

Analyses of the Czech Republic's Current Economic Alignment with the Euro Area

2020

Czech National Bank — Analyses of the Czech Republic's Current Economic Alignment with the Euro Area — 2020



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Introduction

In line with the Czech Republic's Euro-area Accession Strategy, the CNB together with the Czech Ministry of Finance regularly assesses progress in laying the groundwork for euro adoption so that the Czech government can set a target date for joining the euro area and a date for entering ERM II. The CNB's main analytical input to this assessment is the annual Analyses of the Czech Republic's Current Economic Alignment with the Euro Area.¹

As in 2019, the CNB has produced a brief edition of the Alignment Analyses in 2020. This is because it cannot be assessed yet how the alignment of the Czech Republic with the euro area economy and the operation of adjustment mechanisms will be affected by the impacts of the COVID-19 pandemic. Although the first impacts of the crisis are already visible in the higher-frequency data, many of the analyses routinely conducted in this document are based on annual data with a last known value for 2019, i.e. before the outbreak of the coronavirus pandemic.

The core of this year's document is the **Overall Message of the Analyses**, which is based on the results of the traditional analyses, whose results are summarised in the charts and tables presented in the **Chartbook**. These analyses assess both the preparedness of the Czech economy to join the euro area and the economic and institutional situation of the euro area itself. The theoretical foundations, motivations and technical descriptions of each of the analyses are contained in a separate **Methodological Annex**, which is located as an e-document on the CNB website. In addition, this year's Alignment Analyses have been supplemented with four **thematic analyses** focused on current events related to the coronavirus crisis. Specifically, they concentrate on the measures taken by monetary, prudential and fiscal authorities to support economies hit by the coronavirus crisis, related financing by the EU, and the effect of the pandemic on international trade.




The analyses in the document focus on the traditional range of macroeconomic topics without any ambition to assess some other issues relevant to the Czech Republic's entry to the euro area. This document thus does not analyse in detail the impacts of the Czech Republic's joining the banking union, including the transfer of powers in the area of prudential supervision and resolution of credit institutions to the supranational level and the related economic and financial impacts, the costs linked with ESM membership and other – for example legal and political – aspects of joining the euro area. The consequences of changes to the process of ERM II entry, which is a pre-condition for euro area entry, are not assessed either. The document does not examine the overall advantages and disadvantages of adopting the euro² and does not formulate recommendations on this step. The political decision on the date of entry into the euro area falls to the government of the Czech Republic.

¹ The Alignment Analyses are a CNB analytical document. A recommendation to the Czech government on the timing of euro adoption from the economic perspective is given in the related *Assessment* issued jointly by the Ministry of Finance and the CNB.




² A description of the costs and benefits of potential euro adoption and the motivations for these analyses are contained in the *Analyses of the Czech Republic's Current Economic Alignment with the Euro Area 2018*, available on the CNB website: <<https://www.cnb.cz/en/monetary-policy/strategic-documents/euro-area-accession/>>.

The messages of the analyses have been illustrated graphically with arrows of different colours and directions.

The colour underlying the arrow gives information on the message of the indicator in terms of the risks associated with potential euro adoption in the areas analysed:

-  relatively low level of risk associated with potential euro adoption
-  economic risks associated with potential euro adoption
-  neutral message

The direction of the arrow gives information on the change in the indicator since the previous (last year's) analysis:

-  improved
-  deteriorated
-  neither improved nor deteriorated

The assessment of the message of the indicator applies only to the results of a specific analysis in a selected area of the economy. Likewise, the direction of the arrow indicates only whether the situation in that area has improved, has stayed at approximately the same level or has deteriorated over the last year.

However, the message should in no way be interpreted as a CNB recommendation for the Czech Republic to adopt the euro, much less as the Czech Republic's final euro adoption decision. Similarly, a single summary indicator cannot be compiled by adding up the individual coloured indicators or arrows.

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Authors

Kateřina Arnořtová, Oxana Babecká Kucharčuková, Jan Babecký, Soňa Benecká, Jan Brůha, Vilma Dingová, Jaromír Gec, Dana Hájková, Eva Hromádková, Luboš Komárek, Zlatuše Komárková, Jan Král, Petr Král, Ivana Kubicová, Lucie Matějková, Pavla Netušilová, Filip Novotný, Renata Pařaličová, Anna Pavlovová, Lukáš Pfeifer, Miroslav Plařil, Michaela Ryřavá, Branislav Saxa, Vojtěch Siuda, Eva Slezáková, Marek Souček, Lena Stránská, Radek Šnobl, Radka Štiková, Josef Švéda, Martin Vojta

Editors

Lucie Matějková, Kateřina Arnořtová

I. OVERALL MESSAGE OF THE ANALYSES

Future adoption of the single European currency should further increase the benefits accruing to the Czech Republic from its intense involvement in international economic relations. Euro adoption will lead to the elimination of exchange rate risk in relation to the euro area and thus to a reduction in the costs of trade and investment.

Besides these benefits, however, euro adoption simultaneously entails risks arising from the loss of independent monetary policy and exchange rate flexibility. It is also associated with costs arising from new institutional commitments due to developments in the euro area, including the obligation to join the banking union or the ESM.

The key factors for the Czech economy will be its alignment with the euro area and its ability to absorb potential asymmetric shocks by means of other mechanisms after losing its own monetary policy. The analyses presented in this document assess the similarity of the long-term trends, medium-term development and structure of the Czech economy to the euro area, including the similarity of monetary policy transmission. The ability of the economy to adjust by means of autonomous fiscal policy, the labour and product markets and the banking sector is also examined.

The analysed characteristics of the Czech economy as regards its economic preparedness to adopt the euro can be divided into three groups:

Indicators suggesting a relatively low level of risk associated with potential euro adoption in the area analysed

These have long included the high degree of openness of the Czech economy and its close trade and ownership links with the euro area. These factors provide for the existence of benefits of euro adoption, such as the aforementioned reduction in transaction costs and the elimination of exchange rate risk. The strong trade integration also fosters a high degree of alignment between the Czech and euro area business cycles, although that has decreased somewhat in the previous several years. Although the use of the euro in the Czech economy is increasing further, it is concentrated almost exclusively in the trade relations of the Czech business sector. The Czech and euro area economies have converged further in the case of interest rates due to the macroeconomic impacts of the coronavirus pandemic. The Czech koruna remains aligned with the euro with respect to the US dollar, and inflation inertia is not a barrier to joining the euro area either. Several indicators are also suggesting preparedness for adopting the euro as regards the adjustment mechanisms of the Czech economy. A high and rising rate of economic activity and a low long-term unemployment rate are signalling increasing labour market flexibility. The stable domestic banking sector, which entered the recessionary phase of the financial cycle caused by the outbreak of the coronavirus pandemic in good condition with a robust capital and liquidity position, can also be regarded as positive.

Indicators with a neutral message

This category primarily includes the overall similarity of monetary policy transmission in the Czech Republic and the euro area. The Czech Republic differs from the monetary union average in some financial indicators such as depth of financial intermediation, private sector debt and the financial assets and liabilities structure of non-financial corporations and households, but this cannot be considered a disadvantage or a fundamental barrier to euro adoption. The indicator of the alignment of the Czech and euro area financial cycles is also neutral. As stated above, labour market flexibility is improving in some respects. However, the configuration of the tax and benefit system may reduce the incentive for low-income groups in particular to actively seek employment. The Czech Republic's competitiveness score is also neutral, for example.

Indicators suggesting economic risks associated with potential euro adoption in the area analysed

They include a still unfinished process of real economic convergence of the Czech Republic towards the euro area and persisting lower structural similarity. The often procyclical nature of fiscal policy is a problem as regards the adjustment mechanisms of the Czech economy. The need to stabilise the pandemic-hit economy using fiscal policy tools is being reflected in a significant deterioration in the general government balance and an increase in government debt this year. Czech public finance sustainability also remains an issue, as its adverse outlook due to population ageing has worsened further as a result of recent adjustments to the Czech pension system.

Comparison of the similarity of the Czech economy with the euro area

The process of convergence towards the euro area in terms of economic, price and wage levels continued in the Czech Republic in 2019, but the degree of real convergence is still below the euro area average. Although the Czech Republic converged further towards the euro area average in all key indicators, the distance from that average is still significant for most indicators and remains a factor arguing against early euro adoption. If the euro was adopted, there could be sustained pressure on domestic inflation to rise above the CNB's current 2% target due to equilibrium appreciation of the real exchange rate and convergence of the wage level.³

Although the Czech Republic has long been showing high correlation of economic activity with the euro area, its cyclical alignment was lower in previous years. This change was evident both in different GDP growth rates and a decline in the correlation of Czech export growth and economic growth in the euro area in the period before the coronavirus pandemic. However, the similar and identically timed economic response to the common external shock in the form of the outbreak of the global pandemic is bringing about a renewed increase in the measured cyclical alignment.

The persisting differences in the structures of the Czech and euro area economies consist mainly in an above-average share of industry in Czech GDP. As regards euro adoption, the structural differences pose a risk of possible asymmetric shocks, to which the single monetary policy would not be able to respond in full. Any structural changes in the monitored economies caused by the current coronavirus crisis will probably not become visible for some time.

The Czech Republic's strong trade and ownership links remain one of the strongest arguments for it joining the euro area. The elimination of exchange rate risk and transaction cost savings upon euro adoption would be greatly beneficial to the Czech corporate sector, which is intensively involved in the international division of labour. The relatively high intensity of international economic relations, accompanied, in the case of the Czech Republic, by high intensity of intra-industry trade, will in all probability lead to high synchronisation of economic shocks and cyclical alignment and hence lower costs associated with the loss of independent monetary policy. Alignment is also being supported by strong ownership links with the euro area.

The alignment of the Czech and euro area financial cycles increased in 2019, but the contributions of the individual components affecting the position in the financial cycle differ. The positions of the two economies in the financial cycle converged as the sharply falling financial cycle indicator for the Czech Republic approached the only slightly declining indicator for the euro area from above. In both cases, the decline was due to worse economic sentiment, as measured by consumer and business confidence. In the Czech Republic, the decline also reflected weakening credit growth and slightly slower property price growth, due, among other things, to monetary and macroprudential policy tightening in previous years. The difference between the maximum and minimum values of the financial cycle indicator across euro area countries narrowed in the second half of 2019, suggesting a slight decline in intra-euro area heterogeneity. The outbreak of the coronavirus crisis and the switch to the recessionary phase of the cycle can be expected to result in a gradual rise in synchronisation between these economies' financial cycles.

The short-term interest rate differential between the Czech Republic and the euro area narrowed in the first half of 2020 due to the CNB's response to the global economic shock. Like many other central banks, the CNB eased monetary policy in order to mitigate the impacts of the pandemic on price and financial stability and to support the Czech economy. With the ECB's deposit interest rate negative, the spread between the 3M PRIBOR and the 3M EURIBOR decreased below 1 pp. However, monetary conditions also eased further in the euro area, as the ECB significantly increased its asset purchases, primarily under the new Pandemic Emergency Purchase Programme (PEPP). The difference between koruna and euro long-term interest rates also decreased slightly, so the risk of there being a large shock associated with interest rate convergence upon euro adoption remains relatively small.

The Czech currency reacts to changes in the environment outside the euro area similarly to the euro. The correlation between the koruna-dollar and euro-dollar exchange rates temporarily dropped significantly in March 2020 as the koruna's exchange rate was negatively affected by a large outflow of short-term capital along with the initial impacts of the pandemic. Later, however, the koruna reversed its fall, almost reaching last year's level. As with other Central European currencies, the volatility of the koruna-euro exchange rate increased sharply due to the financial market tensions. The results of analyses of financial market convergence suggest strong and asymmetric impacts of the coronavirus crisis. Although the alignment of the individual segments of the Czech financial market with the euro area has long been gradually increasing, that alignment started to decrease and volatility to rise in April 2020.

³ As shown, for example, by D'Adamo and Rovelli (2015), too early euro adoption in converging countries may foster excess inflation.

The depth of financial intermediation and the level of private sector debt in the Czech Republic are well below the euro area average. However, the latter does not represent a level to which the Czech financial sector should converge. An excessively large financial sector and overleveraged private sector might exacerbate the cyclical decline in the real economy due to a negative shock (such as the coronavirus crisis) in the countries concerned, as was the case in some euro area countries during the global financial crisis.

The structural similarity of the financing of Czech and euro area firms has increased, while the structural similarity of the financial assets of Czech and euro area households has decreased further. The increase in similarity in the corporate sector was fostered again mainly by a decrease in the share of loans in total liabilities in the euro area amid no change of this share in the Czech Republic, and also by a decline in the share of other accounts payable of firms in the Czech Republic. The balance sheet similarity of Czech and euro area firms is significant. The decrease in the similarity of households' balance sheets is due mainly to a substantial relative rise in the significance of units and shares in Czech households' total financial assets by comparison with euro area households, amid persisting large differences in holdings of other types of assets.⁴ Differences in the balance sheet structure of households in the Czech Republic and the euro area may imply different sensitivities to a change in interest rates and hence to the potential effect of the single monetary policy.

The interest rate fixation structure of loans in the Czech Republic and the euro area converged further, increasing the probability of similar transmission of monetary policy through the interest rate channel. Loans to households for house purchase continued to shift towards longer fixation periods in both the Czech Republic and the euro area, with ten-year fixations prevailing in the euro area and fixations of over five and up to ten years prevailing in the Czech Republic. This is fostering greater similarity of monetary policy transmission, but it may also imply a decrease in the sensitivity of client interest rates to changes in short-term market or monetary policy rates. Fixation periods have also increased slightly further for loans to non-financial corporations in the Czech Republic and the euro area, but around 80% of the volume of loans provided to non-financial corporations in the countries under review still have floating rates or rates fixed for up to one year. This implies relatively fast transmission of changes in monetary policy rates and, in turn, market rates to loan rates in this segment. However, monetary policy transmission through the various channels works with different intensities in the Czech Republic and the euro area, as indicated by differences in the size of the individual components of the spread between client rates on loans to non-financial corporations and the overnight interbank rate. For a long time, this spread was lower in the Czech Republic, but it has risen above the euro area level in the Czech Republic due to the coronavirus crisis. The similarity of the composition of these spreads has meanwhile increased.

The Czech economy is characterised by gradually rising use of the euro by non-financial corporations, due to its high trade integration with the euro area and to domestic firms' efforts to hedge against exchange rate risk. This is reflected mainly in increased drawdown of foreign currency loans, motivated in part by a widening of the positive interest rate differential between the Czech economy and the euro area over the last two years. Manufacturing – with its large proportion of exporters – and also the real estate sector have particularly high shares of euro-denominated loans. Given the previous increase in corporate debt in foreign currencies, repayment of these loans may be adversely affected by a marked weakening of the koruna-euro exchange rate combined with a decline in euro revenues from abroad because of the coronavirus crisis. Growth in foreign currency loans slowed in the second quarter of 2020. This was accompanied by a substantial increase in short-term export hedging by some firms on the financial market. The share of euro payments between Czech firms has been fluctuating around 20% in recent years and has not changed substantially. By contrast, the euroisation of Czech households, which have negligible foreign currency debt and deposits, has long remained low.

Adjustment mechanisms of the Czech economy

In the current situation, it is difficult to assess the medium- and long-term fiscal policy outlook as regards the functionality of adjustment mechanisms. Given the current situation caused by the COVID-19 pandemic, fiscal policy is focused mainly on mitigating the economic and social consequences of the ongoing pandemic. The 3% Maastricht convergence criterion for the general government deficit will be exceeded in the Czech Republic in 2020, and the medium-term objective (MTO) for the structural balance (-0.75% of GDP) will not be met either. However, given the need to stabilise the pandemic-hit economy using fiscal policy instruments, these developments are justified and in conformity with EU legislation. The government debt level on the eve of the pandemic was relatively low. However, it should be

⁴ In particular, a higher share of currency and deposits and a lower share of insurance, pension and standardised guarantee schemes in the balance sheets of Czech households.

noted that even before the outbreak of the pandemic, the previously positive trend had reversed and the overall and structural balance had worsened slightly in the Czech Republic. This reflected growth in mandatory expenditure in a situation of solid economic growth. The procyclical fiscal policy in recent years has thus reduced the room for fiscal easing when needed. The structural balance would probably deteriorate further and the MTO would possibly not be met this year even if the newly approved fiscal support measures were excluded. Czech public finance sustainability remains unresolved. The Czech Republic has meanwhile long had a particular problem with the resilience of its pension and health care systems.

Labour market indicators have been improving in recent years – mainly because of the favourable phase of the economic cycle – but signs of a gradual cooling are beginning to show. This is indicated mainly by a decline in employment, a turnaround in the Beveridge curve and slower long-term growth in the rate of economic activity. The still very low long-term unemployment rate remains a positive for the time being. Until 2019, the increasing labour market flexibility was being fostered by a gradually increasing share of foreign nationals in the population; the rise in the share of part-time jobs has conversely halted. The configuration of the tax and social benefit system, which is giving rise to the risk of an “unemployment trap” and a “low-income trap”, remains a negative aspect. The Czech Republic is still one of the better-scoring countries under review as regards overall competitiveness.

The domestic financial sector developed favourably last year and thus maintained its high resilience to potential adverse shocks. Its dominant segment, the banking sector, entered the recessionary phase of the financial cycle caused by the outbreak of the coronavirus pandemic with a robust capital and liquidity position. Profitability hit a historical high but started to decline with the onset of the crisis, due mainly to emerging growth in expected credit losses. The CNB supported the banking sector’s capacity to absorb losses and lend to the real economy by gradually lowering the countercyclical capital buffer rate from 1.75% to 0.5%.⁵

Situation in the euro area and the European Union

Economic activity in the euro area fell sharply this year due to the outbreak of the coronavirus pandemic and the unprecedented government measures taken to combat it. These measures slowed – and in some sectors (such as services and tourism) virtually halted – the economy for a time. The final balance of the pandemic’s negative economic impacts on the individual euro area countries may differ vastly. The total losses may be particularly large for highly indebted countries. The fiscal measures being implemented to support economies will lead to a significant increase in governments’ debt levels (following previous partial successes in the form of improved public sector finances). In many of these countries, this will fully exhaust the room for an additional fiscal response to any further negative economic shocks. The ECB also reacted to the economic contraction with an extraordinary monetary policy easing. With its deposit interest rate having been in negative territory for a long time, the ECB first expanded its existing securities purchases (APP) and later launched a new pandemic programme (PEPP), which substantially boosted liquidity and eased financial market tensions. In March this year, the ECB also further relaxed the conditions of its TLTRO III programme providing banks with long-term loans in order to stimulate lending to economic agents. Headline inflation in the euro area countries fell to negative levels this year due to the coronavirus crisis. Core inflation was fluctuating around 1% until roughly the middle of this year and then fell to almost zero. Its dispersion across countries reflects different rates of wage growth, among other factors. In most euro area countries, wage growth slowed due to the economic impacts of the pandemic, while the unemployment rate rose.

The need to respond to the crisis fundamentally changed the modus operandi and thematic focus of the EU’s institutions and Member States. Before the pandemic broke out, the European Commission had been forecasting continued, albeit very gradual, growth both in the EU as a whole and, to a limited extent, in the euro area. This was reflected in the individual Member States’ outlooks and plans and in the new Commission’s 2020 work programme as regards major projects related to the functioning and integration of the euro area. However, the crisis significantly shifted the EU’s attention from long-term projects aimed at completing and deepening the Economic and Monetary Union to resolving the acute problems and challenges caused by the crisis.

No major progress was made in areas aimed at further deepening the Economic and Monetary Union and euro area integration in 2019, and the COVID-19 pandemic further hindered this slow pace of change in 2020. Strategic

⁵ An international comparison of the macroprudential policy response to the coronavirus crisis is provided in the thematic analysis *Measures taken by monetary and prudential authorities in response to the coronavirus pandemic* in this edition of the Alignment Analyses.

EU documents⁶ (approved before the outbreak of the COVID-19 pandemic, which could diminish their relevance) still present completing the Banking and Capital Markets Union, combating money laundering and terrorist financing, and strengthening the international role of the euro as the EU's main priorities. Specific actions are to be targeted at reforming the European Stabilisation Mechanism (ESM), consisting in enhancing its instruments and introducing a common backstop for the Single Resolution Fund, at establishing a European Deposit Insurance Scheme (EDIS) and at completing work on a Budgetary Instrument for Convergence and Competitiveness (BICC) and a Convergence and Reform Instrument (CRI). However, their implementation is behind schedule; work on the BICC and CRI has been suspended and the funds allocated for these two instruments have been redirected to measures to combat the current crisis. No major progress has been made with the initiative to strengthen the international role of the euro; the Commission is planning to return to this issue in the future. The debate about the Capital Markets Union (CMU) was revived in mid-2020 by a High Level Forum⁷ report containing an extensive set of specific recommendations and possible legislative changes. In September 2020, the Commission published a new CMU Action Plan⁸ in which it proposes, among other things, a single rulebook for capital market supervision in the EU and a system of support for SMEs in accessing capital market and non-bank funding. Prospectively (but not before the first quarter of 2021), the Commission also intends to consider an initiative to further extend the ESAs' supervisory powers. Together with the CMU Action Plan, the Commission unveiled a Digital Finance Package⁹ containing, among other things, measures to support the implementation of a cross-border instant euro payment system both in the euro area and in non-euro area states, including cooperation with third countries. The package also contains proposals whose declared goal is to contribute to strengthening the banking union and the CMU.¹⁰ As regards the reform of the ESM, an agreement in principle was reached on all elements related to the ESM reform. All formal steps as regards finalisation of the ESM Treaty amendment and its signing are planned to be accomplished by the end of January 2021. Subsequently, the ESM reform will be subject to ratification at the national level. The discussion within the Eurogroup about the common backstop for the Single Resolution Fund as a credit line from the ESM has also been concluded; agreement has been reached on its total size (EUR 68 billion) and its earlier introduction in 2022. Work on the EDIS should continue prospectively at the technical expert level, but it too has made only marginal progress, again due to the COVID-19 crisis, which has pushed the issue into the background. Many EDIS-related issues remain unresolved, including the form and functioning of the system and its role and financing. According to the January 2020 Eurogroup conclusions, progress was supposed to have been made before the end of June, but the current crisis has temporarily stopped all work on the EDIS.

