession. Russia reports the by far lowest public debt and the country's National Welfare Fund holds about USD 150 billion in liquid assets (9% of GDP).

For fiscal sustainability, it is not only the level of debt that matters but also its composition. With respect to the creditor structure, a large share of foreign investors can drive up risk premiums and impede access to market funding and favorable financing conditions in turbulent times. Domestic investors (such as pension funds), by contrast, are usually more long-term oriented and less prone to swings in sentiment. The share of domestic investors is relatively low in CESEE,

Chart 7



### General government deficit % of GDP



partly because comparatively shallow capital markets make it hard to issue sufficient portions of sovereign debt domestically. Chart 9 shows that nonresidents on average held close to 50% of total debt in CESEE in 2019. In Slovakia and Slovenia, the shares reached close to 70% and displayed a notable upward trend.

If we look at the currency denomination of public debt, we find that the share of foreign currency-denominated debt in total debt is rather high in many CESEE countries given the strong presence of nonresident investors (see chart 10). Exchange rate risks, however, are mitigated by two factors: The euro is the most important foreign currency in the CESEE EU Member States, given their close trade, financial and business cycle linkages with the euro area and the associated hedging possibilities. Second, the stock of euro-denominated debt is especially high in those countries that have pegged their currencies to the euro or whose exchange rate policy is strongly focused on the euro (Bulgaria, Romania, Croatia). Among the non-EU countries, a high share of (mostly U.S. dollar-denominated) foreign currency debt can be observed in Turkey. In Russia, the share of foreign currency-denominated government debt has decreased notably in recent years as sanctions have made tapping international markets increasingly difficult for the country.

Regarding the ratings for long-term foreign currency sovereign debt, Slovakia, Slovenia, the Czech Republic and Poland currently show the strongest ratings (see chart 11). Bulgarian, Hungarian, Romanian and Russian government bonds are assessed as moderately risky. While Standard & Poor's applies the moderate risk category also



Chart 10



General government debt denominated in foreign currency

to Croatia, Moody's sees a substantial credit risk for the country. Turkey is the lowest-rated country in the CESEE region, with credit risk being deemed high by both rating agencies. Comparing 2008 and today, current ratings by Moody's are often somewhat weaker than before the global financial crisis, while no major changes can be observed in the country risk assessments released by Standard & Poor's.

Short-term debt issuance is usually associated with lower funding costs but – at the same time - it is also associated with higher interest and rollover risks especially



Chart 11





General government debt maturing within one year

in times of turbulence. Since the global financial crisis, the share of short-term debt in total debt has fallen substantially in all CESEE countries except Russia (see chart 12). In some cases, it has reached long-term lows. This development was related to favorable market conditions in an environment of prolonged monetary accommodation that favored the issuance of long-term debt.

Summing up, despite some recent deterioration, CESEE countries' budget deficits are generally lower than in 2008, and three countries even reported surpluses in 2019. However, public debt levels have increased substantially throughout most of the region. The structure of public debt remains skewed toward non-resident investors and – at least in some countries – foreign currency-denominated debt. On a positive note, refinancing risks have been reduced considerably due to a lengthening of debt maturities. Therefore, the recent increase in government bond spreads (see below) does not pose an immediate threat.

On the country level, Romania and Turkey seem to be exposed most strongly to public finance risks. Romania's public finances have deteriorated throughout the past years and the country is currently subject to an excessive deficit procedure (the only ongoing EDP in the EU). Its debt level has nearly tripled since 2008. Furthermore, it scores relatively high in terms of the share of nonresident investors and foreign currency public debt. Turkey has by far the weakest country rating in the CESEE region and reports a relatively large (and rising) share of U.S. dollardenominated debt amid pronounced exchange rate volatility in recent years.

In recent years, credit growth accelerated in an environment of strong GDP growth, ample liquidity and low interest rates in most CESEE countries. Some credit segments already displayed first signs of overheating. This applies in particular to housing loans, which grew swiftly given strong housing demand and ever-increasing housing prices. Several CESEE countries (especially EU Member States) have introduced macroprudential measures and/or recommendations to put a brake on this development. Furthermore, countercyclical capital buffers were activated in Bulgaria, the Czech Republic and Slovakia.

Compared to 2008, banking sector risks in CESEE have moderated. For instance, the share of foreign currency-denominated loans in total loans to the private sector has declined throughout most of the region (see chart 13). This downward trend is particularly pronounced in loans to households, which is especially welcome as the sector is usually unhedged against exchange rate changes. At end-2019, the foreign currency share in loans to households was virtually zero in Slovakia, Slovenia, the Czech Republic, Hungary and Russia (in Turkey, foreign currency loans to households have been legally banned). Several countries (most prominently Hungary and Croatia) introduced conversion schemes for foreign currency loans to households into local currency loans that fueled this downward trend. It needs to be noted, however, that the foreign currency share in corporate loans remains notably higher. Such loans have received more policy attention recently. The IMF has intensified its warnings on high levels of corporate debt in emerging markets, and the sharp depreciation of the nominal effective exchange rate of the Turkish lira in 2018 as well as the recent pandemic-induced depreciation of some of the region's currencies has illustrated potential risks.

The decline in foreign currency loans has contributed to a higher quality of banking sector assets, as has the decline in nonperforming loans (NPLs). A comparison of the shares of nonperforming assets in total assets for 2008 and 2019 does not yield a clear-cut regional trend (see chart 14). Compared to 2013,

A more stable refinancing structure, improving asset quality and rising capitalization mostly contain banking sector risks

Chart 14

however, when the global financial crisis and crisis legacies pushed NPL ratios to 15% or more in several countries, NPL ratios have come down substantially. This positive momentum can be attributed to favorable lending developments as well as to the strong general economic momentum. Furthermore, active portfolio cleansing measures – including writing off bad debt, selling NPL portfolios as well as restructuring and forbearance agreements and the transfer of NPLs to bad banks – also positively impacted the stock of nonperforming assets. In Russia, NPLs also decreased somewhat in the past two years after the 2014 recession and the banking sector turbulences in late 2017 (which led to the nationalization of three medium-sized credit institutions together accounting for about 7% to 8% of banking assets). Turkey was the only CESEE country to report higher NPLs in the past few years. The increase in Turkish NPLs reflected the financial difficulties





Nonperforming loans







associated with the 2018 financial turbulences faced by indebted companies – particularly those with debts in foreign currency.

Another positive development was observed in CESEE banking sectors' refinancing structure. Over the past years, the refinancing structure has shifted from external liabilities to local deposits. This makes CESEE banks less vulnerable to swings in international sentiment and the possible (and in a worst case synchronized) withdrawal of foreign capital. At end-2019, seven of the ten countries under observation reported a (partly substantial) overhang of private sector deposits relative to domestic banking sector claims (see chart 15). Banking sectors in Slovakia and Turkey reported a moderate funding gap (on a notable declining trend in the case of Turkey), while only Russia recorded a persistently high funding gap of around 10% of GDP.

On top of that, the risk-bearing capacity of CESEE banking sectors has improved. Capital adequacy ratios have increased throughout the region, in most countries substantially so (see chart 16). Capitalization is not only higher than in 2008, it is also high compared to other European countries. The by far weakest capital base was reported for Russia.

Chart 15

Summing up, risks emanating from the banking sector – a main transmission channel in the global financial crisis – currently seems to be relatively contained. Credit growth is swift (in certain segments probably too swift) but credit is stably funded by local deposits. Asset quality has improved, and banking sector portfolios today are generally less risky than a decade ago. Among the individual countries, Russia and Turkey are exposed to the highest risks. In Russia, domestic claims are notably higher than domestic deposits, capitalization is weak and the NPL ratio is the highest in the region (accompanied by a coverage ratio of only somewhat above 50%, which is the lowest level in CESEE). At the same time, credit growth remains high and strongly driven by uncollateralized consumer loans. Turkey was the only country to report negative dynamics in nonperforming assets. While consumers are banned from foreign currency borrowing, the stock of foreign currency-denominated lending in corporate credit remains stubbornly high. This exposes corporations to exchange rate risks amid large (short-term) negative foreign currency positions. Finally, the Turkish banking sector still reports a positive – though declining – funding gap.

## Spread of coronavirus: CESEE was affected later and to date less strongly than other regions

Coronavirus reached CESEE somewhat later than Western European countries. On average, the first COVID-19 cases in CESEE were reported thirty days later than in Italy (and five days later than in Austria). At the current stage, the number of reported infections is still comparatively small in CESEE (see table 2). Russia and Turkey are the only clear outliers. Infections per million inhabitants, however, remain relatively low also in these two countries.

The Global Health Security Index (developed by the Johns Hopkins Center for Health Security, the Nuclear Threat Initiative and The Economist Intelligence Unit) provides a rough estimate of the health security capabilities in CESEE. The subcomponents of the index that are related to responding to and mitigating the spread of an epidemic and to the quality, coverage, resilience and robustness of the

Key indicators regarding COVID-19 spread in CESEE (mid-April)

Table 2

-	-					
	Current number of official cases	Infections per million inhabi- tants	Daily increase of cumulative cases (average of last 5 days, %)	Days since first reported case	Cumulative deaths	Deaths per million inhabi- tants
SK	835	152	4	40	2	0
SI	1,220	581	2	42	56	27
BG	713	103	3	39	35	5
HR	1,704	416	4	50	31	8
CZ	6,141	574	2	45	161	15
HU	1,579	164	6	42	134	14
PL	7,202	191	5	43	263	7
RO	6,879	358	6	49	344	18
TR	65,111	806	9	35	1,403	17
RU	21,102	145	16	75	170	1
~		10				
CN	83,293	60	0	>110	3,344	2
AT	14,234	1,582	1	50	384	43
IT	162,488	2,708	2	76	21,069	351

Source: European Centre for Disease Prevention and Control, OeNB calculations.

health sector are especially relevant in the current situation. In both categories, CESEE countries do not score notably worse than Austria or Italy. Some countries even outperform Western European peers, e.g. Slovenia, Poland and Turkey. Rather low capabilities of dealing with pandemics, however, are reported for Romania, Slovakia and especially Bulgaria.

While the Global Health Security Index suggests that health-related risks from the coronavirus pandemic are generally in line with other European countries, two factors should be noted: (1) The median age of the population in CESEE is rather high and the age distribution of the population skewed toward older age cohorts (this does not apply to Turkey, though). This implies a rather large high-risk group for serious COVID-19 infections. (2) Furthermore, studies<sup>4</sup> suggest that casefatality rates are strongly positively related to a country's share of working-age families living with their parents (multigeneration households). Such living arrangements increase intergenerational contacts and enable the virus to spread more quickly to high-risk older strata of the population. Multigeneration households are especially widespread in several CESEE countries (e.g. in Slovenia, Bulgaria, Croatia and Poland).

#### Government responses to the spread of coronavirus: fast, comprehensive and associated with high economic costs

Government responses to the spread of coronavirus have taken various forms, ranging from contact tracing and testing up to general curfews. The Oxford COVID-19 Government Response Tracker aims to track and compare government responses to the coronavirus outbreak and makes it possible to compare CESEE countries' stance compared to other European peers. Chart 17 and 18 plot the Stringency Index<sup>5</sup> against the number of confirmed COVID-19 cases and shows that CESEE countries responded quickly and started to implement measures soon after the first coronavirus cases were reported. Government responses at the time



<sup>4</sup> Bayer, C. and M. Kuhn. 2020. Intergenerational ties and case fatality rates: A cross-country analysis. ECONtribute: Markets & Public Policy.

<sup>5</sup> The Stringency Index is based on seven policy response measures related to schools, workplaces, public events, public transport, information campaigns and restrictions on internal and international movement.

Chart 18



#### COVID-19 Government Response Stringency Index



Note: Percentage change on April 11, 2020, compared to a baseline (median value, for the corresponding day of the week, during the five-week period from January 3 to February 6, 2020).

of writing were stringent and far reaching in all CESEE countries (in some cases even more stringent than in Italy or Austria).

Government measures will, without any doubt, lead to large economic costs. The extent of these costs, however, is still very hard to gauge as no hard data on production and sales for the period in question is available at the time of writing (for our current forecast for GDP growth in CESEE, see the Outlook for selected CESEE countries in this issue). However, some indicators suggest that public life has temporarily come to a standstill and that economic activity has declined notably. Chart 19 shows mobility trends published by Google, which are based on visits and the length of stays at different places. For example, mobility observed at transit stations (e.g. public

transport hubs such as subway, bus and train stations) declined by more than 50% on average in the CESEE region in mid-April compared to early February 2020. The reduction was even more pronounced in the area of retail and recreation (e.g. at restaurants, cafés, shopping centers, theme parks, museums, libraries and movie theaters), where mobility declined by 70% on average (up to 90% in the case of Turkey). The same is true for international mobility. Flight departures from international capital airports had basically come to a standstill by mid-April (see chart 20).

Mirroring these figures, sentiment in CESEE has plummeted (see chart 21). In April 2020, the European Commission's Economic Sentiment Indicator (ESI) for the CESEE EU Member States dropped by nearly 40 points and declined to its lowest level in history. A similar development was observed in the Purchasing

#### Selected financial market indicators

	Exchange rate versus euro	Equity index	Euro-denominated <sup>1</sup> government bond yield spread versus euro area	Sovereign credit default swap premium (5-year)
	%	%	Basis points	Basis points
CZ	-6.2	-26.0	59	20
HU	-6.0	-29.0	69	42
PL	-6.6	-22.8	54	29
SK	n.a.	-6.6	n.a.	11
SI	n.a.	-14.5	n.a.	n.a.
HR	-2.3	-21.8	155	28
BG	Currency board	-20.2	74	21
RO	-1.1	-13.6	156	40
RU	-16.1	-18.0	146	50
TR	-12.3	-16.2	365	326

Source: Macrobond.

Note: Year-to-date changes oberserved on April 14, 2020. A negative value in the first column indicates depreciation.

<sup>1</sup> RU: EMBIG (USD-denominated eurobonds) used instead of Euro-EMBIG (EUR-denominated eurobonds).



Table 3



Managers' Index (PMI) for Russia and for Turkey. Both indexes descended into free fall in April 2020 and reported values of only 31.3 and 33.4 points, respectively, far below the 50-point threshold indicating an economic expansion.

The impact of the coronavirus crisis on financial market indicators was immediate and substantial. A deterioration was observed in all financial market segments and in all countries. The strongest impact was reported for equity prices, which declined by up to 29% against the start of the year in Hungary. Euro-denominated eurobond spreads also increased strongly in all countries against the backdrop of increasing sovereign credit default risk and a notable depreciation of national currencies against the euro. The countries most affected by the sell-off were Turkey, Russia, Romania and Croatia, not least because of higher macrofinancial vulnerabilities (as outlined above).

Governments throughout CESEE have taken extensive measures to alleviate the fallout from the ensuing greater economic crisis (for a more detailed overview see country chapters). Fiscal support measures have included, among others, deferring tax and social security contributions for affected enterprises, taking over part of the salary payments to employees and extending paid sick leave. Some countries have increased the pay for key sectors, including the salaries of medical professionals. Governments in many countries have also taken measures to avoid liquidity shortages in the real sector, often jointly with commercial banks and development banks; in some cases, these measures include state guarantees. Moratoria for debt repayments have also widely been recommended and implemented.

CESEE central banks have also been quite active and made use of their full tool kit. Following the onset of the pandemic, key policy rates were cut in the Czech Republic (by 125 basis points to 1%), Poland (100 basis points to 0.5%), Romania (50 basis points to 2%) and Turkey (100 basis points to 9.75%). The Croatian central bank also intervened on the foreign currency markets to contain depreciation pressures. Liquidity provision measures for banks including longer-term refinancing operations and additional foreign currency swap auctions were launched in several countries, and some central banks also started buying bonds of their respective governments (e.g. in Croatia, Hungary, Poland, Romania). In mid-April, the Croatian and the Bulgarian central bank announced swap lines with the ECB. Easing measures regarding the regulatory framework have also been announced. They include, among others, a revision of (planned) countercyclical capital buffer rates (e.g. in Bulgaria and the Czech Republic).

Box 1

### Ukraine: coronavirus pandemic hits economy after successes in macroeconomic stabilization

The Ukrainian economy continued to grow gradually in the second half of 2019, bringing fullyear GDP growth to 3.2%. Yet, inventory destocking weighed on the growth rate, particularly in the final quarter. Supported by strong wage growth, private consumption remained the main growth driver, while gross fixed capital formation also showed positive developments. Exports performed well despite a strengthening hryvnia, as agricultural exports were expanding particularly briskly. Import growth stood slightly below export growth, but due to the higher starting base of imports the contribution of net exports remained marginally negative.

Benefiting from rising real exports and improving terms of trade, the current account deficit narrowed to 2.7% of GDP in 2019 (excluding the one-off compensation payment the Ukrainian state-owned energy company Naftogaz received from Gazprom in the amount of about 2% of GDP). Income from gas transit will remain an important component of the current account in the next few years, but its role will decline. Under the new gas transit contract that was concluded at end-2019, Ukraine will earn about USD 7 billion over the next five years, which is about half of the amount Ukraine would have received under the expired contract. As regards the financial account, the high interest rate level increasingly attracted portfolio investments on the government bond market in 2019, while net FDI inflows stayed moderate.

Consumer price inflation fell to 4.1% at end-2019 and thus reached the inflation target range of  $5\% \pm 1$  percentage point defined by the National Bank of Ukraine (NBU). Inflation declined further to 2.3% in March 2020. Lower energy prices and declining core inflation (supported by the appreciation of the hryvnia) brought down headline inflation rates. Against the background of disinflationary developments, the NBU cut the key police rate in six steps from 17.5% in mid-2019 to 10% in March 2020.

When making its latest interest rate decision public in mid-March, the NBU cited risks related to the spread of coronavirus for the global and the Ukrainian economy. In the same week, the NBU sold foreign currency on the foreign currency market to ease depreciation pressures on the hryvnia in an environment of global financial market turbulences. Net foreign currency interventions totaling about USD 2.2 billion mainly caused official reserves to decline by about 8% in March to USD 24.9 billion. Hence, they fell slightly below their end-2019 level (equal to 3.7 months of imports) after a continued rise in 2019. NBU measures taken in the context of the spread of coronavirus also include delaying the introduction of capital buffers, introducing long-term refinancing loans and encouraging banks to introduce a special grace period for loan repayments by individuals and companies. In parallel, the Ukrainian authorities implemented several measures to contain the spread of coronavirus, ranging from the closure of schools to movement restrictions. Moreover, the budget for 2020 was amended to incorporate a deficit of 7.5% of GDP compared to a deficit of 2.1% in 2019. The budget revision took into account support measures (increases in medical, social and pension expenses) and projected negative GDP growth of 4.8%.

Following a staff-level agreement on a new three-year IMF Extended Fund Facility (EFF) reached in early December 2019, the arrangement has not come into effect so far. Efforts to fulfill the conditions for IMF Executive Board approval intensified more recently, as the land reform was approved by the parliament and a crucial banking law that prevents former owners of banks that have been declared insolvent from regaining their assets passed parliament in the first reading. However, a group of Ukrainian lawmakers proposed thousands of amendments to the law that could lead to a noticeable delay until final parliamentary approval of the law. If the EFF is approved by the IMF Executive Board, total available disbursements would be larger than envisaged in December (reportedly USD 8 billion instead of USD 5.5 billion).

#### Western Balkans<sup>6</sup>: strongly affected by the coronavirus crisis

The coronavirus crisis strongly impacted on the Western Balkan economies since the first lockdown measures were enacted toward mid- or end-March 2020. The far-reaching shutdown of the economies to combat the spreading of the virus have shaken all areas of life in the region with tremendous economic consequences. Overall, the Western Balkan region seems to be more vulnerable to a fast spreading of the virus and its consequences owing to generally poorer health systems and less preparedness to face a pandemic than most EU countries (chart 1).



In most Western Balkan countries, economic growth already lost some momentum in the final quarter of 2019 compared to previous quarters, with strongly diverging growth patterns (chart 2). Growth declined particularly sharply in Albania, from 4.2% in the third to -0.2% in the fourth quarter of 2019, as a devastating earthquake hit the country in November 2019, and in Bosnia and Herzegovina, from 3.1% in the third to 1.6% in fourth quarter of 2019, driven by almost stagnating private consumption. By contrast, growth in Serbia accelerated to 6.2% in the fourth quarter on the back of strong gross fixed capital formation, which lifted full-year growth to above 4%.

Overall, private consumption continued to be an important growth contributor in the second half of 2019. Swift credit expansion, higher wages and remittances and, moreover, positive developments on the labor markets were supportive factors. According to labor force surveys, the Western Balkan economies managed to bring down their unemployment rates (toward the end of 2019) compared to a year earlier. In Kosovo, the unemployment rate declined by almost 4 percentage points compared to one year earlier to (still high) 25.7% at the end of 2019, and by 3.5% in North Macedonia to 17.5%. At end-2019, Serbia had the lowest unemployment rate with below 11%. It should be noted that these positive trends are also owed to a strong brain drain in the region.

The rather volatile patterns of investment are often the result of big public investments (mainly infrastructure or energy projects) throughout the Western Balkans. It is worth noting that, in Albania, investment growth decelerated sharply in the second half of 2019 due to the

<sup>&</sup>lt;sup>6</sup> 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.

finalization of large infrastructure projects. Furthermore, political uncertainty and the earthquake left their marks as well. In Serbia, by contrast, investment growth accelerated by more than 20% in the second half of 2019. Here, a huge energy project was key but FDI inflows also contributed positively to investment growth.



Export growth was particularly strong in Albania (record tourist season) and Kosovo (a new ferronickel plant started operation, increasing exports of services). In North Macedonia, export growth turned negative in annual terms in the last quarter of 2019, possibly mirroring lower international demand (the country is relatively strongly integrated in global value chains).

Strong investment activity in several countries resulted in high import growth given a substantial import content of investments. This is particularly true for Kosovo, North Macedonia and Serbia, where the growth contribution of net exports was negative in the second half of 2019. In contrast, in Albania, Bosnia and Herzegovina, and Montenegro, import growth contributed positively to growth toward the end of the year, leading to a positive contribution of net exports in these countries.

Current account deficits (see table 2 in the statistical annex) narrowed in all Western Balkan countries in the second half of 2019 compared to the first half. In Montenegro, for instance, lower imports of machinery needed for infrastructure projects and higher exports related to tourism<sup>7</sup> and transport services caused the improvement. Albania reported a record tourist season for the second half of 2019. Furthermore, secondary income (largely workers' remittances) as a share of GDP remained high and even accelerated in some countries compared to previous periods (Albania, Kosovo). In the second half of 2019, FDI as a share of GDP on average moderated somewhat compared to the first half of 2019 but still covered the lion's share of the current account deficits.

Inflation rates declined in almost all Western Balkan countries. In Bosnia and Herzegovina, Montenegro and North Macedonia annual inflation fell below 1% in 2019 on average. The situation looked different in Kosovo, where inflation stood at almost 3% in 2019 but moderated over the year. Inflationary pressure was largely the result of 100% tariffs imposed by Kosovo on products from Bosnia and Herzegovina as well as Serbia. In early April, Kosovo lifted the tariffs. Partly as a result of the lower oil price, inflation dropped further in March 2020 in all countries. Only in Albania inflation accelerated strongly to 2.1% year on year, driven by higher food prices, but still remained

<sup>7</sup> Tourism has the biggest impact in Montenegro, where tourism accounts for more than 20% of GDP, followed by Kosovo (approximately 18%) and Albania (15%). below the inflation target of 3% set by the Bank of Albania. So far, the exchange rate regimes seem to be coping relatively well with the coronavirus crisis and have remained rather stable. Albania and Serbia are the only two countries among the Western Balkans with a flexible exchange rate regime. In Albania, the lek temporarily lost some 6% against the euro at the end of March but has largely recovered since then, while the Serbian dinar traded stably.

In response to the pandemic, all countries implemented swift and harsh measures to contain the spread of coronavirus, closing shops, businesses and borders and imposing curfews. All central banks have been very active, too, in addressing the crisis; several interest rate cuts were implemented in March and early April 2020. The National Bank of Serbia cut its key policy rate in two steps by a total of 0.75 percentage points to 1.50% and adopted several measures to supply the domestic sector with additional dinar and foreign currency liquidity. The National Bank of the Republic of North Macedonia cut the policy rate by 0.25 percentage points to 1.75% and the Bank of Albania by 0.5 percentage points to 0.5%. Furthermore, most central banks have decided to support households and businesses with moratoria on debt payments in case these are facing difficulties in repayment; they have also implemented measures to support the granting of loans.

The fiscal positions are rather heterogenous across the region (see table 4 in the statistical annex) but overall the fiscal leeway to deal with the coronavirus-induced shock is relatively limited. In 2019, Montenegro reported the biggest fiscal shortfall with -2.6% of GDP (the same as in 2018); in North Macedonia, the deficit widened, reaching -2.5% (2018: -1.8%). Bosnia and Herzegovina as well as Kosovo achieved fiscal surpluses in 2019. In Albania, the destructive earthquake in November 2019, which resulted in additional expenditure pressure, left the deficit at -1.7%. In 2019, Montenegro was the country with the highest debt-to-GDP level (77.8%), followed by Albania with 66.6%.

The coronavirus crisis is now derailing fiscal plans, causing significant fiscal pressure in 2020. A large fiscal expansion is needed on account of higher health, social and economic support spending as well as revenue shortfalls due to an expected massive economic contraction. So far, Serbia has released the most substantial measures to support the economy in the Western Balkans.

On a positive note, at the end of March 2020, the EU finally gave green light for opening accession negotiations with Albania and North Macedonia. Albania has been an EU candidate since 2014, North Macedonia already since 2005. Together with Montenegro (where accession negotiations started in 2012) and Serbia (since 2013), four countries are currently negotiating with the EU to become Member States. Bosnia and Herzegovina and Kosovo are classified as potential EU candidates. Regarding relations with the IMF, the Extended Fund Facility (EFF) of the IMF approved for Bosnia and Herzegovina in 2016 has been off track, i.a. because the country failed to form a new government after general elections in autumn 2018. In December 2019, a new government was put in place, which provided the basis for a resumption of the IMF arrangement. In December 2019, the IMF completed the third review under the Policy Coordination Instrument (PCI) with Serbia. Accordingly, the economic reform program is on track. In light of the coronavirus crisis, international organizations are playing an important role in supporting the region. The IMF has activated emergency support under its Rapid Financing Instrument (RFI) for Albania, Bosnia and Herzegovina, Kosovo and North Macedonia. Also, the EU, with a macrofinancial assistance (MFA) package and other measures, as well as other institutions or countries have stepped in to support the region.

Lackluster economic performance before the coronavirus crisis due to counteracting domestic and foreign demand

New government takes over in the midst of the fight against coronavirus

## 2 Slovakia: coronavirus crisis has been a baptism of fire for the new government

Economic growth in Slovakia halved in the six months to December 2019 compared to the first half of the year. As a result, GDP growth came out at 2.3% in the year as a whole, down from 4% in 2018. While the economic expansion continued to be backed by ongoing robust household consumption, it was also boosted by a somewhat surprising acceleration of fixed investment in the second half of 2019. Domestic demand benefited from the buoyant labor market situation and accommodative monetary policy stance. By contrast, net exports put a drag on growth for most of 2019, particularly as a result of weakened foreign demand. Some supply-side issues in Slovakia's crucial automotive industry also contributed to the subdued export performance.

Buoyed by still favorable economic conditions, the labor market remained robust, despite significant regional disparities, with unemployment figures improving marginally in the second half of 2019. At the same time, slowing employment and wage growth gradually relieved labor market tensions. As rising labor and global commodity prices had been passed through to food and energy prices, annual inflation edged up to average 3.1% in the review period, although annual price increases moderated to 2.4% in March 2020. Due to the slowdown in economic growth, the general government deficit did not continue its downward trend and remained broadly unchanged at 1.3% of GDP in 2019 compared to the year before. Nonetheless, due to the increase in the denominator, public debt relative to GDP came down by more than 1 percentage point to about 48% of GDP in 2019.

