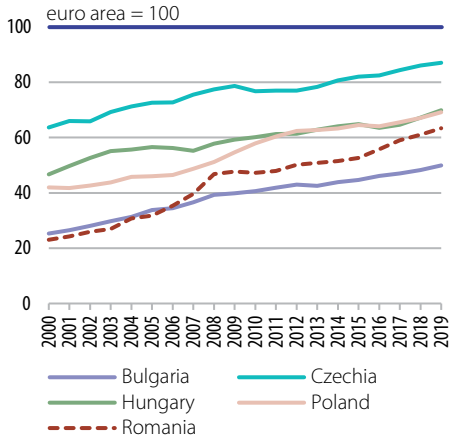
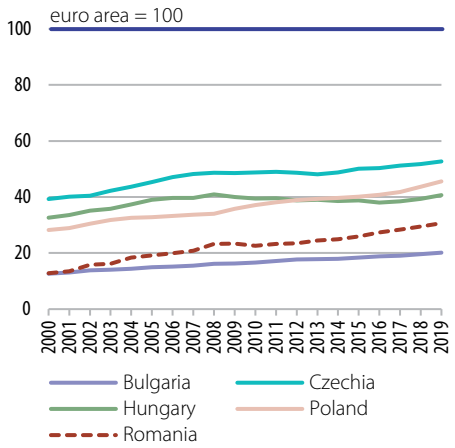
## Box 14. Regional comparison of relevant real convergence indicators

This box analyses, from a regional perspective, a relevant set of indicators of real and structural convergence (to the euro area) for Romania, Bulgaria, Czechia, Hungary and Poland. The indicators are examined in terms of the catching-up with the euro area in 2000-2019, with a focus on the potential changes in the structural alignment between the countries under review and the reference economy, *inter alia* in the context of extreme economic events from a historical perspective (the international financial crisis that broke out in 2008 was a landmark event).

**Chart A**
GDP per capita




Source: AMECO, Eurostat, NBR calc




Source: AMECO, Eurostat, NBR calculations

**Chart B**
Labour productivity per person employed

Overall, the analysed indicators suggest favourable developments in real and structural convergence of the economies in the region to the euro area. In the last 20 years, the convergence process unfolded in parallel with that of economic integration of the Central and Eastern European countries with the euro area. However, most of the indicators showed that the financial crisis had a slowdown effect on the convergence process. From this standpoint, the trajectory of the indicators may be significantly influenced over the course of 2020 and the states under review may see divergent developments, in the context of the multiple effects associated with the coronavirus pandemic, adversely impacting economic activity.

For the past 20 years, the reviewed countries have converged to the euro area; among them, Romania has seen the largest catching-up as concerns GDP per capita (expressed in PPS). The global financial crisis marked a slowing of real convergence for all countries in the analysed group, except for Poland (Chart A). In spite of a slower convergence in the post-crisis period, Romania witnessed a significant catching-up with Poland and Hungary and outpaced Bulgaria. Among the states in the group under review, Czechia ranked further topmost in the last two decades.

Moreover, as part of the real convergence process to the euro area economy, labour productivity per person employed[1] improved for all the states subject to analysis. Romania recorded the largest rise, given that, *inter alia*, it started from the lowest base back in 2000 alongside Bulgaria (Chart B). Nevertheless, in spite of a partial catching-up with the euro area, the gap remains significant.

The convergence of the sectoral structure of the economies in the region to that of the euro area contributes to cushioning the effects of potential asymmetric shocks and to improving the efficiency of economic policies at EU level. Romania

[1] Labour productivity per person employed is calculated by taking into account real GDP.

and Bulgaria in particular saw an increase in the share of the services sector and a decrease in the share of agriculture (Chart C).