A series of major measures were adopted at the EU level in 2020 to mitigate the effects of the economic crisis caused by COVID-19 and to deal more easily with its consequences. These measures are discussed in a separate thematic analysis *The fiscal response of selected EU Member States and the EU as a whole to the coronavirus pandemic* in this edition of the Alignment Analyses.

The July meeting of the European Council reached agreement on the shape of the 2021–2027 Multiannual Financial Framework, the first to be prepared fully in the context of Brexit. Its overall amount is EUR 1,074.3 billion, or around 1.1% of EU GDP. The main new features of the new long-term budget include a clearly set amount to be allocated to climate change (30%) and increased attention to digital transformation. Allocations to traditional policies – the Cohesion Policy and the Common Agricultural Policy – continue to fall. Remarkably, Brexit notwithstanding, the existing rebates have been kept for some net payers, which have now been joined by Germany.

In autumn 2019, the ECB recommenced purchases of euro area member states' assets under the Public Sector Purchase Programme (PSPP), which was launched in 2014 and now runs to well over EUR 2 trillion. In the context of the crisis, an additional EUR 120 billion envelope for asset purchases under the PSPP was released on 12 March 2020, available until the end of 2020. In March 2020, the ECB also launched the above-mentioned new extraordinary private

⁶ *A New Strategic Agenda 2019–2024*: <<https://www.consilium.europa.eu/media/39914/a-new-strategic-agenda-2019-2024-en.pdf>>; *Political Guidelines for the next European Commission*: <https://ec.europa.eu/commission/sites/beta-political/files/political-guidelines-next-commission_en.pdf>; *Commission Work Programme 2020*: <https://ec.europa.eu/info/sites/info/files/cwp-2020-publication_en.pdf>.

⁷ This report (*Final Report of the High Level Forum on the Capital Markets Union – A New Vision for Europe's Capital Markets*) was prepared by the High Level Forum on the future of European capital markets and was discussed in the Economic and Financial Committee (EFC). <https://ec.europa.eu/info/sites/info/files/business_economy_euro/growth_and_investment/documents/200610-cmu-high-level-forum-final-report_en.pdf>.

⁸ The CMU Action Plan (*A Capital Markets Union for People and Businesses – New Action Plan*) of 24 September 2020 contains 16 actions the Commission intends to propose in order to strengthen and integrate capital markets in the EU. The content of the Action Plan is based in many respects on the High Level Forum's June 2020 report. <https://ec.europa.eu/finance/docs/law/200924-capital-markets-union-action-plan_en.pdf>.

⁹ A package of digital finance proposals adopted by the Commission on 24 September 2020: <https://ec.europa.eu/info/publications/200924-digital-finance-proposals_en>.

¹⁰ These include proposed regulations on markets in crypto-assets, including stablecoins and utility tokens, on a pilot regime for distributed ledger technology, and on the unification of security standards in the event of cyber-attacks on financial sector infrastructure, including strengthening the powers of the ESAs and the ECB in this area.

and public bond purchase programme – the Pandemic Emergency Purchase Programme (PEPP), whose initial allocation of EUR 750 billion was raised to EUR 1,350 billion in June. The new programme differs in some respects from the previous instruments and is much more flexible in terms of eligible assets.¹¹

The ECB's previous decision to purchase euro area public sector assets – specifically its PSPP programme – was criticised by the German Constitutional Court in 2020. According to the Court's judgement of 5 May 2020, the ECB had failed to sufficiently assess the PSPP's proportionality (the extent to which it affects areas other than monetary policy, to which it primarily relates, and whether this effect on, for example, economic policy is proportionate compared to its primary monetary policy purpose) when deciding to establish it. As a result, the ECB, in making the decision, had overstepped the powers that Germany and the other Member States had delegated to the EU and its bodies. The decision was thus viewed by the German Constitutional Court as *ultra vires* (beyond the scope of an authority's competence) and hence without legal effect in respect of German authorities. At the same time, the Court prohibited the Bundesbank from participating further in the PSPP unless it proved by 5 August 2020 that the ECB's assessment of the PSPP's proportionality had been sufficient and did not imply that the decision was disproportionate. In the subsequent court proceedings, the German federal government and the Bundestag were given the documents on the basis of which the ECB had decided and assessed the PSPP's proportionality. After examining these documents, the Bundestag adopted by a significant majority a resolution in which it stated that the condition set out by the Constitutional Court had been met. This opened the way to maintaining the Bundesbank's participation in the PSPP. The Bundesbank president will now be invited by the Bundestag to a quarterly dialogue on euro area monetary policy. Nevertheless, some of the complainants requested the Constitutional Court to issue an order to execute the judgement, partly on the grounds that non-public documents had not been made available to the complainants. A complaint making reference to some passages of the judgement was already lodged against the crisis PEPP programme at the end of August 2020 due to possible breach of the prohibition of monetary financing by the ECB. It can also be expected that the ECB will have to take the content of the judgement of 5 May 2020 into account in its monetary policy decisions in the future.

On 10 July 2020, Bulgaria and Croatia entered ERM II and simultaneously joined the banking union. Before applying to join ERM II, the two countries had held informal talks with EU institutions, euro area countries and countries participating in ERM II on the conditions of entry. On the basis of these consultations, the two countries pledged to join the banking union at the latest on their accession to ERM II and to adopt a number of other *ex ante* reform measures, only some of them directly related to exchange rate stability. However, the ERM II parties (the ECB and representatives of the euro area countries and Denmark) regarded these measures as so important that they made the two countries' ERM II entry *de facto* conditional on them.¹² In connection with meeting the *ex ante* ERM II entry conditions, the two countries also pledged to adopt other measures that they would implement during their ERM II membership before adopting the single currency. These measures relate to state-owned enterprises, the insolvency framework and the anti-money laundering framework; Bulgaria also undertook to enhance the sustainability of the non-banking financial sector, while Croatia pledged to improve its business environment.

At the same time, the ERM II parties stated that the approach applied to Bulgaria and Croatia should be applied to all future applicants for ERM II entry.¹³ The CNB has long disagreed with this interpretation and has repeatedly objected to it at the European fora it attends. The CNB regards the obligation to join the banking union and the imposition of further *ex ante* conditions going beyond exchange rate stability as being inconsistent with the conditions set by the applicable EU legislation and hence not legally binding on countries that will enter ERM II in the future. The CNB therefore continues to assume that, in accordance with the EU legal framework, the Czech Republic would be obliged to join the banking union on the same date as adopting the euro. The CNB regards banking union entry on ERM II accession and the acceptance of further additional conditions by a specific country to be solely the consequence of a voluntary decision of its political representation following negotiations with the ERM II parties, a decision which cannot have binding precedential effects.

¹¹ Under the programme, the ECB may, among other things, purchase assets issued by the Greek government, even if they do not meet all the PSPP conditions. It is also more flexible in assessing the ratings of assets purchased. In addition, the rules capping purchases of assets of the same issuer or the same issue have been relaxed.

¹² In the case of both countries, the declared aim of these reforms was to make their financial sectors more robust, their institutions stronger and their economic structures more efficient, thereby facilitating their integration into ERM II. Bulgaria thus pledged to reform its financial sector and increase the quality of its institutions and governance, for example, while Croatia committed itself to reforms in the areas of the macroeconomic framework, the anti-money laundering framework, statistics, public sector governance and the financial and administrative burden.

¹³ The EU Council's Legal Service also commented on the issue. It stated in its opinion that it is admissible to set such *ex ante* conditions, including a requirement to join the banking union. The Legal Service also confirmed the necessity to apply the same conditions to other countries seeking to join ERM II in the future. The European Commission adopted the same position in its 2020 Convergence Report, in which it defined "a reinforced approach to ERM II participation...by the applicant Member States" containing a condition of parallel entry into the banking union on ERM II accession at the latest.

The United Kingdom ceased to be a member of the EU on 1 February 2020, when it left the EU institutions.

However, it remains part of the internal market (i.e. the European Economic area, EEA) and a member of the customs union and subject to EU law until the end of 2020 in a transition period agreed under the withdrawal agreement. The transition period was intended to create a time frame for negotiating new parameters of a mutual relationship, either by concluding a free trade agreement or by entering into a more complex contractual mechanism. Until June 2020, there was a possibility that the transition period would be extended by one or two years. As no decision to extend the transition period had been adopted by that date (nor had any such request been made), the transition period will end at the end of 2020. However, the issue of reaching an agreement on new mutual relations remains open. The current optimistic scenario counts on the possibility of agreeing at least a limited free trade agreement. If this scenario materialises, negotiations on mutual relations in areas not covered by the agreement can be expected to continue in the years ahead. The UK will thus remain a third country from the EU's perspective, with all the implications which this entails. This means that, even under the most optimistic future scenario, the conditions for the movement of persons, services and capital between the EU and the UK will be less favourable than had the UK remained in the EEA. This will be particularly apparent in the financial services and data protection areas, where the depth of mutual relations will be determined mainly by unilateral decisions of the European Commission and the UK government on regulatory and supervisory equivalence and data protection adequacy. On the other hand, the UK's exit from the EEA could in the medium term increase the weight of financial centres in the EU and the euro area, to which businesses currently based in the City of London would gradually transfer their presence for activities in the EU. This is anticipated and supported by the Commission in the aforementioned CMU Action Plan.

Brexit has significantly reduced the weight of the group of countries with their own currencies in the EU's common institutions.

In addition, the fragmentation of these countries' opinions and interests, which the UK to some extent previously bridged, is now more apparent than it used to be. Denmark and Sweden are net payers to the EU budget. Moreover, Denmark has negotiated an opt-out from joining the euro area. The rest of the countries outside the monetary union, including the Czech Republic, remain net recipients of payments from the EU budget and are expected to join the euro area as soon as they fulfil the convergence criteria. There are major differences between these countries as regards political will and the steps taken towards euro area entry, especially now that Bulgaria and Croatia have joined ERM II and the banking union and have declared a clear interest in entering the euro area on the earliest possible date.

However, fundamental differences of opinion about the form of further integration also persist among the euro area countries.

On one side, the countries in the south of the euro area are advocating faster integration, with greater risk and fund sharing. On the other, the northern European countries are emphasising budgetary responsibility in individual countries, fiscal stability, and reduction of risks in the EU financial sector. In addition, a group of northern countries consisting of both euro area and non-euro area states has been formed as a counterweight to potential French-German dominance in the EU. Given this diversity of opinion, the non-euro area EU Member States, including the Czech Republic, are probably not currently at risk of being systematically outvoted and marginalised by the euro area countries.

The impacts of the above developments will have to be taken into account in the Czech Republic's future decision on the timing of joining the monetary union.

These developments have fundamentally changed the content of the euro adoption obligation assumed by the Czech Republic on acceding to the EU. In addition to a proper assessment of the functioning of the institutions and regulations created in past years in response to the economic and financial crisis, attention should be paid to new circumstances such as the impacts of the COVID-19 pandemic, the measures adopted in response to it, the ECB's monetary policy, and Brexit. It is evident that the reform of the euro area and the completion of the Economic and Monetary Union are a still unfinished process, the content of which, moreover, is constantly evolving. Likewise, account should be taken of other implications of potential euro area accession, such as the direct costs of participating in the euro area's rescue mechanisms, including the national contribution to the Single Resolution Fund, the limits imposed on national powers in the banking supervision and resolution areas, and the risks associated with potential fiscal problems in certain euro area member states and the vulnerability of their financial sectors.

The series of measures adopted in response to the crisis caused by the COVID-19 pandemic shows a tendency towards centralised problem solving and a more coordinated approach at the EU level.

Although this tendency has not been accompanied by an equally strong commitment by the Member States to give up the relevant powers or bear the costs of the new measures, certain shifts in the inter-institutional balance and an increase in the pressure to establish a fiscal union – as already evident in, for example, the approval of debt financing of the Next Generation EU instrument – cannot be ruled out in the future (for details, see the thematic analysis *Bond issuance by the EU* in this edition of the Alignment Analyses). The current crisis has also highlighted the fact that the euro area has not yet fully dealt with the problems laid bare by the crisis of 2009–2010. The long-standing problem of insufficient convergence between individual euro area member states persists and thus largely predetermines further developments in the euro area. The ambitious

measures adopted in response to the coronavirus pandemic (an increase in the budget via the Next Generation EU instrument and the ECB's crisis programme) can contribute to solving this problem to only a limited extent. The risks arising from some member states' sovereign exposures and high public debt remain unresolved. The system of economic policy coordination in the euro area continues to suffer from a low degree of compliance with legally non-binding – and therefore unenforceable – recommendations. Insufficient compliance with the fiscal rules of the Stability and Growth Pact remains unsatisfactory as well. In light of the above, it should be noted that not all the potential obligations arising from euro adoption for the Czech Republic in the future are known at present. The potential decision about the timing of joining the monetary union is thus still accompanied by major uncertainties.

II. THEMATIC ANALYSES

II.1. MEASURES TAKEN BY MONETARY AND PRUDENTIAL AUTHORITIES IN RESPONSE TO THE CORONAVIRUS PANDEMIC

Vilma Dingová, Zlataše Komárková, Lucie Matějková, Lukáš Pfeifer, Vojtěch Siuda

National governments, central banks and prudential authorities have responded to the economic shock caused by the government restrictions to contain the pandemic. Central banks have focused mainly on easing monetary policy by cutting interest rates and quantitatively easing, on ensuring that financial markets function normally and commercial banks have access to sufficient liquidity, and on maintaining firms' and households' access to necessary funding. The measures taken by macroprudential and supervisory authorities have been aimed at safeguarding financial stability and often also at maintaining banks' lending capacity by adjusting the parameters of various prudential instruments – primarily capital buffers, but also macroprudential instruments in the lending area. The differences in the specific instruments used have stemmed mainly from different initial conditions and different financial system structures.

EU countries took drastic measures this spring to restrict the movement of people in response to the global COVID-19 pandemic. These measures froze economic activity in numerous sectors of the economy, particularly tourism and numerous other services and air travel, and disrupted supply chains in many branches of industry. In most countries, GDP fell sharply and unemployment rose significantly. Given the strong impact of the current crisis on firms and households (unlike the crisis of 2008, which primarily hit the financial sector), making sure these groups have sufficient liquidity has become a key task for governments and central banks. Government revenue and expenditure measures are intended help the entities affected weather the period of lower or no income until the economic environment normalises. The measures taken by central banks are also aimed at calming the financial markets, where nervousness and risk aversion have been mounting and volatility has increased, as well-functioning financial markets are a necessary condition for the smooth transmission of monetary policy.

Central banks have focused mainly on easing monetary policy,¹⁴ ensuring that financial markets function normally, and maintaining firms' and households' access to necessary funding by, among other things, adjusting the parameters of macroprudential instruments. Markets have often stabilised thanks to the very announcement of rescue measures before their actual use, as entities operating on those markets have gained assurance that the central bank will, if necessary, enter the market to safeguard its operation.

Monetary policy has been eased – where there has been room to do so – through sharp interest rate cuts. The CNB has cut its key policy rate (the 2W repo rate) in several steps by a total of 2 pp to 0.25% (see Chart 1), the Polish NBP has lowered its reference rate (the 7D repo rate) by 1.4 pp to 0.1%, and the Hungarian MNB has reduced its base rate (the 1W depo rate) by 0.3 pp to 0.6%; its O/N deposit rate was already negative (-0.05%). The ECB has left its main rate (the refinancing operations rate) unchanged at 0%; its deposit rate (the O/N depo rate) was also already negative (-0.5%). Central banks have also introduced measures, or extended existing ones, giving banks access to liquidity under favourable terms. The ECB has extended its LTRO long-term liquidity scheme and created a new PELTRO pandemic scheme, while the CNB has changed the parameters of its liquidity-providing repurchase operations. Similar repos have also been offered by the Polish NBP. The Hungarian MNB has put in place a programme of long-term secured loans. Some central banks have entered into swap or repo agreements with the Fed and the ECB to ensure foreign currency liquidity and have offered more frequent foreign currency repo tenders or provided foreign currency loans.

Most central banks have been purchasing assets in order to ease further and provide for smoother transmission of monetary policy to long-term rates. This has mainly involved buying government and corporate bonds and other assets. The bond purchases have reduced risk premia and pushed down rates along the entire yield curve, facilitating the funding of governments and firms. The ECB initially expanded its existing securities purchases (APP) and then, as the economic situation deteriorated further, introduced a new PEPP pandemic programme. The Hungarian MNB and the Polish NBP also launched government bond purchases. The size of the purchases relative to GDP so far is shown in Table 1.

¹⁴ Among the central banks of the countries normally monitored in the Alignment Analyses, only the Czech CNB, the Hungarian MNB and the Polish NBP could adopt independent monetary policy measures; the monetary policy of the other countries under review (Germany, Portugal, Austria, Slovakia and Slovenia) is determined by the monetary policy of the ECB in the EU.

Many central banks have also extended their programmes to support lending to households and firms, or created new ones. Central banks are providing liquidity to commercial banks at favourable terms under funding for lending schemes, on condition that banks increase their lending to the real economy. The ECB's programme portfolio includes, for example, an extended TLTRO III programme (under which the ECB has cut rates and eased collateral conditions) and incentives – in the form of lower rates – for banks to lend more. The Polish NBP has set up a Bill Discount Credit programme through which it will repurchase (discount) bills of exchange obtained by banks as collateral for loans provided to non-financial corporations, thereby de facto refinancing these loans for banks. Under the current Funding for Growth Scheme (FGS), the Hungarian MNB has decided to launch a new FGS Go! programme, increasing several times the total amount of funds available to support SMEs. The monetary policy measures introduced by central banks are summarised in the following Table 1.

Table 1: Monetary policy measures introduced by central banks in response to the coronavirus pandemic.
(as of 31 July 2020)

	Total change in rates	Provision of liquidity to banks	Types of bonds purchased	Size of purchases relative to GDP so far	Direct lending support schemes
CZ	-2.0 pp	Liquidity-supplying repos*	---	---	None
HU	-0.3 pp	Long-term secured loans	Government, mortgage and corporate bonds	0.6%	FGS* FGS Go!
PL	-1.4 pp	Repos	Government and government-guaranteed	4.5%	Bill Discount Credit
EA	0 pp	LTRO* and PELTRO	Government, corporate and covered bonds, ABS	4.5%	TLTRO III*

Note: * Existing programmes whose conditions have been changed during the coronavirus crisis.
Source: Central banks' websites.

Macroprudential authorities have adopted a range of measures to maintain banks' ability to lend to the real economy, the most common being the release of capital buffers. Six of the eight countries under review have changed the regulatory requirement for minimum capital buffers (the Czech Republic, Germany, Hungary, Poland, Portugal and Slovakia). However, they have differed in the type of buffers selected (see Table 2). The Czech Republic, Germany and Slovakia have cancelled originally planned increases in their countercyclical capital buffer (CCyB) rates or have lowered those rates. Poland has responded by abolishing the systemic risk buffer, and Hungary and Portugal by changing the buffer for other systemically important institutions. The differences in the changes stem, among other things, from different capital buffer rates applied before the outbreak of the coronavirus crisis, as the Czech Republic and Slovakia were the only countries of those under review that had countercyclical capital buffers in place (see Chart 2).¹⁵ Unlike the other countries under review, Hungary has also relaxed the macroprudential liquidity measure to support banking sector stability. By contrast, Austria has yet to respond to the ongoing coronavirus crisis with any macroprudential instruments.