After a good start to the year, with strengthening industrial production, sales, construction and consumer confidence, the first COVID-19 patient was confirmed in Slovakia on March 6, 2020. Amid a global pandemic, Slovakia experienced a historical change in leadership. A new four-party coalition government led by Prime Minister Igor Matovič, who was elected largely due to his promise to crack down on corruption, was sworn in on March 21, 2020. With the words "Let's go to battle," Prime Minister Matovič and his government took over from the former administration led by the Social Democrats. Strict containment measures have since been introduced, ranging from a shutdown of nonessential stores and almost all service sector activity to the closure of borders and schools and a ban on the free movement of people (barring some exceptions). These unparalleled restrictions compounded by similar measures taken by Slovakia's trading partners – with their disruptive consequences for global supply chains and international trade will have a massive impact on Slovakia's economy. Moreover, they provide a genuine stress test for the young ruling coalition. The heavy economic toll of the coronavirus crisis will be aggravated by the fact that all carmakers in Slovakia suspended production for a couple of weeks not only to contain the spread of coronavirus but also to adjust to lower demand and obstructions in related supply chains. This represents a major setback for an economy that has the largest car production rates per capita worldwide and whose automotive industry accounts for about 12% of GDP and 44% of industrial production. While the change of government delayed the introduction of economic anti-crisis packages, the government has meanwhile approved measures that include, inter alia, benefits for self-employed individuals and wage subsidies for affected employees. Moreover, the measures allow for the deferred payment of employer levies as well as bank guarantees and moratoria on the repayment of loans and mortgages.

Table 4

#### Main economic indicators: Slovakia

Year-on-year-View Unit View Unit
GDP at constant prices       3.0       4.0       2.3       4.6       3.5       3.8       2.2       1.3       1.3         Private consumption       4.3       3.9       2.2       3.8       4.4       1.9       2.7       1.9       1.9         Public consumption       1.0       0.2       3.8       0.0       2.0       2.3       5.0       3.7       4.9         Gross fixed capital formation       3.9       3.7       4.4       -8.3       8.5       0.0       2.4       7.8       6.6         Exports of goods and services       3.5       5.4       1.7       6.0       5.1       9.0       -0.9       -0.2       -0.6         Imports of goods and services       3.9       5.0       2.6       4.2       6.8       6.5       1.5       3.3       -0.6         Contribution CODP growthin perceptores         Contribution CODP growthin perceptores         Domestic demand       3.2       3.5       3.0       2.9       5.0       1.2       4.4       4.2       2.5         Exports of goods and services       -0.2       -0.5       -0.8       1.6       -1.5       2.6       -2.2       -3.0       0.6
Private consumption       4.3       3.9       2.2       3.8       4.4       1.9       2.7       1.9       1.9         Public consumption       1.0       0.2       3.8       0.0       2.0       2.3       5.0       3.7       1.9         Gross fixed capital formation       3.9       3.7       4.4       -8.3       8.5       0.0       2.4       7.8       6.6         Exports of goods and services       3.5       5.4       1.7       6.0       5.1       9.0       -0.2       -0.2         Imports of goods and services       3.9       5.0       2.6       4.2       6.8       6.5       1.5       3.3       -0         Contribution to CDP growth in percentage points         Contribution to CDP growth in percentage points         Domestic demand       3.2       3.5       3.0       2.9       5.0       1.2       4.4       4.2       3.0         Exports of goods and services       -0.2       0.5       -0.8       1.6       -1.5       2.6       -2.2       -3.0       0.0         Exports of goods and services       3.3       5.1       1.7       5.3       5.0       8.9       -0.9       -0.1       -0.0 </td
Public consumption       1.0       0.2       3.8       0.0       2.0       2.3       5.0       3.7         Gross fixed capital formation       3.9       3.7       4.4       -8.3       8.5       0.0       2.4       7.8       6         Exports of goods and services       3.5       5.4       1.7       6.0       5.1       9.0       -0.2       -0.2         Imports of goods and services       3.9       5.0       2.6       4.2       6.8       6.5       1.5       3.3       -0         Contribution to GDP growthin percentage points         Domestic demand       3.2       3.5       3.0       2.9       5.0       1.2       4.4       4.2       3.6         Net exports of goods and services       -0.2       0.5       -0.8       1.6       -1.5       2.6       -2.2       -3.0       0         Exports of goods and services       -3.3       5.1       1.7       5.3       5.0       8.9       -0.9       -0.1       -0.0         Imports of goods and services       -3.5       -4.6       -2.4       -3.7       -6.5       -6.3       -1.4       -2.9       0         Imports of goods and services       -3.5 <td< td=""></td<>
Gross fixed capital formation       3.9       3.7       4.4       -8.3       8.5       0.0       2.4       7.8       4.8         Exports of goods and services       3.5       5.4       1.7       6.0       5.1       9.0       -0.9       -0.2       -4.4         Imports of goods and services       3.9       5.0       2.6       4.2       6.8       6.5       1.5       3.3       -4.4         Contribution: GDP growthin percentage points         Domestic demand       3.2       3.5       3.0       2.9       5.0       1.2       4.4       4.2       5.4         Net exports of goods and services       -0.2       0.5       -0.8       1.6       -1.5       2.6       -2.2       -3.0       0.0         Exports of goods and services       -3.3       5.1       1.7       5.3       5.0       8.9       -0.9       -0.1       -0.0         Imports of goods and services       -3.5       -4.6       -2.4       -3.7       -6.5       -6.3       -1.4       -2.9       0.0         Year-on-year-time of percentary inversion of goods and services       -3.6       5.1       2.8       3.9       3.7       7.2       5.8       5.8
Exports of goods and services       3.5       5.4       1.7       6.0       5.1       9.0       -0.2       -0.4         Imports of goods and services       3.9       5.0       2.6       4.2       6.8       6.5       1.5       3.3       -0         Contribution to GDP growth in percentage points         Domestic demand       3.2       3.5       3.0       2.9       5.0       1.2       4.4       4.2       5.0         Net exports of goods and services       -0.2       0.5       -0.8       1.6       -1.5       2.6       -2.2       -3.0       0.0         Exports of goods and services       -3.3       5.1       1.7       5.3       5.0       8.9       -0.9       -0.1       -0.0         Imports of goods and services       -3.5       -4.6       -2.4       -3.7       -6.5       -6.3       -1.4       -2.9       0.0         Year-on-year thread average of bener to average in botometers         Year-on-year thread average in botometers         Unit labor costs in the whole economy (nominal, per person)       4.5       3.6       5.1       2.8       3.9       3.7       7.2       5.8       3.6       3.5
Imports of goods and services       3.9       5.0       2.6       4.2       6.8       6.5       1.5       3.3       -4         Contribution GDP growth in percentation         Domestic demand       3.2       3.5       3.0       2.9       5.0       1.2       4.4       4.2       4.5         Net exports of goods and services       -0.2       0.5       -0.8       1.6       -1.5       2.6       -2.2       -3.0       0.0         Exports of goods and services       3.3       5.1       1.7       5.3       5.0       8.9       -0.9       -0.1       -0.0         Imports of goods and services       -3.5       -4.6       -2.4       -3.7       -6.5       -6.3       -1.4       -2.9       0.0         Imports of goods and services       -3.5       -4.6       -2.4       -3.7       -6.5       -6.3       -1.4       -2.9       0.0         Year-on-year change of period average in %         Unit labor costs in the whole economy (nominal, per person)       4.5       3.6       5.1       2.8       3.9       3.7       7.2       5.8       5.9         Unit labor costs in the whole economy (nominal, per person)       4.5       5.0       0.8
Contribution GDP growth in percentage points         Domestic demand       3.2       3.5       3.0       2.9       5.0       1.2       4.4       4.2       4.2         Net exports of goods and services       -0.2       0.5       -0.8       1.6       -1.5       2.6       -2.2       -3.0       0.0         Exports of goods and services       3.3       5.1       1.7       5.3       5.0       8.9       -0.9       -0.1       -0.0         Imports of goods and services       -3.5       -4.6       -2.4       -3.7       -6.5       -6.3       -1.4       -2.9       0.0         Year-on-year change of period average in %         Vear-on-year change of period average in %         Unit labor costs in the whole economy (nominal, per person)       4.5       3.6       5.1       2.8       3.9       3.7       7.2       5.8       3.0         Unit labor costs in the whole economy (nominal, per person)       4.5       3.6       5.1       2.8       3.9       3.7       7.2       5.8       5.0
Domestic demand         3.2         3.5         3.0         2.9         5.0         1.2         4.4         4.2           Net exports of goods and services         -0.2         0.5         -0.8         1.6         -1.5         2.6         -2.2         -3.0         0           Exports of goods and services         3.3         5.1         1.7         5.3         5.0         8.9         -0.9         -0.1         -(           Imports of goods and services         -3.5         -4.6         -2.4         -3.7         -6.5         -6.3         -1.4         -2.9         0           Unit labor costs in the whole economy (nominal, per person)         4.5         3.6         5.1         2.8         3.9         3.7         7.2         5.8         3.9           Unit labor costs in the whole economy (nominal, per person)         4.5         3.6         5.1         2.8         3.9         3.7         7.2         5.8         3.9
Net exports of goods and services         -0.2         0.5         -0.8         1.6         -1.5         2.6         -2.2         -3.0         0           Exports of goods and services         3.3         5.1         1.7         5.3         5.0         8.9         -0.9         -0.1         -(.000)           Imports of goods and services         -3.5         -4.6         -2.4         -3.7         -6.5         -6.3         -1.4         -2.9         0           Vear-on-year change of period average in %           Unit labor costs in the whole economy (nominal, per person)         4.5         3.6         5.1         2.8         3.9         3.7         7.2         5.8         3.9         3.7         7.2         5.8         3.9         3.7         7.2         5.8         3.9         3.7         7.2         5.8         3.9         3.7         7.2         5.8         3.9         3.7         5.9         9.8         1.7         1.6         4.0         7.5         9.8         3.7         7.2         5.8         3.9         3.7         7.2         5.8         3.9         3.7         7.2         5.8         3.9         3.7         7.2         5.8         3.9         3.7         7.2
Exports of goods and services         3.3         5.1         1.7         5.3         5.0         8.9         -0.9         -0.1         -0.1           Imports of goods and services         -3.5         -4.6         -2.4         -3.7         -6.5         -6.3         -1.4         -2.9         0           Vear-on-year change of period average in %           Unit labor costs in the whole economy (nominal, per person)         4.5         3.6         5.1         2.8         3.9         3.7         7.2         5.8         3.9           Unit labor costs in the whole economy (nominal, per person)         4.5         3.6         5.1         2.8         3.9         3.7         7.2         5.8         3.9
Imports of goods and services         -3.5         -4.6         -2.4         -3.7         -6.5         -6.3         -1.4         -2.9         0           Year-on-year change of period average in %           Unit labor costs in the whole economy (nominal, per person)         4.5         3.6         5.1         2.8         3.9         3.7         7.2         5.8         3.9           Unit labor costs in the whole economy (nominal, per person)         6.4         3.7         5.5         0.8         1.7         1.6         4.0         7.5         0.8
Year-on-year change of period average in %         Unit labor costs in the whole economy (nominal, per person)       4.5       3.6       5.1       2.8       3.9       3.7       7.2       5.8       3.9         Unit labor costs in the whole economy (nominal, per person)       6.4       3.7       5.5       0.8       1.7       1.6       4.0       7.5       0.8
Unit labor costs in the whole economy (nominal, per person)         4.5         3.6         5.1         2.8         3.9         3.7         7.2         5.8         5.1           Unit labor costs in manufacturing (nominal, per person)         6.4         3.7         5.5         0.8         1.7         1.6         4.0         7.5         5.8
Linit labor costs in manufacturing (nominal per hour) 64 37 55 08 17 16 40 75 s
Labor productivity in manufacturing (real, per hour)         1.0         4.7         1.3         6.7         6.1         7.5         2.6         -2.4         -2.4
Labor costs in manufacturing (nominal, per hour)         7.5         8.6         6.7         7.6         7.9         9.2         6.7         4.8         66
Producer price index (PPI) in industry         2.5         2.4         1.8         3.6         3.6         2.7         2.9         1.1         0
Consumer price index (here: HICP)         1.4         2.5         2.8         2.7         2.1         2.4         2.6         3.0         3.0
Period average levels
Unemployment rate (ILO definition, %, 15–64 years) 8.2 6.6 5.8 6.4 6.1 5.9 5.8 5.9 5
Employment rate (%, 15-64 years)         66.2         67.6         68.4         67.9         68.2         68.6         68.1         68.5         68
Key interest rate per annum (%)         0.0
Nominal year-on-year change in the period-end stock in %
Loans to the domestic nonbank private sector <sup>1</sup> 10.2 8.4 8.4 9.4 8.4 7.5 6.2 6.8 6
of which: loans to households 11.8 11.3 11.3 12.0 11.3 9.5 8.5 8.1 8
loans to nonbank corporations 7.6 3.4 3.4 5.0 3.4 3.9 2.1 4.4
%
Share of foreign currency loans in total loans to the non-
bank private sector 0.2 0.1 0.1 0.2 0.1 0.2 0.1 0.1 0.1
Return on assets (banking sector)         0.8         0.8         0.9         0.8         0.9         0.8         0.9
Tier 1 capital ratio (banking sector)         16.6         16.6         16.7         16.6         16.7         16.8         16.6         16.7
NPL ratio (banking sector)         3.6         3.0         2.8         3.4         3.0         2.9         2.8         2.8         2.8
% of GDP
General government revenues 40.6 40.8 41.5
General government expenditures 41.5 41.8 42.8
General government balance -1.0 -1.1 -1.3
Primary balance 0.5 0.3 -0.1
Gross public debt 51.3 49.4 48.0
% of GDP
Debt of nonfinancial corporations (nonconsolidated) 59.8 54.3 26.0
Debt of households and NPISHs² (nonconsolidated)         40.8         42.2         20.2
% of GDP (based on EUR), period total
Goods balance 0.7 -0.2 -0.8 -0.7 -2.3 1.3 -0.8 -3.1 -0.
Services balance 1.1 1.0 1.1 1.6 0.2 0.8 1.6 1.6 0.0
Primary income -2.1 -2.0 -2.1 -2.2 -2.5 -1.1 -2.3 -2.4 -2
Secondary income -1.5 -1.4 -1.1 -0.9 -0.8 -1.9 -1.4 -1.1 (
Current account balance -1.9 -2.6 -2.9 -2.1 -5.4 -1.0 -2.8 -5.1
Capital account balance 0.1 1.4 1.0 0.6 3.0 0.2 1.3 0.0
Capital account balance         0.1         1.4         1.0         0.6         3.0         0.2         1.3         0.0         3.0           Foreign direct investment (net) <sup>3</sup> $-2.8$ $-0.9$ $-2.2$ $-1.3$ $-3.4$ $-0.5$ $1.0$ $-2.0$ $-4.6$
Capital account balance         0.1         1.4         1.0         0.6         3.0         0.2         1.3         0.0         1.4           Foreign direct investment (net) <sup>3</sup> -2.8         -0.9         -2.2         -1.3         -3.4         -0.5         1.0         -2.0         -4           % of GDP (rolling four-quarter GDP, based on EUR), end of period         -0.5         1.0         -2.0         -4
Capital account balance         0.1         1.4         1.0         0.6         3.0         0.2         1.3         0.0         1.5           Foreign direct investment (net) <sup>3</sup> -2.8         -0.9         -2.2         -1.3         -3.4         -0.5         1.0         -2.0         -4           So of GDP (rolling four-quarter GDP, based on EUR), end of period         -0.5         110.2         112.2         113.4         111
Capital account balance         0.1         1.4         1.0         0.6         3.0         0.2         1.3         0.0         1.5           Foreign direct investment (net) <sup>3</sup> -2.8         -0.9         -2.2         -1.3         -3.4         -0.5         1.0         -2.0         -4 <i>Ko GGDP (rolling four-quarter GDP, based on EUR), end of period</i> -0.5         110.2         111.2         113.4         111           Gross external debt         108.2         113.6         111.9         110.3         113.6         110.2         113.4         111           Gross official reserves (excluding gold)         2.3         3.8         5.3         3.5         3.8         4.3         4.8         5.6         5
Capital account balance         0.1         1.4         1.0         0.6         3.0         0.2         1.3         0.0           Foreign direct investment (net) <sup>3</sup> -2.8         -0.9         -2.2         -1.3         -3.4         -0.5         1.0         -2.0         -4           So of GDP (rolling four-quarter GDP, based on EUR), end of period         -0.5         110.2         111.2         113.4         111           Gross external debt         108.2         113.6         111.9         110.3         113.6         110.2         113.4         111           Gross official reserves (excluding gold)         2.3         3.8         5.3         3.5         3.8         4.3         4.8         5.6         5.5
Capital account balance         0.1         1.4         1.0         0.6         3.0         0.2         1.3         0.0           Foreign direct investment (net) <sup>3</sup> -2.8         -0.9         -2.2         -1.3         -3.4         -0.5         1.0         -2.0         -4           Gross external debt         108.2         113.6         111.9         110.3         113.6         110.2         113.4         111           Gross official reserves (excluding gold)         2.3         3.8         5.3         3.5         3.8         4.3         4.8         5.6         5           Months of imports of goods and services
Capital account balance         0.1         1.4         1.0         0.6         3.0         0.2         1.3         0.0           Foreign direct investment (net) <sup>3</sup> -2.8         -0.9         -2.2         -1.3         -3.4         -0.5         1.0         -2.0         -4.0           Gross external debt         108.2         113.6         111.9         110.3         113.6         110.2         113.4         111           Gross official reserves (excluding gold)         2.3         3.8         5.3         3.5         3.8         4.3         4.8         5.6         5.5           Gross official reserves (excluding gold)         0.3         0.5         0.7         0.4         0.5         0.5         0.6         0.7         0.6

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

<sup>1</sup> Foreign currency component at constant exchange rates.

<sup>2</sup> 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).

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#### 3 Slovenia: no grace period for the new government

GDP growth in Slovenia gradually weakened in the course of 2019 and reached a meager 1.7% in the final quarter of 2019. Final consumption decelerated sharply, with public consumption even contracting notably. While real wage growth held up well, employment growth slowed, as did the expansion of the real wage sum. Growth of credit to households has moderated since November 2019, in response to central bank measures aimed at containing the growth of consumption loans. Investment growth turned negative in the fourth quarter of 2019. Declining industrial capacity utilization, worsening export expectations and deteriorating overall economic sentiment weighed on private sector investment. Both export and import growth weakened sharply toward the end of 2019, but net real exports remained a positive contributor to growth.

New government takes over in challenging times

Sound budgetary position helps accommodate costs of the pandemic

Banking sector will also feel the effects of the crisis In late January 2020, the five-party minority government resigned. The new four-party coalition government had initially intended to go ahead with reforms to Slovenia's pension, healthcare and long-term care systems as well as its national defense system, to cut red tape and to improve the country's infrastructure. However, these plans were disrupted by the coronavirus pandemic.

Alongside restrictive measures to slow the spread of coronavirus, various support measures have been introduced to mitigate the economic impact of the pandemic. As a case in point, the state is providing wage compensation for shorttime working schemes and temporary layoffs and has taken over, on a temporary basis, pension and health insurance payments as well as sick pay. Furthermore, financial support is being provided to parents who have to take care of their children while schools are closed, while pensioners with the lowest pensions, university students and families with at least three children have received a one-off allowance. Household electricity prices have been temporarily cut by 20%. Public sector employees working in sectors that are key to overcoming the pandemic will be rewarded with a bonus; in addition, the government has invited private companies to follow suit. Self-employed individuals who had come under pressure were given support in the form of emergency assistance, exemptions from pension and healthcare contributions and postponements of income tax prepayments. The government has also introduced tax deferrals for up to two years and the option of paying taxes in 24 installments for troubled businesses, while additional state guarantees and credit lines have been extended.

With the general government budget posting a surplus in 2019 (0.5% of GDP), the government now has some room for maneuver. The expected economic contraction, however, is likely to aggravate the situation. The Bank of Slovenia (BS) estimates that the drop in GDP will range between 6% and 16% in 2020, which would push state debt up to between 70% and 78% of GDP in 2020 (from 66.1% in 2019).

Borrowers who had become unable to settle their loan liabilities due to the negative effects of the pandemic were given the option to defer debt servicing for a maximum of 12 months at no additional costs. As Slovenia is a member of the euro area, the country's banks will also benefit from the ECB's additional asset purchases. In addition, since the BS has extended the supervisory measures taken by the ECB for banks under its direct supervision to less significant institutions under national supervision, all Slovene banks will benefit from further flexibility in the prudential treatment of loans backed by state guarantees. Also, the BS decided to defer certain deadlines for less important supervisory activities and granted banks capital relief.

Table 5

#### Main economic indicators: Slovenia

	2017	2018	2019	Q3 18	Q4 18	Q1 19	Q2 19	Q3 19	Q4 19
	Year-on-yea	ar change of t	he period tot	al in %	I		I	I	I
GDP at constant prices	4.8	4.1	2.4	4.6	3.8	3.3	2.5	2.4	1.7
Private consumption	2.0	2.8	2.7	2.0	2.8	2.5	3.8	3.2	1.3
Public consumption	0.3	3.2	1.6	3.2	4.0	3.9	1.1	3.4	-2.0
Gross fixed capital formation	10.4	9.1	3.2	11.4	6.7	10.1	6.7	2.2	-4.5
Exports of goods and services	10.5	6.1	4.4	4.1	5.4	5.6	6.0	5.3	0.9
Imports of goods and services	10.1	6.6	4.2	4.5	5.4	4.7	5.9	7.4	-0.8
	Contributio	n to GDP grov	wth in percer	tage points					
Domestic demand	3.7	3.9	1.9	4.6	3.5	2.1	1.8	3.4	0.4
Net exports of goods and services	1.2	0.2	0.5	0.1	0.3	1.2	0.6	-1.0	1.3
Exports of goods and services	8.2	5.1	3./	3.4	4.5	4.8	5.1	4.4	0.7
Imports of goods and services	-/.0	-4.9	-3.2	-3.3	-4.1	-3.6	-4.4	-5.4	0.6
	Tear-on-yea	ar change of p	period averag	e in %	24	2.0	ГО	4.4	27
Unit labor costs in the whole economy (nominal, per person)	1.2	3.0	4.5	1./	3.I 1.4	3.7	5.9	4.4	3./
Leben preductivity in manufacturing (nominal, per hour)	-2.4	-Z./	-0.2	+.c- 4.0	1.4	1.Z	-0.4 E O	-1./	0.2
Labor productivity in manufacturing (real, per nour)	7.2	2.0	7.2	1.7	5.5 47	0.C	5.0	2.0 1.0	2.0
Deeducer price index (DDI) in inductor	0.0	2.0	0.7	1.5	т./ 1 (	0.0	0.0	1.0	2.0
Consumer price index (FFI) in industry	Z.Z 1 4	2.1 1 Q	0.7	2.4	1.0	1.1	0.0	0.5	0.4
Consumer price index (nere. rifer)	Period aver	1.7	1.7	Z.1	2.0	1.5	1.7	Z.1	1.0
Unemployment rate (II $\Omega$ definition % 15–64 years)	67	5 2	4 5	51	44	49	43	48	40
Employment rate (% 15–64 years)	69.3	71.1	71.9	71.9	71.8	71 3	72.5	72.1	71.6
Key interest rate per appum (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Nominal ve	ar-on-vear ch	ange in the t	eriod-end stor	-k in %	0.0	0.0	0.0	0.0
Loans to the domestic nonbank private sector <sup>1</sup>	4.9	1.9	1.9	2.2	1.9	2.8	3.6	3.9	4.3
of which: loans to households	6.8	6.4	6.4	6.5	6.4	6.3	5.9	5.7	5.8
loans to nonbank corporations	3.1	-2.2	-2.2	-1.7	-2.2	-0.6	1.4	2.1	2.8
	%								
Share of foreign currency loans in total loans to the non-									
bank private sector	2.4	2.0	1.7	2.1	2.0	1.9	1.8	1.8	1.7
Return on assets (banking sector)	1.1	1.3	1.3	1.3	1.3	1.3	1.8	1.6	1.3
Tier 1 capital ratio (banking sector)	19.4	19.4		19.4	19.4	19.4	19.2	17.7	
NPL ratio (banking sector)	3.7	2.3	1.1	2.7	2.3	2.0	1.5	1.5	1.1
	% of GDP								
General government revenues	44.0	44.3	44.2						
General government expenditures	44.1	43.5	43.7						
General government balance	0.0	0.8	0.5						
Primary balance	2.4	2.8	2.2						
Gross public debt	74.1	70.4	66.1						
	% of GDP	547	24.4						
Debt of nonfinancial corporations (nonconsolidated)	55.4	51./	24.6						
Debt of households and NPISHs <sup>2</sup> (nonconsolidated)	27.2	27.0	12.9 D) h a si a d ta t	-1					
Canda halanaa	% 0  GDP (	Dasea on EUI	r), period tota	21	0.0	27	27	1 (	2.2
	3./ E D	2.5	2.8	3.1	U.U E O	3./ E D	3.6	1.6 74	2.Z
Primary income	J.Z 2.1	10	1.5	0.0	10	J.Z 11	10	7.T 1.7	11
Secondary income	-2.1	-1.0	-1.5	-2.2 1.0	-1.7	-1.1	-1.7	-1.7	-1.1
	-0.7	-0.7	-1.1	-1.0	-0.0	-1.7	-0.0	-1.0	-0.5
	_0.8	_0.5	_0.0	_0.0	_10	_0.0	_01	_0.1	_0.9
Eoreign direct investment (net) <sup>3</sup>	_1.2	-2.0	_14	_3.9	-1.8	-4.0	_11	_1.0	0.0
	% of GDP (	rolling four-au	arter GDP. h	used on FUR)	end of period	1.0	1.1	1.0	0.0
Gross external debt	100.5	92.0	91.8	93.0	92.0	91.5	93.0	94.2	91.8
Gross official reserves (excluding gold)	1.5	1.5	1.6	1.5	1.5	1.6	1.7	1.6	1.6
	Months of	imports of god	ods and servi	tes			,		
Gross official reserves (excluding gold)	0.2	0.2	0.3	0.2	0.2	0.2	0.3	0.3	0.3
、 00 /	EUR millior	, period total							
GDP at current prices	42,987	45,755	48,007	11,812	11,871	11,162	12,115	12,393	12,337

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

<sup>1</sup> Foreign currency component at constant exchange rates.

<sup>2</sup> 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).

Economic activity subsided already before the outbreak of coronavirus

Impact of the coronavirus pandemic

Wide-ranging economic policy measures to mitigate the impact of the crisis

## 4 Bulgaria: entering the coronavirus crisis with an already slowing economy

In the second half of 2019, real GDP in Bulgaria expanded by 2.9%, after 4% in the first half of the year. This deceleration was mainly due to sluggish export growth, while domestic demand remained relatively strong. Consumer price pressure intensified somewhat, reaching an inflation rate of 3.1% in February 2020. Inflation can be mostly explained by rising prices of food and services. The labor market was still in a favorable position in February, with an unemployment rate of only slightly above 4%. Tight labor market conditions continued to exert pressure on wages; annual real wage growth approached nearly 10% by the end of 2019.

Bulgarian authorities declared a state of emergency on March 13, 2020, which is scheduled to last for at least two months and includes the closure of schools, universities, shopping centers, cinemas, restaurants as well as the suspension of all mass public events. In contrast to other countries, though, several smaller businesses already reopened after two weeks of closure. Construction sites, supermarkets, food markets, pharmacies, banks and gas stations had been exempted from the lockdown. To contain the spread of the coronavirus, entry bans were issued, domestic travel was restricted and curfews or quarantine measures were introduced for affected areas. The immediate economic impact has already been substantial: The number of passengers passing through Sofia Airport in March 2020 halved compared to a year before. Fuel consumption dropped by between 40% (in major cities) and 80% (in small towns) in the second half of March. Car parts manufacturing plants largely suspended their production. According to a poll by Gallup International in early April, about one-third of respondents indicated that their income had dropped, and another 25%, mostly elderly people, said that they expected this to happen. According to the Labor Minister, by early April, about 40,000 people had registered as unemployed since the start of the coronavirus crisis.

In early April, the planned general government deficit for 2020 was raised to 2.9% of GDP and the annual borrowing ceiling to BGN 10 billion (compared to an originally planned balanced budget with annual borrowing capped at BGN 2.2 billion). The extra spending will cover not only increased unemployment spending, support for pensioners and increased salaries for medical staff but also state aid for affected businesses by taking over 60% of gross salaries of employees facing layoffs and obliging employers to retain their staff and pay the remaining 40%. The Bulgarian National Bank (BNB) implemented a package of measures worth BGN 9.3 billion (nearly 8% of 2019 GDP figures) to strengthen banks' capital and liquidity. The package requires all banks to retain their year-end 2019 profits and bans the redistribution of profits accumulated during previous years. The planned increases in the countercyclical capital buffer, by contrast, were cancelled. Moreover, the BNB paved the way for a temporary moratorium on debt repayments for crisis-affected borrowers for up to six months until the end of the year. As regards the ERM II, the BNB stated that the crisis will most likely delay Bulgaria's ERM II entry until 2021, while the government plans to apply for ERM II membership by the end of April this year. Besides the BNB, the state-owned Bulgarian Development Bank also implemented several liquidity-supporting measures. Its capital was raised by the government by BGN 700 million (about 0.6% of 2019 GDP levels) and will be used to issue portfolio guarantees to commercial banks extending loans to crisisaffected SMEs and to issue interest-free consumer loans to self-employed individuals and employees on unpaid leave.