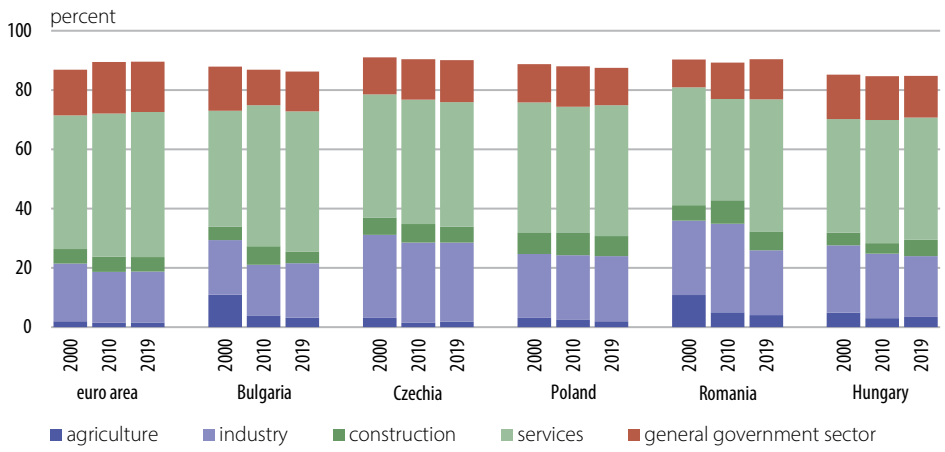
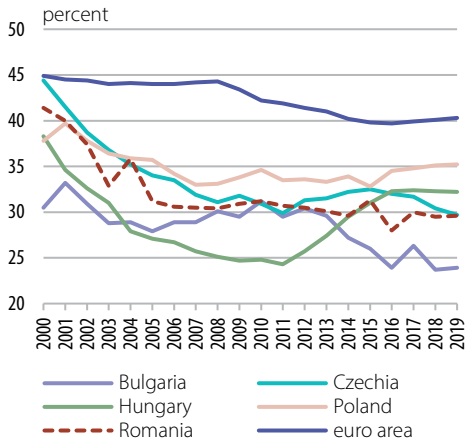



**Chart C**
Sectoral structure of the economy

Source: AMECO, Eurostat, NBR calculations

During the convergence process, labour market flexibility contributes to enhancing the economy's capacity to respond to asymmetrical shocks, containing the need to adjust other macroeconomic variables. The activity rate is indicative of the labour force capacity to adjust to the changes in the economic climate. The youth activity rate (population aged 15-24) is particularly relevant in terms of the effectiveness of structural reforms in education and labour market areas. In the first decade, the youth activity rate had a broad-based unfavourable evolution (Chart D), whereas in the post-crisis period, it posted mixed developments, with Bulgaria and Romania recording declines, Czechia and Poland reporting near stagnations and Hungary witnessing an advance, which reflected different degrees of labour market flexibility and adjustment of human capital to labour market needs. However, mention should be made that the extended 15-64 age group saw a positive evolution over the last 10 years (compared to the fluctuations recorded in the previous decade). Except for Czechia, all countries stood however below the euro area level, with Romania reporting the widest gap over the last years.




Source: AMECO, Eurostat, NBR calculations

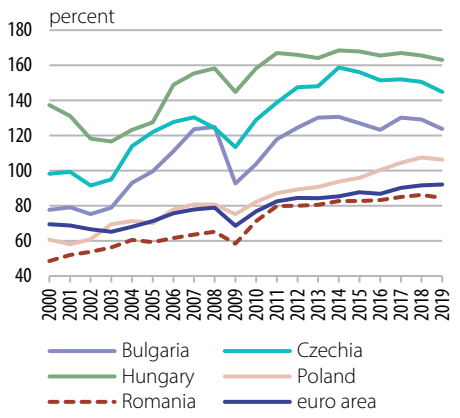
**Chart D**
Youth activity rate (population aged 15-24)

One of the factors which can contribute to creating favourable conditions for real convergence is the upward trend of the openness of the economy[2], visible in all the countries in the region, but temporarily interrupted around the financial crisis (Chart E). The indicator consistently touched the lowest values for Romania, running below the euro area indicator, while the countries in the region reported

[2] The literature that tackles the impact of the openness of the economy on economic growth is fairly equivocal. For instance, Rodriguez, F. and Rodrik, D., in "Trade Policy and Economic Growth: A Skeptic's Guide to Cross-National Evidence", NBER Working Paper No. 7081 issued in April 1999, consistently brought a quantitative criticism to the papers advocating the positive impact of openness on growth.