Some national macroprudential authorities have also called on banks not to make dividend payouts. They have done so due to expected growth in future credit losses and in an effort to use free capital reserves efficiently and prevent them from being released before systemic losses occur. At the EU level, the ESRB has issued a recommendation on profit distribution restrictions during the COVID-19 pandemic.¹⁶

Most of the countries under review have also taken macroprudential measures in the lending area. The Czech Republic, Slovenia and Portugal have also changed their macroprudential instruments mitigating the risks associated with the provision of residential property purchase loans. The Czech Republic and partly also Portugal have abolished the DSTI cap. The Czech Republic has also abolished the DTI cap and raised the upper LTV limit.¹⁷ Slovenia has

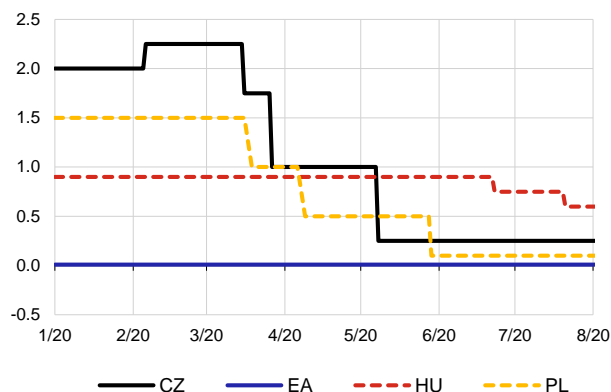
¹⁵ With the exception of Bulgaria, the EU Member States not included in the normally monitored sample (Bulgaria, Denmark, France, Ireland, Lithuania, Luxembourg and Sweden) which applied non-zero CCyB rates before the outbreak of the coronavirus crisis have released their buffers completely (see Chart 2).

¹⁶ In the present situation, releasing capital buffers is one of the measures that, in combination with postponing dividend payouts, can support the resilience of Member States' banking sectors and their ability to finance the real economy without interruption. According to the ESRB recommendation, profit distribution restrictions may be applied until at least the end of 2020.

¹⁷ The DSTI (debt service to income) ratio is the ratio of the loan applicant's average annual expenses arising from total debt (debt service) to net annual income. The DTI (debt to income) ratio is the ratio of the applicant's total debt to net annual income. The LTV (loan to value) ratio is the ratio of the loan amount to the value of collateral.

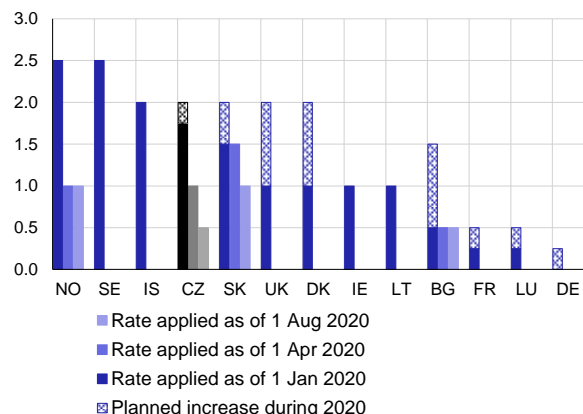
allowed banks to temporarily exclude income declines caused by the pandemic from the calculation of client creditworthiness.

Chart 1: Central banks' interest rate cuts in response to the coronavirus pandemic
(%)



Source: Central banks' websites.

Chart 2: CCyB rates in European countries
(% of total risk exposure)



Source: ESRB, BCBS.

Table 2: Macroprudential measures introduced in response to the coronavirus pandemic
(as of 29 July 2020)

Macroprudential measures	
CZ	Cancellation of planned increase in CCyB rate from 1.75% to 2%. Reduction of CCyB rate by 0.75% to 1% on 1 April 2020 and subsequent reduction to 0.5% on 1 July 2020. Recommendation not to pay dividends. DTI cap cancelled and upper LTV limit increased from 80% to 90% on 1 April 2020. DSTI cap cancelled on 1 July.
AT	No changes.
DE	Cancellation of planned increase in CCyB rate from 0% to 0.25%.
PT	Postponement of phase-in of capital buffers for other systemically important institutions. Activation of some measures announced by ECB and EBA for smaller Portuguese banks, including possibility to temporarily operate below selected capital and liquidity requirements, recommendation to restrict dividend distributions, extension of deadlines of reporting obligations, and rescheduling of on-site inspections and stress test exercise. Short-term loans (up to 2 years) provided to bridge temporary liquidity shortages of households need not comply with DSTI cap between 1 April and 30 September 2020.
HU	Foreign Exchange Coverage Ratio (FECR) – maximum difference between foreign exchange assets and liabilities of credit institutions in per cent of total assets – reduced from 15% to 10%. Capital requirement for systemically important institutions temporarily repealed on 1 July 2020.
PL	3% systemic risk buffer repealed.
SI	Maximum level of allowed bank account fees reduced (bigger reduction for more disadvantaged groups). Banks allowed to temporarily exclude income declines caused by epidemic when calculating creditworthiness. Banks forbidden from distributing profit.
SK	Cancellation of planned increase in CCyB rate from 1.5% to 2%. Reduction of CCyB rate by 0.5% to 1% on 1 August 2020.

Note: An overview of macroprudential policy tools and their current parameters in individual EU countries is available on the European Systemic Risk Board (ESRB) website: <https://www.esrb.europa.eu/national_policy/html/index.en.html>

Source: IMF, <<https://www.imf.org/en/Topics/imf-and-covid19/Policy-Responses-to-COVID-19>>

II.2. THE FISCAL RESPONSE TO THE CORONAVIRUS PANDEMIC IN SELECTED EU MEMBER STATES AND THE EU AS A WHOLE

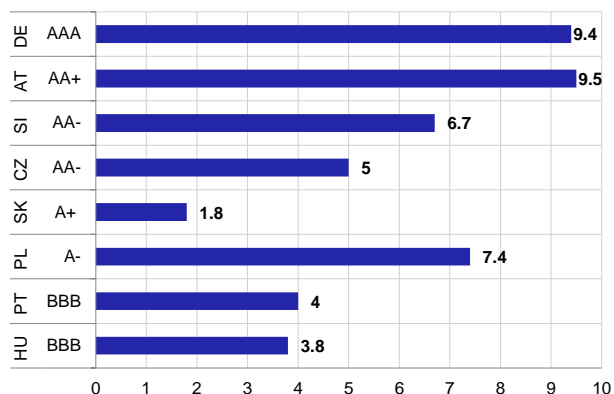
Pavla Netušilová, Marek Souček, Lena Stránská

Fiscal policy in EU Member States has played a key stabilising role in response to the negative economic consequences of the outbreak of the COVID-19 pandemic. Among the countries under review, the largest fiscal expansions to support the economy have been approved in Germany and Austria, i.e. countries with the best government bond ratings and hence a relatively favourable state of public finance. The support measures in the countries under review have mainly taken the form of subsidies and transfers for firms and households. Significant measures to boost Member States' economies have also been adopted at EU level.

To mitigate the negative effects of the economic downturn caused by the coronavirus crisis, the governments of EU Member States have adopted support measures with significant financial impacts on their budgets. To maintain employment, wage cost subsidies (“Kurzarbeit”) have been introduced with the aim of overcoming temporary decline in demand and production and avoiding lay-offs and insolvencies. Various forms of one-off subsidies have been targeted at companies hit by the adverse situation (particularly micro firms and SMEs). Partial rent payment schemes have been introduced for firms in many countries to avoid chain insolvencies. Household income support has consisted mainly in cash benefits intended to partly compensate people for income decline linked with restrictions on the movement of persons and with care for under-aged children staying at home due to school closures. In the spring, due date for many taxes was postponed and tax advances and penalties were waived in order to maintain liquidity among economic agents.

Chart 1: Size of COVID-19 fiscal packages and S&P rating

(size of package in % of 2019 GDP)

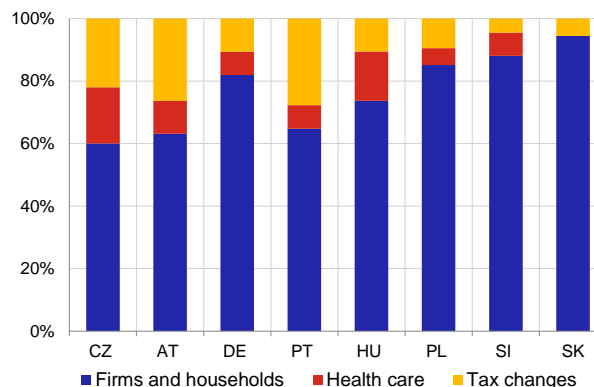


Note: The validity of many support measures reducing the income declines of households and firms has been extended into the period after the end of the deepest crisis, therefore their final extent and fiscal impact will not become clear until later.

Source: Standard & Poor's Sovereign Debt Ratings in the period of adoption of fiscal packages (March–June 2020).

Chart 2: Allocation of support from COVID-19 fiscal packages

(% of package amount)



Source: IMF, OECD database of COVID-19 measures, CNB calculations (as of 30 June 2020).

The size of the fiscal support packages relative to the size of the economy varies widely across the EU Member States under review. The largest fiscal packages – of almost 10% of GDP – have been approved in Austria and Germany, while Slovakia has announced the smallest fiscal package of less than 2% of GDP (see Chart 1). The scale of support in the individual Member States has been determined to a large extent by the room for additional fiscal stimulus and the current state of their public finance. In addition to public finance, fiscal space is largely determined by financial costs and access to external financing in times of financial stress. The comparison in Chart 1 shows that the countries which have approved the largest fiscal support packages, i.e. Germany and Austria, also have had the best ratings. By contrast, countries with substantially worse ratings, such as Hungary and Portugal, have planned a significantly smaller fiscal response in relation to the size of their economies. Slovakia is the only exception in this regard, having approved a smaller amount of support despite its strong rating. This may be explained by the Slovak public finance deficits recorded in recent years. Given the higher structural deficits posted in 2018 and 2019, the room for additional fiscal expansion is more limited in Slovakia and Hungary than, for instance, in Germany, which previously recorded structural surpluses, or

in Austria, which had a near-zero structural balance in 2019. In Portugal, the size of the fiscal response has been limited by high government debt.

In all the countries under review, the bulk of introduced fiscal measures has been focused on supporting firms and households in the form of various subsidies and benefits (see Chart 2). Tax cuts and tax relief have accounted for a substantially smaller part of approved packages. Increased health care expenditure – related mainly to the hasty purchase of medical supplies and the payment of additional bonuses to frontline health care workers – has not exceeded 1% of GDP in the countries under review. In addition to one-off fiscal measures, which have had an immediate impact on public finance, all the EU countries under review have supported the business sector through state-guaranteed bank loans, which will only have an effect on public finance should the guarantees materialise. The value of government guarantees has not exceeded 10% of GDP in the EU countries under review, with the exception of Germany, where they have represented more than 30% of GDP.

In 2020, a series of major measures have also been taken at EU level to mitigate the effects of the economic crisis caused by the COVID-19 pandemic and to contain its consequences. A set of three measures, amounting to EUR 540 billion, was approved in phase one at the end of April. The first instrument, SURE,¹⁸ provided EUR 100 billion to help prevent growth in unemployment through various forms of Kurzarbeit. This instrument enables Member States to apply to the Commission for loans to finance their national schemes under favourable terms. The Commission will borrow the funds for the scheme on the financial markets on behalf of the EU, with EUR 75 billion guaranteed from the EU budget and the rest from individual guarantees provided by the Member States. The European Commission plans to assess the effectiveness of SURE by the end of 2020. A condition for its approval was that it would be a temporary instrument. However, the question is whether, based on the assessment, attempts will be made to convert it into a permanent facility, which would essentially overlap with the older plan to establish a European unemployment insurance. The second measure approved is an SME support scheme administered with the help of a EUR 200 billion guarantee fund provided by the European Investment Bank. The third measure in phase one is a credit line from the ESM which will allow each euro area country to access favourable loans of up to 2% of their 2019 GDP until the end of 2022. A total of EUR 240 billion has been released for these loans. The Balance of Payments assistance facility remains available for similar purposes to EU Member States that have not yet adopted the euro.

In the second phase, the European Commission unveiled a proposal for a Next Generation EU (NGEU) recovery instrument to temporarily reinforce the Multiannual Financial Framework (MFF) for 2021–2027. According to the Commission, the proposed funds of EUR 750 billion will be divided into different programmes, each falling under one of three pillars: (i) supporting the Member States to recover through investments and reforms, (ii) kickstarting the economy and mobilising private investment, and (iii) learning the lessons of the crisis and addressing strategic challenges. The Recovery and Resilience Facility¹⁹ will provide the bulk of the funds, which will be provided in the form of grants or preferential loans. The European Council discussed the proposed NGEU in July 2020. It left the overall size of the programmes unaltered but significantly changed the originally proposed grant-to-loan ratio²⁰ (EUR 390 billion will be distributed in grants and EUR 360 billion in preferential loans).

The approved NGEU funding method is unprecedented, as in effect it breaks the previously respected rule that EU spending should, in principle, not be financed by issuing bonds.²¹ The European Commission will borrow the necessary funds on behalf of the EU on the financial markets, with the funds to be repaid by 2058 at the latest.²² The EU bonds will be guaranteed by the EU budget, which is in turn guaranteed by the individual Member States. The funds provided to Member States as grants will be financed directly from the EU budget. The funds drawn in the form of preferential loans will be paid in the usual way from the national budgets of the individual beneficiaries. The overall size of the programme makes this an unprecedented step, one that until recently the northern Member States were sceptical about (especially seen in the context of the further EUR 75 billion, also guaranteed by the EU budget, which the EU plans to borrow during the same period to fund SURE). Although the instrument is formally a temporary measure, based

¹⁸ Instrument for temporary Support to mitigate Unemployment Risks in an Emergency (SURE).

¹⁹ The Recovery and Resilience Facility replaces the Commission's former proposals for the creation of a Budgetary Instrument for Convergence and Competitiveness (in the euro area) and the Convergence and Reform Instrument (for the non-euro area Member States), which were under discussion for most of 2019.

²⁰ In its original proposal, the European Commission had planned to distribute EUR 500 billion in grants and EUR 250 billion in loans.

²¹ Until now, exceptions to this principle have been limited to situations such as those arising during, or in the context of, the 2009–2010 financial crisis, and those involving the provision of financial assistance to third countries. The issue of funding EU programmes is discussed in detail in the thematic analysis *Bond issuance by the EU* in this edition of the Alignment Analyses.

²² The European Commission lends money under the new instrument to Member States at the same terms as those under which it issued its bonds (i.e. with the same interest, the same maturity and the same nominal amount). Thanks to the EU's high rating, some EU Member States can thus obtain loans under better conditions than they would be able to achieve on the financial markets on their own.

on an exception allowed by Article 122 of the Treaty on the Functioning of the European Union, it could be argued that it involves the de facto creation of common European bonds, which have been a subject of fundamental dispute among the Member States for years. The year 2020 thus marks another significant step towards fiscal union, which in this case is not limited to the euro area countries, but affects all Member States via guarantees from the budget of the EU as a whole. In the context of the need to raise funds for NGEU and SURE (including repayment of the funds borrowed on the financial markets), the European Council has approved a plan for a new own resource of the EU budget based on a fee paid by Member States on non-recycled plastic packaging waste. The European Council has also called on the Commission to put forward a proposal on a digital levy – targeted primarily at large technology corporations – and a proposal on a carbon border adjustment mechanism.²³

²³ The carbon border adjustment mechanism is intended to ensure that firms that produce in the EU, which must comply with strict EU climate protection regulations, are not disadvantaged compared to firms producing outside the EU, which are not subject to those regulations. The mechanism will involve a form of surcharge that firms producing outside the EU would have to pay when entering the EU market. This would simultaneously make it disadvantageous for firms producing in the EU to relocate their production outside the EU.

II.3. BOND ISSUANCE BY THE EU

Lena Stránská, Marek Souček

EU primary law provides scope for common European bonds to be issued in specific cases. However, the current decision to fund selected EU programmes in response to the COVID-19 pandemic by issuing European bonds is unprecedented in terms of scope and other parameters and has the potential to affect the development of the EU in many important areas.

EU primary law provides scope for common European bonds to be issued in a specific set of cases. This is so that the EU can raise funds to support Member States in economic difficulty and provide financial assistance to countries outside the scope of development cooperation which are geographically, economically and politically close to the EU and which also receive support from the International Monetary Fund. In each of these cases, there is a specific programme based on a special EU regulation, on the basis of which the European Commission issues bonds on behalf of the EU, which in turn fund the programme in question.

(i) The first case is the provision of EU financial assistance where a Member State is seriously threatened with severe difficulties caused by natural disasters or exceptional occurrences beyond its control under Article 122 of the Treaty on the Functioning of the European Union (TFEU). On this basis, the European Financial Stabilisation Mechanism (EFSM) was established in 2010. The EFSM allows the Commission to borrow up to EUR 60 billion on the financial markets on behalf of the EU. Under EU law, the EFSM is open to any EU Member State wishing to participate, but over time an agreement has been reached to focus exclusively on euro area countries. Between 2011 and 2015, the mechanism provided assistance to Ireland, Portugal and Greece; most of these funds have yet to be repaid. The EFSM was designed as a temporary solution and was effectively replaced in 2012 by the permanent European Stability Mechanism (ESM), which provides funding for euro area countries only.²⁴ Article 122 of the TFEU also forms the legal basis for the current SURE²⁵ programme and the proposed Next Generation EU (NGEU) programme.

(ii) Another category is financial assistance for non-euro area Member States, based on Article 143 of the TFEU, which provided the basis for the creation of the EU balance of payments assistance programme. It can be used to provide financial assistance of up to EUR 50 billion. Between 2008 and 2010, Romania, Hungary and Latvia obtained funds from this programme, most of which have already been repaid.

(iii) The final case is the provision of macrofinancial assistance to third countries under Article 212 of the TFEU. This assistance is provided primarily to countries from the EU's wider environs, specifically Ukraine, Armenia, Moldova, Georgia, Kyrgyzstan, Tunisia and Jordan. Around EUR 5 billion is currently borrowed through this programme.

As of the end of October 2020, the EU had borrowed around EUR 69 billion on bond markets to fund the assistance provided under the aforementioned programmes. Loans to euro area countries most severely hit by the financial crisis of 2009–2010 account for most of the outstanding amounts.

Various rules have been applied thus far to the issuing of EU bonds, some of them explicitly enshrined in EU legislation and others more the result of ad-hoc political agreements and practice. The bonds issued constitute an EU commitment, with the EU budget acting as guarantor in case the recipient of assistance does not repay its debt. Given the TFEU provision prohibiting an EU budget deficit, the EU institutions (specifically the Commission, the Council and the European Parliament) are committed to providing sufficient funds to enable the EU to meet its obligations to creditors.²⁶ The Commission is thus entitled to use budget margins,²⁷ to redirect some budget expenditures, and to

²⁴ The EFSM was intended from the outset as a temporary solution and was supposed to end in 2013, partly due to doubts as to whether there was sufficient underpinning for its creation in EU primary law. Following an amendment of Article 136 of the TFEU, the ESM became its permanent successor, as decided by the European Council in December 2010. However, the establishment of the ESM required the euro area member states to sign an intergovernmental agreement specifying its details. This prolonged the establishment process, and as a result, the mechanism did not start operating until autumn 2012. The EFSM is still in existence and currently administers the programmes provided through it in the past. However, it no longer provides any new support.

²⁵ A EUR 17 billion inaugural bond under the SURE instrument was issued on 20 October 2020. The bond met with very strong investor interest and was more than 13 times oversubscribed, with bids exceeding EUR 233 billion. It consisted of two tranches with a 10-year and 20-year maturity. The biggest investors in the 10-year tranche were fund managers (41%) and central banks (37%), while bank treasuries bought 15%. Investors from Europe purchased 84% of the total, with representatives of the UK (20%), Germany (17%), the Benelux countries (15%) and France (12%) dominating. Investors from Asia were the largest non-European buyers (9%). The dominant investors in the 20-year tranche were fund managers (46%) followed by bank treasuries (25%), central banks (13%) and insurance and pension funds (13%). Europe accounted for 96% of the total, with investors from Germany (24%), France (19%), the UK (16%) and the Benelux countries (16%) represented most strongly.

²⁶ Summaries published by the Commission for the period since 2011 give four main categories of EU creditors: fund managers (29%), banks (28%), central banks (21%) and insurance and pension funds (20%). Their regional breakdown is strongly dominated by European creditors,

require Member States to pay additional contributions to the EU budget to ensure timely repayment of EU commitments. The funds raised by the Commission by issuing EU bonds on the financial markets may not be used to fund an EU budget deficit. Finally, Member States' commitments to the EU budget are excluded from their government debt statistics. An unwritten rule – one which has been applied without exception so far – is that funds borrowed in this way may be provided to Member States solely as loans. These loans must be earmarked for a clearly-defined programme approved specifically for the given country and listing the conditions the country must meet in order to obtain the funds. The maturity of the EU bonds issued so far ranges from three to thirty years (the average term of EFSM loans to euro area countries is 19½ years).

Compared to previous practice, a number of fundamental changes have been made with regard to the issuing of bonds for the purposes of funding programmes to mitigate the economic impacts of the COVID-19 pandemic:

(i) A substantial part of the funds from NGEU will be provided as grants, not loans. The beneficiary Member States will not have to repay these grants. The EU budget will thus no longer only serve as a means of providing guarantees, but will be used directly to repay commitments to creditors, i.e. buyers of common European bonds.

(ii) For the first time, funds will not only be channelled to crisis-hit countries, but will be available to all EU Member States under certain conditions. In a sense, this decision constitutes an extensive interpretation of Article 122 of the TFEU, which stipulates that funds should be directed to Member States in difficulties.