#### Main economic indicators: Bulgaria

Ta	Ы	e	6

	2017	2018	2019	Q3 18	Q4 18	Q1 19	Q2 19	Q3 19	Q4 19
	Year-on-yea	ar change of t	he period tot	al in %					
GDP at constant prices	3.5	3.1	3.4	3.3	3.0	4.5	3.6	2.9	2.9
Private consumption	3.8	4.4	5.8	5.4	0.5	3.8	7.1	7.0	5.3
Public consumption	4.3	5.3	5.5	5.8	7.3	6.9	1.4	6.1	7.5
Gross fixed capital formation	3.2	5.4	2.2	1.9	5.5	0.2	0.9	0.9	5.6
Exports of goods and services	5.8	1.7	1.9	-0.8	5.9	4.1	0.3	3.7	-0.3
Imports of goods and services	7.4	5.7	2.4	5.2	3.9	2.8	1.2	6.3	-0.5
	Contributio	n to GDP gro	wth in percer	tage points					
Domestic demand	4.2	5.5	3.6	6.6	2.1	3.5	4.2	4.0	2.8
Net exports of goods and services	-0.7	-2.4	-0.3	-3.6	1.1	0.8	-0.6	-1.1	0.1
Exports of goods and services	3.7	1.1	1.3	-0.6	3.4	2.9	0.2	2.5	-0.2
Imports of goods and services	-4.4	-3.6	-1.5	-3.0	-2.3	-2.1	-0.8	-3.6	0.3
	Year-on-yea	ar change of ‡	beriod averag	e in %	( )	2.0	1.1	4.5	2.2
Unit labor costs in the whole economy (nominal, per person)	8.4	6.3	3.0	4.9	6.3	2.9	4.1	1.5	3.3
Unit labor costs in manufacturing (nominal, per hour)	6.2	2.2	5.9	1.0	1.0	3.3	6.3	8.0	6.4
Labor productivity in manufacturing (real, per hour)	6.0	7.5	4.2	9.6	6.4 フェ	9.3	3.3	0.6	4.5
Labor costs in manufacturing (nominal, per hour)	12.6	9.8	10.5	10.8	7.5	12.9	9.7	8.6	11.1
Producer price index (PPI) in industry	4.9	4.0	3.0	4.1	3.5	3.3	2./	3.4	2.8
Consumer price index (here: HICP)	1.2	2.6	2.5	3.6	3.0	2.5	2.8	2.2	2.3
EUR per T BGIN, $+ =$ BGIN appreciation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Period aver	age levels	4.2	FO	47	E 4	4.2	2.7	4.4
Unemployment rate (ILO definition, %, 15–64 years)	6.3	5.3	4.3	5.0	4./	5.1	4.Z	3./	4.1
Employment rate (%, 15–64 years)	66.9	67.7	/0.1	68.8	67.7	68.3	/0./	/1.4	70.0
Rey interest rate per annum (%)'				 2 0					
BGN per l'EUR	Z.U	Z.U	Z.U	Z.U	2.0	2.0	2.0	2.0	2.0
I constanthe demostic newbork private costan?		ar-on-year cr	ange in perio	a-ena stock in 70	0.00	70	(0	70	0.4
Loans to the domestic hondank private sector	4.8	8.3	8.3	/.3	0.3 11.2	7.9	6.7	7.Z	9.4
of which: loans to nouseholds	6.I 4.1	11.Z	11.2	9.7 E O	11.Z	11.0	8.1	9.1	9.5
Ioans to nonbank corporations	4.1	0.0	0.0	3.7	0.0	0.1	0.2	0.0	7.3
	70								
bank private sector	379	34.9	33.7	35.6	34.9	34.1	33.5	22.1	33.3
Beturn on assets (hanking sector)	10	17	15	16	17	10	17	16	15
Tier 1 capital ratio (banking sector)	20.9	1.7	1.5	1.0	1.7	18.3	1.7	20.2	19.5
NPL ratio (banking sector)	20.7	51	40	61	51	10.5	4.8	5.0	42
THE Fallo (Darking sector)	% of GDP	J.1	1.2	0.1	J.1	1.7	1.0	5.0	7.2
General government revenues	36.0	28.2	38.4						
General government expenditures	35.0	36.5	36.3						
General government balance	11	1.8	21						
Primary balance	1.1	24	2.1						
Gross public debt	25.3	2.1	2.7						
	% of GDP	22.5	20.1						
Debt of nonfinancial corporations (nonconsolidated)	86.3	84.6	76.9						
Debt of households and NPISHs <sup>3</sup> (nonconsolidated)	22.9	23.4	21.3						
	% of GDP (	based on EUI	R), period tota	al					
Goods balance	-1.5	-3.3	-2.8	-1.1	-3.8	-2.7	-4.0	-1.6	-2.9
Services balance	5.9	6.3	6.2	13.1	3.5	3.1	5.6	12.1	3.5
Primary income	-4.4	-1.2	-2.8	-0.9	-0.5	-2.9	-3.2	-3.2	-1.8
, Secondary income	3.5	3.5	3.4	4.4	2.1	4.3	4.7	2.9	2.0
Current account balance	3.5	5.3	4.0	15.5	1.3	1.8	3.1	10.2	0.7
Capital account balance	1.0	1.1	1.5	1.6	1.0	1.5	1.6	1.6	1.2
Foreign direct investment (net) <sup>4</sup>	-2.5	-0.6	-1.3	-0.8	-1.5	-0.7	-0.8	-2.3	-1.2
- · · /	% of GDP (	rolling four-qu	arter GDP, b	ased on EUR),	end of period				
Gross external debt	71.8	65.6	62.2	69.0	65.6	65.6	64.5	64.5	62.2
Gross official reserves (excluding gold)	43.1	42.8	38.0	42.4	42.4	41.1	40.1	39.5	38.0
	Months of i	mports of goo	ods and servi	ces					
Gross official reserves (excluding gold)	8.1	8.1	7.6	8.0	8.1	7.9	7.9	7.7	7.6
	EUR million	, period total							
GDP at current prices	51,663	55,182	60,675	15,559	15,523	12,711	15,070	16,184	16,710

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

<sup>1</sup> Not available in a currency board regime.

<sup>2</sup> Foreign currency component at constant exchange rates.

<sup>3</sup> Nonprofit institutions serving households.

<sup>4</sup> + = 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).

Solid growth on the back of domestic demand before the coronavirus crisis

Stable pre-crisis monetary and financial environment

Pre-crisis imbalances declined further, but remain high

Strong first response to support the economy in the face of the crisis

## 5 Croatia: entering the downturn with high sovereign debt and strong reliance on tourism

Before the coronavirus pandemic, the Croatian economy was developing favorably. Economic growth reached 2.7% year on year in the second half of 2019, despite decelerating compared to the first half of the year given very strong first-quarter GDP growth. Private consumption was the strongest contributor to growth. Investment growth slowed in the second half of 2019, after strong growth in the first half of the year. Export growth accelerated and import growth decelerated, improving the contribution of net exports. On the output side, the largest contribution to overall growth came from wholesale and retail trade, transport, accommodation and food service activities. The industrial sector's performance was weak, while construction boomed, even though growth rates decelerated somewhat compared to the first half of the year.

Average inflation in 2019 was low (0.8% year on year), with energy and food price movements (VAT changes) contributing to some volatility in headline inflation. The Croatian National Bank (HNB) continued its accommodative stance and further built up international reserves (EUR 18.5 billion at end-2019, roughly 9 months of imports) through its foreign currency market interventions to counter appreciation pressures on the kuna. The Croatian banking sector is one of the most profitable and best capitalized in the region, with a return on assets of 1.4% and a tier 1 capital ratio of 22.4% at end-2019 – both slightly higher than a year before. The NPL ratio declined markedly to 5.5%.

One of the main imbalances remains the high sovereign debt level, which came to 71.2% of GDP at the end of 2019, 3.5 percentage points lower than a year ago. The Croatian government reported a very mild budget surplus in 2019. Croatia's external debt declined to the still high level of 76% of GDP at end-2019, down 7 percentage points from the previous year and driven to a large extent by the government sector. Corporate indebtedness is elevated compared to peer countries (roughly 68% of GDP). Croatia's economy relies heavily on tourism, which indirectly contributes some 20% to 25% to employment and gross value added. Over the past years, this has supported growth and improved the current account surplus, which increased to 2.9% of GDP in 2019 on the back of a strong tourist season. However, tourism is likely to be among the sectors most affected by the current crisis, potentially exposing the Croatian economy to a sharp downturn.

The Croatian government and the HNB have implemented strong measures to support the country's economy and exchange rate stability. The Croatian government has approved two economic support packages worth an estimated 9% to 10% of GDP (roughly half of which relates to debt moratoria or loan guarantees). The financing has not yet been secured for all announced support measures. On April 3, 2020, the government reported having received 65,000 requests for tax deferrals from businesses and 70,000 applications from employers for the government's net minimum wage support program aimed at saving 420,000 jobs (approximately 25% of Croatia's labor force). During March 2020, the HNB intervened several times in foreign currency markets, injecting a total of EUR 2.2 billion into the markets. In addition, it launched a high-volume five-year longer-term refinancing operation, restarted regular weekly repo auctions with full allotment, purchased government bonds on the secondary market and eased regulations for banks.

So far, Croatia has not announced any deviations from its timeline for adopting the euro, according to which Croatia will join the ERM II in the second half of 2020.

Table 7

#### Main economic indicators: Croatia

	2017	2018	2019	Q3 18	Q4 18	Q1 19	Q2 19	Q3 19	Q4 19
	Year-on-ye	ar change of t	he period tot	al in %					
GDP at constant prices	3.1	2.7	2.9	3.0	2.2	4.1	2.4	2.9	2.5
Private consumption	3.1	3.2	3.5	2.5	3.7	4.3	2.7	3.0	4.0
Public consumption	2.2	1.3	3.3	2.5	0.9	3.1	3.9	2.9	3.5
Gross fixed capital formation	5.1	4.1	7.1	5.0	2.3	11.5	8.2	5.0	4.0
Exports of goods and services	6.8	3./	4.6	5.4	2.3	4.1	3.3	5.1	5.6
Imports of goods and services	8.4	/.5	4.8	6.5	9.2	6.5	8.3	4.3	0.1
	Contributio	n to GDP gro	wth in percer	itage points	5.4		5.0	1.0	0.4
Domestic demand	3.8	4.5	3.1	4./	5.1	6.4	5.2	1.0	0.4
Net exports of goods and services	-0.6	-1.8	-0.1	0.8	-3./	-2.1	-2./	1.6	2.2
Exports of goods and services	3.3	1.8	2.3	3.8	0.9	1.5	1.6	3.6	2.3
Imports of goods and services	-3.9	-3./	-2.5	-3.0	-4.6	-3.6	-4.3	-2.0	-0.1
	tear-on-ye	ar change of f	period averag	e in %					
Unit labor costs in the whole economy (nominal, per person)					 0.1		 Э Г	1.0	
Unit labor costs in manufacturing (nominal, per nour)	1./ 2.E	0.0		7.0	8.1	-1.4	3.S 4 F	1.9	
Labor productivity in manufacturing (real, per nour)	5.5 F 4	2.2	 2 (	1.5	1.1	0.2	-1.5	1.5	
Labor costs in manufacturing (nominal, per nour)	2.1	7.1	0.0	0.0 2.0	7.Z	0./	1.7	0.7	2.0
Consumer price index (FFI) in industry	2.0	1.2	0.0	3.0 2.0	1.0	1.4	1.0	-0.2	0.5
EI IP par 1 $\Box PK \pm = \Box PK$ appreciation	0.0	0.6	0.0	2.0	1.5	0.0	0.0	0.7	0.2
EOR per THRK, $\pm$ – HRK appreciation	Poriod avor		0.0	0.1	1.5	0.2	-0.5	0.5	-0.5
nemployment rate (   O definition % 15, 64 years)	11.3	a c	67	74	87	76	62	5.8	73
Employment rate (% 15-64 years)	58.9	60.7	62.1	61.9	60.6	61.2	61.8	63.0	62.2
Key interest rate per annum (%)	50.7	00.7	02.1	01.7	00.0	01.2	01.0	05.0	02.2
HBK per 1 ELIB			 74	 74	 74	 74	 74	 74	 74
	Nominal ve	ar-on-vear ch	nonge in the t	period-end stor	-k in %	7.1	7.1	7.1	7.1
Loans to the domestic pophank private sector <sup>1</sup>	0.6	24	24	18	24	35	2.8	23	34
of which: loans to households	2.0	47	47	43	47	5.9	6.0	63	67
loans to nonbank corporations	-1.6	-0.8	-0.8	_1.5	-0.8	0.2	-1.6	-3.3	-13
·····	%					=		0.0	
Share of foreign currency loans in total loans to the non-									
bank private sector	56.9	54.7	51.5	55.5	54.7	54.4	53.0	51.9	51.5
Return on assets (banking sector)	0.9	1.2	1.4	1.5	1.2	1.3	1.5	1.4	1.4
Tier 1 capital ratio (banking sector)	22.3	22.1	22.4	21.1	22.1	21.6	22.0	21.9	22.4
NPL ratio (banking sector)	8.8	7.6	5.5	10.3	9.8	9.5	9.2	6.0	5.5
	% of GDP								
General government revenues	46.2	46.3	47.1						
General government expenditures	45.4	46.1	47.0						
General government balance	0.8	0.3	0.1						
Primary balance	3.5	2.6	2.3						
Gross public debt	78.0	74.8	71.2						
	% of GDP								
Debt of nonfinancial corporations (nonconsolidated)	94.1	92.5	88.0						
Debt of households and NPISHs <sup>2</sup> (nonconsolidated)	34.3	34.2	32.5						
	% of GDP (	based on EUI	R), period toto	al					
Goods balance	-17.2	-18.7	-19.2	–16.3	-18.4	-21.6	-22.2	-15.6	-18.1
Services balance	17.9	17.9	19.1	41.9	5.9	1.8	17.4	43.6	8.2
Primary income	-1.5	-1.6	–1.6	-2.6	0.3	-1.4	-2.7	–1.6	-0.5
Secondary income	4.2	4.3	4.5	3.1	5.4	3.7	4.9	3.6	5.9
Current account balance	3.4	1.9	2.9	26.0	-6.9	–17.4	-2.5	29.9	-4.5
Capital account balance	1.1	1.4	2.1	1.0	2.1	1.7	2.8	1.5	2.4
Foreign direct investment (net) <sup>3</sup>	-2.3	-1.5	-1.9	0.1	0.6	-4.2	0.9	-2.2	-2.2
	% of GDP (	rolling four-qu	arter GDP, b	ased on EUR),	end of period				75.6
Gross external debt	89.0	82.7	/5.8	84.1	82.7	83.7	85.1	80.6	/5.8
Gross official reserves (excluding gold)	32.1	33.9	34.4	32.6	33.8	35.1	37.7	38.2	34.4
Construction of the second sec	Months of	mports of goo	ods and servi	ces	70	0.4	0.4	07	70
Gross official reserves (excluding gold)	7.8	/.9	7.9	1.1	/.9	8.1	8.6	8./	7.9
CDD at automatic puisso	EUK million	, period total	E2 0 42	14 50 4	10 740	11.074	10 5 40	15 774	12 250
GDF at current prices	48,999	51,473	53,743	14,594	12,749	11,871	13,542	15,2/1	13,259

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

 $^{\scriptscriptstyle 1}$  Foreign currency component at constant exchange rates.

 $^{\rm 2}$  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).
Economic slowdown in the second half of 2019 spurred by falling exports

Strong monetary and fiscal policies to navigate massive coronavirus shock

## 6 Czech Republic: economy is teetering on the edge of the coronavirus abyss

Economic growth in the Czech Republic slowed moderately to 2.5% in the second half of 2019. The slowdown was driven by net exports knocking off 2.4 percentage points from annual GDP growth in the last quarter of 2019 due to a significant nosedive of exports. The latter reflected the moderation in external demand and, in particular, the slump in the German car industry. The contribution of domestic demand, by contrast, strengthened in the second half of last year. Household consumption was propelled by continued income growth and generally still favorable consumer sentiment. Investment growth accelerated gradually in the last two quarters of 2019, owing to still solid government investments (buoyed by a sustained drawdown of EU funds) and households' capital expenditure on housing. The latter has been kept afloat by low mortgage rates and brisk growth of disposable income.

Owing to a lower surplus of the trade and services balance and to a strong outflow of dividends in the primary income balance, the current account turned negative in the second half of 2019. The general government budget surplus declined noticeably in 2019 as a result of the economic slowdown, rising wages in the public sector and higher social transfers. While the labor market remained tight, the sustained rise in employment and decline in unemployment petered out in late 2019. None-theless, inflation was fueled by buoyant wage growth and consumer demand coupled with a weaker koruna and a surprisingly sharp rise in administered and food prices. Inflation thus averaged 2.8% in the second half of 2019 and gradually increased further to 3.7% in February 2020. After having missed its inflation target repeatedly ( $2\% \pm 1$  percentage point), the Czech National Bank (CNB) raised the key policy rate by 25 basis points to 2.25% in early February 2020.

The Czech government reacted forcefully and quickly to the outbreak of coronavirus, declaring a state of emergency on March 12, 2020. By mid-March, borders, restaurants and most shops had been closed and a nation-wide curfew had been issued. Hence, the coronavirus-induced damages were already reflected in the most recent business and consumer sentiment indicators. Google data suggest that demand in the retail and recreation sectors dropped by more than 60% in the second half of March. Worse still, an agonizing 90% of the entire automotive industry – the backbone of the Czech economy, which accounts for more than 8% of GDP and for one-quarter of industrial production and exports – stopped production for at least a month.

Both fiscal and monetary policy have reacted vigorously to the unfolding crisis. Given the country's rather favorable fiscal position, the government has, to date, earmarked some 18% of GDP to deal with the impact of the coronavirus pandemic, the third-largest amount in Europe according to the IMF. The measures adopted by the government include income support for affected employees, lump-sum payments to self-employed individuals as well as credit lines and guarantees for businesses. In addition, some taxes have been temporarily suspended, penalties have been waived and a six-month moratorium on some bank loans has been announced. The CNB lowered the policy rate twice by 50 and 75 basis points, respectively, to 1% in March 2020. It also increased the frequency of repo operations from one to three times a week. On the regulatory side, the CNB reduced the countercyclical capital buffer rate from 1.75% to 1%, and relaxed regulatory limits for new mortgages. In preparation for quantitative easing, the Act on the CNB has been amended to ease existing restrictions on open market transactions.

#### Table 8

#### Main economic indicators: Czech Republic

	2017	2018	2019	Q3 18	Q4 18	Q1 19	Q2 19	Q3 19	Q4 19
	Year-on-yea	ar change of t	he period tot	al in %	I		I		
GDP at constant prices	4.4	2.8	2.6	2.4	3.0	2.8	2.4	3.3	1.8
Private consumption	4.3	3.2	3.0	2.9	2.6	3.2	2.8	3.3	2.9
Public consumption	1.3	3.4	2.6	4.4	3.3	2.1	2.8	3.7	1.8
Gross fixed capital formation	3.7	7.6	2.8	8.1	7.6	3.3	0.9	2.6	4.3
Exports of goods and services	6.7	4.4	1.2	4.2	5.6	1.3	1.9	3.8	-2.1
Imports of goods and services	5.9	5.9	1.7	6.6	5.5	1.9	1.0	2.7	1.0
	Contributio	n to GDP grov	wth in percer	tage points	27	2.2	47	2.2	4.4
Domestic demand	3.3	3.6	2.8	3./	2.6	3.3	1./	2.3	4.1
INet exports of goods and services	1.1	-0.8 Э Е	-0.3	-1.4	0.4	-0.4	0.8 1 E	0.9	-2.4
Exports of goods and services	2.5	3.5	0.7	). I 1 E	4.5	1.1	1.5	2.0 1.0	-1.0
imports of goods and services	Year-on-ver	r change of t	-1.2 Period averag	–т.J е in %	-7.1	-1.5	-0.7	-1.7	-0.7
Unit labor costs in the whole economy (nominal per person)	3 5	6 5	4 2	71	49	47	48	3.2	43
Unit labor costs in manufacturing (nominal, per per son)	18	44	5.8	39	36	6.6	69	18	79
l abor productivity in manufacturing (real, per hour)	6.5	3.9	1.0	3.7	3.6	0.8	1.4	1.6	0.1
Labor costs in manufacturing (nominal, per hour)	8.4	8.5	6.8	7.7	7.4	7.4	8.4	3.5	8.0
Producer price index (PPI) in industry	0.8	0.7	1.7	2.2	3.2	3.1	2.5	1.2	0.1
Consumer price index (here: HICP)	2.4	2.0	2.6	2.3	1.8	2.3	2.4	2.6	3.0
EUR per 1 CZK, $+ = CZK$ appreciation	2.7	2.7	-0.1	1.4	-0.8	-1.1	-0.3	-0.1	1.1
	Period aver	age levels							
Unemployment rate (ILO definition, %, 15–64 years)	2.9	2.3	2.1	2.4	2.1	2.1	1.9	2.2	2.1
Employment rate (%, 15–64 years)	73.6	74.8	75.1	75.0	75.4	75.0	75.0	75.2	75.3
Key interest rate per annum (%)	0.2	1.1	1.9	1.2	1.7	1.8	1.9	2.0	2.0
CZK per 1 EUR	26.3	25.6	25.7	25.7	25.9	25.7	25.7	25.7	25.6
	Nominal ye	ar-on-year ch	ange in perio	d-end stock ir	1 %				
Loans to the domestic nonbank private sector <sup>1</sup>	6.9	6.8	6.8	6.6	6.8	5.4	5.3	3.9	5.0
of which: loans to households	7.5	7.5	7.5	7.6	7.5	7.0	6.6	6.3	6.1
loans to nonbank corporations	6.2	5.8	5.8	5.4	5.8	3.6	3.9	1.2	3.8
	%								
Share of foreign currency loans in total loans to the non-	12.2	111	14 F	45.0	111	14.0	14.0	45.0	14 F
Dative sector	13.3	14.1	14.5	10.3	14.1	14.9	14.8	10.3	14.5
Tier 1 capital ratio (banking sector)	1.1 10 7	1.1 101	20.9	1.1 10 2	1.1	1.0	1.Z 10.0	1.Z 10.0	1.Z
NPL ratio (banking sector)	41	31	20.0	30.5	31	3.0	27	25	20.0
ru Eratio (banking sector)	% of GDP	5.1	2.1	J.2	5.1	5.0	2.7	2.5	2.1
General government revenues	41.0	42.2	42.1						
General government expenditures	39.5	41.2	41.9						
General government balance	1.5	0.9	0.3						
Primary balance	2.2	1.8	0.9						
Gross public debt	34.7	32.6	30.8						
	% of GDP								
Debt of nonfinancial corporations (nonconsolidated)	58.1	56.7	54.2						
Debt of households and NPISHs <sup>2</sup> (nonconsolidated)	32.6	32.0	30.6						
	% of GDP (	based on EUF	R), period tota	al					
Goods balance	5.1	4.1	4.2	2.3	2.6	5.6	5.7	3.5	2.5
Services balance	2.5	2.3	1.8	1.7	2.1	2.6	2.6	1.4	0.8
Primary income	-5.1	-5.3	-5.7	-7.1	-4.2	-3.1	-6.4	-8.4	-4.9
Secondary income	-0.9	-0.8	-0.7	-0.8	0.3	-2.0	-0.1	-0.9	0.0
Current account balance	1.6	0.3	-0.4	-3.9	0.8	3.1	1.8	-4.4	-1.6
Capital account balance	0.8	0.3	0.3	0.3	0./	-0.5	0.6	0.1	0.7
Foreign direct investment (net)°	-0.9	-1./	-1.1	-2./	-2.5	-0.3	-2.0	-1.8	-0.1
Cross avternal debt	% 07 GDP (	roiling four-qu	arter GDP; b	asea on EUR),	ena oj period	01.1	00 5	70 F	70.0
Gross external debt	89.1	82.7 EQ.0	/8.3	83.1 50.0	82.7	81.1 (0.5	80.5	/9.5	/8.3
Gross official reserves (excluding gold)	64.1 Months of	57.8	60.4	57.9	57.8	60.5	60.4	60.8	60.4
Gross official reserves (excluding gold)		10 0		10.0	10.0	10.1	10.2	10.2	10.4
GLOSS OFFICIAL LESELVES (EXCLUDING BOID)	ELIR million	10.0	10.4	10.0	10.0	10.1	10.2	10.3	10.4
GDP at current prices	191 999	207725	220 212	52 541	54 522	50 872	54 982	56 174	58 183
obrite current prices	17 (,777	201,123	220,212	52,511	51,552	50,07Z	51,705	50,17-1	50,105

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

<sup>1</sup> Foreign currency component at constant exchange rates. <sup>2</sup> Nonprofit institutions serving households.

<sup>3</sup> + = 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).

Coronavirus crisis hit when economy was operating at close to full capacity

Policy measures to ease the burden on businesses and households

> MNB revamps monetary policy toolkit and eases supervisory rules

#### 7 Hungary: coronavirus pandemic brings about cyclical turnaround

Although GDP growth in Hungary slowed down somewhat in the final quarter of 2019, full-year growth at 4.9% exceeded expectations. Consumption growth strengthened in the second half of 2019, as the government took advantage of better than expected budgetary developments to accelerate spending, while house-hold consumption benefited from income growth, strong consumer confidence and accelerating growth of loans to households. Investment growth decelerated sharply in the final quarter of 2019 as a result of slowing investments in machinery and non-dwelling construction. Net real exports provided a relatively large negative contribution to growth in the second half of 2019, as import growth accelerated more than export growth, partly in connection with restocking.

Since the outbreak of coronavirus in Hungary, the government has announced several direct measures to fight the pandemic (e.g. shop closures and increased funding for the healthcare sector) and has presented recovery packages to ease the negative impact on the economy. These included, in a first step, a temporary suspension of tax payments for small businesses, a substantial reduction of social security payments for the most heavily hit sectors, a temporary ban on evictions, property seizures and the enforcement of tax debt collection as well as an extension of expiring entitlements to childcare benefits until the end of the state of emergency. In a second step, the 2020 budget deficit was revised up from 1% to 2.7% of GDP following the creation of three funds (partly financed by budget restructuring and partly by additional taxes on the retail and banking sectors). Furthermore, the recovery packages included government cofinancing of wages of employees on short-time working, investment support, state guarantees and interest subsidies for corporate loans, the gradual re-introduction of an extra 13<sup>th</sup> month pension payment as well as bonusses and wage hikes in the healthcare sector.

The Hungarian parliament imposed a debt service moratorium and an interest rate cap for consumption loans, both until end-2020. To ease the adverse effects of these measures on banks, support the restart of the economy and counter increased depreciation pressure on the forint, the National Bank of Hungary (MNB) has taken comprehensive action. To mitigate liquidity tensions and support lending, it expanded its lending facilities, granted banks a moratorium on servicing loans under its F4G schemes and exempted banks from reserve requirements. It also initiated a new "Funding for Growth Go!" (F4G Go!) scheme with lighter eligibility criteria and expanded its "Bond funding for Growth Scheme" (BGS), while paying a preferential 4% interest rate on its deposit facility to sterilize the additional liquidity. Moreover, the MNB launched a government bond purchase program and restarted its mortgage bond purchase program. In response to mounting depreciation pressure on the forint in the second half of March 2020, the MNB introduced one-week deposit auctions at the base rate to withdraw short-term liquidity. At the beginning of April, it hiked its overnight and one-week deposit rates to 1.85% and allowed the one-week deposit rate to be set in a flexible way between -0.05% and 1.85% at future auctions. To ease the administrative and regulatory burden on the financial sector, the MNB eased capital requirements, suspended some fines and deferred certain deadlines. At the same time, it took measures to bolster banking sector stability, inter alia by tightening some prudential ratios, and instructed banks not to decide on and pay out dividends until end-September 2020.