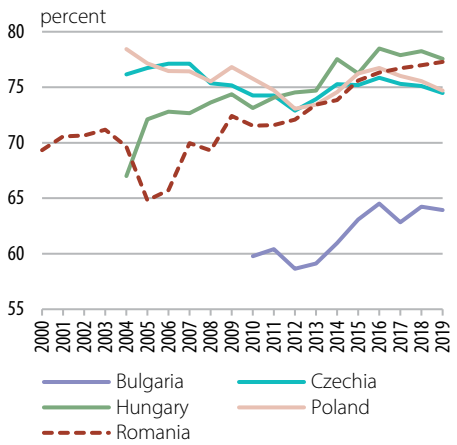
higher readings. However, it is worth noting that the gap with the euro area narrowed in the post-crisis period. Mention should be made that the euro area has a relatively low openness, given that the internal market is robust and large-sized. By contrast, in the case of the Romanian economy, the persistence of relatively low values could be explained by the differences in competitiveness with the trading partners. Trade integration with the European Union, measured by the share of trade with the other EU Member States in the country's total foreign trade; Chart F) had an upward path after the financial crisis for all the economies under review. However, all states under review saw weaker correlations between the annual growth rate of exports to the EU-28 and of the industrial output, respectively, with EU-28 GDP dynamics in the second decade. Nevertheless, this decoupling was temporary, at least in the case of Romania[3], being visible only in the years that immediately followed the global financial crisis.

**Chart E**
Openness of the economy*



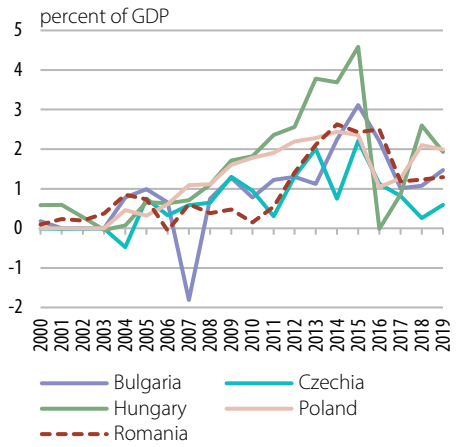

*) [(imports + exports of goods and services)/GDP]*100

Source: AMECO, Eurostat, ECB, NBR calculations

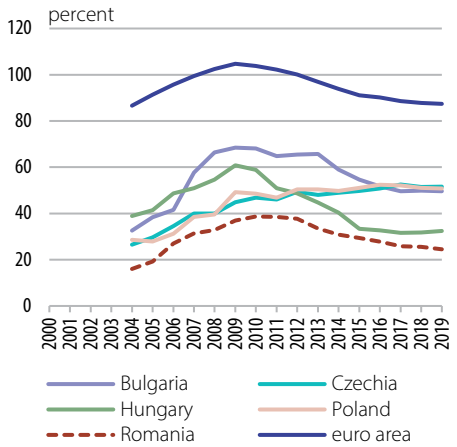



Source: AMECO, Eurostat, ECB, NBR calculations

**Chart F**
Trade with the EU-28 as a share in total foreign trade




Source: AMECO, Eurostat, ECB, NBR calculations




Source: AMECO, Eurostat, ECB, NBR calculations

**Chart H**
Indirect financial intermediation

**Chart G**
Capital account balance as a share in GDP

The shortage of saving from domestic sources can be covered, at least partly, by a higher capacity to absorb non-repayable structural funds, visible in the capital account balance-to-GDP ratio (Chart G). These spur the economy, primarily through

3 In 2012-2016, the correlation coefficient between industrial output and GDP growth in EU-28 entered and moved deeper into negative territory; the calculation is based on a 3-year moving window.

the investment activity. The measures designed to simplify the access to non-repayable structural funds were pivotal to the increase, as a share of GDP, in the funds raised in the post-crisis period for all the countries under review. Over the recent years, however, amid moving to the new Multiannual Financial Framework (2014-2020), capital inflows saw a decrease.

Regardless of the relative size of the financial system in each state, in the reviewed period, the behaviour of lending was the same, featuring some divergences in the post-crisis period. Thus, after a sustained growth in the years preceding the global financial crisis (amid significant capital inflows, generally more pronounced in the countries in the region than in the euro area), the indirect financial intermediation, measured by credit to the private sector as a share in GDP, saw a contraction[4] (Chart H). Czechia and Poland were the only exceptions, as they followed an upward trend, albeit at a slightly slower pace. Throughout the period under review, Romania stood markedly below the euro area average and, at the same time, at the bottom scale of the countries in the region. Similarly with indirect financial intermediation, all the states under review showed a much lower direct financial intermediation than the euro area.

[4] For the purpose of comparability, for all states, including Romania, indirect financial intermediation is calculated based on the series expressed in euro from two primary sources, i.e. ECB and Eurostat. In Romania, this drop indicates, *inter alia*, the write-off of non-performing loans.