(iii) The total planned borrowings of EUR 825 billion (EUR 750 billion for NGEU and EUR 75 billion for SURE to help prevent growth in unemployment) are unprecedentedly high.

(iv) As a result of the aforementioned specificities, coupled with the obligation to provide sufficient funds to repay the EU's commitments, the own resources ceiling under the EU's Multiannual Financial Framework (MFF) for 2021–2027 will be raised substantially (by 0.6%) to 2% of the EU's gross national income (GNI).

(v) Bonds associated with the COVID-19 pandemic will have longer maturities than EU bonds issued in the past, which can be up to 37 years.²⁸

(vi) Under SURE, EUR 25 billion of the total of EUR 100 billion is to be guaranteed by the individual Member States based on the ratio of their GNI to the EU's GNI.²⁹ To this end, a guarantee agreement between the EU and individual Member States has been used for the first time, regardless of whether or not a Member State decides to draw funds from the programme. All the Member States must provide their guarantee (by ratifying the relevant guarantee agreement) in order for the programme to be launched.

The changes in the bond-issuing conditions described above and the use of the funds raised in this way have the potential to substantially affect the future development of the EU. The EU budget guarantees and the increase in the MFF commitment ceiling have transferred the primary responsibility for repaying part of the debt from the Member States to the EU as a whole.³⁰ This opens up the possibility of permanent issuing of common European bonds or the establishment of a fully fledged fiscal union in the future. A related question is whether and to what extent the temporary nature of the instrument can be maintained in the long term, given that the funds will be repaid until 2058.

clearly led by Germany and Austria (together 33%) followed by the UK and Ireland (together 17%). In third place are creditors from Asia (12%), closely followed by France (11%). Representatives of the Benelux countries and Switzerland also have large shares (9% and 7% respectively).

²⁷ The budget margin is the difference between funds that have a specific purpose assigned to them in the budget and the maximum funds that can theoretically be used in the budget in the given period. This difference thus essentially forms a budget reserve giving budgetary authorities the flexibility to respond to unexpected situations or strengthen certain parts of the budget where necessary. Budget reserves are often used in crisis situations (examples include the provision of financial assistance to deal with a natural disaster in a Member State, and recently the initial response to the COVID-19 pandemic before specific measures were introduced) or, for example, in situations where EU commitments guaranteed by the EU budget have to be repaid.

²⁸ Lending will commence in 2021 and end at the end of 2026 at the latest. The repayment period will run until 2058.

²⁹ Based on this criterion, the Czech Republic's share was set at just under 1.5% of the total guarantees.

³⁰ If a Member State fails to repay a loan (or part thereof) granted to it under NGEU, an amount equal to the outstanding liability will be repaid directly from the EU budget. If there is enough room in the current budget, the funds will be repaid directly from it up to the approved budget ceilings. If there are insufficient funds in the current budget, the raised MFF commitment ceiling will be used (the Member States have agreed to raise the MFF commitment ceiling by 0.6% to ensure sufficient capacity to repay the EU's commitments at any time) and, to cover that commitment, the Member States will be required to make additional contributions proportionate to their shares stipulated in the EU budgetary formula.

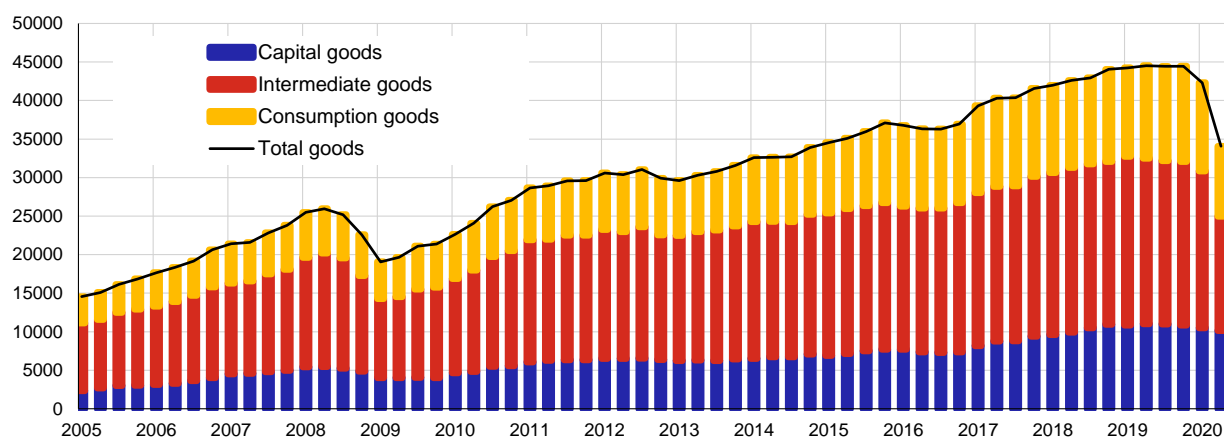
II.4. THE IMPACT OF THE PANDEMIC ON INTERNATIONAL TRADE AND THE ROLE OF GLOBAL PRODUCTION CHAINS

Oxana Babecká Kucharčuková, Jan Brůha

International trade, which has long been a major contributor to global economic growth, is also one of the main mechanisms of the transmission of economic shocks between countries. Much of the decline in international trade observed during the coronavirus pandemic has been driven by a decline in trade in intermediate goods. This reflects the increasing role of global production chains, which amplify the transmission of economic shocks and foster growth in business cycle synchronisation between European countries.

International trade, which undoubtedly contributes to the long-term growth of the global economy, is also one of the key mechanisms through which positive and negative economic shocks are transmitted between countries. A change in economic activity in one country is naturally reflected in a change in its demand for exports from its trading partner countries. The openness of European economies has long been growing, and this is especially true of Central European countries following their accession to the EU.³¹ However, in addition to the direct shock transmission channel described above, the role of international trade is magnified by the existence of global production chains, as economic shocks have an impact on all the countries participating in these chains.³² A consequence of this effect is high sensitivity of international trade to changes in economic activity.³³

Chart 1: Structure of Czech goods exports
(CZK millions; current prices)



Source: Eurostat.

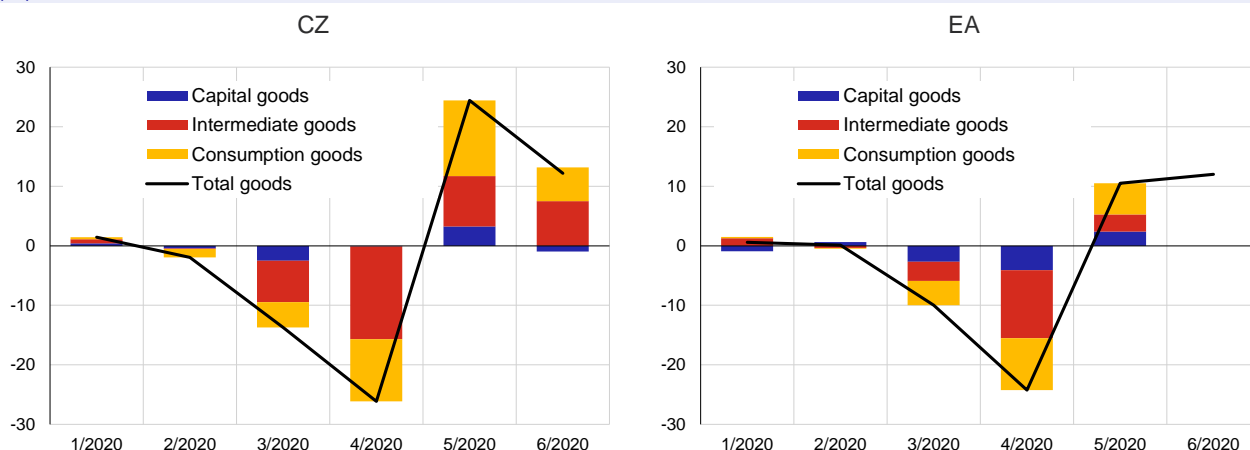
The growing role of global trade chains is evidenced by the high share of intermediate goods exports in total goods exports. Intermediate goods account for around half of total Czech goods exports (see Chart 1). This segment also has the greatest impact on export growth. Its effect is particularly strong during economic downturns, such as that caused by the current coronavirus pandemic. In April 2020, its contribution to the decline in exports was almost 60% in the Czech Republic (see Chart 2, left-hand side) and nearly 50% in the euro area (see Chart 2, right-hand side).

³¹ Babecká Kucharčuková and Brůha (2018).

³² Levchenko et al. (2010).

³³ Yi (2003).

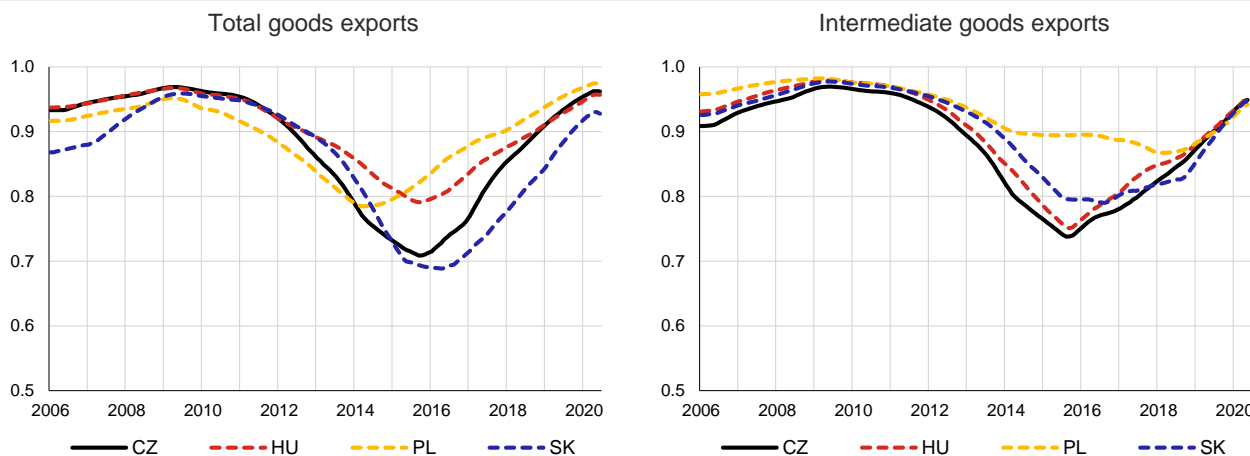
Chart 2: Breakdown of month-on-month changes in goods exports from the Czech Republic and the euro area by goods category
(%)



Source: Eurostat, CNB calculations.

Intermediate goods exports also play a big role in Central European countries, fostering alignment of their exports with the euro area, which goes up during crises. This reflects these countries' growing involvement in the international division of labour. Chart 3 (left-hand side) shows an estimate of the time-varying correlations between total goods exports from the V4 countries and exports from the euro area from the V4 countries' accession to the EU to the present. The correlations are high over the entire period and rise further during economic crises, be it the 2009–2010 global financial crisis or the 2020 coronavirus pandemic. The correlations between intermediate goods exports have qualitatively the same profile as those between total goods exports and are also slightly higher (see Chart 3, right-hand side).

Chart 3: Time-varying correlation between goods exports from the V4 countries and exports from the euro area



Note: Correlation of year-on-year growth at monthly frequency.
Source: Eurostat, CNB calculations.

Global production chains and related intermediate goods trade amplify the transmission of economic shocks and thus also the synchronisation of economic activity between countries; this is particularly important in times of economic crisis.³⁴ The importance of these factors for the Czech and other Central European economies is growing over time, and rose particularly after their accession to the EU. The high correlation of intermediate goods exports shows that international trade is a strong mechanism through which a high degree of alignment will persist between the countries of Central Europe and those of the euro area during the current pandemic downturn. This means that crisis periods do not reduce the symmetry between EU countries and hence do not create additional barriers to euro adoption.

³⁴ Synchronisation of economic activity in EU countries was dealt with in a thematic analysis in the 2019 Alignment Analyses (Babečková Kucharčuková and Brůha, 2019).

III. CHARTBOOK

The traditional analyses assess the evolution of individual indicators over time and in comparison with selected countries. These countries are either euro area members showing similar features to the Czech Republic in terms of economic level or trade integration, or are countries expected to adopt the euro in the future. The above selection is not related to any assessment of how successfully these economies have performed in the euro area. Germany, the largest trading partner of the Czech Republic, also provides a useful benchmark as a core country of the euro area. However, the large weight of Germany in the calculation of aggregate or average indicators for the euro area must be taken into account when making comparisons with those economic indicators.

The euro area as a whole is abbreviated as EA in the tables and charts, i.e. unless indicated otherwise in a note, this refers to the EA19:

AT	Austria
BE	Belgium
CY	Cyprus
DE	Germany
EE	Estonia
EL	Greece
ES	Spain
FI	Finland
FR	France
IE	Ireland
IT	Italy
LT	Lithuania
LU	Luxembourg
LV	Latvia
MT	Malta
NL	Netherlands
PT	Portugal
SI	Slovenia
SK	Slovakia

The selected non-EA countries under comparison are:

HU	Hungary
PL	Poland

III.1. THE CZECH REPUBLIC'S CYCLICAL AND STRUCTURAL ALIGNMENT WITH THE EURO AREA

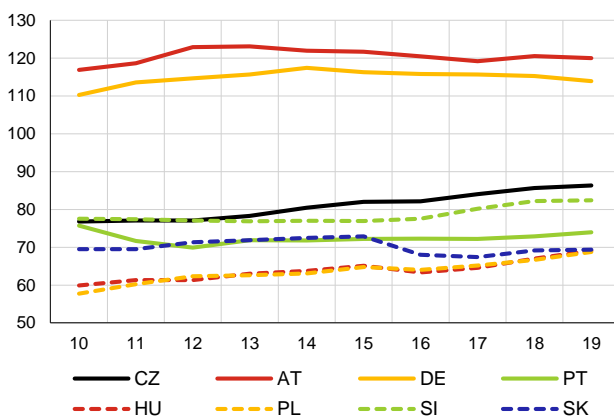
III.1.1. Direct alignment indicators

-  Real economic convergence³⁵
-  The Czech Republic's cyclical alignment with the euro area
-  Structural similarity of the Czech economy to the euro area economy
-  Trade links with the euro area
-  Intensity of intra-industry trade with the euro area
-  Ownership links with the euro area
-  Financial cycle alignment
-  Interest rate convergence vis-à-vis the euro area
-  Volatility of the Czech currency against the euro
-  Alignment of the Czech koruna with the euro
-  Financial cycle alignment

REAL ECONOMIC CONVERGENCE

Czech GDP continues to converge to the euro area average, but the lag behind advanced euro area countries remains significant.

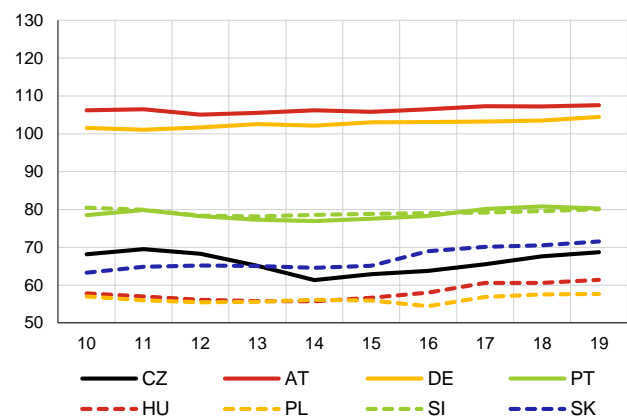
GDP per capita at purchasing power parity (PPP)
(EA = 100)



Source: Eurostat, CNB calculations.

The process of price level convergence – where the Czech Republic lags even further behind advanced countries – also continues.

Price level of GDP
(EA = 100)



Source: Eurostat, CNB calculations.

³⁵ The colours and directions of the arrows are explained in the Introduction to this document.

The real exchange rate of the koruna has appreciated significantly since the exit from the exchange rate commitment. Compared to 2009, it has strengthened the most of all the countries under review in the period up to 2019.

Real exchange rate against the euro (HICP deflated)

(2009 = 100; a rise in the index means appreciation of the real exchange rate)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
CZ	104.1	106.5	105.2	101.8	96.1	97.0	98.3	101.9	104.8	106.1
AT	100.1	100.9	101.0	101.7	102.8	103.4	104.2	104.9	105.2	105.5
DE	99.5	99.3	99.0	99.2	99.5	100.0	100.2	100.3	100.5	100.7
PT	99.8	100.6	100.9	100.0	99.4	99.7	100.1	100.1	99.5	98.6
HU	104.9	104.6	104.2	101.9	97.6	97.0	96.8	98.3	96.4	96.6
PL	109.4	107.3	106.9	106.0	106.0	105.0	100.3	102.9	102.2	102.2
SI	100.4	99.8	100.1	100.7	100.6	99.7	99.3	99.3	99.5	100.0
SK	99.1	100.4	101.6	101.7	101.2	100.7	99.9	99.8	100.6	102.1

Source: Eurostat, CNB calculations.

As in previous years, real interest rates in the Czech Republic remained negative in 2019, although less significantly than in most of the countries under review.

Real 3M interest rates

(%, ex post, HICP-deflated)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
CZ	0.1	-0.9	-2.4	-0.9	-0.1	0.0	-0.4	-2.0	-0.7	-0.4
AT	-0.9	-2.1	-2.0	-1.9	-1.2	-0.8	-1.2	-2.5	-2.4	-1.8
DE	-0.3	-1.1	-1.5	-1.4	-0.6	-0.2	-0.6	-2.0	-2.2	-1.7
PT	-0.6	-2.1	-2.1	-0.2	0.4	-0.5	-0.9	-1.9	-1.5	-0.7
HU	1.4	2.5	2.3	2.4	2.5	1.5	0.5	-2.2	-2.7	-3.1
PL	1.2	0.6	1.2	2.2	2.5	2.5	1.9	0.1	0.5	-0.4
SI	-1.2	-0.7	-2.2	-1.7	-0.2	0.7	-0.1	-1.9	-2.2	-2.0
SK	0.1	-2.6	-3.1	-1.2	0.3	0.3	0.2	-1.7	-2.8	-3.1

Source: Eurostat, CNB calculations.

Labour market tightness fostered further convergence of Czech wages in euro terms to the euro area average.

Average wage per employee in EUR

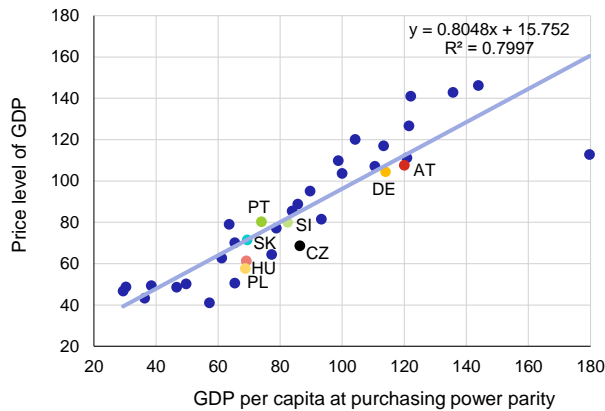
(EA = 100)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
CZ	39.2	40.6	39.6	37.7	35.9	36.9	38.2	41.1	44.6	46.3
AT	104.4	104.4	105.2	105.8	106.3	106.9	108.1	108.0	108.8	109.7
DE	93.9	94.7	95.4	95.6	97.1	98.5	99.5	100.4	101.1	102.2
PT	55.3	53.2	50.6	51.5	49.9	49.4	49.3	49.6	49.8	50.1
HU	31.6	31.8	31.1	29.9	28.5	28.6	28.8	30.5	30.8	32.3
PL	30.6	30.6	30.6	30.5	30.9	31.0	30.8	32.8	34.6	36.1
SI	63.8	63.5	61.7	61.0	60.9	61.0	62.2	63.0	64.1	65.6
SK	36.5	36.5	36.7	37.0	37.3	38.1	38.5	39.9	41.2	42.9

Source: AMECO, CNB calculations.

The Czech price level is still below the level corresponding to GDP per capita by international comparison.

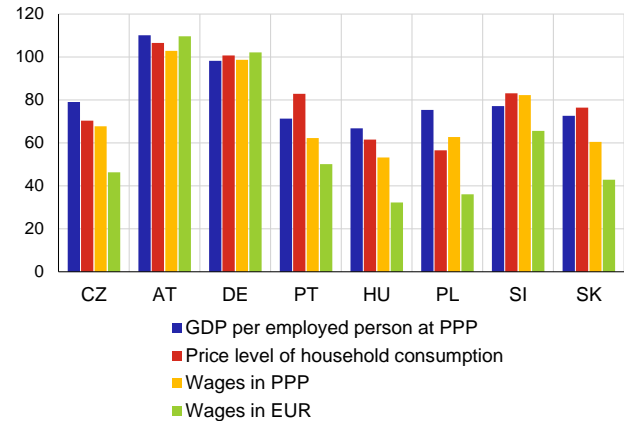
GDP per capita at purchasing power parity versus the price level (2019, EA = 100)



Source: Eurostat, CNB calculations.