#### Main economic indicators: Hungary

Table 9

	2017	2018	2019	Q3 18	Q4 18	Q1 19	Q2 19	Q3 19	Q4 19
	Year-on-yea	ı ır change of t	i he period tot:	al in %	I		I		
GDP at constant prices	4.3	5.1	4.9	5.3	5.3	5.3	4.9	5.0	4.5
Private consumption	4.7	4.8	5.1	4.7	4.4	5.0	5.0	4.8	5.3
Public consumption	2.4	0.9	1.7	0.7	-2.6	0.3	0.5	1.3	4.6
Gross fixed capital formation	18.7	17.1	15.3	20.7	17.8	24.9	17.8	16.1	7.0
Exports of goods and services	6.9	4.3	6.0	1.2	4.9	7.3	3.7	10.2	3.3
Imports of goods and services	8.2	6.8	6.9	6.1	7.1	7.1	4.6	10.2	5.9
	Contributio	n to GDP gro	wth in percer	tage points					
Domestic demand	4.8	6.7	5.4	9.0	6.6	4.9	5.4	4.7	6.4
Net exports of goods and services	-0.5	–1.7	-0.4	-3.7	-1.4	0.5	-0.5	0.3	–1.9
Exports of goods and services	6.0	3.8	5.1	1.0	4.0	6.6	3.3	8.2	2.7
Imports of goods and services	-6.4	-5.4	-5.6	-4.7	-5.5	-6.1	-3.7	-7.9	-4.6
	Year-on-yea	ar change of t	beriod averag	e in %					
Unit labor costs in the whole economy (nominal, per person)	4.5	3.5	6.0	2.5	3.2	5.5	7.5	5.6	5.6
Unit labor costs in manufacturing (nominal, per hour)	5.4	/.4	6.6	8.0	1.1	/.2	9.1	3.8	6.2
Labor productivity in manufacturing (real, per hour)	2.4	1.5	4.1	1.0	1.4	4.9	2.2	6.5	3.0
Labor costs in manufacturing (nominal, per hour)	8.0	9.0	10.9	9.1	9.1	12.4	11.6	10.6	9.4
Consume an aviage in days (PPI) in industry	3.3	5.6	2.2	7.9 D.F	5.5	3.2	2.3	1.2	2.1 2.5
Consumer price index (nere: HICP)	2.4	2.9	3.4	3.D E /	3.3 Э Е	3.Z	3.8 1.0	3.I 1 D	3.5
$EOK$ per 1 HOF, $\pm$ – HOF appreciation	Poriod avor		-2.0	-3.4	-5.5	-Z.1	-1.0	-1.2	-2.7
$ $  nemployment rate (   $\bigcirc$ definition % 15, 64 years)	4 2	age levels	35	30	3.6	3.6	34	35	3.4
Employment rate (% 15–64 years)	-T.Z 68.2	693	701	69.5	5.0 69.5	69.9	70.0	5.5 70.3	70 3
Key interest rate per appum (%)	00.2	07.5	0.1	07.5	07.5	07.7	0.0	0.5	0.5
HUE per 1 EUR	309.3	318.8	325.2	3241	323.0	3179	322.9	328.2	331.9
	Nominal ve	ar-on-vear ch	nange in heric	d-end stock ir	1%	517.7	522.7	520.2	551.7
l oans to the domestic nonbank private sector <sup>1</sup>	4.3	9.9	9.9	9.1	9.9	11.0	12.1	12.2	12.4
of which: loans to households	1.3	5.8	5.8	3.2	5.8	7.7	7.6	12.7	15.4
loans to nonbank corporations	6.8	13.1	13.1	13.7	13.1	13.5	15.4	11.8	10.3
,	%								
Share of foreign currency loans in total loans to the non-									
bank private sector	23.5	24.0	23.8	24.1	24.0	23.8	24.1	24.0	23.8
Return on assets (banking sector)	1.8	1.4	1.2	1.5	1.4	1.4	1.3	1.3	1.2
Tier 1 capital ratio (banking sector)	21.1	17.8	14.9	19.2	17.8	16.3	16.8	15.8	14.9
NPL ratio (banking sector)	3.7	2.2	2.6	2.6	2.2	3.4	3.1	3.0	2.6
	% of GDP								
General government revenues	44.6	44.4	44.0						
General government expenditures	47.0	46.7	46.1						
General government balance	-2.4	-2.3	-2.0						
Primary balance	0.3	0.1	0.2						
Gross public debt	72.9	70.2	66.3						
	% of GDP		59.4						
Debt of nonfinancial corporations (nonconsolidated)	65./	65.4	59.1						
Debt of households and INPISHs <sup>2</sup> (nonconsolidated)	18.5	17.6	15.9 D) howing to the	-1					
Coords halve as	% 0] GDP (1	Dasea on EUI	R), period tota 4 o		1 (	0.2	0.0	2.2	2.0
	1.5 E 0	-1.3 E 0	-1.9	-3.7	-1.6	-0.3 E D	-0.9	-3.Z	-2.8
Primary income	3.0	2.0 2.0	2.0	0.0	+.7 2 7	2.5	0.2	0.4	7.4
Secondary income	0.9	-5.7	-3.7	-5.0	-5.7	-5.0	-7.0	-5.5 1 2	-5.1
	-0.7	-0.0	-0.0	0.5	2.0	03	-0.2	-1.2	-0.5
	0.9	2.0	-0.0	-0.0	-2.0	-0.5	13	-1.5	-2.0
Eoreign direct investment (net) <sup>3</sup>	-1.6	_2.2	-16	-6.2	-0.5	-3.6	0.5	-0.8	_27
. o. o.g., an eet invostment (net)	% of GDP (	rolling four-a	larter GDP. h	ased on FUR)	end of period	5.0	0.5	0.0	2.7
Gross external debt	84.0	80.5	72.8	80.5	80.5	81.4	80.7	77.0	72.8
Gross official reserves (excluding gold)	18.5	19.7	18.8	18.1	19.8	19.4	18.6	19.1	18.8
· · · · · · · · · · · · · · · · · · ·	Months of i	mports of go	ods and servi	ces					
Gross official reserves (excluding gold)	2.8	2.9	2.8	2.7	2.9	2.9	2.8	2.9	2.8
	EUR million	, period total							
GDP at current prices	125,575	133,661	143,701	33,949	36,867	32,093	35,854	36,706	39,049

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

<sup>1</sup> Foreign currency component at constant exchange rates.

<sup>2</sup> Nonprofit institutions serving households.
<sup>3</sup> + = 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).

Slightly weaker but balanced growth, higher inflation and moderate current account surplus

Monetary and fiscal policy responses to the coronavirus impact

## 8 Poland: entering the coronavirus crisis in a comparatively robust economic position

GDP growth in Poland stood at 4.1% in 2019, declining from 4.7% in the first quarter to 3.5% in the last quarter. Like GDP growth, total final demand growth was lower in 2019 than in 2018, as both foreign and domestic demand growth declined. As a result, import growth shrank by more than export growth and the net export contribution to GDP growth turned positive. In 2019, the current account balance showed a surplus of 0.5% of GDP, as the goods and services balance rose markedly to above 5% of GDP. The capital account surplus remained at 2% of GDP; net FDI inflows stood at 1.9% of GDP, down from 2.5% a year earlier. The domestic demand slowdown in 2019 stemmed mainly from considerably lower inventory buildup, but also fixed investment and private consumption growth were moderately weaker. In the second half of 2019, annual nominal unit labor cost (ULC) growth in the whole economy and in manufacturing accelerated somewhat to 3.5% and almost 5%, respectively, with the latter being about 0.5percentage points higher than that of the euro area. From June 2019 to February 2020, annual headline inflation accelerated from 2.3% to 4.1% based on the HICP and from 2.6% to 4.7% based on the national CPI. Core inflation started from 2.4% (HICP excluding energy and unprocessed food) and 1.9% (CPI excluding energy and all food) and reached 3.6% (both indicators) in February 2020. In October 2019, the Monetary Policy Council (MPC) had expected a rise in inflation in early 2020 but had considered it a temporary phenomenon. In March 2020, amidst the benign overall economic situation characterized by low unemployment rates, high capacity utilization rates, stable liquidity positions and profitability rates as well as robust confidence indicators, the coronavirus lockdown threatened to hit both foreign and domestic demand, and the złoty depreciated by almost 5% against the euro.

On March 4, 2020, the MPC, pursuing an inflation target of  $2.5\% \pm 1$  percentage point (CPI), considered inflation above the upper bound due to supply-side and regulatory factors beyond its direct influence and concluded that inflation would remain close to the target over the monetary policy transmission horizon. On March 17, 2020, in view of the coronavirus impact, the MPC agreed, through intersessional decision, to cut the rate from 1.5% to 1%, to decrease the required reserve ratio from 3.5% to 0.5% and to increase the remuneration of the required reserves from 0.5% to 1%. Moreover, it decided to offer bill discount credit aimed at refinancing new loans granted by banks and to start outright government bond purchases on the secondary market to strengthen the monetary transmission mechanism. Having bought a volume of about 0.8% of GDP by April 8, 2020, the MPC cut the policy rate to 0.5%. In parallel, commercial banks offered moratoria of up to six months to households and SMEs. Regarding fiscal policy, in fall 2019, the European Commission had expected the headline deficit to narrow to 0.2% of GDP in 2020 after widening to 0.7% of GDP in 2019, and the structural deficit to narrow slightly to 1.9% after widening to 2.2% in 2019. General government gross debt declined to 47.4% of GDP in 2019. On March 21, 2020, in view of the implications of the coronavirus crisis, the government exempted self-employed individuals and micro-companies from social security payments (for three months if revenues had dropped by more than 50% compared to February 2020) and provided support for farmers. On March 31, 2020, an economic support package worth EUR 46 billion or 9% of GDP was adopted, providing, inter alia, support for companies, the financial and health sectors as well as public investment.

Table 10

#### Main economic indicators: Poland

	2017	2018	2019	Q3 18	Q4 18	Q1 19	Q2 19	Q3 19	Q4 19
	Year-on-yea	ar change of t	he period tot	al in %					
GDP at constant prices	4.9	5.1	4.1	5.8	4.4	4.7	4.1	4.2	3.5
Private consumption	4.5	4.2	3.8	4.1	5.0	3.7	4.0	3.8	3.6
Public consumption	2.9	3.6	4.2	4.7	3.9	6.3	2.7	5.0	3.2
Gross fixed capital formation	4.0	8.9	6.9	12.0	7.8	12.4	9.2	4.0	5.3
Exports of goods and services	9.5	7.0	4.2	7.2	6.9	7.3	3.2	5.1	1.3
Imports of goods and services	9.8	7.6	3.0	7.8	7.4	6.0	3.5	3.6	-0.8
	Contributio	n to GDP gro	wth in percer	tage points					
Domestic demand	4.7	5.1	3.3	5.8	4.4	3.8	4.1	3.2	2.4
Net exports of goods and services	0.3	0.0	0.8	0.0	0.0	1.0	0.0	1.0	1.1
Exports of goods and services	5.0	3.8	2.3	3.9	3.5	4.2	1.9	2.8	0.7
Imports of goods and services	-4./	-3.8 ar chango of l	-1.5	-4.0	-3.5	-3.Z	-1.9	-1.9	0.4
Linit labor costs in the whole according (naminal new person)	Tear-on-yea	ן criange of p ככ	oeriou averag ว จ	em 27	11	21	25	24	24
Unit labor costs in the whole economy (norminal, per per son)	2.1	47	4.7	43	т.1 6 2	3.1 2.2	47	5.7	2.0 4.1
l abor productivity in manufacturing (real per bour)	2.0	31	2.5	27	2.0	2.2	24	15	23
Labor costs in manufacturing (nominal per hour)	6.4	8.0	6.8	71	8.4	61	72	73	6.6
Producer price index (PPI) in industry	2.7	2.1	1.3	3.1	2.7	2.6	1.6	0.8	0.3
Consumer price index (here: HICP)	1.6	1.2	2.1	1.4	1.1	1.2	2.2	2.5	2.6
EUR per 1 PLN, $+ =$ PLN appreciation	2.5	-0.1	-0.9	-1.1	-1.6	-2.9	-0.5	-0.4	0.3
	Period aver	age levels							
Unemployment rate (ILO definition, %, 15–64 years)	5.0	3.9	3.4	3.9	3.9	4.0	3.3	3.2	2.9
Employment rate (%, 15–64 years)	66.1	67.4	68.2	68.0	67.3	67.2	68.2	68.9	68.5
Key interest rate per annum (%)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
PLN per 1 EUR	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
	Nominal ye	ar-on-year ch	nange in perio	d-end stock in	%				
Loans to the domestic nonbank private sector <sup>1</sup>	6.2	6.4	6.4	5.9	6.4	6.9	6.7	6.6	5.0
of which: loans to households	4.8	5.6	5.6	5.4	5.6	5.6	5.9	6.1	5.6
loans to nonbank corporations	8.7	7.6	7.6	6.9	7.6	9.2	8.2	7.3	4.1
	%								
Share of foreign currency loans in total loans to the non-	21.2	20.0	10.2	20.0	20.0	20.7	10.0	20.0	10.2
Pature on assets (hanking sactor)	21.5	20.0	17.Z	20.7	20.0	20.6	17.0	20.0	0.7
Tier 1 capital ratio (banking sector)	17.2	171	171	173	171	170	16.9	17.0	171
NPL ratio (banking sector)	6.8	68	64	70	6.8	6.8	6.8	6.8	6.4
	% of GDP	0.0	0.1	7.0	0.0	0.0	0.0	0.0	0.1
General government revenues	39.8	41.4	41.3						
General government expenditures	41.2	41.6	42.0						
General government balance	-1.5	-0.2	-0.7						
Primary balance	0.2	1.2	0.7						
Gross public debt	50.6	48.9	46.0						
	% of GDP								
Debt of nonfinancial corporations (nonconsolidated)	47.4	45.2	43.0						
Debt of households and NPISHs <sup>2</sup> (nonconsolidated)	35.7	34.8	33.1						
	% of GDP (	based on EUI	R), period toto	al					
Goods balance	0.3	-1.0	0.5	-0.9	-1.2	0.3	0.1	0.2	1.0
Services balance	3.8	4.4	4.8	4.2	4.0	4.9	5.0	4.8	4.5
Primary income	-4.1	-4.1	-4.4	-5.2	-3./	-3.2	-5.2	-5.3	-4.0
Secondary Income	0.0	-0.3	-0.3	-0.4	-0.4 1.2	-0.9	-0.2	-0.3	-0.1
	1.2	-1.0	0.5	-2.4	-1.5	1.2	-0.5	-0.6	2.0
Earling direct investment (net) <sup>3</sup>	1.5 _1.4	_2.1	_19	_4.8	0.0	_5.7	_0.3	_31	0.9
	% of GDP (	rolling four-a	arter GDP h	rsed on FLIR	end of beriod	-9.7	.0.5		0.7
Gross external debt	68.4	63.4	.59.2	64.8	63.4	62.2	61.3	60.5	59.2
Gross official reserves (excluding gold)	19.5	19.7	19.8	19.0	19.6	19.1	18.5	19.4	19.8
	Months of	mports of goo	ods and servi	ces					
Gross official reserves (excluding gold)	4.7	4.5	4.7	4.4	4.5	4.4	4.3	4.5	4.7
	EUR millior	, period total							
GDP at current prices	465,897	496,267	527,109	122,234	139,045	121,284	127,992	131,029	148,797

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

<sup>1</sup> Foreign currency component at constant exchange rates. <sup>2</sup> Nonprofit institutions serving households.

<sup>3</sup> + = 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).

Growth was still robust ahead of the coronavirus crisis

Twin deficits made Romania vulnerable to economic shocks

Containment and economic support measures in response to the coronavirus pandemic

#### 9 Romania: entering the coronavirus crisis with twin deficits

Before the coronavirus pandemic reached Romania at the end of the first quarter of 2020, the country recorded vivid economic activity. Full-year GDP growth came in at a still robust 4.1% in 2019, slightly down from the growth rate observed in 2018. In the second half of 2019, annual GDP growth rates were somewhat below the growth rates seen in the first half of 2019, but GDP growth reaccelerated in the final quarter of the year. Private consumption growth remained brisk and was supported by rising household income and consumer lending. In the first two months of 2020, retail sales pointed to ongoing brisk private consumption growth. In the second half of 2019, gross fixed capital formation expanded markedly, benefiting from buoyant construction activity and equipment purchases by companies. Exports recorded only moderate growth amid weak external demand and a major negative contribution of car parts exports. As import growth clearly surpassed export growth, the growth contribution of net exports stayed negative.

Procyclical fiscal and income policies have fueled economic growth in recent years. As a consequence, the general government budget deficit rose to 4.3% of GDP in 2019 and thus exceeded the 3% limit set out in the EU's stability and growth pact. On April 3, 2020, the Council of the European Union concluded that an excessive deficit existed in Romania. A few days later, the European Commission emphasized in a letter to the Romanian Finance Minister that it would fully take into account the economic and fiscal impact of the coronavirus outbreak in its assessment under the excessive deficit procedure. As the current account deficit widened in 2019, Romania entered the international coronavirus crisis with twin deficits.

To contain the spread of coronavirus, the Romanian authorities took various measures in early March that have since been tightened further and complemented. In addition to a series of initial measures (e.g. cancellations of events and flights to Italy and Spain and closures of schools, universities and restaurants), restrictions on movement were put in place on March 25, 2020. Since then, people have not been allowed to leave their homes with a few exceptions (e.g. to go to work or buy food).

To mitigate the impact of the coronavirus pandemic and related containment measures, the government decided to cover the wages of employees working for companies strongly affected by the pandemic (up to a limit of 75% of individual gross wages and capped at 75% of the average gross wage in the economy). In addition, to avoid liquidity shortages in the real sector, the state will provide guarantees for loans to companies (especially SMEs) and permit borrowers to postpone their loan repayments by nine months. Yet, the scope of the moratorium remains unclear, as the latest law on this subject has been challenged before the constitutional court. Finally, individuals and companies will be allowed to defer tax payments.

The National Bank of Romania (NBR) reacted with a policy package as well. It cut its key policy rate by 50 basis points to 2% and decided to provide liquidity to credit institutions via repo transactions and to purchase leu-denominated government securities on the secondary market. The NBR's decisions came after four failed treasury bond auctions and market reports of foreign exchange interventions by the NBR to support the leu. Furthermore, the NBR stressed that it stands ready to cut the minimum reserve requirement ratios on leu- and foreign currency-denominated liabilities of credit institutions, depending on how the situation evolves.

Table 11

#### Main economic indicators: Romania

	2017	2018	2019	Q3 18	Q4 18	Q1 19	Q2 19	Q3 19	Q4 19
	Year-on-ye	ar change of t	he period tot	al in %					
GDP at constant prices	7.1	4.4	4.1	4.5	4.4	5.0	4.4	3.0	4.3
Private consumption	9.9	7.2	5.9	5.7	8.2	7.4	5.1	4.3	7.2
Public consumption	4.5	3.1	7.1	3.6	5.7	2.4	11.4	2.2	9.4
Gross fixed capital formation	3.5	-1.0	17.9	-1.8	-1.4	3.2	20.5	25.6	15.7
Exports of goods and services	7.8	5.9	3.8	3.0	4.4	2.9	3.0	3.2	6.2
Imports of goods and services	10.7	9.2	8.3	6.8	8.7	11.5	5.5	9.1	7.3
Demonstra demonst	Contributio	n to GDP gro	wth in percer	tage points	()	74	F /	F 7	4.0
Domestic demand	8.5 1.4	5.7	2.8	)./	0.3	7.4 Э.Г	2.6	2./	4.8
Exports of goods and services	-1.4	-1.4	-1.7	-1.1	-1.0	-3.5	-1.5 1.4	-2.5	-0.5
Imports of goods and services	2.1 4.5	4.0	3.6	1.0	2.1	2.0	1.7	1.0	2.5
imports of goods and services	Year-on-ve	r change of t	period averag	e in %	5.7	5.5	2.7	1.1	2.0
Unit labor costs in the whole economy (nominal, per person)	9.9	9.1	4.5	9.3	5.7	5.3	3.3	3.5	5.8
Unit labor costs in manufacturing (nominal, per hour)	5.6	7.0	12.7	7.0	8.7	8.0	14.0	14.4	14.4
Labor productivity in manufacturing (real, per hour)	8.3	5.5	-0.8	5.4	3.5	4.1	-1.9	-2.2	-2.6
Labor costs in manufacturing (nominal, per hour)	14.3	12.8	11.9	12.8	12.4	12.5	11.9	11.9	11.4
Producer price index (PPI) in industry	3.5	5.0	4.0	5.8	5.2	4.6	4.5	3.5	3.2
Consumer price index (here: HICP)	1.1	4.1	3.9	4.6	3.5	3.8	4.3	3.9	3.7
EUR per 1 RON, $+ = RON$ appreciation	-1.7	-1.8	-1.9	-1.4	-0.9	-1.7	-2.0	-1.8	-2.2
	Period aver	age levels							
Unemployment rate (ILO definition, %, 15–64 years)	5.1	4.3	4.0	4.0	4.2	4.2	3.9	4.0	4.0
Employment rate (%, 15–64 years)	63.9	64.8	65.8	66.2	64.5	64.2	66.4	66.7	66.0
Key interest rate per annum (%)	1.8	2.4	2.5	2.5	2.5	2.5	2.5	2.5	2.5
RON per 1 EUR	4.6	4./	4./	4.6 d and atack in	4./	4./	4./	4./	4.8
Leans to the domestic nonbank private sector	Nominal ye	ar-on-year cr	ange in perio 79	a-ena stock in 5 o	70 70	6 0	6.4	60	5 5
of which: loans to households	т.т 71	91	91	9.0	91	0.0 73	63	6.6	5.5
loans to nonbank corborations	2.5	6.6	6.6	2.4	6.6	6.3	6.5	7.1	4.2
·····	%								
Share of foreign currency loans in total loans to the non-									
bank private sector	37.2	34.0	32.4	34.6	34.0	34.2	33.4	33.4	32.4
Return on assets (banking sector)	1.3	1.6	1.4	1.8	1.6	1.6	1.2	1.5	1.4
Tier 1 capital ratio (banking sector)	18.0	18.6	18.0	17.8	18.6	17.9	17.7	17.9	18.0
NPL ratio (banking sector)	6.4	5.0	4.1	5.6	5.0	4.9	4.7	4.6	4.1
	% of GDP								
General government revenues	30.9	32.3	31.7						
General government expenditures	33.6	35.2	36.0						
General government balance	-2.6	-3.0	-4.3						
Cross public debt	-1.4	-1./	-3.1						
Gi oss public debt	% of CDP	55.0	JJ.Z						
Debt of nonfinancial corporations (nonconsolidated)	35.2	33.1	29.4						
Debt of households and NPISHs <sup>2</sup> (nonconsolidated)	15.9	15.9	14.1						
	% of GDP (	based on EUI	R), period tota	al					
Goods balance	-6.5	-7.3	-7.8	-6.5	-8.2	-8.7	-7.7	-7.3	-7.7
Services balance	4.4	4.3	3.9	3.8	4.0	4.2	4.4	3.4	3.8
Primary income	-2.5	-2.7	-1.4	-3.7	-1.3	1.4	-3.2	-2.6	-0.7
Secondary income	1.4	1.2	0.7	0.9	1.4	0.5	0.1	0.7	1.2
Current account balance	-3.2	-4.6	-4.6	-5.6	-4.1	-2.6	-6.3	-5.8	-3.3
Capital account balance	1.2	1.2	1.3	0.9	2.0	1.6	0.9	0.9	1.7
Foreign direct investment (net) <sup>3</sup>	-2.6	-2.4	-2.4	-4.7	-1.1	-2.9	-2.8	-2.8	-1.3
	% of GDP (	rolling four-qu	arter GDP, b	used on EUR),	end of period	17.0		10.5	
Gross external debt	51.8	48.6	4/.4	49.7	48.6	4/.8	49.6	49.5	4/.4
Gross official reserves (excluding gold)	17.9 Monthe C	16.3	14./	15.9	16.2	15.4	15.3	16.3	14.7
Groce official receiver (aveluding gold)	vionths of	inports of goo		.es 4 2	10	4.1	11	1.1	4.0
GLOSS OFFICIAL LESELVES (EXCLUDING BOID)	4.9 FLIR million	+.3 berind total	4.0	4.3	4.3	4.1	4.1	4.4	4.0
GDP at current prices	187 282	202 879	222.259	57051	61 643	47 847	51 618	61 388	67411
	107,202	202,077	223,237	57,051	01,015	12,012	51,010	01,000	0/,111

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

<sup>1</sup> Foreign currency component at constant exchange rates.

<sup>2</sup> Nonprofit institutions serving households.
<sup>3</sup> + = 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).

FOCUS ON EUROPEAN ECONOMIC INTEGRATION Q2/20

Unbalanced and credit-driven recovery and accelerating inflation at the beginning of 2020

Monetary and fiscal policy responses to the coronavirus impact

## 10 Turkey: entering the coronavirus crisis in a very weak economic position

GDP growth fell to 0.9% in 2019, which mainly reflected the more lasting effects of the severe recession in the second half of 2018, while quarter-on-quarter growth was positive throughout the year. Thus, year-on-year growth rose from -2.3% in the first quarter of 2019 to 6.0% in the last quarter. While export growth declined significantly during the year, the contribution of domestic demand transited from a strong contraction to a notable expansion, boosted by higher private consumption growth on the back of sharp credit expansion. While large parts of the domestic demand expansion stemmed from the implied inventory change, quarter-on-quarter growth of fixed investment also turned positive in the second half of 2019. Following strong import compression in the first half of the year, very high domestic demand growth boosted import growth to outpace export growth by far in the last quarter of 2019. Still, in the full year 2019, the contribution of net exports to GDP growth was clearly positive and the current account balance showed a surplus of 1.2% of GDP, as the trade balance improved, while remaining in negative territory. The surplus in the services balance (tourism) rose further to 4.9% of GDP. The aftereffects of the Turkish lira's sizable depreciation in 2018 were still reflected in elevated inflation and even more strongly accelerated manufacturing labor cost and ULC growth in 2019. However, in the second half of 2019, the Turkish lira was stronger than in the second quarter of the year. Subsequently, from end-November to end-February, the Turkish lira depreciated by about 7.5% against both the euro and the U.S. dollar. Annual HICP inflation declined from 18.7% in May to 8.6% in October, then accelerated to 12.4% in February. This reflected, inter alia, similar inflation patterns of energy and unprocessed food. The Turkish central bank (TCMB) cut its one-week reportate, the main policy rate, from 24% in May 2019 to 14% in October 2019, before gradually reducing it to 10.75% by the end of February 2020 despite the currency depreciation and the uptick in inflation. In March 2020, in view of the economic impact of the coronavirus crisis, the Turkish lira depreciated by another 5%.

On March 17, 2020, the TCMB reduced the policy rate to 9.75% and increased liquidity provision to banks by introducing unlimited access through intraday and overnight standing facilities, longer repo auctions and targeted additional liquidity facilities at 100-150 basis points below policy rate linked to credit provision to the corporate sector. Moreover, the TCMB lowered foreign exchange reserve requirements by 500 basis points for banks that meet certain credit growth conditions and thus released EUR 4.5 billion (0.7% of GDP). It also granted export companies a three-month moratorium on the repayment of rediscount credits until end-June 2020, thus providing about EUR 7 billion. On March 31, 2020, the TCMB announced that it will increase outright purchases of domestic government debt securities and extend Turkish lira-denominated rediscount credits to export companies at 150 basis points below policy rate by TRY 60 billion (1.4% of GDP). Moreover, the government asked all financial institutions not to cancel existing loans and to ease the requirements for new loans. Furthermore, it doubled the state credit guarantee fund. Regarding fiscal policy, in fall 2019, the European Commission had expected the headline deficit to widen to 3.5% in 2020. In view of the coronavirus impact, a first economic package worth TRY 100 billion (2.3% of GDP) was set up, which includes deferrals of taxes and social insurance payments by six months for all companies operating in particularly affected industries, several benefits for elderly people and new funds for poor families.