Czech wages at purchasing power parity are roughly 68% of the euro area average. In euro terms, they are only around 46%.

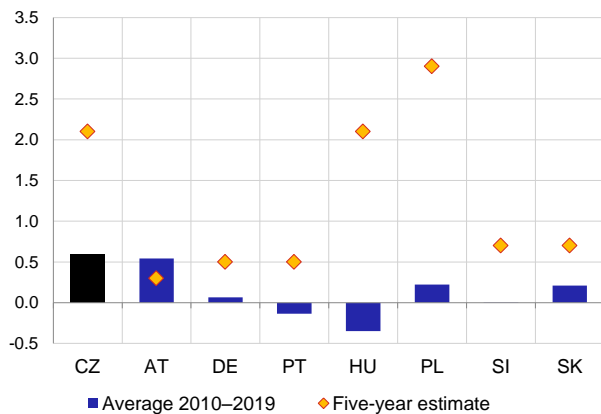
Other indicators of long-term convergence (2019, EA=100)



Source: Eurostat, EC, CNB calculations.

The real exchange rate of the koruna has appreciated by 0.6% a year on average over the last ten years. Its future annual equilibrium rate of appreciation is estimated at close to 2.1%.

Real exchange rate appreciation: average for last ten years and estimate for next five years (EA = 100, HICP-deflated)

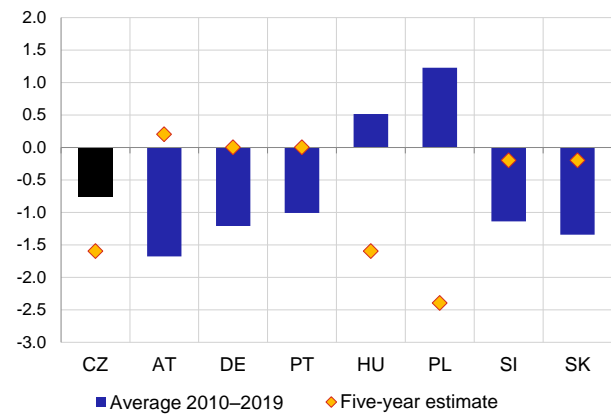


Note: The chart shows the geometric mean for 2010–2019. The estimate of the average pace of equilibrium real exchange rate appreciation for the next five years is based on a panel regression linking the price level of final consumption of households compared to the euro area average with GDP at purchasing power parity per capita.

Source: Eurostat, CNB calculations.

Czech real interest rates would probably be negative following euro adoption. However, they have also been negative on average over the past ten years.

Real 3M interest rates: average for last ten years and estimate after euro adoption (% , ex post, HICP-deflated)



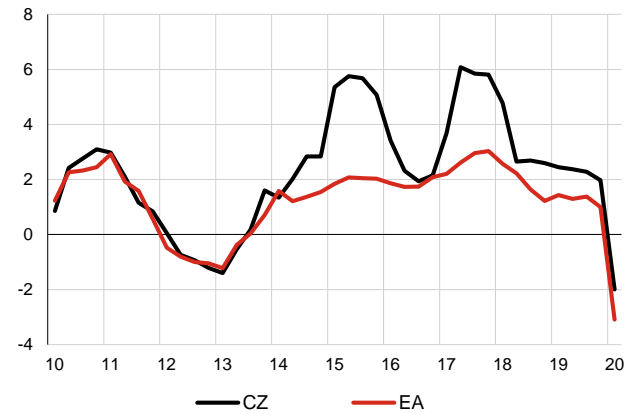
Note: Simple arithmetic mean for 2010–2019. The estimated average equilibrium real average interest rate after euro adoption is derived from the estimate of the pace of equilibrium real exchange rate appreciation, assuming a zero money market risk premium and an equilibrium real interest rate in the euro area of 0.5%.

Source: Eurostat, CNB calculations.

CYCLICAL ALIGNMENT OF ECONOMIC ACTIVITY

The growth of the Czech economy has been higher than that of the euro area over the last five years.

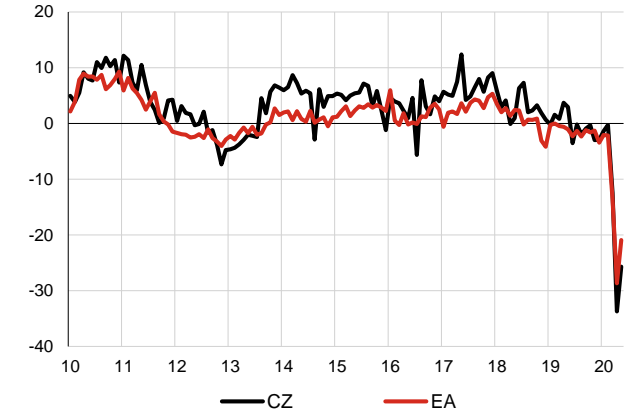
Real GDP
(y-o-y, %)



Source: Eurostat, CNB calculations.

This has been due to, among other things, growth in industrial production, which has long exceeded the euro area average.

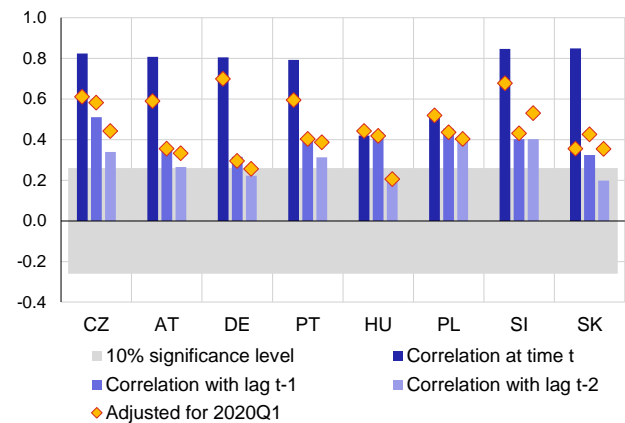
Industrial production index
(y-o-y, %)



Source: Eurostat, CNB calculations.

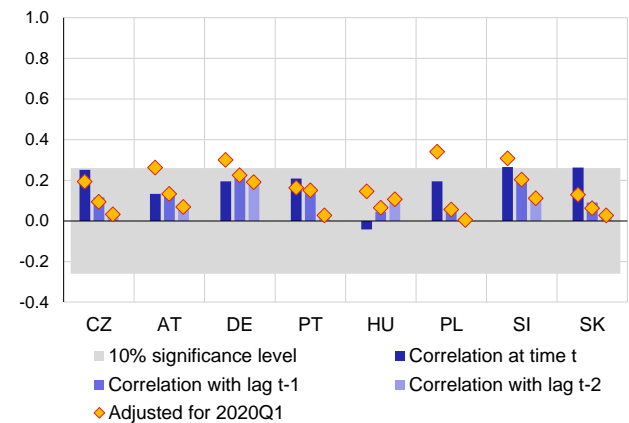
The long-term alignment of the Czech Republic's business cycle with the euro area was high in the period under review, particularly relative to the other non-euro area countries under comparison.

Correlation coefficients of GDP with the euro area



However, the correlation between Czech exports to the euro area and euro area GDP fell significantly year on year (even after adjustment for the last quarter), perhaps indicating a decrease in alignment.

Correlation coefficients of exports to the euro area with euro area GDP

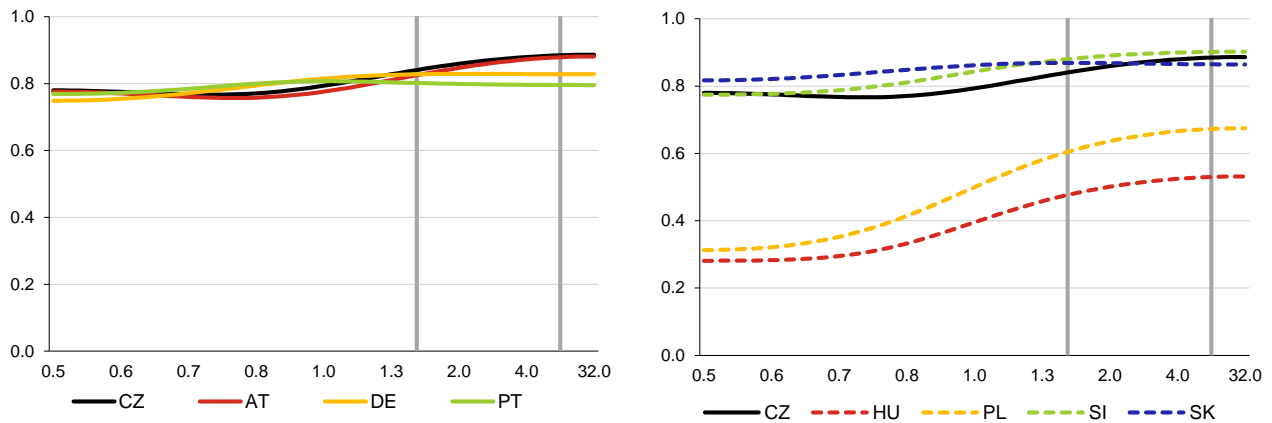


Note: The calculation is based on the quarter-on-quarter differences in the logarithms of the seasonally adjusted data. The columns indicate the lag of the euro area time series relative to the given country's time series. For example, t-1 denotes a lag of one quarter. The statistical significance of the correlation coefficients is indicated in the chart: values statistically significant at the 10% level lie in the white part of the chart (meaning that values in the grey part of the chart are not statistically significant at the 10% level).

Source: Eurostat, CNB calculations.

The high alignment of the Czech economy with the euro area is confirmed by the dynamic correlations between business cycles in the monitored band of 1.5–8 years.

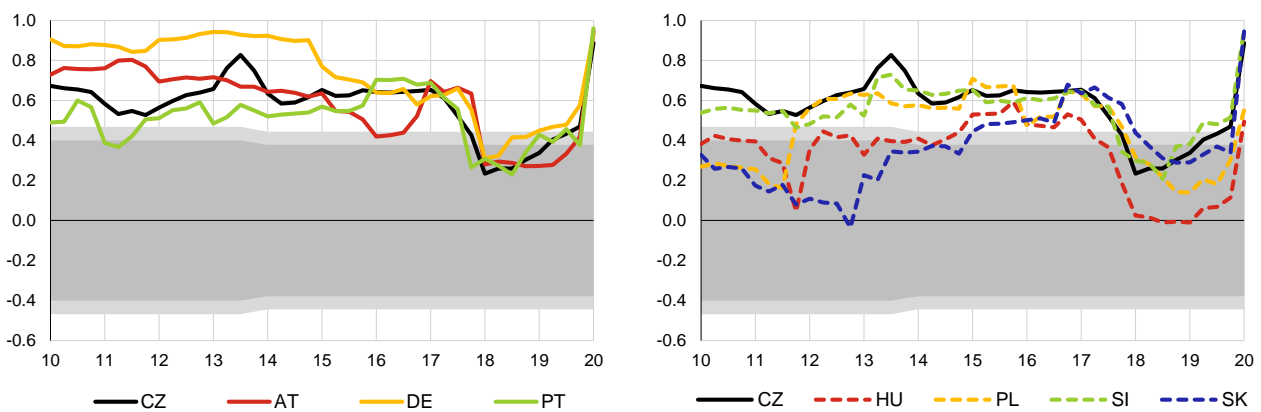
Dynamic correlations of economic activity with the euro area



Note: The calculation is based on the quarter-on-quarter differences in the logarithms of the seasonally adjusted data. The x-axis is the cycle length in years.
Source: Eurostat, CNB calculations.

A substantial drop in the rolling correlations with euro area economic activity in previous years signalled a decrease in cyclical alignment. The increase in the correlations in 2020 Q1 was due to a synchronised drop in economic activity caused by the outbreak of the coronavirus pandemic.

Five-year rolling correlations of GDP growth between individual countries and the euro area



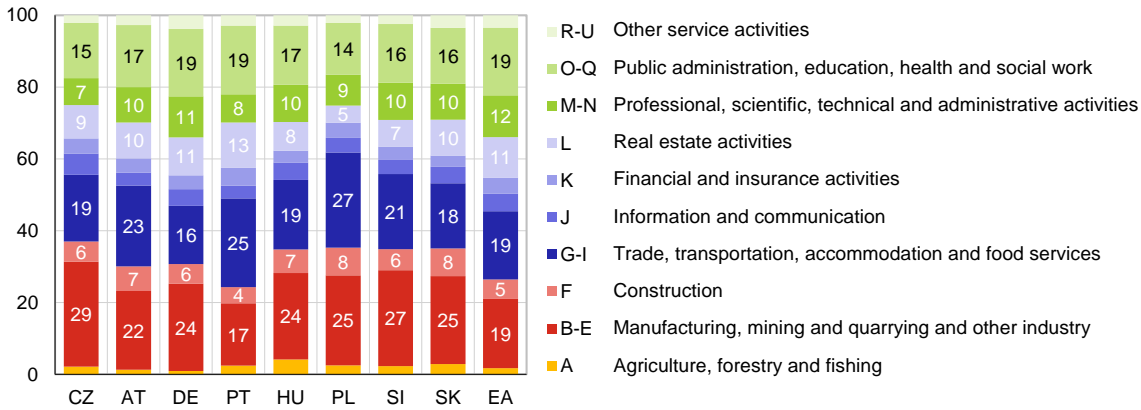
Note: The time data indicate the end of the rolling window of five years. The calculation is based on the quarter-on-quarter differences in the logarithms of the seasonally adjusted data. The statistical significance of the correlation coefficients is indicated in the chart: values statistically significant at the 5% level lie in the white area of the chart, and values statistically significant at the 10% level lie in the white or light grey parts of the chart. Values in the dark grey part of the chart are not statistically significant at the 10% level.
Source: Eurostat, CNB calculations.

STRUCTURAL SIMILARITY OF THE ECONOMIES

The Czech Republic continues to have an above-average share of industry in GDP compared to the euro area.

Shares of economic sectors in GDP

(2019, %)

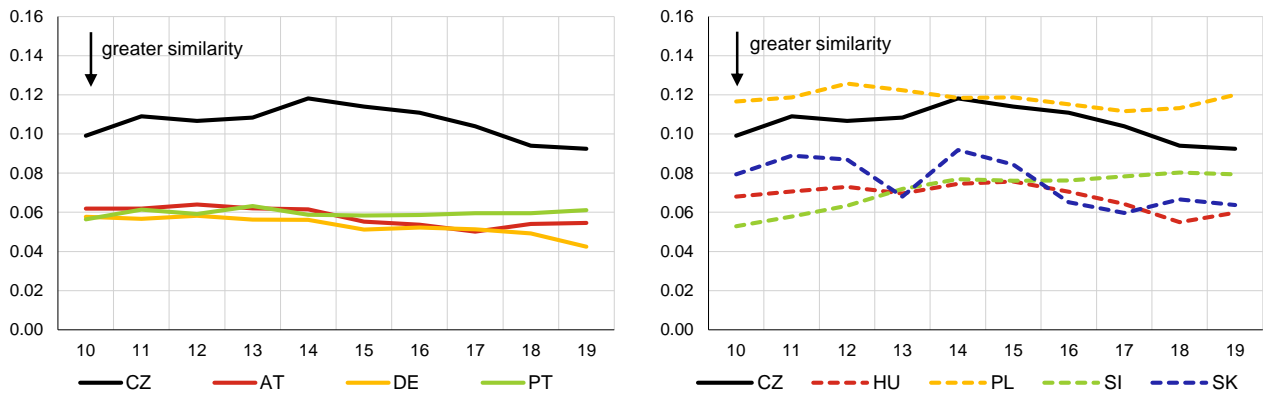


Source: Eurostat, CNB calculations.

The different sector structure of value added is also reflected in higher values of the Landesmann index, indicating a lower degree of similarity of the Czech economy with the euro area economy. In recent years, however, this similarity has been gradually increasing.

Structural similarity vis-à-vis the euro area

(Landesmann index)



Note: The Landesmann index takes values in the range [0;1]. The closer the index is to zero, the more similar is the structure of the economies under comparison. Given the methodological changes in the GDP calculation and the revisions of the historical GDP data, the results published in previous issues of this publication may differ slightly from this year's figures.

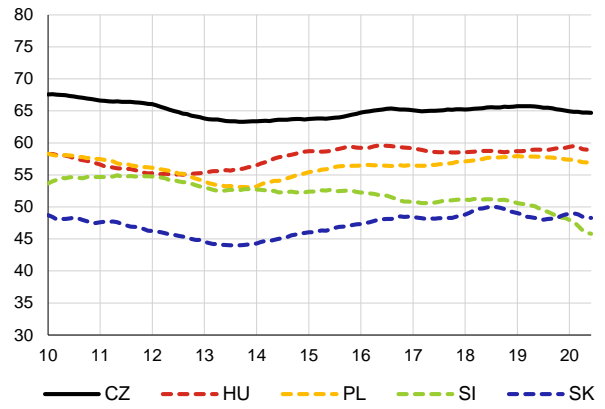
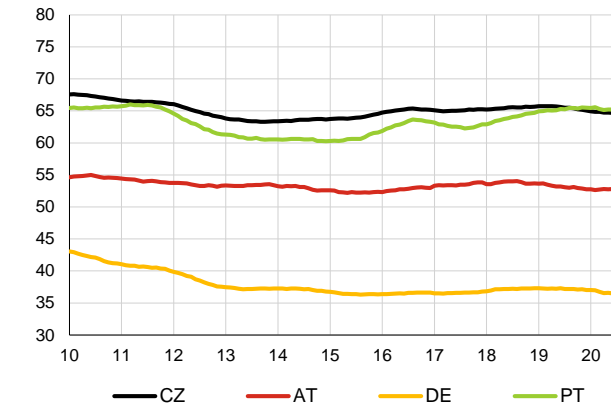
Source: Eurostat, CNB calculations.

INTEGRATION OF THE ECONOMY WITH THE EURO AREA

The share of exports to the euro area in total exports has long been high in the Czech Republic...

...remaining constantly above the levels seen in the other EU Member States of Central and Eastern Europe under comparison.

Shares of exports to the euro area in total exports (%)

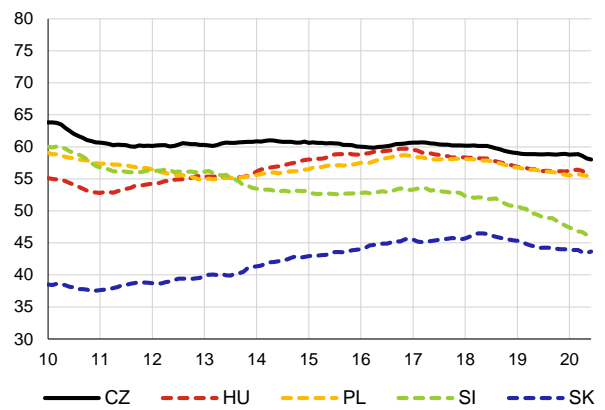
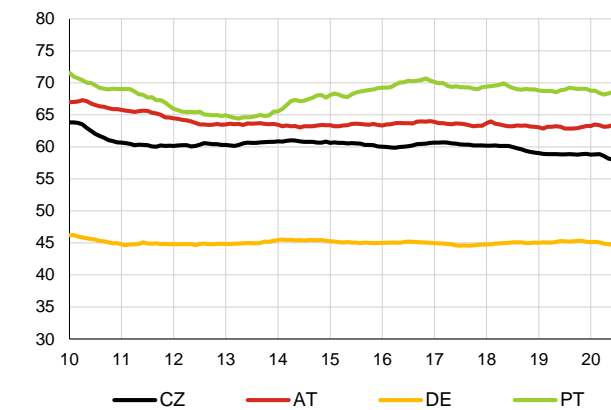


Note: Annual moving total of the monthly data.
Source: Eurostat, CNB calculations.

The share of imports from the euro area in total imports to the Czech Republic is slightly lower than in the case of exports...

...but even so it exceeds the share of imports from the euro area in the other EU Member States of Central and Eastern Europe.

Shares of imports to the euro area in total imports (%)



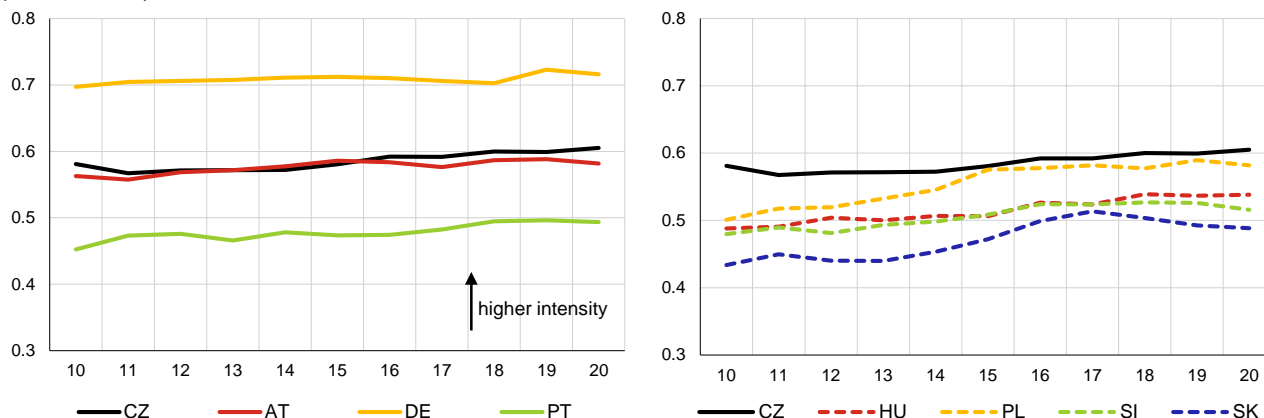
Note: Annual moving total of the monthly data.
Source: Eurostat, CNB calculations.

The high intensity of intra-industry trade supports a similar reaction to economic shocks...

...and is the highest among the EU Member States of Central and Eastern Europe. Only Poland has achieved similar levels in recent years.

Intensity of intra-industry trade with the euro area

(under SITC5)



Note: The results were calculated using the five-digit SITC classification. To analyse intra-industry trade we used the Grubel-Lloyd index, which indicates the share of the absolute amount of intra-industry trade in total foreign trade turnover with the euro area. The 2020 figure is for the first four months of the year.

Source: Eurostat, CNB calculations.

Alignment of economic activity is also fostered by ownership links, which, in the case of investment from the euro area in relation to GDP in the Czech Republic, are the highest among the countries under comparison.

Ratios of FDI stock from the euro area to GDP

(%)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
CZ	57.5	53.4	60.2	58.6	61.2	62.0	63.1	64.4	63.4	63.4
AT	36.0	35.3	35.6	35.2	36.6	44.5	35.1	36.3	37.3	35.2
DE	23.5	23.6	25.8	27.0	26.3	26.3	26.6	26.7	29.9	29.8
PT	42.0	44.1	58.1	64.6	65.0	63.3	63.3	65.0	61.4	62.7
HU	51.0	48.9	58.2	56.2	56.1	57.4	50.4	46.4	45.4	39.9
PL	36.1	32.7	37.0	39.1	39.5	36.6	39.3	39.6	37.2	37.3
SI	18.8	20.0	20.7	19.6	21.9	23.7	25.6	26.1	26.9	28.2
SK	48.1	49.4	48.2	47.0	44.4	45.1	51.2	49.1	47.3	45.9

Source: Eurostat, Hungarian central bank for Hungary, CNB calculations.

Investment by the other EU Member States of Central and Eastern Europe in the euro area economies is still low, but the Czech Republic is faring much better than the other EU Member States of Central and Eastern Europe.

Ratios of DI stock in the euro area to GDP

(%)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
CZ	13.0	12.6	14.8	16.5	17.3	18.5	18.0	21.4	20.4	21.6
AT	24.2	25.1	25.0	26.1	30.0	26.1	30.3	30.9	30.2	32.9
DE	23.1	24.1	26.6	27.4	27.7	28.6	29.3	30.3	32.2	33.1
PT	19.9	25.3	30.3	32.2	28.7	28.6	29.3	28.0	26.0	26.3
HU	5.7	6.0	10.5	10.3	11.2	8.7	9.7	8.3	8.8	9.7
PL	7.5	7.9	8.8	8.6	8.5	8.8	8.6	7.2	6.9	6.6
SI	4.8	4.7	3.9	3.7	4.2	4.3	4.7	5.3	5.5	6.1
SK	6.0	8.0	6.5	7.1	6.7	7.9	11.5	8.9	8.6	7.8

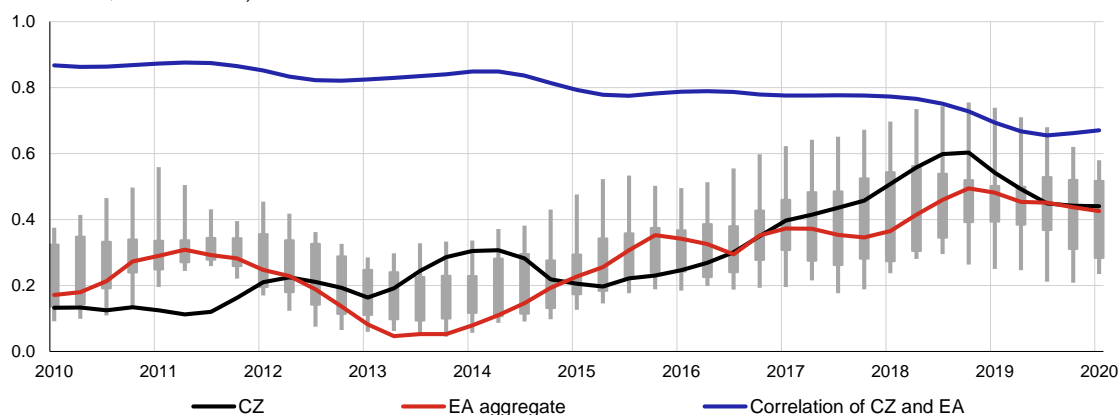
Source: Eurostat, Hungarian central bank for Hungary, CNB calculations.

ALIGNMENT OF FINANCIAL CYCLES

The positions of the euro area and the Czech Republic in the financial cycle have converged. At the same time, the heterogeneity across the euro area countries decreased in late 2019.

Simplified financial cycle indicators for the Czech Republic and the euro area and their correlation

(0 minimum, 1 maximum)

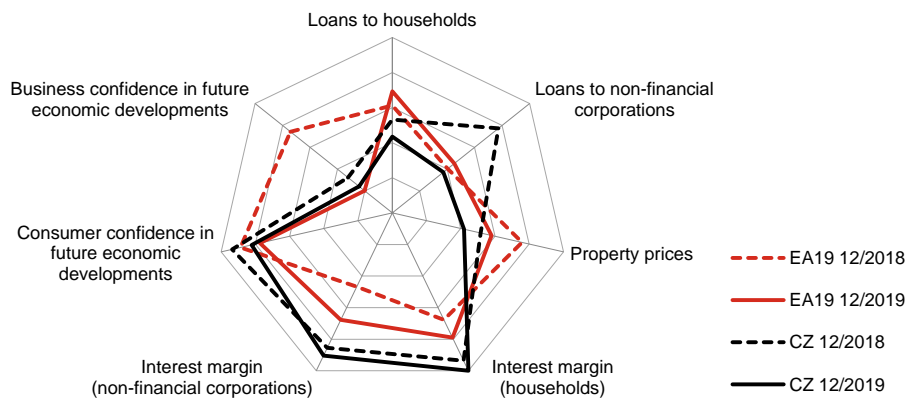


Note: The simplified financial cycle indicator takes values from 0 to 1, with higher values corresponding to an expansionary phase of the financial cycle. The boxplot shows the minimum value, the 25% quantile (the lower edge of the rectangle), the 75% quantile (the upper edge of the rectangle) and the maximum value of the simplified financial cycle indicator in the euro area countries for each period.

Source: ECB, Eurostat, BIS, national central banks, CNB calculations.

Despite the convergence of positions in the financial cycle, the importance of the individual factors in the Czech Republic and the euro area continue to differ. Consumer confidence is the only factor which has long had a similar impact on the financial cycle indicator.

Components of the simplified financial cycle indicator



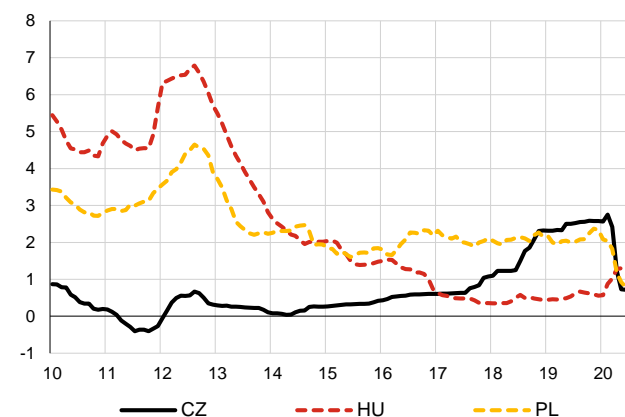
Note: The simplified financial cycle indicator takes values from 0 to 1 (the trough and the peak of the cycle respectively). The same applies to its individual components.
Source: ECB, Eurostat, BIS, national central banks, CNB calculations.

INTEREST RATE CONVERGENCE

The Central European central banks responded to the pandemic by lowering policy rates. In the case of Poland and the Czech Republic, this led to a decline in the interest rate differential vis-à-vis the 3M rate in the euro area, as the ECB did not lower its interest rates deeper into negative territory.

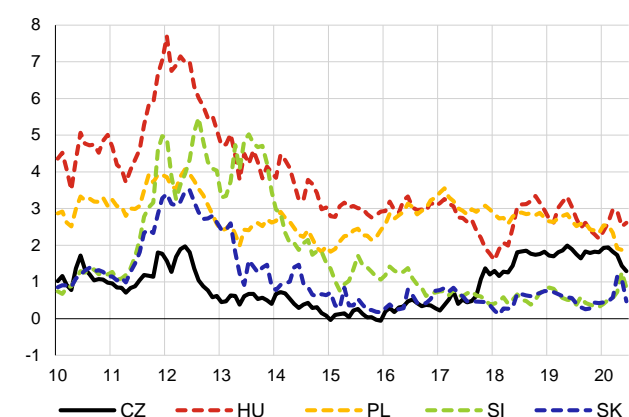
The long-term rate spread fell only marginally (to 1.3 pp) after the interest rate decreases by the CNB. A similar decrease in the differences in 10Y interest rates was also evident in Poland, Slovakia and Slovenia.

Differences in 3M interest rates vis-à-vis the 3M EURIBOR (pp)



Source: Eurostat, CNB calculations.

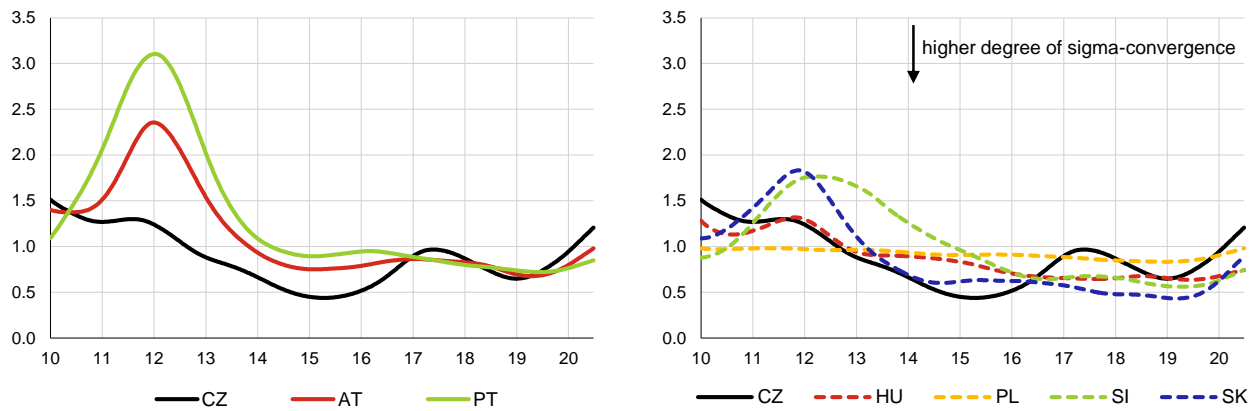
Differences in 10Y interest rates vis-à-vis Germany (differential vis-à-vis 10Y government bond yield in pp)



Source: Eurostat, CNB calculations.

The alignment of the Czech government bond market with the benchmark German market decreased following the outbreak of the coronavirus pandemic.

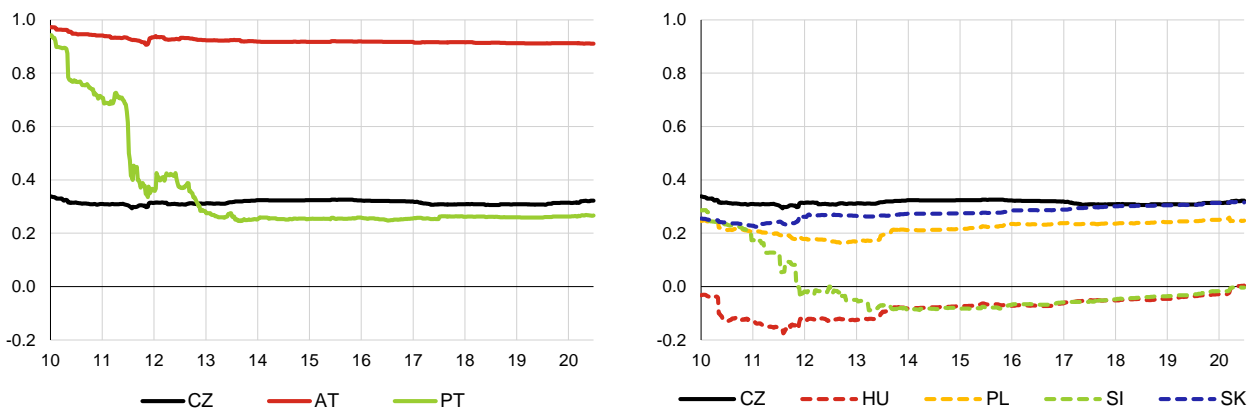
Degree of convergence of government bonds compared to Germany (sigma-convergence)



Note: Lower standard deviations (y-axis) correspond to a higher degree of convergence.
Source: Datastream, CNB calculations.

The rate of transmission of global news on the government bond market remains relatively high in the Czech Republic.

Sensitivity of asset prices to global news by comparison with the euro area (gamma-convergence)

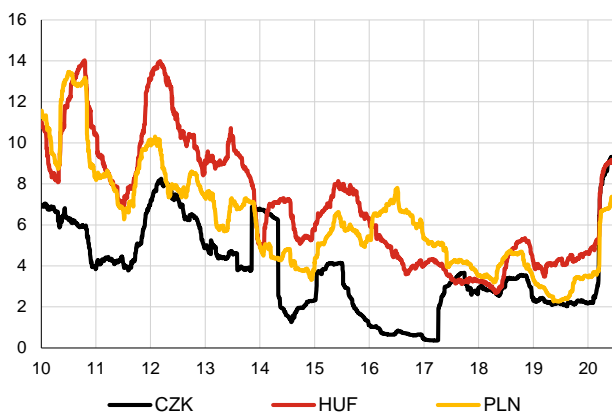


Note: Positive (negative) gamma values close to one express the same (opposite) directional and similarly strong sensitivity to news and hence a higher degree of integration; values close to zero express low integration.
Source: Bloomberg, Datastream, CNB calculations.

EXCHANGE RATE AND FINANCIAL MARKET VOLATILITY AND ALIGNMENT

The financial market tensions connected with the pandemic were reflected in a dramatic increase in the historical volatility of the Czech koruna and the Hungarian forint and, to a lesser extent, the Polish zloty.

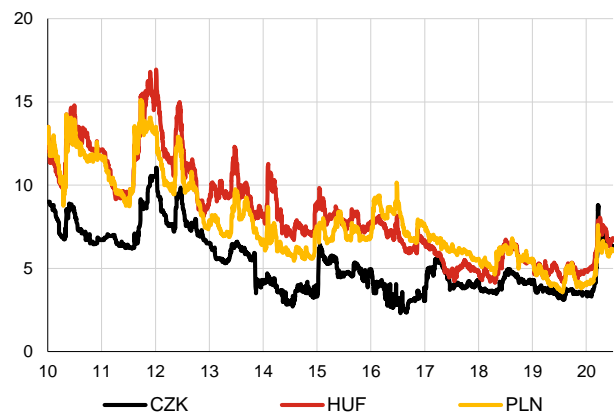
Historical volatility of exchange rates vis-à-vis the euro (%)



Source: Datastream, CNB calculations.

The implied volatility of all Central European currencies also rose in connection with the pandemic in early 2020. It has been falling slightly since May 2020 due to a calming of the financial market situation, but remains above the pre-pandemic level.

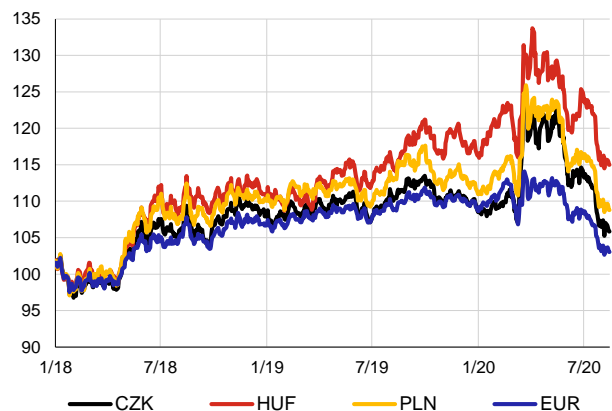
Implied volatility of exchange rates vis-à-vis the euro (daily data, expected volatilities of exchange rates of national currencies based on prices of options for those currencies, %)



Source: Datastream, CNB calculations.

The currencies under review initially depreciated slightly against the dollar in 2020 but later appreciated gradually due to tensions between the USA and China.

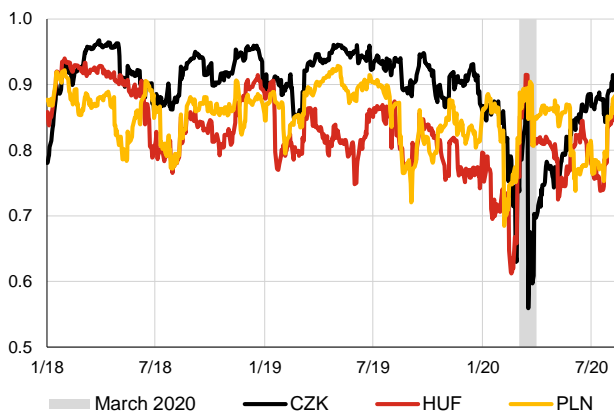
Exchange rates against the US dollar (index, January 2018 = 100)



Source: Datastream.

The correlation of the koruna-dollar exchange rate with the euro-dollar exchange rate is currently relatively high. The largest decline in the correlation occurred in March 2020, when an outflow of short-term capital, coupled with the first impacts of the pandemic, had an adverse effect on the exchange rate of the koruna.

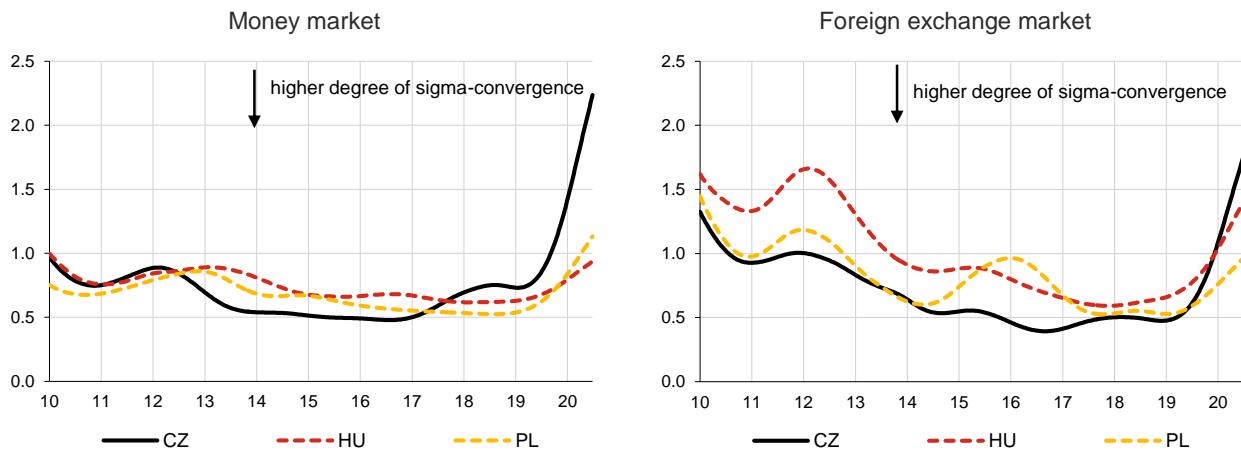
Correlations of exchange rates against the US dollar (correlations: national currency/USD and EUR/USD)



Source: Datastream, CNB calculations.

The alignment of the Czech foreign exchange and especially money markets with the benchmark euro market decreased sharply due to the outbreak of the coronavirus pandemic.