Table 12

#### Main economic indicators: Turkey

	2017	2018	2019	Q3 18	Q4 18	Q1 19	Q2 19	Q3 19	Q4 19	
	Year-on-yea	ı ar change of t	he period tot	al in %	l					
GDP at constant prices	7.5	2.8	0.9	2.3	-2.8	-2.3	-1.6	1.0	6.0	
Private consumption	6.2	0.0	0.7	0.7	-7.7	-5.1	-1.0	1.9	6.8	
Public consumption	5.0	6.6	4.4	6.9	5.3	6.6	3.4	5.7	2.7	
Gross fixed capital formation	8.2	-0.6	-12.4	-4.4	-11.6	-12.4	-22.8	-12.8	-0.6	
Exports of goods and services	12.0	7.8	6.4	14.3	10.7	8.7	8.3	5.1	4.4	
Imports of goods and services	10.3	-7.8	-3.6	-16.3	-24.3	-29.3	-17.0	7.9	29.3	
Contribution to GDP growth in percentage points										
Domestic demand	6.9	0.8	-2.5	0.0	-7.3	-5.8	-7.1	-1.6	4.2	
Net exports of goods and services	0.1	3.5	2.2	6.6	8.3	9.3	5.6	-0.3	-4.7	
Exports of goods and services	2.5	1.7	1.4	3.0	2.2	1.9	1.8	1.2	1.0	
Imports of goods and services	-2.4	1.9	0.8	3.7	6.1	7.4	3.9	-1.4	-5.7	
	Year-on-yea	ar change of ‡	period averag	e in %						
Unit labor costs in the whole economy (nominal, per person)										
Unit labor costs in manufacturing (nominal, per hour)	4.0	18.0	21.9	18.5	27.9	24.8	25.1	22.3	15.7	
Labor productivity in manufacturing (real, per hour)	6.3	1.8	1.7	1.7	-2.9	-0.5	2.6	1.2	3.4	
Labor costs in manufacturing (nominal, per hour)	10.5	20.4	23.9	20.5	24.3	24.2	28.3	23.8	19.7	
Producer price index (PPI) in industry	15.8	27.0	17.6	34.5	39.0	30.7	27.9	12.0	4.4	
Consumer price index (here: HICP)	11.1	16.3	15.2	19.4	22.4	19.9	18.0	13.5	10.3	
EUR per 1 TRY, $+ =$ TRY appreciation	-18.9	-27.7	-10.4	-37.5	-28.6	-23.2	-20.9	4.7	-2.1	
	Period aver	age levels								
Unemployment rate (ILO definition, %, 15–64 years)	11.1	11.1	14.0	11.3	12.5	15.0	13.1	14.3	13.5	
Employment rate (%, 15–64 years)	51.6	52.0	50.3	53.0	51.1	49.3	50.7	51.0	50.2	
Key interest rate per annum (%)	8.0	15.5	20.6	18.9	24.0	24.0	24.0	20.3	14.3	
TRY per 1 EUR	4.1	5.7	6.4	6.6	6.3	6.1	6.6	6.3	6.4	
	Nominal ye	ar-on-year ch	ange in perio	d-end stock in	1 %					
Loans to the domestic nonbank private sector	20.8	12.4	11.2	27.6	12.4	12.9	6.7	-2.2	11.2	
of which: loans to households	16.3	3.2	15.9	9.2	3.2	1.5	-0.6	3.7	15.9	
loans to nonbank corporations	22.3	15.5	9.8	33.9	15.5	16.6	8.9	-3.8	9.8	
	%									
Share of foreign currency loans in total loans to the										
nonbank private sector	32.9	38.5	35.1	41.0	38.5	38.6	38.2	35.5	35.1	
Return on assets (banking sector)	1.6	1.5	1.1	1.5	1.5	1.2	1.2	1.1	1.1	
Tier 1 capital ratio (banking sector)	13.6	13.4	13.8	13.9	13.4	12.6	13.1	13.9	13.8	
NPL ratio (banking sector)	3.1	4.1	5.7	3.4	4.1	4.3	4.7	5.3	5.7	
	% of GDP									
General government revenues	31.4	31.2	31.8							
General government expenditures	34.1	34.3	34.7							
General government balance	-2.8	-3.2	-3.0							
Primary balance	-0.6	-0.8	-0.1							
Gross public debt	28.2	30.1	31.4							
	% of GDP									
Debt of nonfinancial corporations (nonconsolidated)										
Debt of households and NPISHs <sup>1</sup> (nonconsolidated)										
	% of GDP (	based on EUI	R), period toto		0.5		2.4	2.4	2.4	
Goods balance	-6.8	-5.2	-2.2	-4.2	0.5	-1.6	-2.4	-2.1	-2.6	
Services balance	3.1	4.0	4.8	/.2	4.3	2.4	4.8	/.4	4.3	
Primary income	-1.3	-1.5	-1./	-1.3	-1.9	-1.3	-2.2	-1.5	-1.6	
Secondary Income	0.3	0.1	0.1	0.1	0.2	0.1	0.0	0.2	0.2	
	-4.8	-2.5	1.1	1.8	3.1	-0.4	0.1	3.9	0.3	
Capital account balance	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Foreign airect investment (net) <sup>2</sup>	-1.0	-1.2	-0./	-1.4	-2.0	-1.2	-0.6	-0.6	-0.6	
Change automated alat	% OF GDP (	rolling four-qu	arter GDP, bo	used on EUR),	ena of period	10.4	FO F	F0 /	F 4 0	
	51.0	57.9	54.8	54.3	57.9	60.4	59.5	58.6	54.8	
Gross official reserves (excluding gold)	9.3	9./	10.4	8.3	9.7	10.5	10.4	10.6	10.4	
Conservation of the second sec	ivionths of i	mports of god	oas and servio	tes	27	4.0	4.0	4.2		
Gross official reserves (excluding gold)	3./ ELID	3./	4.1	3.1	3./	4.0	4.0	4.2	4.1	
CDP at current prices	250 277	, perioù total 656 447	672 015	155 071	161 507	150 005	15/ 002	181 400	185 510	
ODF at current prices	/ 52,0//	000,467	0/2,713	155,771	101,307	130,073	134,003	101,070	105,516	

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

<sup>1</sup> Nonprofit institutions serving households.

<sup>2</sup> + = 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).

Growth in 2019 remains low due to weak investment activity and tight macroeconomic policies

CBR's restrictive stance and overall weak demand have driven down inflation substantially

Twin surpluses and capital outflows have declined, while international reserves have expanded

Rapid retail lending growth passed its peak

### 11 Russia: continued sluggish growth in 2019, coronavirus crisis triggers plunge in oil price, but fiscal and external buffers available

After declining to 0.4% (year on year) in the first quarter of 2019, Russian economic growth recovered somewhat in the second (1.1%), third (1.5%) and fourth quarters (2.1%) year on year), producing a 1.3% GDP increase in the full year 2019. Sluggish economic activity was influenced by the weaker oil price and lackluster fixed investment (+1.5% in 2019). The two factors driving growth were household final consumption (+2.5%), which gained some traction from quarter to quarter, and public consumption (+2.2%); net exports shrank. In late 2019, the unemployment rate remained at a historical minimum (4.6%).

Given the decline in the oil price (-9% compared to the annual average price of Urals grade crude in 2018) and continued foreign exchange purchases of the Russian central bank (CBR) under the fiscal rule, the exchange rate of the ruble against the U.S. dollar weakened slightly (-3.5% from the annual average). The CBR's tight monetary stance (elevated key rate), overall still sluggish demand and declining inflationary expectations helped cushion the temporary rise in inflation linked to housing and communal tariff adjustments as well as the VAT increase in January 2019. Accordingly, inflation decreased to 2.5% in March 2020 year on year (1.5 percentage points below the CBR's target of 4%). Meanwhile, the coronavirus pandemic has swiftly changed the trajectory of the economy, triggering an oil price plunge in March-April 2020 and bringing about nation-wide lockdowns stifling business from late March onward. The combined effect has pushed the Russian economy into recession. The CBR has reacted by switching to an accommodative monetary stance, cutting its key rate by half a percentage point to 5.5% in April and announcing its readiness for further cuts.

The VAT increase, improved tax administration, the pension reform (adjustment of the retirement age) and restraint in public spending secured a budget surplus of 1.9% of GDP in 2019. The declining oil price in 2020, however, contributed to eliminating the surplus. Meanwhile, thanks to the transfer of oil and gas earnings of 2019, Russia's budgetary stabilization fund, the National Wealth Fund, reached a record level of EUR 150 billion at end-March 2020 (most of the fund is part of the country's international reserves). In April 2020, fiscal anti-crisis measures amounting to about 2.8% of GDP (mostly tax holidays and loan guarantees) were decided for 2020. The lower oil price contributed to the decline in the current account surplus to 3.8% of GDP in 2019. Private capital outflows decreased to 1.6% of GDP in 2019 (from 3.8% in 2018). Largely on account of nonresidents purchasing Russian obligations, the country's foreign debt expanded to EUR 430 billion at end-2019 (+8% year on year). However, Russia's foreign debt has been clearly outgrown by its international reserves (including gold, which the authorities have stocked up substantially in recent months), which stood at EUR 516 billion in mid-April 2020 (+19% over the last 12 months or 34% of GDP).

Notwithstanding Russia's sluggish economic growth and its NPL ratio stagnating at a relatively high level (17.1% at end-2019), retail lending (as opposed to corporate lending) continued to expand swiftly (+15% in late 2019 in real terms and exchange rate adjusted). That said, the expansion of retail lending – notably that of unsecured consumer credit – has passed its peak thanks to the CBR's prudential tightening measures and, in part, related easing of credit demand on the back of unstable household income dynamics. Moreover, the coronavirus crisis is expected to strongly dampen any further growth of banking activities.

Table 13

#### Main economic indicators: Russia

	2017	2018	2019	Q3 18	Q4 18	Q1 19	Q2 19	Q3 19	Q4 19
	Year-on-ye	ı ar change of t	i he period tot	al in %					
GDP at constant prices	1.8	2.5	1.3	2.5	2.8	0.4	1.1	1.5	2.1
Private consumption	3.7	3.3	2.5	2.9	4.0	2.6	2.5	2.5	2.5
Public consumption	2.5	1.3	2.2	1.3	1.3	2.0	2.1	2.3	2.3
Gross fixed capital formation	4.7	0.2	1.5	7.9	-5.1	-2.3	5.1	-1.1	2.9
Exports of goods and services	5.0	5.5	-2.3	4.8	2.9	-0.6	-5.3	-0.8	-2.5
Imports of goods and services	17.3	2.6	3.4	0.1	-0.5	-2.0	-0.2	4.5	10.1
	Contributio	n to GDP gro	wth in percer	tage points					
Domestic demand	3.9	1.9	2.7	1.5	2.2	0.2	2.4	2.7	4.9
Net exports of goods and services	-2.3	0.9	-1.4	1.2	0.9	0.3	-1.4	-1.3	-3.0
Exports of goods and services	1.3	1.5	-0.6	1.2	0.8	-0.2	-1.5	-0.2	-0.7
Imports of goods and services	-3.6	-0.6	-0.8	0.0	0.1	0.5	0.1	-1.1	-2.3
	Year-on-ye	ar change of f	period averag	e in %					
Unit labor costs in the whole economy (nominal, per person)									
Unit labor costs in manufacturing (nominal, per hour)	17.9	1.8	4.4	2.6	0.6	2.8	5.8	4.2	4.7
Labor productivity in manufacturing (real, per hour)	7.4	4.9	3.2	4.2	5.7	3.6	2.8	3.6	2.8
Labor costs in manufacturing (nominal, per hour)	26.7	6.6	7.7	7.0	6.3	6.5	8.7	8.0	7.7
Producer price index (PPI) in industry	7.8	12.0	2.3	15.9	15.1	9.2	6.6	–1.1	-5.7
Consumer price index (here: HICP)	3.6	3.0	4.6	3.1	4.0	5.3	5.1	4.4	3.5
EUR per 1 RUB, $+ = RUB$ appreciation	12.6	11.0	2.2	-9.3	-9.4	-6.6	2.0	6.2	7.7
	Period aver	age levels			1.0	1.0			
Unemployment rate (ILO definition, %, 15–64 years)	5.2	4.8	4.6	4.6	4.8	4.8	4.5	4.4	4.6
Employment rate (%, 15–64 years)									
Key interest rate per annum (%)	9.1	/.4	/.3	/.3	/.5	/.8	/./	/.3	6.6
RUB per 1 EUR	65.9	/4.1	/2.5	/6.3	/5.9	/4.9	/ 2.6	/1.8	/0.5
l a construite a de construite a contra construite a sette est	Nominal ye	ar-on-year cr	ange in perio	d-end stock in	% 12.2	11.0	11 /	10 F	10.4
Loans to the domestic nonbank private sector	5./	12.3	12.3	11.4 24.4	12.3	11.9	11.6	10.5	10.4
of which: loans to nouseholds	12./	22.2	22.2	21.4 7 c	22.2	23.5	22.8	20.7	18.5
Ioans to nonbank corporations	3.I %	0.3	0.0	7.5	0.3	1.2	0.7	0.1	0./
Chara of foreign currency leans in total leans to the pop	70								
bank private sector	147	13.6	11.4	14.4	13.6	12.2	11.6	11.4	11 4
Beturn on assets (banking sector)	10	15	22	17	15.0	2.2	22	21	22
Tier 1 capital ratio (banking sector)	8.5	8.9	92	95	89	96	92	94	9.2
NPL ratio (banking sector)	191	18.0	171	18.7	18.0	18.0	18.0	177	171
	% of GDP	1010		1017	1010	1010	1010		
General government revenues	33.8	35.7	35.5						
General government expenditures	35.3	32.8	33.6						
General government balance	-1.5	2.9	1.9						
Primary balance									
Gross public debt	12.6	12.1	12.4						
	% of GDP								
Debt of nonfinancial corporations (nonconsolidated)									
Debt of households and NPISHs <sup>2</sup> (nonconsolidated)									
	% of GDP (	based on EU	R), period toto	al					
Goods balance	7.3	11.7	9.6	11.4	13.1	12.4	9.6	8.5	8.5
Services balance	-2.0	-1.8	-2.1	-2.1	-1.6	-1.6	-2.2	-2.6	-2.1
Primary income	-2.7	-2.5	-3.1	-2.2	-2.1	-1.3	-4.8	-3.1	-3.2
Secondary income	-0.6	-0.6	-0.6	-0.6	-0.7	-0.7	-0.2	-0.4	-1.0
Current account balance	2.1	6.8	3.8	6.5	8.8	8.9	2.4	2.4	2.2
Capital account balance	0.0	-0.1	0.0	0.0	-0.2	0.0	-0.1	0.0	-0.1
Foreign direct investment (net) <sup>3</sup>	0.5	1.4	-0.5	1.0	2.4	-0.3	-0.3	-1.5	0.0
	% of GDP (	rolling four-qu	arter GDP, b	ased on EUR),	end of period				
Gross external debt	31.2	28.1	29.2	29.0	28.1	29.5	29.7	29.8	29.2
Gross official reserves (excluding gold)	21.3	23.8	26.0	23.5	23.6	25.0	25.5	26.2	26.0
	Months of	imports of go	ods and servi	tes					
Gross official reserves (excluding gold)	12.3	13.7	15.0	13.6	13.7	14.4	14.8	15.2	15.0
	EUR million	n, period total	1 50 1 151	a	0.05		0.00	101	10.0
GDP at current prices	1,396,089	1,399,910	1,521,628	360,476	382,502	333,112	363,984	401,915	422,618

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

<sup>1</sup> Foreign currency component at constant exchange rates.

<sup>2</sup> 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

Economic activity in the CESEE-6 region will take a deep dive in 2020 and then recover hesitantly, Russian economy set to contract in 2020<sup>1,2</sup>

Against the background of the evolving coronavirus crisis, economic growth in the CESEE-6 countries<sup>3</sup> is expected to plummet from 3.9% in 2019 to -4.5% in 2020. For 2021 and 2022, we project a rebound to 3.0% and 3.3%, respectively. Thus, economic activity will remain notably below the baseline of our previous forecast over the whole forecasting horizon. Apart from public consumption, all components of GDP will contract in 2020. A nosedive of gross fixed capital formation and private consumption will push the growth contribution of domestic demand deep into the red. In line with much weaker projections for euro area import growth, CESEE-6 export growth will also lose substantial steam in 2020. The high import content of exports and fading domestic demand imply a strong decline in import growth that will translate into a roughly neutral growth contribution of the external sector. The expectation of a recovery in 2021 and 2022 rests on a rebound of domestic demand amid a positive base effect and substantial fiscal and monetary stimuli. Export and import growth will reaccelerate as well, but the growth contribution of net exports should remain negligible overall. Among the CESEE-6, the decline in economic activity in 2020 will be particularly pronounced in Croatia, Bulgaria and Romania. Risks to the forecast are high and mostly tilted to the downside. They mainly stem from the further development of the coronavirus crisis and its possible impact on global value chains and the international division of labor.

Table <sup>·</sup>	1
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#### Eurostat/ **OeNB-BOFIT** projections IMF WEO forecast Difference between OeNB-BOFIT Rosstat April 2020 April 2020 and IMF Forecasts 2019 2021 2022 2020 2021 2022 2022 2020 2020 2021 Year-on-year growth in % Percentage points 3.9 -4.5 3.0 4.8 -1.8 CESEE-6 3.3 -4.9 0.4 •• ••• 3.4 -6.4 4.3 3.7 -4.0 6.0 -2.4 -1.7 Bulgaria Croatia 3.0 -7.6 4.2 4.5 -9.0 4.9 1.4 -0.7Czech Republic 2.5 -3.8 2.9 2.8 -6.5 7.5 2.7 -4.6 ... 4.9 -3.5 3.2 3.9 -3.1 4.2 -0.4 -1.0 Hungary 4.1 -4.3 -4.6 4.2 -1.4 Poland 2.8 3.3 0.3 Romania 4.2 -4.9 3.1 -5.0 3.9 0.1 2.7 -1.2 ... 1.3 -3.02.0 1.8 -5.53.5 2.5 -1.5 Russia

#### OeNB-BOFIT GDP projections for 2020 to 2022 compared with the IMF forecast

Source: OeNB-BOFIT April 2020 projections, Eurostat, IMF World Economic Outlook (WEO) of April 2020, Rosstat Note: 2019 figures are seasonally adjusted data.

- <sup>1</sup> The projections for the CESEE-6 countries were prepared by the OeNB, those for Russia were prepared by the Bank of Finland in cooperation with the OeNB. Cutoff date for data underlying the outlook for the CESEE-6 region: March 30, 2020. CESEE-6 projections are based on the assumption of an eight-week shutdown in the euro area followed by a slow recovery in the remainder of 2020.
- <sup>2</sup> Compiled by Josef Schreiner and Julia Wörz, with input from Katharina Allinger, Stephan Barisitz, Markus Eller, Martin Feldkircher, Thomas Reininger, Mathias Lahnsteiner, Tomáš Slačík and Zoltan Walko.
- <sup>3</sup> CESEE-6: Bulgaria, Croatia, the Czech Republic, Hungary, Poland, Romania.

The coronavirus pandemic and falling oil prices have seriously eroded prospects for the Russian economy.<sup>4</sup> Thus, we expect Russia's growth to turn negative this year, reaching -3%. Growth is expected to revive next year as the outlook for the global economy recovers and Russia's public sector spending rises further. The risk of a weaker than expected outcome is significant due to the uncertainty in commodity markets and effects from the coronavirus pandemic.

#### 1 CESEE-6: coronavirus pandemic has fueled uncertainty and will lead to a broad-based decline in economic activity

The outbreak of the coronavirus in China and its development into a worldwide pandemic is deemed to be the largest crisis since the end of World War II by many European policymakers. This crisis has thoroughly altered the outlook for the CESEE economies.

Even before the outbreak of the pandemic, a slowdown in economic momentum for the CESEE region was evident, given the U.S.-China trade conflict, shrinking world trade amid weaker global growth in general, and a sluggish performance in Germany. In the fourth quarter of 2019, average quarter-on-quarter growth in the CESEE-6 countries stood at 0.7%, the lowest level in three years. Nevertheless, at 3.9%, average growth for the whole year 2019 came in only moderately lower than in 2018 (4.4%).

Since the beginning of the year, and even more so in recent weeks and days, a completely new situation has been rapidly unfolding. At the cutoff date for this forecast, far-reaching economic restrictions have been imposed across CESEE and the duration, coverage and extent of these restrictions remains unclear. For several sectors of the economy, activity has been brought close to a standstill and a general economic recession is becoming inevitable. The question how deep the recession is going to turn out, however, is surrounded by an extraordinarily high degree of uncertainty.

First, there is still a lack of hard data for February and March that could provide facts on the impact of the coronavirus pandemic on CESEE economies and that could inform projections for the following quarters. One of the few available figures is the latest release of the European Commission's Economic Sentiment Indicator (ESI). The March reading of the indicator for the CESEE-6 countries came in at an average of 97.3 points, 3.6 points lower than in the previous months. While this represents the lowest value since early 2014, the drop in the euro area's ESI reading was even more pronounced (-8.9 points to 94.5 points). The comparatively low decline in the CESEE-6 countries could be related to the timing of the fieldwork for the survey (between February 26 and March 23); it cannot be ruled out that most survey responses were collected before strict containment measures were enacted.

Second, the duration of shutdown measures (and consequently the depth and duration of recession) is wide open and depends on how well people will comply with hygiene and social distancing requirements and on the subsequent development of coronavirus infections.

Third, national authorities have entered partly uncharted territory with the policy measures taken to contain the economic fallout from the crisis. The current crisis is unique in that it stems from a politically imposed, almost complete reduction

<sup>&</sup>lt;sup>4</sup> The oil price assumption used by the Bank of Finland is based on the average price for oil futures contracts for the five days preceding April 3, 2020, yielding the following oil prices per barrel: USD 36 in 2020, USD 39 in 2021 and USD 42 in 2022.

in economic activity for public health reasons, resulting in a drastic shortage of supply and a subsequent loss of demand. Against this backdrop, previous crises can only partly serve as a blueprint for finding an adequate policy mix and gauging the current situation's implications for near- and medium-term economic developments.

Fourth, individual sectors of the economy will be affected to a very different degree. While sectors like tourism, arts, cultural, recreational and sports activities, as well as large parts of wholesale and retail trade are literally lying idle, other sectors are running at full speed (e.g. health care, trade of daily consumer goods). The composition of the slump in economic activity will therefore differ markedly from previous crises. We have reason to expect that private consumption will collapse to a much greater extent than in previous recessions and – on the supply side – the service sector will not be able to act as a stabilizing element.

Fifth, given the very nature of this crisis, a rather swift rebound in economic activity after the lifting of containment measures cannot be ruled out. As most CESEE economies entered the current downturn in generally solid economic shape without any major macroeconomic imbalances, impediments to kick-starting economic activity should, in principle, be low. However, a swift rebound crucially depends on a number of factors: how long the shutdown measures will last (the longer they last, the more likely they will have an impact on the growth potential), whether disruptions of the global value chains are of a temporary or permanent nature and how the international environment will evolve. The major regions of the world economy are sequentially entering the shutdown phase and the question arises whether the lifting of related measures will occur simultaneously or in a more staggered approach.

Decline in economic activity stronger than during great financial crisis Given the lack of data available to capture the impact of the coronavirus pandemic, we assume a moderately negative shock to economic activity in the first quarter of 2020, a strongly negative shock in the second quarter of 2020 and, again, a moderately negative shock in the third quarter of 2020. Given positive base effects and catch-up effects buttressed by massive demand-side fiscal and monetary support, we have penciled in a moderately positive shock for 2021.

Against this backdrop, we project real GDP growth to decline to an average of -4.5% in 2020. This is a hard brake on economic activity compared to 2019 (+3.9%). The projected recession will be even deeper than in the year 2009 at the height of the global financial crisis (-1.8%), mostly because the Polish economy will no longer act as a stabilizing anchor for the region. On the country level, we expect output to decline, with rates ranging from -3.5% in Hungary to -7.6% in Croatia. The response to the shock will strongly depend on idiosyncratic factors such as the availability of fiscal space and the specific structure of the economy.

In general, we are currently witnessing an unprecedented decline in growth projections for the CESEE region as is shown by a comparison of different forecast vintages. This is illustrated in chart 1, which shows projections for the year 2009 at different points in time compared to projections for the current year.

For the year 2021, we see a muted recovery to an average growth rate of 3.0%, mainly on the back of positive base effects and fiscal and monetary stimuli for the region. Furthermore, we penciled in a somewhat stronger rebound of investment spending as the financing periods of the EU multiannual financial frameworks for 2014–2020 and 2021–2027 overlap. However, the level of economic activity will remain notably below the baseline of our previous forecast, not least given

Chart 1



#### **CESEE EU Member States: growth projections for 2009 and 2020 over time**

second-round effects of the recession (e.g. higher unemployment, weaker wage growth and a deterioration in consumer confidence). Real GDP growth will return to positive levels in all CESEE-6 countries in 2021 and range from 2.7% in Romania to 4.3% in Bulgaria.

Economic dynamics in 2022 will be very much like those expected in 2021, with an average real GDP growth rate of 3.3% and a broadly similar range of outcomes at the country level as in the previous year.

The downturn in 2020 will be broadly based and encompass all components of GDP except for public consumption. The largest negative growth contributions will come from private consumption, but gross fixed capital formation will have a largely equal negative impact on growth in Romania and Poland. In line with weaker projections for euro area import growth, CESEE-6 export growth will also substantially lose steam in 2020. Given the high import content of exports and fading domestic demand, however, we also project a strong decline in import growth. This translates into a roughly neutral growth contribution of the external sector.

Comparing these trends with the experience of the 2009 recession, we expect a broadly similar decline of investments but a much larger contraction of private consumption in the current year than back then. Furthermore, the external sector will not act as a stabilizing element as it did in 2009, as the collapse of imports will not be more pronounced than the collapse of exports according to our projections. (Import growth in the global financial crisis had come down from very high and partly unsustainable levels.)

The recovery in 2021 and 2022 will be just as broadly based as the downturn in 2020, with all components of domestic demand bolstering GDP growth. The growth contribution of net exports will remain about neutral, as both, export and import growth are set to accelerate. Compared to 2009, we project a stronger rebound of domestic demand on the back of comprehensive monetary and fiscal measures and a larger base effect.

As outlined above, the current situation is surrounded by an unusually high degree of uncertainty. Therefore, the risks to our CESEE-6 forecast are high and crucially depend on the accuracy of the assumed shocks our projections are based on.

**Broad-based** recession in 2020 affecting all GDP components

**Risks to projections** are extraordinarily high and mostly tilted to the downside



#### **CESEE-6: GDP and GDP components**

The most important risk relates to the duration of the shutdown measures. Far-reaching restrictions to economic activity beyond the second quarter of 2020 represent the most important downside risk to our forecast. A quicker lifting of restrictions than assumed in our scenario represents an upside risk to our forecast. Furthermore, the possibility of repeated waves of infections (and shutdown measures) until the development of a vaccine also is a downward risk that could alter the outlook for 2021 and 2022.

Certainly, economic growth of the world economy, in general, or the euro area, in particular, could turn out higher (or lower) than assumed in our baseline scenario and would thus translate into higher (or lower) growth prospects for the CESEE-6 countries. A better than expected coordination of the international policy response to the approaching recession represents an upward risk to our projections. In our overall risk assessment, however, we conclude that the risks to external demand are tilted to the downside. The U.S.A. – the largest economy of the world and an important component of final demand for CESEE products – are currently developing into a hot spot of the coronavirus pandemic and infection is spreading at alarming speed. The U.S.A. have so far been rather reluctant to fight the spread of the virus, but the introduction of more full-fledged (European style) measures is becoming more likely. At the European level, there are still many uncertainties regarding the future relationship between the U.K. and the EU.

The coronavirus crisis could potentially accelerate the process of de-globalization that we have been witnessing in recent years and thus impact negatively on supply as well. The closing of European (and international) borders, the ensuing interruption of the free flow of goods and people and the consequent scarcity of supplies that are vital to our economies and health-care systems (the most prominent example being protective masks) could lead to a reconsideration of the current international division of labor. A shift or a complete dismantling of global production chains would be especially harmful for CESEE, as the region is tightly interwoven in such structures. However, in the medium term, the region could also benefit from a reallocation of production capacities from more remote destinations to Europe and closer to European consumer markets given the still existing wage advantage vis-à-vis Western Europe.

The CESEE-6 countries' ability to manage a quick economic recovery after the acute phase of the crisis might be impaired by a permanent loss of productive capacity, following waves of bankruptcies and surging unemployment. A shift in demand patterns and/or a substantial sectoral restructuring would render previous investment decisions and qualifications obsolete and thus cause notable hysteresis effects. While policy measures are being introduced to avoid such a scenario, it still represents a downside risk especially for the years 2021 and 2022.