Degree of convergence of national financial markets to the euro area (sigma-convergence)

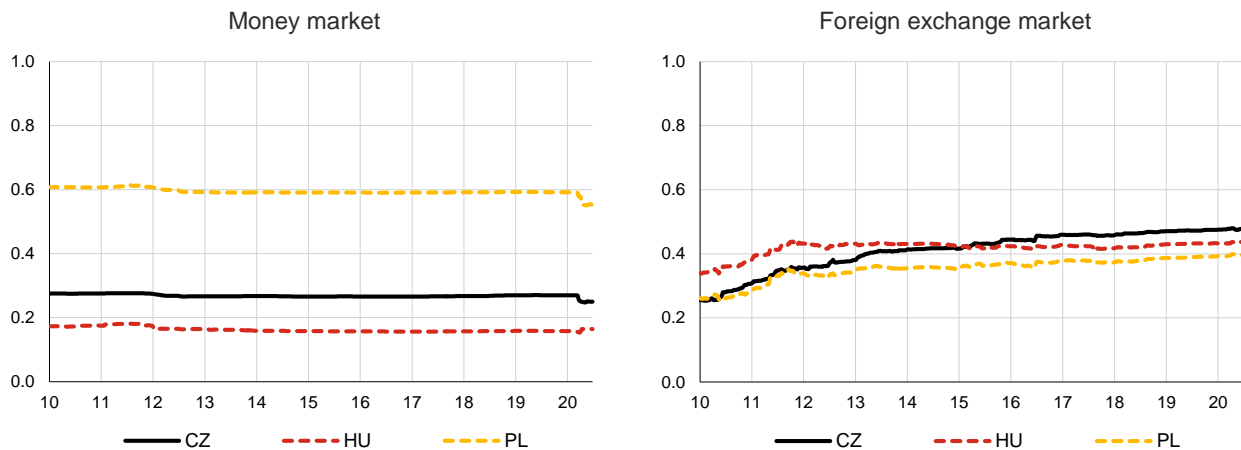


Note: Lower standard deviations (y-axis) correspond to a higher degree of convergence.
Source: Datastream, CNB calculations.

The rate of transmission of global news on the money market has declined slightly in the Czech Republic...









...while on the foreign exchange market it has remained relatively high.

Sensitivity of asset prices to global news by comparison with the euro area (gamma-convergence)



Note: Positive (negative) gamma values close to one express the same (opposite) directional and similarly strong sensitivity to news and hence a higher degree of integration; values close to zero express low integration.
Source: Bloomberg, Datastream, CNB calculations.

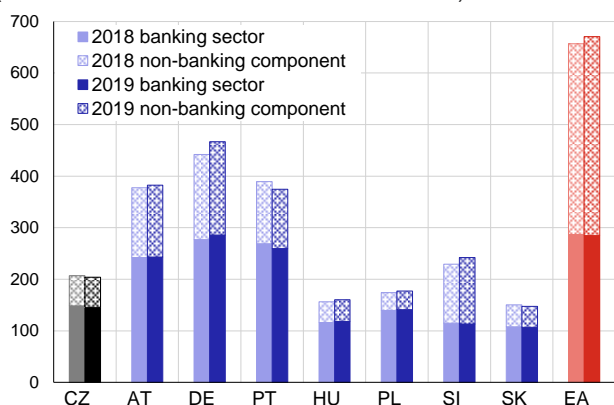
III.1.2. Similarity of monetary policy transmission

-  Depth of financial intermediation
-  Private sector debt
-  Structural similarity of non-financial corporations' balance sheets in the Czech Republic and the euro area
-  Structural similarity of households' balance sheets in the Czech Republic and the euro area
-  Structural similarity between the volume of loans of non-financial corporations in the Czech Republic and the euro area
-  Structural similarity between the volume of loans for house purchase in the Czech Republic and the euro area
-  Spontaneous euroisation
-  Inflation persistence

FINANCIAL SYSTEM

The depth of financial intermediation in the Czech Republic remains well below the euro area average.

Depth of financial intermediation (assets of financial institutions as % of GDP)

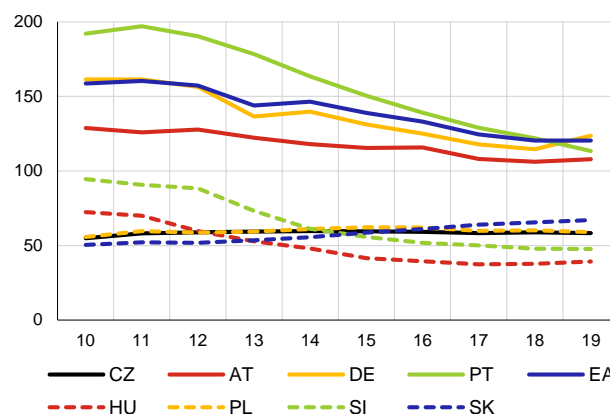


Note: The banking sector's total assets are adjusted for exposures to the central bank. The euro area value exceeds the other countries in the chart due to the large volume of assets of financial corporations in Luxembourg, Ireland, the Netherlands and France both as a percentage of their GDP and in comparison with the total financial assets of the euro area.

Source: CNB, ECB, Eurostat, national central banks.

Private sector debt in the Czech Republic is substantially below the euro area average.

Private sector debt (% of GDP)



Note: EA represents the average of the euro area member countries weighted by the size of GDP.

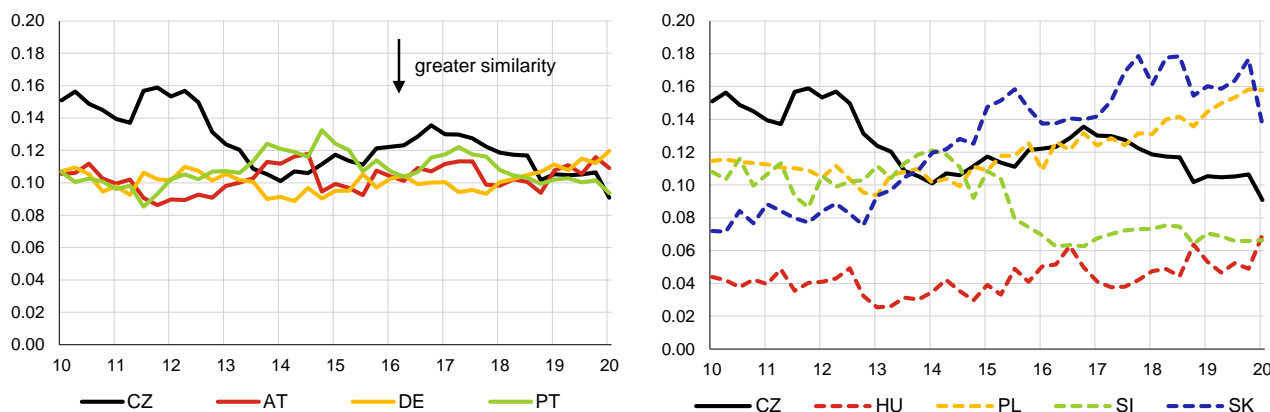
Source: IMF, Eurostat.

STRUCTURE OF FINANCIAL ASSETS AND LIABILITIES OF CORPORATIONS AND HOUSEHOLDS

The structural similarity of the financing of Czech corporations with firms in the euro area has increased and is comparable to Portugal, Germany and Austria.

Similarity of the structure of the financial liabilities of non-financial corporations

(Landesmann index)



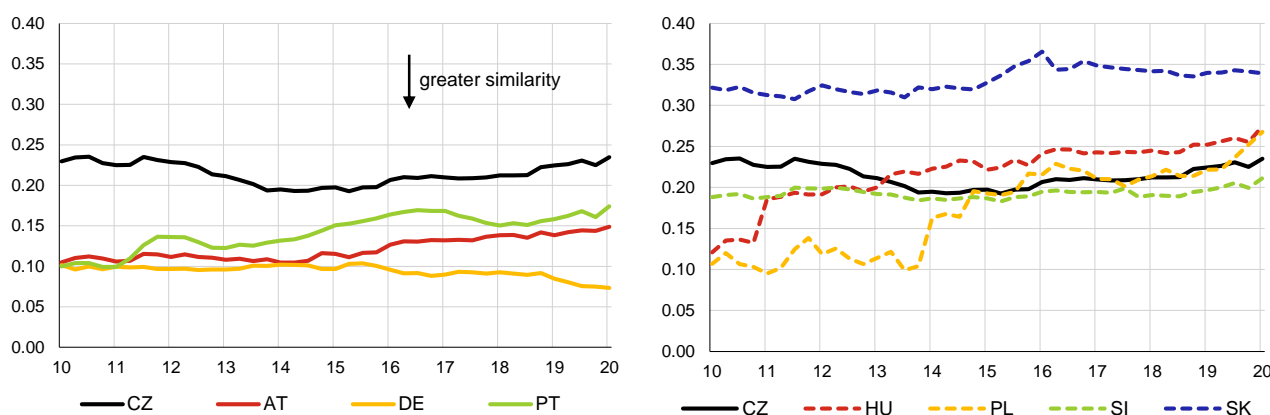
Note: The Landesmann index takes values in the range [0;1]. The closer the index is to zero, the more similar is the structure of the balance sheets under comparison. The shares of the individual categories of liabilities in total liabilities were used for non-financial corporations. The index values differ from the previous year due to data revisions.

Source: ECB, CNB calculations.

The similarity of the structure of the financial assets of Czech households and households in the euro area continues to fall and remains relatively low. The further decrease in 2019 was due to sharp relative growth in the importance of units and shares in the total financial assets of Czech households by comparison with households in the euro area, amid persisting large differences in holdings of other types of assets.

Similarity of the structure of the financial assets of households

(Landesmann index)



Note: The Landesmann index takes values in the range [0;1]. The closer the index is to zero, the more similar is the structure of the balance sheets under comparison. The shares of the individual categories of assets in total assets were used for households. The index values differ from the previous year due to data revisions.

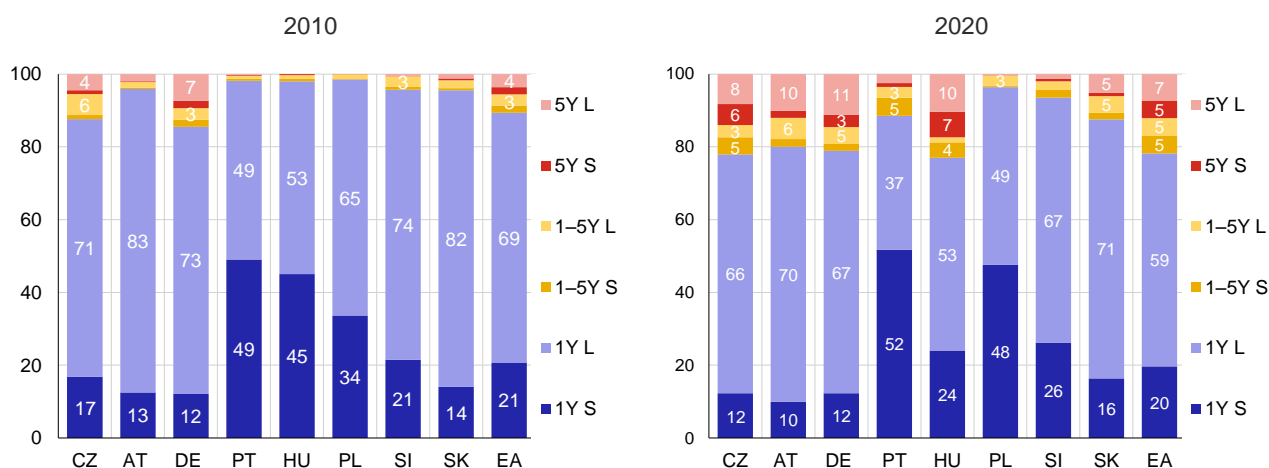
Source: ECB, CNB calculations.

EFFECT OF MONETARY POLICY ON CLIENT INTEREST RATES

Most non-financial corporations in the countries under review take out loans with floating rates or rates fixed for up to one year. This gives rise to relatively fast transmission of changes in monetary policy rates and subsequently market rates to loan rates in this segment. In recent years, however, the share of loans with longer interest rate fixation periods has been increasing.

Structure of new loans to non-financial corporations by interest rate fixation period

(%)



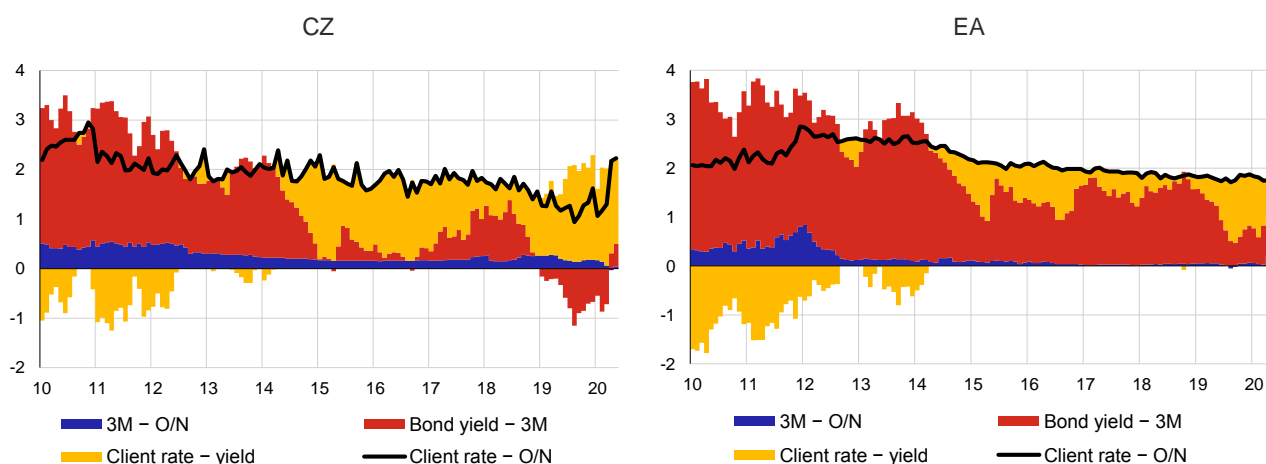
Note: 1Y S and 1Y L stand, respectively, for small (up to EUR 1 million) and large (over EUR 1 million) loans with a floating rate or a rate fixed for up to one year, and the other items in the key denote such loans with longer interest rate fixations. The structure of the euro area total varies according to the increasing number of countries. The 2020 data are as of June.

Source: ECB, CNB calculations.

The spread between client rates on loans to non-financial corporations and the overnight interbank market rate in the Czech Republic rate rose over the last year and is currently higher than in the euro area. However, their structure converged.

Decomposition of the spread between interest rates on loans to non-financial corporations and O/N interbank rates

(pp)

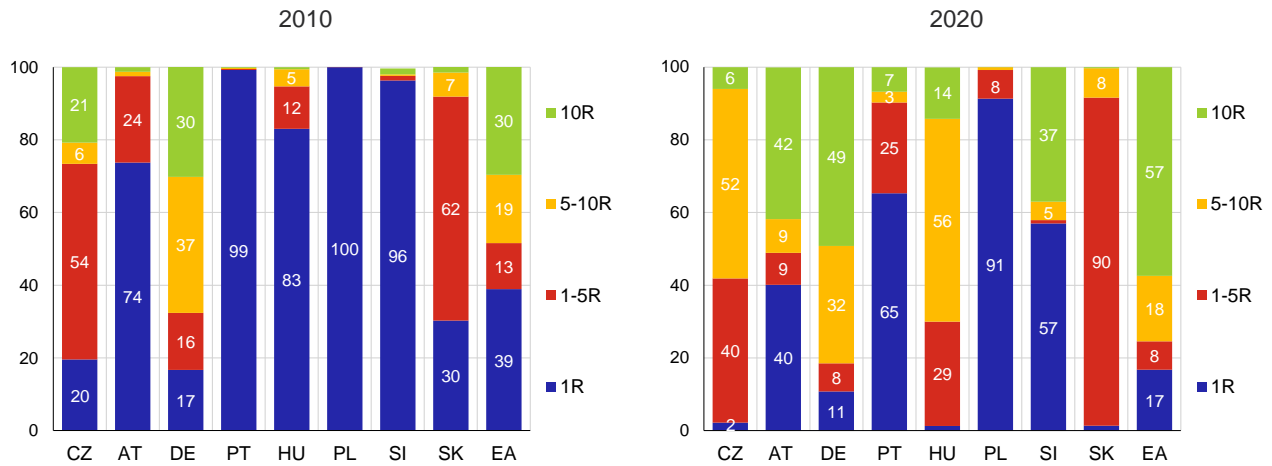


Note: 3M - O/N is the difference between the three-month rate and the overnight interbank rate. Bond yield - 3M is the difference between the ten-year government bond yield and the three-month interbank rate. Client rate - yield is the difference between the client rate on loans across all maturities to non-financial corporations and the ten-year government bond yield. The data are monthly averages.

Source: ECB, CNB, CNB calculations.

The shift towards loans for house purchase with longer fixation periods seen in recent years is continuing in most of the countries under review.

Structure of new loans to households for house purchase by interest rate fixation period (%)



Note: The structure of the euro area total varies according to the increasing number of countries. The 2020 data are as of June. Source: ECB, CNB calculations.

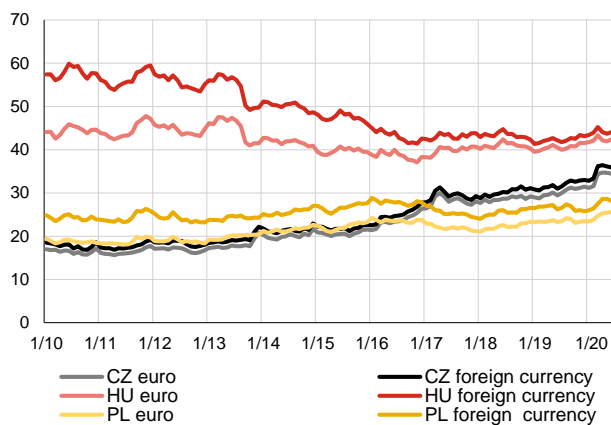
SPONTANEOUS EUROISATION

The share of foreign currency loans (mostly euro-denominated) to Czech corporations increased to a new high (of 36%) due to natural hedging against exchange rate risk and the significantly increased interest rate differential reached before the coronavirus pandemic broke out. The share of foreign currency deposits has long been around 20%.

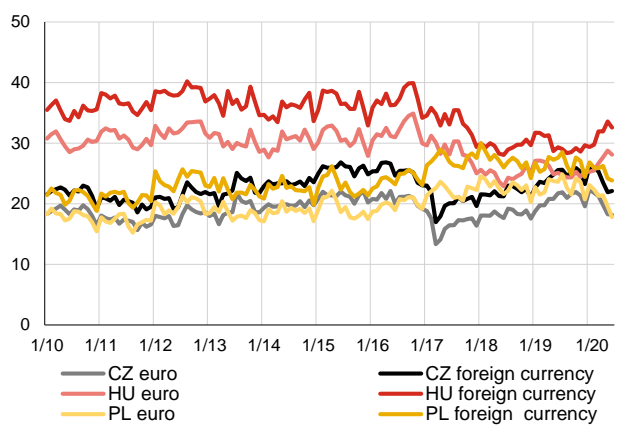
Foreign currency loans and overnight deposits of non-financial corporations

(shares in total loans and overnight deposits of non-financial corporations with domestic banks, %)

Foreign currency loans



Overnight foreign currency deposits

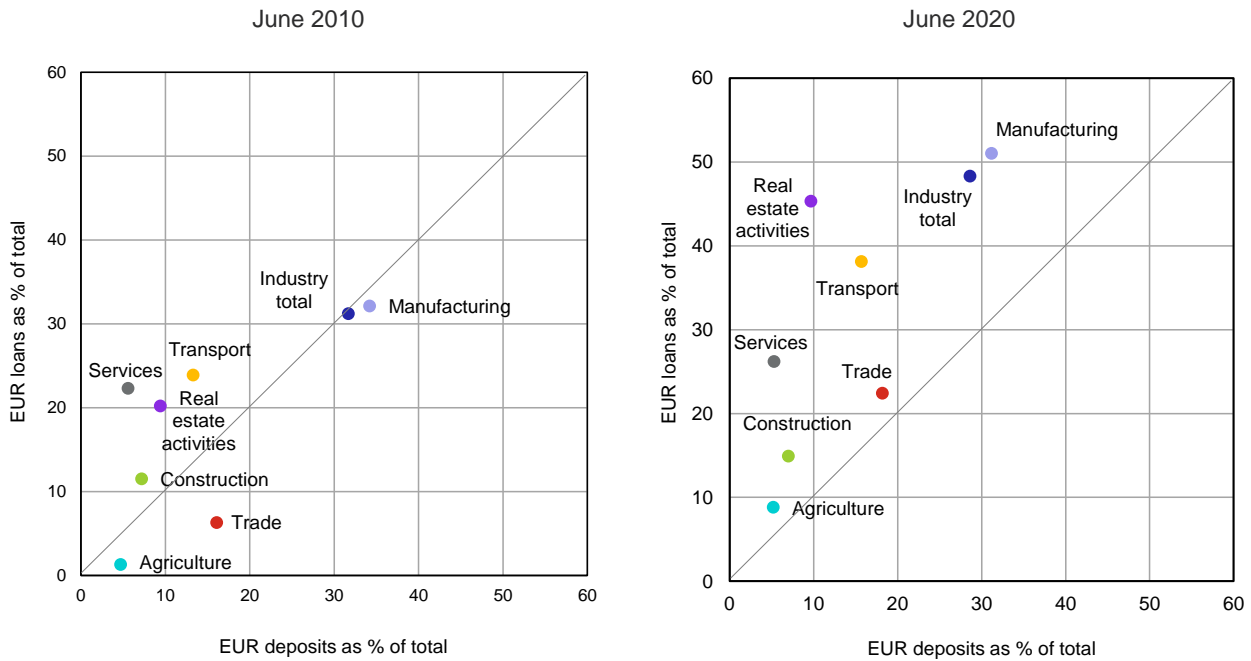


Source: ECB, CNB calculations.