Governments throughout CESEE are trying to shield companies, workers and households from the most severe consequences of the coronavirus-induced economic slump by lending fiscal support, which will lead to higher public debt. A drastic tightening of global financial conditions and/or the deterioration of sentiment could impinge on (re)financing this debt. The same is true for other European countries, especially those with already high debt levels. Should the solvency of a core member of the euro area be at risk, a general loss of confidence in the single currency could not only have detrimental effects on the euro area but also on the CESEE region. This represents a negative tail risk.

#### 2 Projections for Bulgaria, Croatia, the Czech Republic, Hungary, Poland and Romania

Even though, at the time of writing, Bulgaria belongs to the group of European countries with a comparatively contained number of reported coronavirus infections, the country will likely be hit very strongly in economic terms. Based on the assumption that the nationwide shutdown prescribed in mid-March 2020 will only gradually be lifted starting in mid-May 2020, together with sharply reduced economic activity worldwide (Italy being one of Bulgaria's major trading partners), both domestic and external demand will shrink considerably this year. As during the 2008–2009 crisis, we expect that net exports will make a positive growth contribution due to a stronger decline in imports than exports. Among the domestic demand components, only public consumption will expand (considerably) this year and thus serve as a certain cushion. An important issue regarding the intensity of the recession this year will be the developments in the summer season as Bulgaria relies comparatively strongly on tourism. Several factors render it more probable that the recovery will start in the fourth rather than in the third quarter: the gradual lifting of anti-pandemic measures, not only in Bulgaria but also in other European countries, a probably short-run hesitance on the part of tourists to fully resume their traveling plans, and production capacities that can only be rebooted stepwise due to interrupted value-added chains. Unless any new infection wave hits the country and/or its major trading partners, 2021 will be characterized by a marked economic rebound – helped by favorable base effects – before economic developments will return to pre-crisis dynamics in 2022.

The projected V-shaped impact of this once-in-a-lifetime shock is obviously subject to the country's resilience and crisis mitigation capacities. The largest short-run risks are related to the poor quality of the health-care system due to Bulgaria: economy severely hit by the coronavirus shock despite considerable crisis mitigation efforts, marked rebound in 2021

underinvestment and emigration of medical personnel in the past years. According to the OeNB's Euro Survey (2018 wave), 80% of respondents in Bulgaria are dissatisfied or very dissatisfied with the public delivery of health-care services – one of the highest rates in the region. As regards the scope for countercyclical fiscal policy measures, Bulgaria's government is in a comfortable position, having produced budgetary surpluses in recent years that are partly stored in the Fiscal Reserve Account, which can now be tapped. Bulgaria is also by far less indebted than other EU countries, with a gross public debt-to-GDP ratio of only slightly above 20% in 2019. However, an extensive use of discretionary fiscal stimulus measures is de facto limited by the currency board arrangement in place. The latter remains comfortably backed by a comparatively large share of gross official reserves (excluding gold) – nearly 40% of GDP at the end of 2019. As regards the scope for countercyclical financial sector policies, the Bulgarian banking sector has overall been well capitalized and profitable, and additional leeway has been created by the Bulgarian National Bank (BNB) by requiring full capitalization of the banking system's profit and by canceling the planned increases of the countercyclical buffer in 2020 and 2021. Moreover, several liquidity-enhancing measures have been implemented by both the BNB and the state-owned Bulgarian Development Bank, most notably a temporary moratorium that suspends or postpones payments on bank loans, portfolio guarantees on bank loans and interest-free consumer loans for citizens on unpaid leave.

Croatia: coronavirus containment measures threaten main tourist season Our first point estimate for Croatian GDP growth foresees a sharp contraction of 7.6% in 2020, largely based on the assumption of severe tourism-related revenue losses this year. Tourist revenues in the second quarter of 2020 will likely be completely lost due to coronavirus containment measures. It seems plausible to assume that border restrictions will be among the measures that will be lifted comparatively late and that the uncertainty regarding a renewal of measures, combined with lost holiday leave entitlements and income across Europe, will also have severe negative effects on the main tourist season in the third quarter. The tourism sector has an indirect share in total employment and in gross value-added of around 20% to 25%.

The current forecast projects a drop in private consumption of 12%. We assume that, in the second quarter of 2020, domestic consumption will experience a much sharper drop due to the closure of shops, restaurants, etc., but that these domestic containment measures will be slowly lifted in the course of the same quarter. The Croatian government has passed an economic package worth 7.5% of GDP to support businesses and households. Whether this package will prove sufficient to shield the private sector from major permanent income and job losses that would weaken consumption even further will depend on how soon domestic businesses and trade relations can return to some normality. The weak tourist season will, however, dampen the recovery of consumption in the second half of 2020. Public consumption is expected to grow by 6% year on year in 2020, largely on the back of higher health-care expenditure, and then shrink due to fiscal consolidation needs.

Gross fixed capital formation is expected to shrink by 12% in 2020. The uncertainty triggered by the coronavirus crisis, revenue losses and higher debt levels for businesses will weigh on private investments. However, a much larger share of investments in Croatia is related to EU funds, for which we assume only short-lived disruptions during the second quarter of 2020; over the remainder of the forecast horizon, fiscal consolidation needs could negatively impact the co-financing of EU-funded projects.

Our assumptions for the tourism sector imply a sharp drop in service exports and thus overall exports (-23%). Moreover, Italy is Croatia's largest trading partner, which worsens supply chain disruptions for Croatian firms and the outlook for goods exports. However, given the high import content of private consumption, investments and tourism, we project a similarly sharp drop in imports (-24%) for 2020.

We currently see mostly downside risks to our GDP forecast for 2020. On the back of strong tourist seasons in 2021 and 2022, Croatian GDP growth will start to recover. The rebound will likely be moderate, however. While purchases of goods may just have been postponed during the crisis and may help a strong rebound later, revenues from services, such as tourism, are likely permanently lost. Moreover, income losses, lower savings and higher debt in the private sector as well as fiscal consolidation needs as a result of the downturn in 2020 will likely dampen the recovery. We estimate GDP growth to reach 4.2% and 4.5% in 2021 and 2022, respectively. Croatia will therefore need some years to recover the GDP losses of the current crisis. Notwithstanding the current economic downturn, Croatia's plans to enter ERM II and to adopt the euro remain unchanged.

Economic growth in the Czech Republic has been gradually losing steam for some time, coming down from 4.4% in 2017 to 2.4% in 2019. Even before the coronavirus shock, a further slight moderation of GDP growth was expected for 2020. The coronavirus pandemic and the worldwide containment measures seen since early March have turned the entire economic outlook on its head within a couple of weeks. Not only has the forecast growth performance changed dramatically but also its structure has made a U-turn. From the current perspective – which is obviously subject to an enormous amount of uncertainty and significant downside risks – the Czech economy seems to be headed for a deep recession in 2020, which will be at least as pronounced as seen in 2009. Only a gradual recovery will follow in the medium term. With respect to demand-side components, the slide will be driven predominantly by private consumption and investment as a result of the shutdown measures.

Concerning actual health risks, the Czech health-care system appears better suited to cope with the pandemic than the health-care systems of many other countries in and beyond the CESEE region as various health-care indicators and rankings suggest.<sup>5</sup> More importantly, the Czech government introduced rather strict containment measures very early into the pandemic. Only 11 days after the first confirmed coronavirus patient on March 1, the government declared a state of emergency and by mid-March the country had largely closed its borders, most shops, restaurants as well as cultural and sports venues, had forbidden the entry of foreigners and issued a nationwide curfew. In addition, virtually the entire automobile industry – the lung of the Czech economy, making up nearly 25% of the country's industrial production and exports as well as roughly 7.5% of GDP and all FDI – will come to a total standstill for at least four weeks. Moreover, the very Czech Republic: economic rollercoaster with domestic demand in the driving seat

<sup>&</sup>lt;sup>5</sup> For example, with respect to the number of critical care beds available per unit of population, one of the indicators that particularly matter in the current crisis, the Czech health-care system matches the EU average. However, the range is very broad, and the Czech Republic operates only one-third of beds compared to Germany but twice as many as Sweden (see <u>https://www.researchgate.net/publication/229013572</u> The variability of critical care <u>bed\_numbers\_in\_Europe</u>).

high level of internationalization of the Czech economy and its deep integration in global value chains are likely to amplify the extent of the shock.

Overall, such massive domestic impediments magnified by an unprecedented drop in external demand will have a devastating impact on private consumption, investment as well as trade in goods and services, probably well beyond the period of the acute coronavirus threat. The damage to the economy is likely to rise over time. Hence, we expect the Czech economy to remain in a strong recession with a pronounced anti-inflationary effect for the rest of the year and only a gradual recovery in the medium term. Domestic demand will contribute to the decline in economic activity most strongly. The unprecedented monetary and fiscal stimulus measures as well as a weaker koruna, which has depreciated significantly as a result of the dramatic economic outlook and financial market panic, may partly offset the economic damage but only in the medium term.

Hungary's GDP growth in 2019 surpassed our expectations (4.9% against 4.4%) and thus decelerated only slightly compared to 2018. However, we now expect a contraction of GDP by around 3.5% in 2020, to be followed by a gradual recovery in 2021 and 2022.

The pandemic will knock down private consumption, which will be directly hit by the suspension of entertainment activities and the closure of shops, restaurants and cafés. Second-round effects will likely include an increase in unemployment, potential wage losses due to temporary layoffs or shorter working hours, weaker wage growth, a deterioration in consumer confidence and probably weaker household credit growth (owing to greater caution on part of both households and banks). The moratorium on debt servicing until end-2020, the introduction of a temporary interest rate cap on consumption loans, the temporary suspension of tax payments and reduction in social security contributions in sectors most affected by the pandemic and the fact that households' net financial wealth is at record highs are expected to provide a cushion. With pandemic effects easing off toward end-2020, we expect a recovery of private consumption in 2021 and 2022.

We expect economic policy to continue counteracting the impact of the coronavirus pandemic. The Hungarian central bank (MNB) has substantially expanded its liquidity provision to banks via stepped-up foreign currency swaps and the introduction of new collateralized loan facilities. It has also taken several measures to ease the administrative and regulatory burden of banks, while at the same time strengthening banking sector stability. The government and parliament have already enacted various temporary measures. The government will also make substantial changes to the 2020–2021 budget to restructure expenditure and possibly increase the 2021 deficit target to up to 3% of GDP. We expect some fiscal correction in 2021 (if, as assumed, the pandemic recedes by end-2020), to be followed by a temporary acceleration in 2022, in line with the electoral cycle (parliamentary elections in spring 2022). Hungary's emergency law that enables the prime minister to rule by decree without time limits has been met with international criticism.

Investment activity was set to decelerate in 2020 and 2021 already in our baseline scenario, mostly on account of weakening public sector investments and housing construction. As a result of the coronavirus crisis, we expect deteriorating household income and consumer sentiment and a potentially weaker uptake of subsidized loans to additionally slow housing construction in 2020. Capacity

Hungary: coronavirus crisis will moderate GDP growth path over 2020–2022 utilization in industry has already fallen back to its long-time average and is now expected to drop further in the coming months. Companies will likely cut back investments in 2020 in response to the damage to global value chains, weaker near-term demand prospects (affecting both domestic and export demand) and likely deteriorating economic sentiment. Favorable and abundant financing facilities (not least due to the central bank's various funding schemes) should partly mitigate the decline in investment activity. Investments are expected to rebound in 2021 and continue to be supported by EU funds.

We expect exports to contract sharply in 2020 as the pandemic is causing notable damage to global value chains, foreign supplies are being interrupted, foreign demand is nose-diving, and short-term global growth prospects are deteriorating. Given the high import content of exports and the decline in domestic demand, we expect imports to contract somewhat more than exports, leading to a small positive contribution of net real exports to overall GDP growth in 2020. For 2021 and 2022, we expect a recovery of exports, as foreign demand recovers and additional impulses come from new production capacities going online. Imports are expected to rise on the back of recovering domestic demand, leading to a minor negative contribution of net real exports to the GDP growth rate.

In Poland, GDP is forecast to decline by -4.3% year on year in 2020, after growth of 4.0% in 2019. In the last quarter before the coronavirus outbreak, export growth had declined further and imports even slightly contracted, while domestic demand growth had remained stable at almost 3%. The economic fallout from the coronavirus crisis in 2020 will arise from both gross exports and domestic demand, with the former having a weight of about 35% in total final demand. Given our assumptions about the developments in the euro area, Poland's main trading partner, exports of goods and services are forecast to decline by about 7%, with nominal depreciation of the currency helping preserve Polish market shares in the euro area. Domestic demand in Poland, like in all other countries, will be severely hit by the health policy measures, implying a contraction by about 4% to 5% – indeed, there is not much scope for repeating the exceptional relative performance of 2008–2009.

In 2021, the economy is forecast to expand by almost 3.0%, 2.8% to be specific. Despite starting from a significantly lower level and being supported by a beneficial base effect, growth is forecast to be smaller in absolute terms than during the previous decline, on account of economic hysteresis effects and a protracted route toward normalization in terms of health policy measures. While exports will start expanding again, driven by the recovery of demand in the euro area, some export-oriented SMEs will likely vanish, and others struggle to regain their previous strength. Together with a recovery of sentiment in the financial markets, these losses are forecast to dampen the speed of export growth.

As a result, imports are forecast to decline even more strongly than exports in 2020, reflecting the price effect of currency depreciation and the significant contraction of domestic demand on top of the impact of the export decline. Thus, there will be a positive contribution of net exports to GDP growth of almost 1 percentage point. By contrast, in 2021, import growth is forecast to outpace export growth, as pent-up domestic demand will compound the effect of restarting foreign demand growth. This will cause the contribution of net exports to GDP growth to enter negative territory, reaching almost -1 percentage point.

Poland: coronavirus-induced output loss in 2020 will not be fully recovered in 2021

Looking at the components of domestic demand, in the last quarter before the coronavirus outbreak and at the beginning of the year, consumption had already received several stimuli, ranging from fiscal transfer measures, including the widening of family benefits to include higher income segments and the one-off thirteenth-month pension payment, and an increase in public sector wages, to changes in the personal income tax system. At the same time, enterprises had been in a favorable financing situation with respect to both own funds (profitability, accumulated deposits) and external funds (low interest rates). These factors are expected to provide some cushion against the immediate impact of the coronavirus-related health policy measures. In addition, monetary policy easing (rate cut, reserve requirements, repo operations and outright government bond purchases), commercial banks' moratorium offers to households and SMEs of up to six months, the exemption of self-employed people and micro-companies from social security payments and the economic/fiscal support package of EUR 46 billion (about 10% of GDP) will help contain a domestic demand contraction in 2020 and support a re-start in 2021. Fixed investment will be hit particularly hard in 2020, as the coronavirus effects exacerbate the already ongoing slowdown due to the impact of the fading-out EU funding cycle on local governments and (publicly owned) companies.

Romania: from overheating to recession with limited policy space After a period of strong growth with signs of overheating, Romania will experience a deep recession in 2020. Both domestic and external demand will be substantially hit by the economic impact of the spread of the coronavirus and related containment measures. While the first quarter of 2020 will already be partly affected, a deeply negative growth rate is projected for the second quarter. The recovery will likely be gradual, as uncertainties will depress economic sentiment and hysteresis effects stemming from rising unemployment and insolvent companies will prevent a more forceful recovery.

The temporary closure of the two major car producers Dacia and Ford and other companies in the manufacturing sector starting from mid-March, will have an immediate impact on exports. We do not expect a fast return of production to full capacities, though closures were initially announced to last only for some weeks. In addition to supply-side factors, exports will also be negatively affected by plummeting external demand in 2020. After a marked decline of exports in 2020, base effects and recovering external demand will enable exports to grow again in 2021. Due to the high import content of exports and shrinking domestic demand, imports will also contract considerably in 2020. This might induce a very small, positive contribution of net exports in 2020, which will turn negative in 2021.

High wage growth will come to an end due to rising unemployment and wage losses triggered by temporary layoffs. This will add to the negative impact of containment measures (such as restrictions on movement) and confidence effects on private consumption. Hence, we expect negative private consumption growth in 2020, followed by a hesitant recovery in 2021 and 2022. Households' deteriorating income position and loss of confidence will also have an impact on capital formation, in the form of less residential building construction. While debtors are allowed to postpone their loan repayments, demand for new housing loans might decline during the economic downturn. Residential building investment is likely to recover only slowly but investments supported by EU funds will enable some recovery of capital formation (provided the Romanian government manages to free up budgetary resources for cofinancing). At the same time, shrinking earnings and confidence effects will negatively affect corporate investment – definitely in 2020 and possibly also beyond. However, state guarantees for investment loans to SMEs will provide some cushion. In the medium term, Romania could benefit from a reallocation of production capacities, as multinational European companies might try to increase capacities in Europe to make production chains less vulnerable to global disruptions.

As growth in recent years was fueled by procyclical fiscal policy leading to a high budget deficit, fiscal space to counteract recessionary developments appears limited. Fiscal consolidation is inevitable in the near future and will slow down the recovery in 2021 and 2022. By purchasing government bonds on the secondary markets, the central bank has supported the financing of public spending. Yet, monetary policy is subject to certain constraints, too. In this respect, the current account deficit and the remaining stock of foreign currency loans, in particular in the household sector, should be noted. External imbalances might reinforce depreciation pressures on the exchange rate in times of international financial market turbulences. Hence, under tense market conditions, the central bank needs to strike a balance between managing the exchange rate (to contain balance sheet effects) and injecting more liquidity. It should be noted that cutting minimum reserve requirements for leu and foreign currency liabilities still is available as a policy option for the central bank.

Negative spillover effects from Italy cloud the outlook for the Romanian economy further due to a comparatively high degree of trade integration, the presence of Italian investors and the declining income of labor migrants. On a positive note, the impact of the crisis through tourism will be quite limited in Romania, as tourism plays a much smaller role in Romania than e.g. in Croatia and is also markedly less relevant than in neighboring Bulgaria.

#### 3 Russian economy set to contract in 2020

Russia's GDP growth slowed down last year to 1.3% due to lower growth in private consumption resulting from the hike in value-added tax and because of shrinking exports. The coronavirus pandemic and falling oil prices have seriously eroded prospects for the Russian economy. Thus, we expect Russia's growth to turn negative this year, reaching -3%. Growth is expected to revive next year as the outlook for the global economy recovers and Russia's public sector spending rises further. The risk of a weaker than expected outcome is significant due to the uncertainty on commodity markets and effects of the coronavirus pandemic.

If the weakening of the global economy remains temporary, Russia is expected to stick to its current spending plans. Under the approved 2020–2022 budget framework, public sector spending will increase by 6% to 7% a year in nominal terms. With the current oil price outlook, however, the net deficit will turn negative this year. Russia's ability to deal with external shocks is supported by the Russian government's comfortable financial position. The Russian government carries little debt (14% of GDP), but U.S. sanctions restrict its ability to borrow internationally. Russia has also built up its sovereign wealth fund again. The National Welfare Fund now holds about USD 150 billion in liquid assets (9% of GDP). So far, public sector support measures related to the coronavirus situation have been relatively limited in terms of spending and have been realized within the current budget framework, but additional measures may be decided. Consumption is expected to contract this year hampered by slower economic activity and measures to contain the coronavirus pandemic. Recent ruble depreciation is likely to increase inflation and thus reduce purchasing power. In addition, consumption growth will be restrained by lower growth in consumer credit due to tighter regulation. In coming years, consumption growth is expected to pick up, supported by a gradual rise in incomes, including planned increases in social spending. Fixed investment recovered slightly last year, growing by slightly more than 1%. Fixed investment is expected to decline substantially this year due to the deteriorating economic outlook over the near term; notably, private sector capital formation is expected to decline sharply, whereas public sector investment may slightly increase, with the government attempting to push forward national projects. Fixed investment should then gradually pick up in the coming years as spending on national projects gets into full swing.

Russian exports contracted by 2% in 2019 for the first time in decades. Much of the contraction was due to a decline in metal and grain exports. Exports are expected to contract even more this year due to the weakness in the global economy. Exports should recover gradually next year as demand returns. Russian imports grew moderately last year supported by ruble appreciation. Imports are expected to fall substantially this year, constrained particularly by ruble depreciation from lower oil prices. Imports should also be dampened by investment demand's public sector focus, which favors domestic suppliers. In addition, imports of tourism services will fall substantially due to the coronavirus pandemic.

In the current situation, forecasting risks are exceptionally high. Russia's economic development may turn out considerably weaker if the coronavirus pandemic is prolonged and oil prices fall further for an extended period. Russia, however, has the capacity to soften the impact of negative shocks through government support. The planned referendum on changes to the Russian constitution and the State Duma elections in 2021 could also create pressure to increase public sector spending. In addition, a stronger than expected fall in imports could mitigate the GDP contraction.

## Studies

# Macroprudential policies in CESEE – an intensity-adjusted approach

#### Markus Eller, Reiner Martin, Helene Schuberth, Lukas Vashold<sup>1</sup>

We assess the overall intensity with which macroprudential policies were used in eleven Central, Eastern and Southeastern European (CESEE) countries from 1997 until end-2018. To this end, we construct an intensity-adjusted macroprudential policy index, which also allows us to gauge the impact macroprudential measures had on credit growth and housing prices. Our new index reveals that some of the eleven CESEE countries had already intensively implemented macroprudential policy tools before the global financial crisis (GFC), while others became more active in this respect only in its aftermath. The considerable macroprudential tightening evident since 2010 mainly reflects the introduction of borrower-based measures, like loan-to-value (LTV) and debt service-to-income (DSTI) limits, and the implementation of capital buffers. In the empirical assessment, we find that macroprudential measures are associated with lower private sector credit growth, in particular for households. Moreover, borrower-based macroprudential measures tend to have a larger and more robust impact on credit growth than other macroprudential instruments that also include capital- and liquidity-based measures. These findings also hold for the impact of macroprudential measures on house price growth.

JEL classification: E58, E61, G18, G28

Keywords: macroprudential policies, intensity adjustment, composite indicator, CESEE, credit growth, house price growth, financial stability

Research on macroprudential policies (MPPs) in Central, Eastern and Southeastern Europe (CESEE) provides important lessons for other countries. Given that some CESEE countries adopted macroprudential policy measures rather early, relatively long time series lend themselves to assessing the impact of macroprudential policy on the domestic financial cycle – and on financial stability more generally.

Macroprudential policy encompasses a large number of tools. Some resemble traditional microprudential tools, e.g. capital and liquidity requirements; others target borrowers' behavior, e.g. loan-to-value (LTV) and debt service-to-income (DSTI) limits. Macroprudential tools may be gradual, such as a change in the LTV limit from 90% to 80%, binary, e.g. foreign currency (FX) loans are permitted or not, and some can change from gradual to binary or vice versa. Accurately quantifying MPP activity by capturing not only the occurrence of such policies but also their strength is thus highly challenging<sup>2</sup>.

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<sup>&</sup>lt;sup>2</sup> For a discussion of challenges related to the definition and measurement of a macroprudential policy stance, see ESRB (2019).

In fact, most of the literature on macroprudential policy captures only the extensity, i.e. the occurrence of macroprudential policies, using very simple indices. Some authors use a basic binary indicator signaling whether a certain instrument was in place at a given time (e.g. Reinhardt and Sowerbutts, 2015; Cerutti et al., 2017a). Most studies use an index where a tightening measure is coded with +1, a loosening measure with -1 and ambiguous measures are not taken into account. By cumulatively summing up the values over time, a simple time series of overall macroprudential extensity can be compiled (see, for instance, Shim et al., 2013; Cerutti et al., 2017b; Ahnert et al., 2018). The intensity of the measures is, however, not taken into account. To take an example from Vandenbussche et al. (2015), these indices would record a lowering of the maximum LTV ratio from 100% to 90% in the same way as a reduction from 100% to 60%. Obviously, however, the effect of these two measures is unlikely to be the same.

It is no easy task to construct an index that genuinely reflects the intensity of macroprudential policy given the difficulty of comparing and quantifying the effects that different measures have on the overall macroprudential stance. One could even argue that constructing a "perfect" index is practically impossible. However, in order to help make informed policy decisions and to explore and understand the effects of macroprudential policy on different economic developments, having an indicator that could be used for such modeling exercises would prove very useful.<sup>3</sup>

There are only few examples of intensity-adjusted macroprudential indices. Most notably, Vandenbussche et al. (2015) construct an intensity-adjusted macroprudential policy index for 16 CESEE countries to investigate the effects of macroprudential measures on housing prices. Dumičić (2018) also accounts for possible differences in the intensity of measures. Richter et al. (2019) and Alam et al. (2019) both focus on LTV limits and provide detailed information on the intensity of usage of this specific instrument. However, the authors of both papers stopped short of compiling an overall MPP index.

In this paper, we build and expand on previous intensity-adjusted approaches and construct a novel, overall index for macroprudential policy in CESEE. Our macroprudential policy index (MPPI) accounts not only for "classic" macroprudential instruments but also for other requirements motivated by macroprudential objectives. The index is based on information derived from four databases of macroprudential measures and applies a set of weighting rules partly leaning on those developed by Vandenbussche et al. (2015). The MPPI covers eleven CESEE EU Member States from 1997 to 2018 on a quarterly basis. The novelty of our index compared to the existing literature lies — next to the aforementioned intensity adjustment — in covering a comparatively long time span (of more than 20 years) and a large variety of MPP instruments as well as in differentiating between the announcement and implementation of macroprudential measures.

This paper is structured as follows: section 1 discusses a taxonomy of macroprudential policy measures and introduces the MPPI, with section 2 providing an overview of its country-specific development over time. In section 3, we use the MPPI to assess the impact of macroprudential policy measures on key macrofinancial variables, such as credit growth and house prices. Section 4 concludes.

<sup>&</sup>lt;sup>3</sup> Additionally, it might also be very useful for communication purposes to have an index which could more clearly explain to both financial institutions and the general public the stance of the overall macroprudential policy and its various segments.

Chart 1

#### 1 Constructing an intensity-adjusted macroprudential policy index

To construct our macroprudential policy index (MPPI), we first decided on its components. Besides "classic" macroprudential instruments, such as capital buffers or borrower-based instruments, we include system-wide (Pillar 1) minimum capital requirements and reserve requirements. Capital requirements are typically seen as microprudential tools and are set by relevant (banking supervision) authorities. However, they clearly also have an impact on systemic financial sector risk. Reserve requirements are usually seen as a monetary policy tool but have often also been used for macroprudential purposes.

Chart 1 provides a hierarchical overview of the various subindices and other components we draw on to construct the MPPI. Classic ("narrow") macroprudential instruments are grouped into three subindices for capital-based, borrower-based and liquidity-based measures, respectively. First, the capital-based macroprudential policy subindex (CB-MPPI) comprises the countercyclical capital buffer (CCyB), the systemic risk buffer (SyRB), the capital conservation buffer (CCoB), institution-specific buffers for other systemically important institutions (O-SII buffer) and risk weights (RWs)<sup>4</sup>. Second, the borrower-based macroprudential policy subindex (BB-MPPI) encompasses limits in the LTV ratio for new collateralized house purchase loans, the DSTI ratio and outright bans on foreign currency lending. Other borrower-based instruments like debt-to-income (DTI) or loan-to-income (LTI) limits, having only played a negligible role in the CESEE countries, have not been included so far.<sup>5</sup> Third, the liquidity-based macroprudential policy subindex (LB-MPPI) consists of liquidity requirements (like short-run liquidity ratios) and a variety of other prudential measures, such as limits on large exposures and specific sectors. It also



Source: Authors' compilation.

- <sup>4</sup> Risk weights play an important role in determining banks' risk-weighted assets and, by extension, the total amount of capital banks need to hold.
- <sup>5</sup> In fact, in our sample, only Slovakia issued a binding DTI limit, and the Czech Republic issued a respective recommendation, both in the second half of 2018.

captures intragroup exposure limits and rules on foreign currency mismatches. The three "classic" macroprudential subindices taken together constitute what we call the narrow macroprudential policy index (N-MPPI).

To obtain the extended version of the macroprudential policy index, or MPPI, we include the additional measures mentioned at the beginning of this section. First, we account for system-wide (Pillar 1) minimum capital requirements, comprising both the applicable capital adequacy ratio and the tier 1 capital ratio. Second, we include minimum reserve requirements. Many macroprudential measures, in particular in the CESEE countries, differentiate between local and foreign currencies, with foreign currency requirements being usually stricter than national currency requirements to account for exchange rate risks. Foreign currency requirements were not included in the MPPI as a separate subindex. Instead, they are taken into account within the various subindices.

The second step in the construction of the MPPI is weighting and aggregating the individual measures, which is a difficult and, to a certain extent, inevitably arbitrary task, as already alluded to in the introduction. To go beyond simple binary indicators, it is necessary to define specific weights for the various macroprudential instruments included in the MPPI. Increasing the CCyB by 50 basis points might, for example, constitute a more, or less, severe change in the intensity of overall macroprudential policy than, say, reducing the upper limit on the LTV ratio by 5 percentage points. Depending on the nature of the macroprudential instruments, we apply three different *weighting rules* to the individual instrument feeding into the MPPI. Many of these rules are fully or partly based on Vandenbussche et al. (2015), which, to our knowledge, reflects the most comprehensive previous attempt to calculate an intensity-weighted macroprudential index. However, the database used in Vandenbussche et al. (2015) ended nearly ten years ago and does not include newer instruments, such as capital buffers. Moreover, the database provides only the implementation dates of measures and not the announcement dates. Our three weighting rules are as follows:

First, we use *face value aggregation* for instruments that are captured by a single number and where a change clearly indicates a tightening or loosening of macro-prudential policy intensity. For example, a 1-percentage-point increase of the CCyB leads to a 1-index-point increase in both the extended and the narrow MPPI as well as in the CB-MPPI.

Second, for more complex measures or measures where a decrease represents a tightening of macroprudential intensity, a *formula-based aggregation* is used. This usually involves a default limit from which the actual limit is subtracted and a weighting scheme to ensure that the impact of changes in the measure concerned is appropriately reflected. For instance, a 5-percentage-point reduction in the LTV limit is equivalent to a 1-index-point increase in the MPPI.

Third, for macroprudential instruments that are too specific or too complex to be properly captured through a formula, such as changes in definitions for the calculation of minimum capital requirements, we use an *augmented dummy approach*. It works similarly to the approach used in many other studies and assigns fixed positive (negative) values for tightening (loosening) incidents. However, even for such cases we introduce some nuances in the scoring. For example, a change in the type of capital required for overall reserve requirements has a stronger impact on the MPPI than a change in the type of capital applicable only to certain exposures. This approach allows us to include a range of macroprudential measures that are hard or impossible to quantify otherwise. In total, around one-third of the measures included in the overall index were coded in this way.

Another important aspect when aggregating the MPPI is that many instruments included in the MPPI may either be *recommendations* or legally binding acts. Given that the former are not as stringent as the latter, the weight attributed to recommendations in the index is lower than the weight attributed to equivalent measures that are legally binding.

As we focus in our analysis on changes in the intensity of the various types of macroprudential measures, the *initial level* of the indices is of secondary importance. In this study, we subtract the value of the index in the first period from the whole series thereafter. This way, the index and each subindex start at zero. Positive (negative) values in the subsequent periods then signal a net tightening (loosening) of aggregate macroprudential policy. Moreover, given that most CESEE countries in our sample had implemented only few if any macroprudential policy measures before the mid-1990s, it is realistic to assume that cross-country differences in the macroprudential policy stance were not that large in 1997, when our index starts.

For compiling the MPPI, we use and cross-check information derived from four MPP databases: the ECB's Macroprudential Policies Evaluation Database (MaPPED) documented in Budnik and Kleibl (2018), the CESEE-related database of Vandenbussche et al. (2015), the IMF iMaPP database described in Alam et al. (2019), and the database of the European Systemic Risk Board (ESRB) described in Kochanska (2017).<sup>6</sup> All these databases provide *implementation dates*, i.e. the dates when certain measures take effect. MaPPED and the ESRB database also provide *announcement* or *decision dates*. In the econometric analysis, we generally use the announcement dates for tightening and the implementation dates for loosening incidents. The rationale behind this is that a credit institution is likely to react to the announcement of a tightening measure, e.g. an increase in minimum capital requirements instantaneously by building up capital reserves if needed. In contrast, the announcement of a loosening policy action for the same instrument is unlikely to trigger an immediate reaction given that the old regulations stay in place until the date of implementation.

The online supplement to this article, available on the OeNB's website, provides more details on underlying data sources, the categorization of the different macroprudential policy measures and the applied weighting rules. In it, we moreover show the evolution of each subindex by country over time.

#### 2 Country-specific analysis of macroprudential policies

Chart 2 displays the macroprudential policy index (dark red line) as constructed for all 11 CESEE countries in our sample for the period from 1997 to 2018 and illustrates the role of the different components of the MPPI.<sup>7,8</sup> An unweighted CESEE

<sup>&</sup>lt;sup>6</sup> Our MPPI covers only MPP measures recorded in existing databases. Therefore, it is possible that we do not capture the entire universe of country-specific regulations motivated by macroprudential considerations.

<sup>&</sup>lt;sup>7</sup> The data in this chart, as well as all the measures commented on in this section, are based exclusively on implementation dates. By contrast, the charts in the online supplement are based on the differentiated timing used for the econometric investigation in section 3. Any differences between the data shown in chart 2 and in the charts of the online supplement are due to a considerable time lag between the announcement and implementation of tightening measures.

<sup>&</sup>lt;sup>8</sup> To show the extent to which classic MPP components contributed to the MPPI over time, the online supplement also contains the corresponding figures for "narrow" macroprudential policies but excludes information on minimum capital requirements and minimum reserve requirements.

aggregate was added by averaging over the 11 countries in order to get an overview of the overall use of macroprudential policy in this region. The aggregate reveals a gradual increase in the intensity of macroprudential policy use in the region. Chart 2 also shows that several CESEE countries had implemented MPP measures to rein in extraordinary strong credit growth already before the 2008–2009 global financial



Note: Data are based on the implementation dates of macroprudential measures.

crisis (GFC). At that time, such measures were not yet called "macroprudential" but rather "administrative" measures (for an overview, see Hilbers et al., 2005). Bulgaria, Croatia and Romania and, to some extent, Poland, Slovenia and Estonia appear to have been regional "frontrunners" in this respect. Other countries intensified their use of macroprudential instruments toward the end of the observation period.

The tightening in the late 1990s was mainly due to increased minimum capital requirements (shown in dark green in chart 2) and, to a lesser extent, to liquidity-based measures (marked brown). Minimum reserve requirements (shown in light green) were eased countercyclically in many countries in the wake of the GFC and then largely remained at these levels. The tightening evident since 2010 mainly reflects the implementation of borrower-based measures (marked orange) that gained importance after the GFC, but their use stagnated somewhat in recent years. Finally, the accelerated tightening since 2014 was mainly due to the implementation of capital buffers (marked dark blue) with a view to complying with Basel III rules and the respective EU directives. These regulatory changes affected all countries in our sample rather uniformly (and are therefore not discussed further in the subsequent country-specific paragraphs).

Minimum capital adequacy ratios and tier 1 capital ratios were harmonized in 2014–2015, which implied an easing for a few countries (Bulgaria, Croatia, Estonia and Latvia) and a tightening for several others (the Czech Republic, Hungary, Lithuania, Poland, Slovakia and Slovenia). At the same time, all countries activated various capital buffers. Starting in 2014 (or later), positive rates were set (1) for the CCoB in all countries (reaching 2.5% throughout in 2019), (2) for the institution-specific O-SII buffer in all countries but the Czech Republic and (3) for the SyRB in all countries but Latvia, Lithuania and Slovenia. The SyRB was initially often used as a substitute for the O-SII buffer, which became available in 2016; and later to complement the maximum O-SII buffer rate of 2%.<sup>9</sup> Some of the countries also used the SyRB to compensate for a decrease in Pillar 1 capital requirements, which resulted from the above-mentioned adjustments to EU legislation. Regarding the CCyB, there is more country-specific discretion: until end-2018, positive CCyB rates had been set only in the Czech Republic and in Slovakia (effective since 2017), in Lithuania (effective since end-2018) and Bulgaria (effective since 2019).

The aggregate picture (see the CESEE-11 panel in chart 2) conceals pronounced heterogeneity across countries.<sup>10</sup> Let us focus, first, on countries that tightened macroprudential policy already in the late 1990s or early 2000s and reinforced the use of MPP in the years before the GFC, mostly motivated by extraordinarily strong credit growth at the time, i.e. Bulgaria, Croatia and Romania.

#### 2.1 Bulgaria, Croatia and Romania

Right after its financial crisis in 1997–1998, *Bulgaria* substantially tightened minimum capital requirements (by end-1999, the minimum level of the capital adequacy ratio had increased from 8% to 12% and that of the tier 1 capital ratio from 4% to 6%)

<sup>&</sup>lt;sup>9</sup> We calculated a simple average of the individual rates applicable to the SyRB and the O-SII buffers if the rates were differentiated by institutions or if a range was given that covered the individual rates. Moreover, if the SyRB refers to all exposures (and not only to domestic ones), only the larger of the SyRB and the O-SII buffer rates applies. In our sample, this is an issue in Croatia and Romania, which we considered to avoid double counting.

<sup>&</sup>lt;sup>10</sup> Note that in the description of the various country-specific developments we usually refer to the implementation dates of the respective measures unless stated otherwise.

and liquidity requirements (e.g. limits on banks' single client exposure and qualified holdings outside the financial sector were imposed in 1997). Subsequently, in the years of sizable capital inflows and rapid credit growth prior to the GFC, the Bulgarian National Bank (BNB) imposed comparatively strict regulations for capital, liquidity, risk classifications and provisioning. As a case in point, in 2005–2006, the authorities sharply lowered the LTV threshold for mortgages to which a risk weight of 100% applies, from 100% to 50%, and, in 2007, raised the minimum reserve requirement rate from 8% to 12%. In the years prior to the GFC, some of these measures were bypassed, however, via direct external borrowing, a phenomenon that was also seen in other countries (Vandenbussche et al., 2018). To counteract the strong deceleration in bank lending both during and right after the GFC, minimum reserve requirements were eased again at the end of 2008 and risk weights were reduced in early 2010 (from 100% to 75% for consumer loans, and from 50% to 35% for mortgage loans with an LTV ratio below 70%). By contrast, liquidity requirements were tightened in 2010 to help banks overcome liquidity problems in adverse situations.<sup>11</sup>

On the back of strong credit growth, mostly denominated in foreign currency, and rising financial and macroeconomic imbalances, Croatia started using macroprudential policies in the late 1990s. The minimum capital adequacy ratio was increased from 8% to 10% in 1998, foreign exchange liquidity requirements were introduced in 2001 and maximum limits on banks' open foreign currency claims in 2003. Single client exposure limits were implemented in 1998 and intragroup exposure limits in 2002. With the introduction of marginal and special reserve requirements, the overall minimum reserve requirement rates were gradually increased between 2004 and 2006. In 2006, risk weights for FX mortgage loans to unhedged borrowers were raised from 50% to 75% and, in 2008, to 100%, those for foreign currency-indexed consumer loans from 100% to 150%.<sup>12</sup> When the GFC hit, Croatia relaxed its macroprudential policy stance until 2014, e.g. by releasing the system reserves accumulated during the boom phase. Risk weights for currency-induced credit risk were also relaxed in 2010, as part of the adjustment to Basel II, but this easing was offset by an increase in the minimum capital adequacy ratio to 12%. In 2014, the minimum capital adequacy ratio was lowered again to 8% with a view to complying with Basel III but was counterbalanced by implementing several capital buffers.

*Romania* significantly tightened its macroprudential policy stance already before 2007, mainly by increasing the minimum capital requirements and, to some extent, also the minimum reserve requirements. In 2004, the central bank started to raise reserve requirements on foreign currency deposits while reducing those for local currency. These instruments were complemented with borrower-based measures: an LTV ceiling for housing loans of 75% and DSTI limits (30% on consumer loans, 35% on mortgage loans) were introduced in 2004 already, as well as intragroup exposure limits. However, to harmonize its minimum capital requirements with those of the EU, Romania had to loosen its macroprudential stance by reducing the minimum capital adequacy ratio from 12% to 8% in 2007, and by abandoning

<sup>&</sup>lt;sup>11</sup> During the 2014 bank runs on the country's third- and fourth-largest banks, significant liquidity and capital buffers helped contain spillovers to the rest of the banking sector.

<sup>&</sup>lt;sup>12</sup> The efficiency of those measures was reduced given their circumvention by the less regulated parts of the financial system or via direct borrowing from foreign parent banks (Vujčić and Dumičić, 2016).

explicit ceilings on LTV and DSTI ratios.<sup>13</sup> When the GFC hit, Romania reversed some of the tightening (especially by loosening reserve requirements) but retightened its macroprudential stance in 2011. The increase in the MPPI at the time mainly reflects the reintroduction of LTV limits and further restrictions for FX loans regarding both the LTV and DSTI ratio. A tightening of the maximum DSTI ratio to 40% was announced in 2018 and implemented in 2019.

#### 2.2 Poland, Slovenia and Estonia

The second group of countries – Poland, Slovenia and Estonia – also tightened their MPP stance before the GFC, but less so than the first group and in part applied a less differentiated toolkit.

*Poland* escaped the GFC relatively unscathed, and the early use of MPP measures arguably played an important role in preventing banks from suffering large losses during the GFC (Sławiński, 2020). While the MPP stance was loosened between 1999 and 2005, almost exclusively reflecting a reduction of risk weights on local and FX mortgages, it was tightened thereafter. Risk weights for loans with a high LTV ratio were increased starting in 2004. In June 2006, the Polish Commission for Banking Supervision introduced "Recommendation S," according to which LTV and DSTI limits were tightened and the risk weights for FX mortgage loans were raised from 35% to 75% with effect from 2008. The immediate impact of this regulation was not so much a curbing of the lending boom, but it directed most FX loans toward households that could withstand a sizable depreciation of the złoty (Zettelmeyer et al., 2011). Risk weights for FX mortgage loans were further tightened to 100% in 2012, while, in 2014, the LTV threshold above which a risk weight of 100% applies was raised from 50% to 80% for loans denominated in both foreign and domestic currency, which translated into an easing in this policy area. In another tightening step, the risk weights on FX loans were increased to 150% in 2018. Starting in 2010, borrower-based measures were significantly tightened by introducing a maximum DSTI ratio of 50% for borrowers earning less than the average national wage, and of 65% for other borrowers. Similar DSTI restrictions were applied for FX-denominated loans to unhedged borrowers. Since 2014, LTV limits have been reduced from 100% to 80%. In 2014, FX lending to households without income in the same currency was banned altogether.<sup>14</sup>

*Slovenia's* MPP stance remained unchanged until 2004, when risk weights on mortgage loans were increased from 50% to 100%. They were relaxed again to 35% in 2007, but, at the same time, the LTV threshold above which a risk weight of 100% applies became more binding, having been set at 60%. Minimum capital reserves were tightened somewhat in 2007, when capital requirements for operational risk were introduced, and in 2015, when the minimum tier 1 capital ratio was increased from 4% to 6%. Capital buffers gained some importance in recent years but not as strongly as in the other CESEE countries. Since 2007, the central bank required banks to assess clients' creditworthiness based on euro equivalent values of FX loans (Bank of Slovenia, 2008). Borrower-based measures have been

<sup>&</sup>lt;sup>13</sup> However, financial institutions using internal models were required to set such limits, and risk weights on high-LTV loans (75% and above) were increased when Romania adopted Basel II in 2007.

<sup>&</sup>lt;sup>14</sup> If the currency of the loan and the currency in which the borrower obtains his or her highest income is the same, the bank is obliged to account for a fictitious depreciation of 20%.

used more intensively since 2016, when the central bank started issuing several tightening recommendations regarding LTV and DSTI limits.

Like Bulgaria and Croatia, *Estonia* tightened minimum capital and reserve requirements considerably in the late 1990s to improve the resilience of the banking sector in view of speculative attacks against the Estonian kroon in October 1997 and potential spillovers from the Russian financial crisis in 1998. In 2006, in light of very rapid credit growth, the central bank increased the minimum capital requirement further and for the first time raised the risk weights on housing loans (from 50% to 100%). The latter were loosened again considerably (to 35%) during the GFC. Before Estonia joined the euro area, minimum reserve requirements were relaxed significantly in 2010 (from 15%) to gradually approach the rate set by the ECB. Besides the activation of several capital buffers in 2014, borrower-based measures were tightened in 2015, when the LTV cap for new housing loans was decreased to 85% and a DSTI limit of 50% was introduced.

#### 2.3 Czech Republic, Slovakia, Hungary, Lithuania and Latvia

The third group of countries shows a relatively stable overall macroprudential policy stance for a long period before considerably tightening MPPs in the wake of the GFC and especially in the past few years.

The *Czech Republic* left its MPP stance largely unchanged until it raised the minimum tier 1 capital ratio from 2% to 6% and activated various capital buffers in 2014, which it continued to tighten. Notably, the Czech Republic was among the first countries in the EU that applied a positive CCyB rate. In parallel, since 2015, liquidity requirements (i.e. floors for liquidity coverage ratios) and borrower-based measures were tightened gradually. To date, the Czech National Bank (CNB) only has a mandate to issue recommendations for borrower-based measures. It issued tightening recommendations in 2015 and 2016 for gradually reducing the LTV limit from 100% to 90%, and, in 2018, for reducing the maximum DSTI ratio. The pronounced tightening of the overall MPP stance in the Czech Republic in recent years was primarily motivated by an expansionary phase of the credit cycle since 2014 and very dynamic housing loan growth (CNB, 2019).

*Slovakia* followed a pattern very similar to that of the Czech Republic. Even though a formal LTV cap had already been in place since 1996, it was only applicable to a narrow definition of mortgage loans and could be bypassed by applying for other housing loans (Vandenbussche et al., 2015)<sup>15</sup>. In response to an increase in these other housing loans, a new package of LTV limits covering all collateralized mortgages was launched. The central bank, Národná banka Slovenska (NBS), recommended a further tightening in 2014, which became legally binding in 2016. Moreover, in 2014, the LTV threshold above which a risk weight of 100% applies was raised, which resulted in a loosening in this policy area. In light of rising property prices and household indebtedness, borrower-based measures were tightened again in 2018. Among other things, mortgages with an LTV ratio of more than 90% were prohibited and the share of new loans with an LTV ratio

<sup>&</sup>lt;sup>15</sup> Given that these circumvention possibilities are well documented, we depart from the usual de jure coding of macroprudential regulations and apply in this case a de facto approach and do not translate this measure into an explicit LTV cap for all collateralized house purchase loans. Instead, we record the measure in the residual group "LTV\_other" (subject to a lower aggregation weight), where we capture the 2002 loosening of this narrow LTV cap to 70%, which remained binding until the end of 2017.
between 80% and 90% was restricted (NBS, 2018). Together with the activation and gradual increases of applicable capital buffers, this has substantially tightened the macroprudential environment until end-2018.

*Hungary* considerably tightened its macroprudential policy stance only after the GFC, having since then put a strong emphasis on borrower-based measures, above all to reduce the high share of FX borrowing. In 2010, Hungary introduced maximum LTV ratios on household mortgage lending (and car loans). Upper limits were set for real estate borrowing, namely 75% for loans denominated in forint (raised to 80% in 2012), 60% for loans in euro, and 45% for loans in other currencies. Maximum DSTI ratios for FX loans differentiated by currency were also set in 2010, and later in that year, FX mortgages were banned altogether. The ban was discontinued in 2015, which contributed to an easing of the macroprudential stance, while the LTV and DSTI limits were tightened further that year (DSTI limit again in 2018). Moreover, more stringent liquidity requirements and the activation and tightening of various buffer rates had a considerable macroprudential tightening impact since 2014.

*Lithuania* used a comparatively rich macroprudential toolkit. The net easing until mid-2011 was mainly due to reduced risk weights on mortgages (from 100% to 50% in 2001) and gradually relaxed minimum reserve requirements since 1997. By contrast, liquidity-based measures had a counterbalancing tightening impact. The net overall MPP tightening since 2011 was mainly driven by borrower-based measures and the activation of various capital buffers. For mortgage loans, the LTV cap was reduced from 100% to 85% and the DSTI limit from 60% to 40% in 2011.

*Latvia* is a special case since its overall macroprudential stance remained broadly unchanged during the whole observation period. Tightened minimum capital requirements, buffer requirements and borrower-based measures were outweighed by reduced risk weights and reserve requirements. When we focus only on "narrow" MPPs, there was some net tightening since 2014, which was mainly attributable to the implementation of capital buffers.

## 3 The impact of macroprudential tightening on macrofinancial variables

Studying the effectiveness of MPPs in dampening domestic financial cycles and/or in increasing financial sector resilience is a rapidly growing area of economic research. In this section, we use the MPPI to assess the impact that macroprudential policy measures had on credit growth and house prices in the CESEE EU countries.

According to several papers, tighter MPPs are associated with slower credit growth, especially if the focus is on household credit and on the impact of borrower-based measures (e.g. Akinci and Olmstead-Rumsey, 2018; Alam et al., 2019; Dumičić, 2018). Using a large panel for the period from 2001 to 2013, Cerutti et al. (2017a) find that, in general, borrower-based measures have a stronger effect on credit growth than other MPPs, in both advanced and emerging economies. Furthermore, their results suggest that while both household and corporate credit have a negative relationship with MPPs, the effect on corporate credit is weaker and often statistically insignificant. They argue that this is the case because MPPs are usually directed at financial institutions or households rather than corporations (while personal loans taken out by firm owners to finance their businesses could still be affected by borrower-based measures).

The empirical evidence regarding the impact of MPPs on house prices is less clear cut, though. Referring to a few of the related papers, Vandenbussche et al. (2015) found that tighter capital-based MPPs and nonstandard liquidity measures (mostly minimum reserve requirements) have a dampening effect on house price inflation in CESEE. Akinci and Olmstead-Rumsey (2018) concluded that almost exclusively housing-related MPPs, particularly LTV and DSTI caps, constrain housing credit growth and house price appreciation, especially in countries where private sector financing via the banking sector plays an important role. Kuttner and Shim (2016) compared the effectiveness of MPPs with that of fiscal policy measures: while housing credit growth would be mitigated by both tighter borrower-based MPPs and an increase in housing-related taxes, the latter is the only policy tool with a discernible impact on house price appreciation. Finally, there could also be differences across different levels of economic development: Alam et al. (2019), for instance, identified a negative effect of MPPs on house prices only in the case of advanced economies.

#### 3.1 Econometric specification

Following large parts of the literature (for a recent survey, see Galati and Moessner, 2018), we use, as baseline specification, panel regressions with country fixed effects (OLS-FE) to assess the impact of changes in the macroprudential environment on macrofinancial variables, notably house price growth and private sector credit growth (i.e. growth of credit to households and nonfinancial corporates). Our baseline model reads as follows:

$$y_{i,t} = \beta MPPI_{i,t-1} + X_{i,t} \gamma + \tau_i + \varepsilon_{i,t}, \qquad (1)$$

where  $y_{i,t}$  denotes the variable of interest, with the superscripts i=1,...,N and t=1,...,Trepresenting a country and time period, respectively, and *MPPI*<sub>*i*,*t*-*l*</sub> denotes the lag of the included macroprudential policy index.  $X_{i,i}$  is the matrix of control variables,  $\tau_i$  captures country fixed effects and  $\varepsilon_i$  denotes a Gaussian distributed error term with heteroskedastic variance. We analyze short-term effects of changes in the macroprudential environment by including the index lagged by one quarter. To investigate the possibility of more persistent effects, we include, in an alternative specification, a simple moving average of the previous four quarters, similarly to Alam et al. (2019). We use the announcement dates for tightening and the implementation dates for loosening incidents. The matrix  $X_{i,t}$  contains country-specific information about lagged GDP growth and lending rates<sup>16</sup> as well as a dummy for the GFC to control for possible crisis-driven variation. Similarly to Vandenbussche et al. (2015) and Alam et al. (2019), we include all other subindices as additional regressors, when focusing on the effects of specific types of MPPs (e.g. borrower-based measures), to ensure that the detected effect of the investigated MPP instruments does not represent the effect of other, correlated MPPs (in econometric terms, this is referred to as an omitted variable bias).

<sup>&</sup>lt;sup>16</sup> Ideally, we should include a variable representing the price of a loan, i.e. (an average of) the interest rates charged for bank loans in a country. However, for confidentiality reasons, such data are not sufficiently accessible. Hence, we use a proxy, namely the lending rate obtained from the IMF's International Financial Statistics (IFS). It represents the rate of depository corporations usually meeting the short- and medium-term financing needs of the private sector. As a caveat, in this series, several observations would be missing due to definitional changes over time. Such gaps are filled by applying interpolation using the dynamics of long-term interest rates from the same data source.

To mitigate the problem of endogeneity (see Galati and Moessner, 2013), at least to some extent, we include lags of the policy measures and of the other covariates (except for the crisis dummy) instead of using contemporaneous data. Pre-estimation diagnostic tests also supported the inclusion of one lag of each regressor (based on the minimal Schwarz's Bayesian information criterion). Moreover, the dependent variables seemed to be stationary based on the panel unit root test by Pesaran (2007). We conducted robustness checks, including a larger number of control variables, such as inflation, equity prices or the real effective exchange rate, the results of which are available on request.

As pointed out in section 2, the intensity with which macroprudential policies have been used in the CESEE countries under investigation is very heterogeneous, a finding also supported by a pre-estimation panel test for slope homogeneity (Pesaran and Yamagata, 2008). To account for panel heterogeneity, we estimate two other models that allow for heterogeneous slope coefficients, namely the dynamic fixed effects model (DFE) and the mean group estimator model (MG; see Pesaran and Smith, 1995). However, as a caveat, these procedures are mostly applied for panels with large *N* and *T*. As our dataset consists of eleven countries, this may lead to results that are driven by outliers, especially for house price growth, where the time series is relatively short. Nonetheless, these additional estimation models are useful complements to our baseline OLS-FE specification. A detailed description of the definitions, data sources and data availability can be found in table A1 in the annex.

# 3.2 Results

Table 1 summarizes our estimation results. Considering first the impact of macroprudential policies on credit growth, we find that a macroprudential tightening is indeed associated with lower private sector credit growth, both in the short and in the medium run (indicated by the four-quarter moving averages of the respective policy variables). Strikingly, the magnitude of the negative effects increases, when we look at the narrow MPPI, i.e. N-MPPI, and the borrower-based subindex, or BB-MPPI; these two also yield statistically significant results for the baseline OLS-FE specification. The additional DFE and MG specifications confirm a negative sign across all indices. Statistically significant results can, however, only be found in the case of borrower-based measures.

The decline in total credit growth following a tightening of macroprudential policies appears to be primarily driven by a decrease in household credit growth. For this variable, the estimated coefficients are larger in magnitude and statistically significant across the MPPI, N-MPPI and BB-MPPI indices (in the baseline OLS-FE specification). Corporate credit growth also shows a negative relation but is seldom statistically significant. Borrower-based MPPs again seem to have the most significant effect in dampening both household and corporate credit growth.

For house price growth, all estimated coefficients are negative and largest in the case of the borrower-based subindex, for which they are also statistically significant. This provides further evidence for the effectiveness of such measures to dampen house price growth. However, the aforementioned rather short time series for house price growth renders the interpretation of these estimates somewhat less reliable than those for credit growth.

The general observation that the magnitude of coefficients increases for more narrowly defined MPP indices could imply that additional measures included in the

#### Macroprudential policy, credit growth and house prices - panel regression results

	MPPI			N-MPPI			BB-MPPI		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Total nonbank private sector credit growth	OLS-FE	DFE	MG	OLS-FE	DFE	MG	OLS-FE	DFE	MG
First lag of respective policy index Standard error Moving average of previous four quarters Standard error Number of observations	-0.563 [0.337] -0.544 [0.365] 913	-0.173 [0.445] -0.134 [0.492] 913	-0.987 [0.783] -0.944 [0.942] 913	-0.717* [0.384] -0.758* [0.403] 913	-0.480 [0.484] -0.497 [0.515] 913	-0.562 [0.723] -0.356 [0.842] 913	-1.586*** [0.445] -1.734*** [0.441] 830	-1.387*** [0.508] -1.513*** [0.509] 830	-4.560** [2.180] -7.694** [3.545] 830
Household credit growth First lag of respective policy index Standard error Moving average of previous four quarters Standard error Number of observations	<b>-1.290*</b> [0.582] <b>-1.432*</b> [0.710] 880	-0.426 [0.679] -0.558 [0.788] 880	-1.857 [1.286] -2.998 [2.131] 880	<b>-1.217</b> * [0.554] <b>-1.338</b> * [0.623] 880	-0.546 [0.667] -0.660 [0.722] 880	-1.257 [1.257] -1.999 [1.834] 880	<b>-2.521</b> *** [0.544] <b>-2.774</b> *** [0.561] 797	<b>-1.948***</b> [0.624] <b>-2.164***</b> [0.617] 797	-4.526* [2.428] -7.372* [3.867] 797
Nonbank corporate credit growth First lag of respective policy index Standard error Moving average of previous four quarters Standard error Number of observations	-0.358 [0.267] -0.303 [0.263] 880	-0.120 [0.301] -0.043 [0.316] 880	-0.775 [0.693] -0.622 [0.850] 880	-0.348 [0.396] -0.353 [0.407] 880	-0.202 [0.464] -0.180 [0.482] 880	-0.223 [0.670] -0.040 [0.668] 880	-0.897 [0.494] <b>-0.979*</b> [0.480] 797	-0.783 [0.562] -0.846 [0.559] 797	<b>-2.990*</b> [1.613] <b>-6.358**</b> [2.845] 797
Housing price growth First lag of respective policy index Standard error Moving average of previous four quarters Standard error Number of observations	-0.494 [0.376] -0.497 [0.394] 504	-0.457 [0.365] -0.451 [0.379] 504	-0.483 [0.638] -0.468 [0.689] 504	-0.341 [0.340] -0.402 [0.361] 504	-0.350 [0.401] -0.403 [0.469] 504	0.083 [0.462] 0.341 [0.913] 504	-0.945** [0.306] -0.921*** [0.279] 452	<b>-1.000***</b> [0.317] <b>-0.973**</b> [0.381] 452	-0.713 [0.780] -1.615 [1.602] 452

Source: Authors' estimations.

Note: All models include one lag of GDP growth and the lending rate as additional covariates as well as an unlagged crisis dummy, all at quarterly frequency. Robust standard errors are in brackets below the coefficients. Models (1), (4) and (7) were estimated using OLS with heteroskedasticity-robust standard errors and include country fixed effects (OLS-FE); models (2), (5), (8) were estimated with dynamic fixed effects (DFE), and models (3), (6) and (9) with the mean group estimator (MG). For models (4)–(6), one lag of the index capturing minimum capital requirements and one lag of the index capturing minimum reserve requirements were added as additional controls. For models (7)–(9), additional regressors are the ones for models (4)–(6) as well as one lag of the subindex capturing capital-based MPPs (CB-MPPI) and of the subindex capturing liquidity-based MPPs (LB-MPPI). For models (7)–(9), Bulgaria was excluded due to lacking variation of instruments included in the BB-MPPI. F-tests for joint significance are all highly significant. Robustness checks were conducted with further covariates such as the consumer price inflation rate, equity price growth, and the real effective exchange rate. Results are available on request from the authors. Statistically significant results are given in bold; significance levels: \*\*\* – 1%, \*\* – 5%, \* – 10%.

extended MPPI are in fact diluting the impact of the more effective ones, such as borrower-based measures. This is confirmed when we run the same estimations for other MPPI subindices, namely the capital-based (CB-MPPI) and liquidity-based (LB-MPPI) ones. For the sake of brevity, we do not show the results here in detail. The estimated coefficients often exhibited a positive sign and were not statistically significant, except for some specifications looking at house price growth.

In general, the results of this empirical exercise are broadly in line with previous empirical work and suggest that tighter MPPs are associated with lower private sector credit growth. Furthermore, we can confirm key findings of Cerutti et al. (2017a), namely that borrower-based measures seem to be more effective than other MPPs in containing credit growth and that the effect is more pronounced for household than for corporate credit growth. For house price growth, we find that even though broader MPPs tend to have a negative relationship with house prices, again only borrower-based measures seem to have a statistically significant effect (which corroborates the findings of Akinci and Olmstead-Rumsey, 2018).

## 4 Summary and conclusions

Several countries in the CESEE region have used macroprudential policies for a much longer period than countries in western Europe. Hence, the CESEE region is very suitable for analyzing the effectiveness of macroprudential policies (MPPs). We contribute to this literature by constructing a novel macroprudential policy index that accounts for the intensity with which the eleven CESEE EU countries in our sample used MPP measures over the past two decades. For the CESEE aggregate, our analysis shows a gradual tightening of the overall macroprudential stance from the late 1990s up to the GFC, which mainly reflected the increased use of capital and liquidity requirements. Until 2010, the MPP intensity in the region remained broadly unchanged, but was tightened thereafter, in particular since 2014. Borrower-based measures contributed significantly to the tightening after 2010, whereas the introduction of capital buffers played a big role in the further tightening starting around 2014.

There are considerable heterogeneities across CESEE countries with respect to the composition of instruments and the timing of MPP instrument activation. We identified three clusters of countries. First, Bulgaria, Croatia and Romania implemented macroprudential policy already in the late 1990s or early 2000s and reinforced its use in the years before the GFC – mostly motivated by extraordinarily strong credit growth at the time. Second, Estonia, Poland and Slovenia also used MPP measures before the GFC but to a lesser extent than the first group of countries, and they partly applied a less differentiated instrument toolkit. Third, the Czech Republic, Hungary, Lithuania, Slovakia and partly Latvia initially made only limited use of MPP tools before considerably tightening their MPP stance just after the GFC and especially in the past few years.

Given that the recent MPP tightening in the region was driven more strongly by capital- than borrower-based measures and that it went along with widespread house price increases, the question arises whether there is room to optimize the choice of instruments. To assess the impact of macroprudential policy intensity on the key macrofinancial variables credit and house price growth, we use a set of panel regressions and find that the use of macroprudential policies is effective in lowering credit growth, both in the short and medium term. In line with previous research, we find that borrower-based measures, such as LTV and DSTI limits, tend to have a stronger and more significant impact than other MPP measures that also include capital- and liquidity-based instruments. Broadly confirming previous findings, we conclude that MPPs are more effective in containing household than corporate credit growth. In the same vein, borrower-based measures seem to be relatively more effective in dampening house price growth.

Further research is required to study more closely the role of different transmission channels to better understand the reasons for cross-country heterogeneity and to explore the effectiveness of different sets of macroprudential instruments and their possible interactions with other policy instruments (especially those of monetary policy). The index and its components presented in this paper could serve as an important contribution to the quickly evolving literature in this field of research.

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# Annex

This table describes the variables used in the panel regressions, giving the main sources and information on data availability.

Table A1

Description and a	vailability of variables used in the panel regression	ons	
	Description	Main source(s)	Data availability
Total nonbank private sector credit growth	Domestic banks' claims on resident nonmonetary financial institu- tions, excluding the general government; HICP deflated, seasonally adjusted, in logarithms, year-on-year change	IMF-IFS	Q1 1998–Q4 2018
Household credit growth	Domestic banks' claims on resident household sector, HICP deflated, seasonally adjusted, in logarithms, year-on-year change	IMF-IFS	CZ: Q1 2003–Q4 2018 HU: Q1 2001–Q4 2018 LV: Q1 1999–Q4 2018 rest: Q1 1998–Q4 2018
Nonbank corporate credit growth	Domestic banks' claims on resident nonbank corporate sector, HICP deflated, seasonally adjusted, in logarithms, year-on-year change	IMF-IFS	CZ: Q1 2003–Q4 2018 HU: Q1 2001–Q4 2018 LV: Q1 1999–Q4 2018 rest: Q1 1998–Q4 2018
Housing price growth	House price index and value of housing transactions, 2015=100, no seasonal adjustment, year-on-year change	Eurostat	BG:         Q1 2006-Q4 2018           CZ:         Q1 2009-Q4 2018           EE:         Q1 2009-Q4 2018           HR:         Q1 2009-Q4 2018           HU:         Q1 2009-Q4 2018           LU:         Q1 2007-Q4 2018           LV:         Q1 2007-Q4 2018           LV:         Q1 2007-Q4 2018           PL:         Q1 2006-Q4 2018           RO:         Q1 2010-Q4 2018           SI:         Q1 2008-Q4 2018           SK:         Q1 2007-Q4 2018
MPPI	Intensity-adjusted macroprudential policy index, no further transformations	authors' calculations	Q1 1997–Q4 2018
N-MPPI	Narrow intensity-adjusted macroprudential policy index, no further transformations	authors' calculations	Q1 1997–Q4 2018
BB-MPPI	Borrower-based intensity-adjusted macroprudential policy subindex, no further transformations	authors' calculations	Q1 1997–Q4 2018
GDP growth	GDP volume, 2005=100, seasonally adjusted, in logarithms, quarter-on-quarter change	IMF-IFS	Q2 1997–Q4 2018
Lending rate	Rate of depository corporations usually meeting the short- and medium-term financing needs of the private sector, no further transformation	IMF-IFS, national central banks	Q1 1997–Q4 2018

Source: Authors' compilation.

Note: This table presents the variables used in the various panel regressions, briefly describes the variables and their transformations, gives the main sources used to obtain the variables and states the periods for which they are available. Seasonal adjustment was based on the Census X12 method. There were a few cases of variables with missing observations, which we interpolated using the dynamics of closely related variables: i.e. we used the long-term interest rate from the IMF's International Financial Statistics (IMF-IFS) for gaps in the lending rate (several countries), domestic banks' loans from the IMF-IFS for gaps in the corresponding claims (Croatia and Estonia) and the CPI from the Vienna Institute for International Economic Studies (wiiw) for gaps in the HICP (Croatia, for the deflation of credit series).

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# Assessing credit gaps in CESEE based on levels justified by fundamentals – a comparison across different estimation approaches

#### Mariarosaria Comunale, Markus Eller, Mathias Lahnsteiner

Relying on a rich panel regression framework, we study the role of different "fundamental" credit determinants in Central, Eastern and Southeastern European (CESEE) EU Member States and compare actual private sector credit-to-GDP ratios to the derived fundamental levels. It turns out that countries featuring positive credit gaps at the start of the global financial crisis (GFC) have managed to adjust their credit ratios downward toward levels justified by fundamentals, but the adjustment is apparently not yet complete in all countries. In addition, negative credit gaps have emerged or widened in most countries that had seen credit levels close to or below the fundamental levels of credit at the start of the GFC. The estimated speed of adjustment implies that at the end of the review period, there was still a rather long way to go for countries with very large credit gaps.

OeNB Working Paper 229. March 2020.

# Austrian banks' expansion to Central, Eastern and Southeastern Europe: Milestones – review and outlook

#### Stefan Kavan, Tina Wittenberger

Austria's largest banks jumped at the chance of expanding their low-margin domestic operations by entering Central, Eastern and Southeastern European (CESEE) markets soon after the fall of the Iron Curtain. By establishing new banks and/or acquiring stakes in existing banks, they were able to rapidly gain a foothold in the region and benefit from the reform mood and growth momentum fueled by the prospect of potential EU membership for CESEE economies. Dynamic loan growth generated high profits, but the rapid expansion was not without downsides. Much of the lending occurred in foreign currencies and was refinanced by the parent banks. The underlying risks materialized when the global financial and economic crisis emerged in 2008 and drove up costs, thus leading to a period of consolidation in the banking industry. Macroprudential measures designed to mitigate risks to financial stability were an important lesson learned by banking supervisors from the crisis, and Austria was no exception in this respect. With the economy recovering, the past few years have been characterized by an enhanced ability of clients to pay back their loans. However, the good profits have also been supported by re-accelerating credit growth, which has created new systemic challenges and necessitated macroprudential measures in some CESEE countries. The economic catching-up process in Austrian banks' enlarged home market continues to provide the potential for significant growth and profits. At the time of writing, profit conditions and loan portfolio quality were good. Yet, the long recovery driven by credit growth and the recent weakening of the economy also come with numerous challenges, which the banks in question and banking supervisors will have to address.

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# Mapping financial vulnerability in CESEE: understanding risk-bearing capacities of households is key in times of crisis

#### Nicolas Albacete, Pirmin Fessler, Maximilian Propst

A crisis of the real economy - like the current crisis caused by the coronavirus pandemic - and the countermeasures taken by countries worldwide can lead to a severe financial crisis if the ability of debtors to pay back their debt is questionable. Necessary support and the costs involved in providing it directly depends on the financial buffer households have and their general risk-bearing capacity. It is crucial to understand both to be able to anticipate potential problems and prepare for mitigating their impact. Policies designed to mitigate the effects of income losses could benefit greatly from better knowledge of the exact nature of the nonlinearities involved. We analyze newly available micro data on households' balance sheets to examine financial vulnerability in Central, Eastern and Southeastern European (CESEE) countries and Austria. As Austrian banks have a high and increasing exposure in the region, households' risk-bearing capacities in CESEE are an important factor in determining credit risks of the banking sector in Austria. The Household Finance and Consumption Survey (HFCS) allows us to study the general indebtedness of households as well as borrower-level vulnerability in eight CESEE countries and compare them to Austria. While the share of households owning their homes is comparably large in these countries, the share of households holding mortgage debt is not particularly large. Uncollateralized debt levels, by contrast, vary greatly across the region, and some of the countries show rather high levels of loan-to-value ratios, which point to more generous credit standards in mortgage lending. Subtracting the assets of vulnerable households from their debt reveals that the levels of potential losses for banks are generally low. Furthermore, we use a machine learning approach to reweight the data, thereby decomposing the observed differences between CESEE and Austria into one part that can be explained by observable household characteristics and a remainder which might be linked to banks' different treatment of similar clients in different countries.

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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										
	2017	2018	2019	Q3 18	Q4 18	Q1 19	Q2 19	Q3 19	Q4 19	
Gross domestic product	Annual real change in %									
Albania Bosnia and Herzegovina <sup>1</sup> Kosovo Montenegro North Macedonia Serbia Ukraine	3.8 3.0 4.2 4.7 1.1 2.0 2.5	4.1 3.6 3.8 5.1 2.7 4.4 3.4	2.2 2.3 4.2 3.6 3.6 4.2 3.2	4.6 2.8 3.7 5.3 2.4 4.2 2.7	3.1 3.8 4.1 4.9 6.2 3.5 3.7	2.4 2.8 4.2 3.0 3.8 2.6 2.9	2.5 3.0 4.1 3.2 3.4 2.9 4.7	4.2 3.1 4.4 4.7 3.6 4.8 3.9	-0.2 1.6 3.9 3.1 3.4 6.2 1.5	
Industrial production	Annual r	eal change	in %							
Albania Bosnia and Herzegovina <sup>2</sup> Kosovo Montenegro North Macedonia Serbia Ukraine	-0.8 3.1 2.9 -4.2 0.2 3.9 1.1	18.7 1.6 2.4 22.4 5.4 1.3 3.0	-1.1 -5.3 4.7 -6.3 3.7 0.2 -0.5	18.1 0.8 -0.4 11.9 5.1 -1.5 2.2	5.4 -0.4 5.8 17.6 6.4 -0.8 1.9	-11.7 -5.0 -2.1 -14.4 8.8 -2.0 -0.1	6.7 3.6 6.7 9.5 1.1 2.6 2.7	2.1 -5.7 7.9 0.1 7.2 1.9 1.1	14.9 -6.9 4.7 -1.6 -1.3 3.1 -5.1	
Average gross wages – total economy	Annual c	hange in %	6							
Albania Bosnia and Herzegovina Kosovo Montenegro North Macedonia Serbia Ukraine	3.0 1.6 5.8 2.0 2.6 4.0 37.0	3.1 3.1 1.8 0.1 5.8 4.0 24.8	3.8 4.3 1.7 0.8 5.1 10.5 18.5	2.4 3.5  0.3 5.5 2.7 24.7	3.4 4.2  0.1 6.6 2.9 22.5	4.9 4.0  0.6 4.6 9.3 20.8	4.5 4.4  0.5 4.8 9.9 18.8	3.7 4.5  1.0 5.3 10.8 18.4	2.2 4.3 1.3 5.7 11.9 16.3	
Unemployment rate <sup>3</sup>	%									
Albania Bosnia and Herzegovina Kosovo Montenegro North Macedonia Serbia Ukraine	14.1 21.1 30.5 16.4 22.6 14.1 9.9	12.8 18.9 29.5 15.5 21.0 13.3 9.1	12.0 16.4 25.7 15.4 17.5 10.9 8.6	12.7  30.7 14.4 21.0 11.8 8.4	12.7  31.4 16.4 19.6 13.4 9.4	12.6  26.9 15.2 18.1 12.7 9.6	12.0  25.3 14.7 17.6 10.8 8.0	11.8  24.5 15.6 17.3 10.0 7.6	11.6  25.9 16.1 16.8 10.2 9.2	
Consumer price index	Period a	/erage, anr	nual change	e in %						
Albania Bosnia and Herzegovina Kosovo Montenegro North Macedonia Serbia	2.0 0.8 1.5 2.8 1.4 3.1	2.0 1.4 1.1 2.9 1.5 2.0	1.4 0.6 2.7 0.5 0.8 1.9	2.2 1.8 1.4 2.4 1.5 2.4	1.8 1.7 2.2 1.7 1.2 2.0	1.6 1.0 3.2 0.4 1.2 2.4	1.4 0.7 3.3 0.5 1.2 2.2	1.4 0.4 2.6 -0.1 0.6 1.3	1.3 0.2 1.7 1.1 0.1 1.4	
Okraine	14.4	11.0	1.9	8.9	9./	8.9	9.1	8.5	5.2	

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

<sup>1</sup> Expenditure-side data.

 $^{\rm 2}$  Value added in the national accounts.

<sup>3</sup> Labor force survey.

#### **External accounts**

	2017	2018	2019	Q3 18	Q4 18	Q1 19	Q2 19	Q3 19	Q4 19		
Trade balance	% of GDF	0									
Albania	-24.4	-22.4	-23.0	-22.8	-24.6	-22.5	-21.5	-23.6	-24.6		
Bosnia and Herzegovina	-22.8	-22.1	-22.3	-22.8	-22.3	-22.2	-23.2	-21.3	-22.6		
Kosovo	-38.4	-40.6	-40.1	-40.1	-40.1	-40.7	-39.6	-38.6	-41.7		
Montenegro	-43.3	-43.9	-42.1	-36.7	-44.6	-46.2	-50.6	-34.9	-40.7		
North Macedonia	-17.8	-16.2	-17.3	-14.5	-16.4	-17.9	-16.0	-15.1	-20.1		
Serbia	-10.2	-11.9	-12.2	-10.9	-14.6	-12.4	-11.0	-10.8	-14.5		
Ukraine	-8.6	-9.8	-9.3	-12.5	-10.2	-7.6	-9.3	-10.2	-9.4		
Current plus capital account balance	% of GDP										
Albania	-6.4	-5.9	-7.1	-3.8	-9.8	-7.4	-7.5	-4.1	-9.3		
Bosnia and Herzegovina	-3.6	-3.1	-2.6	-2.3	-3.8	-4.6	-3.2	-0.1	-2.6		
Kosovo	-6.6	-8.1	-5.7	6.1	-12.8	-6.1	-11.4	7.4	-13.5		
Montenegro	-16.1	-17.0	-15.1	13.1	-31.9	-35.7	-28.5	14.7	-27.3		
North Macedonia	-0.9	0.0	-2.7	7.4	-3.4	-5.9	-1.7	6.4	-9.5		
Serbia	-5.2	-4.9	-7.1	-4.8	-4.7	-8.1	-6.4	-5.1	-8.8		
Ukraine	-2.1	-3.3	-0.8	-7.5	-2.5	-0.5	-1.3	-5.4	3.7		
Foreign direct investment <sup>1</sup>	% of GDF	)									
Albania	-8.6	-8.0	-7.6	-8.3	-7.3	-9.2	-6.3	-7.6	-7.3		
Bosnia and Herzegovina	-2.0	-2.2	-2.6	-2.5	-1.3	-3.2	-4.5	-1.9	-1.0		
Kosovo	-3.9	-2.4	-2.8	-3.9	-1.4	-4.3	-1.6	-4.0	-1.7		
Montenegro	-11.3	-6.9	-/.0	-4.2	-8.9	-9.3	-12.6	-2.4	-6.3		
North Macedonia	-1.8	-5.6	-2.6	0.1	-10.5	-1.5	-0.4	-2.2	-5.8		
Serbla	-6.2	-/.4 1.0	-/.8	-5.3	-10.1	-/.8	-9.0	-/./	-6.8 1 E		
Okraine	-2.5	-1.0	-1.0	-1.2	-2.2	-1./	-1.0	-1.4	-1.5		
Gross external debt	End of pe	eriod, % of	GDP								
Albania	68.7	65.1	60.5	64.5	65.1	64.3	62.5	61.3	60.5		
Bosnia and Herzegovina	65.6	65.6	63.9	65.6	65.6	65.1	64.9	63.9	63.9		
Kosovo	32.6	29.9	30.8	31.6	29.9	30.0	31.0	30.7	30.8		
Montenegro	160.6 72.4	164./	 72.2	 70.0	 ד ב בד	 7E 0	 75 7	 ד / ד	 72.2		
Sorbia	75.T 85.8	73.3 843	72.Z 83.2	77.0 84.8	73.3 843	73.0 83.6	73.7 84.9	70.7 85.0	72.Z		
Likraine	973	901	78.1	92.8	901	872	83.4	83.6	78.1		
Okraine	77.5	20.1	/ 0.1		20.1	07.2	05.1	05.0	70.1		
Reserve assets excluding gold	Period av	erage, ann	ual change	in %							
Albania	25.4	26.0	23.7	24.5	26.0	25.1	24.1	24.7	23.7		
Bosnia and Herzegovina	32.2	33.6	34.5	33.8	33.6	32.7	33.8	34.4	34.5		
Kosovo <sup>2</sup>	10.7	11.4	12.2	13.7	11.4	13.1	14.6	15.2	12.2		
Montenegro	19.7	22.5	27.4	22.7	22.0	20.1	17.2	18.0	27.4		
North Macedonia	20.9	24.5	26.1	23.7	24.5	24.0	24.1	25.3	26.1		
Serbia	23.7	24.6	26.2	24.9	24.6	24.6	25.7	27.6	26.2		
Ukraine	15.0	15.6	15.5	12.8	15.6	15.0	14.1	14.3	15.5		

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

+ = 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).

<sup>2</sup> Reserve assets (including gold).

# **Banking sector indicators**

	2017	2018	2019	Q3 18	Q4 18	Q1 19	Q2 19	Q3 19	Q4 19		
Bank loans to the domestic nonbank private sector	End of pe	End of period, annual change in %									
Albania <sup>1</sup> Bosnia and Herzegovina <sup>1</sup> Kosovo Montenegro North Macedonia <sup>1</sup> Serbia <sup>1</sup> Ukraine <sup>1</sup>	3.6 7.5 11.5 7.5 7.4 7.9 –0.6	-0.3 5.7 10.9 9.6 6.4 8.4 6.5	6.9 6.6 10.0 6.8 5.2 8.1 -3.6	-0.7 6.5 11.4 10.2 7.6 6.4 9.8	-0.3 5.7 10.9 9.6 6.4 8.4 6.5	0.6 5.3 11.4 10.1 7.8 8.2 1.4	4.5 6.1 10.5 6.2 7.1 7.6 0.1	6.5 6.1 10.3 6.2 4.7 8.7 -3.9	6.9 6.6 10.0 6.8 5.2 8.1 -3.6		
Share of foreign currency loans <sup>2</sup>	End of period, %										
Albania Bosnia and Herzegovina Kosovo	51.1 62.9	50.4 59.0	48.8 52.6	50.7 61.0	50.4 59.0	51.1 54.2	50.4 53.2	49.8 52.7	48.8 52.6		
Montenegro <sup>3</sup> North Macedonia Serbia <sup>4</sup> Ukraine	5.1 41.7 66.2 43.9	5.7 40.4 66.3 42.9	 41.5 66.1 37.0	5.6 41.8 66.5 44.1	5.7 40.4 66.3 42.9	5.2 40.5 66.0 42.2	3.2 40.8 65.9 40.6	3.4 41.3 65.9 37.7	 41.5 66.1 37.0		
NPL ratio	%										
Albania Bosnia and Herzegovina Kosovo Montenegro North Macedonia Serbia Ukraine	13.2 8.6 3.1 7.3 5.1 10.1 54.5	11.1 7.7 2.7 6.7 4.8 7.0 52.9	8.4  2.0 4.7 3.8  48.4	12.9 8.2 2.8 6.7 4.5 7.5 54.3	11.1 7.7 2.7 6.7 4.8 7.0 52.9	11.4 7.5 2.6 5.9 4.7 7.3 51.7	11.2 7.1 2.5 4.8 4.7 7.2 50.8	10.6 6.8 2.3 4.7 4.1  48.9	8.4  2.0 4.7 3.8  48.4		
Tier 1 capital ratio	%										
Albania Bosnia and Herzegovina Kosovo <sup>5</sup> Montenegro <sup>5</sup> North Macedonia Serbia	15.1 14.8 18.0 16.4 14.2 21.6	17.0 16.5 17.0 15.6 15.0 21.1	17.1 17.5 15.9 17.7 14.8 22.4	16.9 14.6 16.1 16.5 14.9 21.9	17.0 16.5 17.0 15.6 15.0 21.1	16.6 16.1 17.1 15.3 15.5 22.6	17.3 16.9 16.8 19.5 15.8 22.1	17.6 17.1 16.5 17.7 15.4 22.5	17.1 17.5 15.9 17.7 14.8 22.4		
Ukraine	12.1	10.5	13.5	10.3	10.5	10.9	13.0	13.1	13.5		

Source: National central banks.

<sup>1</sup> Foreign currency component at constant exchange rates.
<sup>2</sup> In total loans to the nonbank private sector. Including loans indexed to foreign currencies, as far as available.
<sup>3</sup> Share in total loans to all sectors.
<sup>4</sup> Including securities.
<sup>5</sup> Overall capital adequacy ratio.

# Monetary and fiscal policy indicators

	2017	2018	2019	Q3 18	Q4 18	Q1 19	Q2 19	Q3 19	Q4 19		
Key interest rate	End of period, %										
Albania (one-week repo rate)	1.3	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		
Bosnia and Herzegovina <sup>1</sup>											
Kosovo <sup>1</sup>											
Montenegro'											
central bank bills)	3.3	2.5	2.3	2.8	2.5	2.3	2.3	2.3	2.3		
Serbia (one-week repo rate)	3.5	3.0	2.3	3.0	3.0	3.0	3.0	2.5	2.3		
Ukraine (discount rate)	14.5	18.0	13.5	18.0	18.0	18.0	17.5	16.5	13.5		
Three-month interbank rate	Period av	erage, %									
Albania	2.2	1.8	1.4	1.7	1.6	1.4	1.4	1.5	1.5		
Bosnia and Herzegovina											
Kosovo											
Montenegro	 1 0	 1 E	 1 E	 1 E	 1 E	 1 E	 1 E	 1 E	 1 E		
Serbia	1.0 3.4	1.5 3.0	1.5	1.5 2.9	3.0	1.5 3.0	3.0	1.5	1.5 1.8		
Ukraine	14.3	13.7	14.8	13.4	14.4	14.8	14.6	15.0	14.8		
Exchange rate	Period av	erage, nati	onal currei	ncy per EU	IR						
Albania	134.2	127.6	123.0	126.0	124.4	124.6	123.1	121.6	122.7		
Bosnia and Herzegovina	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		
Kosovo											
Montenegro		 (4 E	 (4 E	 (4 E							
Serbia	61.6 121.4	61.5 118 3	61.5 1179	61.5 118.1	61.5 118.4	61.5 118.2	61.5 118.0	61.5 1177	61.5 117.5		
Ukraine	30.0	32.1	28.9	31.8	31.9	31.0	29.8	28.1	26.8		
		-									
	2017	2018	2019	2017	2018	2019					
	General balance	governme	ent	General	governme	ent debt					
	End of pe	eriod, % of	GDP								
Albania	-2.0	-1.6	-1.7	66.9	67.9	66.6					
Bosnia and Herzegovina	2.6	2.3	1.0	36.1	34.2	31.7					
Kosovo	1.3	0.4	0.7	15.5	16.3	17.2					
Montenegro	-5.6	-2.6	-2.6	64.2	70.0	77.8					
North Macedonia	-2.7	-1.8	-2.5	39.5	40.5	41.9 53.4					
Ukraine	-1.4	-1.9	-0.1 -2.1	71.8	60.9	52.1 50.3					

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

<sup>1</sup> No policy rate available (unilateral euroization or currency board).

# **Conventions used**

.. = data not available. Discrepancies may arise from rounding.