The euroisation of the Czech economy is asymmetrical in terms of loans and deposits. The share of euro-denominated loans increased in most sectors (most significantly to 51% in manufacturing and 45% in real estate activities), while the share of euro-denominated deposits was essentially unchanged.

Euro-denominated loans and deposits by sector

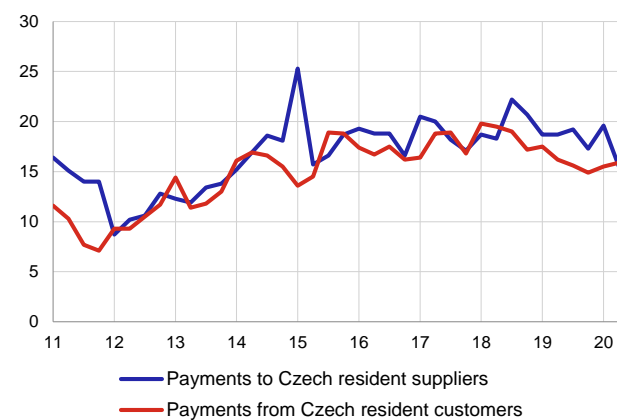
(shares in total loans and deposits in given sector with domestic banks, %)



Source: CNB.

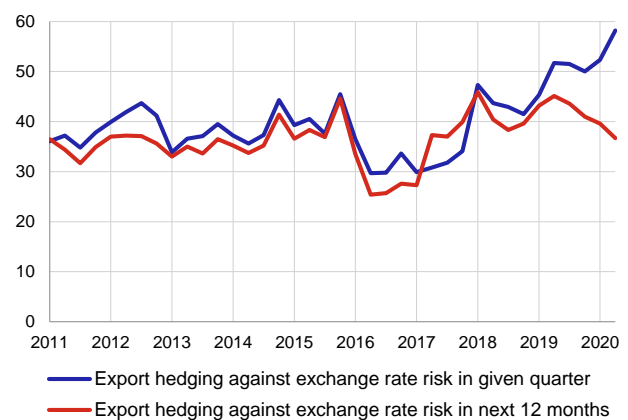
The share of euro payments between Czech firms remains significant but is little changed from the longer-term perspective.

Shares of euro payments between Czech firms (%)



Amid increased koruna-euro exchange rate volatility, short-term export hedging by firms on the financial market increased significantly in 2020 Q2. By contrast, export hedging for the following year decreased, probably due to the extraordinary uncertainty.

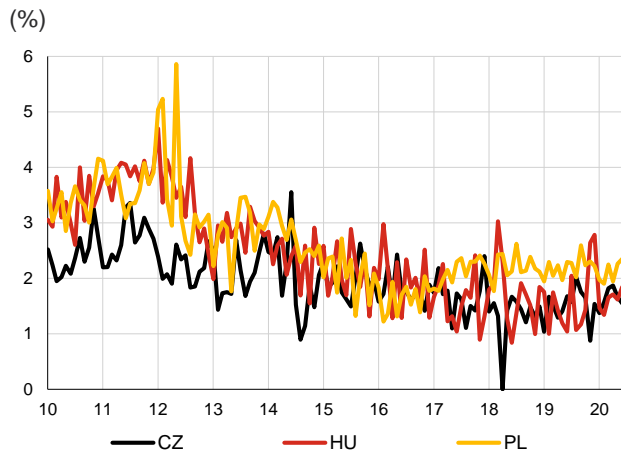
Shares of export hedging against exchange rate risk (%)



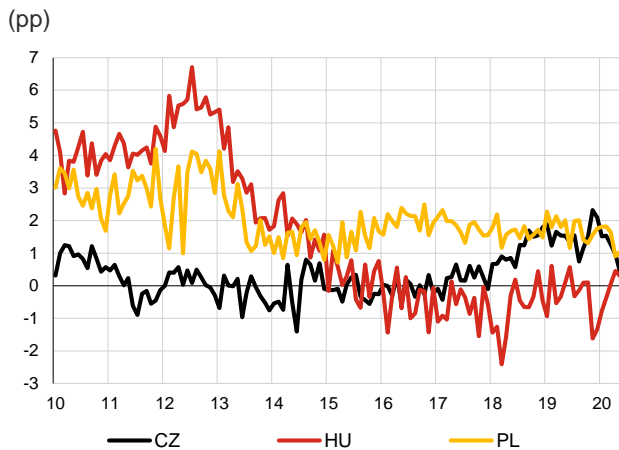
Source: Survey of non-financial corporations conducted by the CNB and the Confederation of Industry of the Czech Republic.

The interest rate differentials on koruna- and euro-denominated corporate loans in the Czech Republic rose substantially in 2019, motivating Czech firms to increasingly obtain euro-denominated loans. In 2020, the differentials decreased due to monetary policy easing by the CNB connected with the outbreak of the coronavirus pandemic.

Interest rates on euro-denominated loans of non-financial corporations



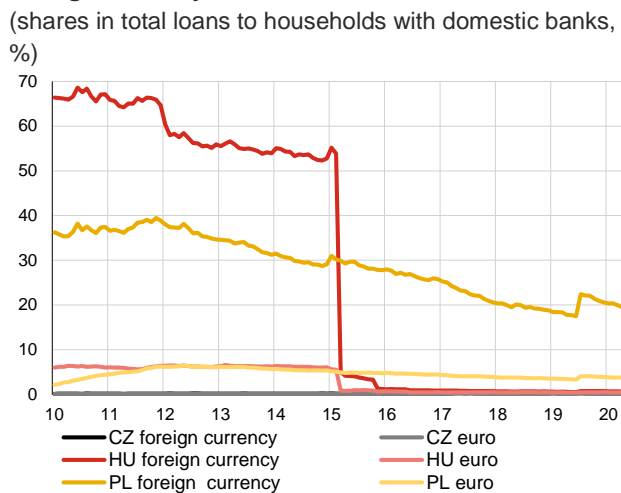
Interest rate differentials on domestic and foreign currency loans of non-financial corporations



Note: The data refer to large loans of over EUR 1 million with interest rates fixed for up to one year. Source: ECB, CNB calculations.

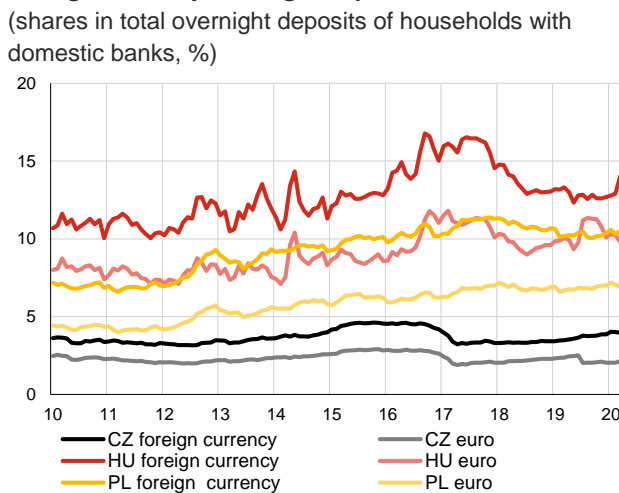
The euroisation of households has long been low in the Czech Republic due to high confidence in the domestic currency; the share of foreign currency deposits is around 3% and that of foreign currency loans virtually zero.

Foreign currency loans of households



Note: The share of foreign currency loans in Hungary fell to zero in 2015 owing to administrative measures. The foreign currency loans of Czech households are between 0.1% and 0.3%. Source: ECB, CNB calculations.

Foreign currency overnight deposits of households

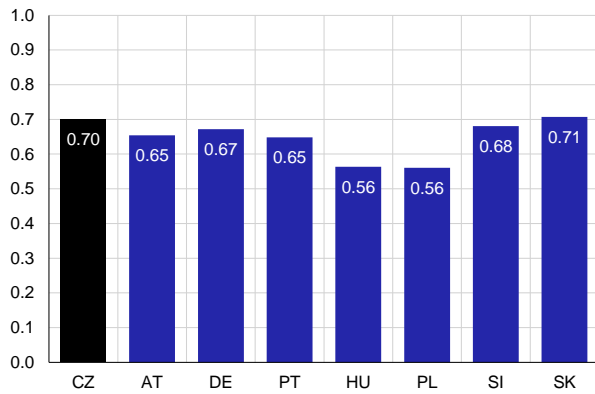


Source: ECB, CNB calculations.

INFLATION PERSISTENCE

Inflation persistence in the Czech Republic is comparable with that in the other countries under review.

Inflation persistence estimates







Note: Calculation for 2010 Q1–2020 Q2.

The closer the values are to one, the more persistent is inflation.

Source: Eurostat, CNB calculations.

III.2. ADJUSTMENT MECHANISMS OF THE CZECH ECONOMY

III.2.1. Fiscal policy

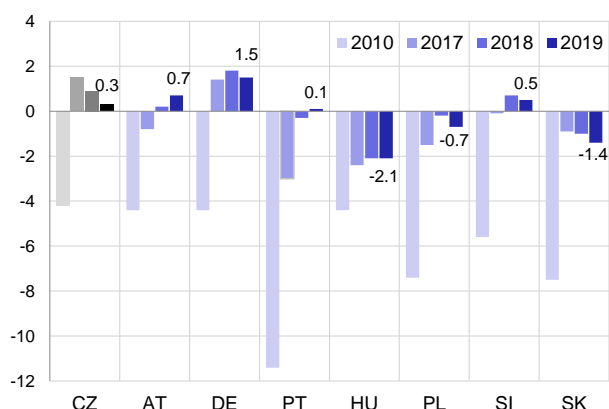
-  Cyclically adjusted general government balance
-  General government debt
-  Countercyclical effect of fiscal policy
-  Long-term sustainability of public finances

The general government surplus in the Czech Republic decreased again last year as a result of expansionary fiscal policy. It will switch to a sizeable deficit this year due to the pandemic and fiscal stabilisation measures.

Total general government debt has decreased to a relatively low level in the Czech Republic over the last decade. The debt will increase again in the next few years owing to sizeable expected general government deficits; in 2021 it will exceed 40% of GDP. However, it should stay safely below the debt brake level.

General government balance

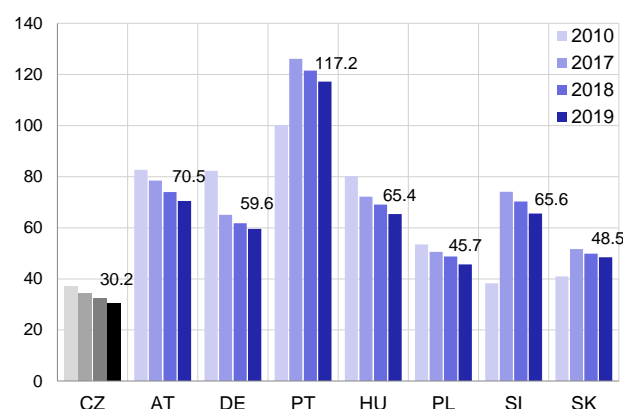
(% of GDP)



Source: Eurostat.

General government debt

(% of GDP)



Source: Eurostat.

The Czech Republic ranks among the countries with low sensitivity of the general government balance to economic developments, i.e. with lower automatic stabilisers.

Indicators of the sensitivity of the general government balance to economic developments

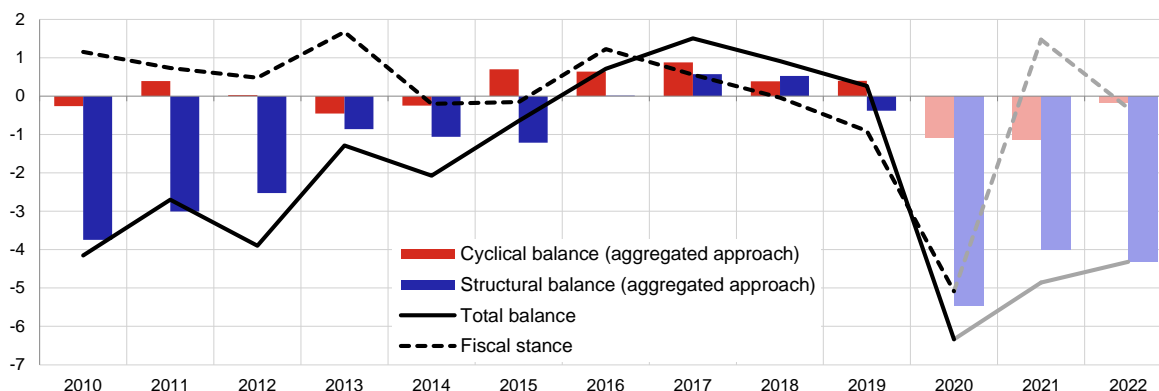
	CZ	AT	DE	PT	HU	PL	SI	SK
Total budgetary elasticity	0.45	0.60	0.66	0.54	0.56	0.47	0.45	0.38
Automatic stabilisation of average revenue (in %)	29	45	39	33	34	27	38	31

Note: According to the CNB's internal estimates, total budgetary elasticity in the Czech Republic is even lower, at around 0.35, while the Ministry of Finance estimates it at 0.43. The estimates for the Czech Republic differ due to different estimates of the elasticities of individual tax revenues.

Source: Price et al. (2015), European Commission (2018a).

Czech fiscal policy has often been procyclical, so the Czech Republic entered the coronavirus crisis with limited fiscal space, which, however, was actively used.

The Czech Republic's general government balance, its cyclical and structural components, and the fiscal stance (% of GDP, pp)



Note: The fiscal stance measures the year-on-year change in the structural balance. The structural balance is the general government balance adjusted for the business cycle and one-off measures.

Source: CZSO (2010–2019), CNB calculations (2020–2022 forecast).

The total and cyclically adjusted general government balance will worsen significantly in 2020 in all the countries under review, including the Czech Republic, due to the pandemic.

General government balances, European Commission estimates (% of GDP)

	Total balance						Cyclically-adjusted balance					
	2010	2018	2019	2020	2021	2022	2010	2018	2019	2020	2021	2022
CZ	-4.2	0.9	0.3	-6.2	-4.7	-3.7	-3.7	-0.2	-1.0	-4.2	-3.3	-3.3
AT	-4.4	0.2	0.7	-9.6	-6.4	-3.7	-3.5	-1.0	-0.8	-6.6	-5.2	-3.4
DE	-4.4	1.8	1.5	-6.0	-4.0	-2.5	-3.3	1.0	0.9	-3.4	-2.7	-1.9
PT	-11.4	-0.3	0.1	-7.3	-4.5	-3.0	-11.4	-2.0	-2.0	-3.8	-3.0	-2.6
HU	-4.4	-2.1	-2.1	-8.4	-5.4	-4.3	-2.3	-4.1	-4.4	-6.6	-4.2	-4.0
PL	-7.4	-0.2	-0.7	-8.8	-4.2	-3.0	-7.9	-1.8	-2.9	-7.9	-3.5	-2.7
SI	-5.6	0.7	0.5	-8.7	-6.4	-5.1	-4.5	-1.1	-1.9	-7.1	-6.2	-5.6
SK	-7.5	-1.0	-1.4	-9.6	-7.9	-6.0	-7.2	-2.3	-2.8	-7.8	-7.3	-6.4
EA	-6.3	-0.5	-0.6	-8.8	-6.4	-4.7	-5.1	-1.2	-1.5	-4.8	-4.3	-3.6
CZ^{a)}	-4.2	0.9	0.3	-6.3	-4.9	-4.3	-4.0	0.5	-0.1	-5.2	-3.7	-4.2

Note: a) Total balance: data according to the CZSO's statistics and notifications (autumn 2020) until 2019, and the CNB's forecast from *Inflation Report IV/2020* for 2020–2022. The cyclically adjusted balance is calculated according to the aggregated approach.

Source: European Commission (2020a, 2020b), CNB.

Together with Slovakia, Poland and Portugal, the Czech Republic is among the countries with a lower ratio of public expenditures and revenues to GDP compared to the euro area.

Ratios of public revenues and expenditures to GDP in the Czech Republic
(2019, % of GDP)

	CZ	AT	DE	PT	HU	PL	SI	SK	EA
Total revenues	41.6	49.1	46.7	42.7	43.5	41.1	43.8	41.4	46.4
- taxes	20.4	27.6	24.2	24.8	24.5	21.7	21.6	19.2	26.3
- social contributions	15.6	15.4	17.3	11.8	11.8	14.2	16.0	15.3	15.1
Total expenditures	41.3	48.4	45.2	42.7	45.6	41.8	43.3	42.7	47.1
- compensation of employees	10.0	10.5	7.9	10.7	10.1	10.3	11.3	10.2	9.9
- intermediate consumption	5.9	6.2	5.3	5.2	8.1	5.6	6.1	5.6	5.3
- social payments	12.3	17.9	15.8	16.3	10.8	15.4	15.2	13.4	16.7
- gross fixed capital formation	4.4	3.0	2.5	1.9	6.1	4.3	3.8	3.6	2.8
- interest expenditure	0.7	1.4	0.8	3.0	2.2	1.4	1.7	1.2	1.6

Source: Eurostat.

A large proportion of state budget expenditures in the Czech Republic are mandatory or quasi-mandatory.

Shares of mandatory and quasi-mandatory expenditures in total expenditures and total revenues of the Czech state budget

(%)

	2010	2012	2014	2015	2016	2017	2018	2019	2020	2021
Shares of mandatory expenditure in total SB expenditure	54.3	57.7	57.8	54.2	58.2	57.0	55.0	52.6	49.5	54.9
Shares of quasi mandatory expenditure in total SB expenditure	18.7	17.7	17.3	17.5	18.8	20.2	20.6	20.9	19.5	21.0
Shares of mandatory expenditure in total SB revenue	62.8	63.3	61.7	57.0	55.4	57.3	54.9	53.6	67.7	66.7
Shares of quasi mandatory expenditure in total SB revenue	21.6	19.4	18.5	18.4	17.9	20.3	20.6	21.3	26.6	25.6

Note: Actual data for 2010–2019, state budget projections for 2020–2021.

Source: Ministry of Finance of the Czech Republic (2020).

The decrease in general government debt relative to GDP in the Czech Republic until 2019 was accompanied by low and falling debt service costs.

Debt service

(European Commission estimate, % of GDP)

	2010	2014	2015	2016	2017	2018	2019	2020	2021	2022
CZ	1.3	1.3	1.1	0.9	0.7	0.7	0.7	0.8	0.8	0.7
AT	2.9	2.4	2.3	2.1	1.8	1.6	1.4	1.4	1.2	1.2
DE	2.5	1.6	1.4	1.2	1.0	0.9	0.8	0.7	0.6	0.6
PT	2.9	4.9	4.6	4.1	3.8	3.4	3.0	2.9	2.6	2.5
HU	4.1	4.0	3.4	3.1	2.7	2.4	2.2	2.5	2.4	2.3
PL	2.5	2.0	1.8	1.7	1.6	1.4	1.4	1.4	1.4	1.3
SI	1.6	3.2	3.2	3.0	2.5	2.0	1.7	1.7	1.6	1.5
SK	1.3	1.9	1.8	1.7	1.4	1.3	1.2	1.3	1.2	1.1
EA	2.8	2.5	2.2	2.0	1.8	1.7	1.5	1.5	1.4	1.3

Source: European Commission (2020b).

Recent adjustments to the Czech pension system have fostered a further deterioration in what was already an adverse outlook for Czech public finance sustainability.

Age-related government expenditures

(% of GDP)

	Pensions		Health care		Long-term care		Total		Change 60-16
	2016	2060	2016	2060	2016	2060	2016	2060	
CZ	8.2	11.6	5.4	6.6	1.3	2.8	14.9	21.0	6.1
AT	13.8	14.7	7.0	8.2	1.9	3.6	22.7	26.5	3.8
DE	10.1	12.5	7.4	8.1	1.3	2.0	18.8	22.6	3.8
PT	13.5	12.0	5.9	8.3	0.5	1.4	19.9	21.7	1.8
HU	9.7	11.1	4.9	5.8	0.7	1.1	15.3	18.0	2.7
PL	11.2	11.1	4.3	5.2	0.5	1.2	16.0	17.5	1.5
SI	10.9	15.2	5.6	6.8	0.9	1.8	17.4	23.8	6.4
SK	8.6	9.9	5.6	7.0	0.9	1.5	15.1	18.4	3.3
EA	12.3	12.4	6.8	7.5	1.6	2.7	20.7	22.6	1.9

Note: Recent adjustments to the pension system include: a change to the regular increases in old-age pensions (from 2018, the amount by which old-age pensions are increased takes into account one-half of the growth in the real wage instead of the previous one-third, plus inflation for all households or the increase in pensioners' living costs, whichever is the higher), a ceiling on the retirement age at 65 years (in January 2018), an increase in the flat-rate component of pensions from 9% to 10% of the average wage and a bonus of CZK 1,000 a month for senior citizens aged over 85 (from 2019), and a higher-than-usual (i.e. higher than the minimum mandatory) indexation of pensions (from January 2020).

Source: European Commission (2018b).

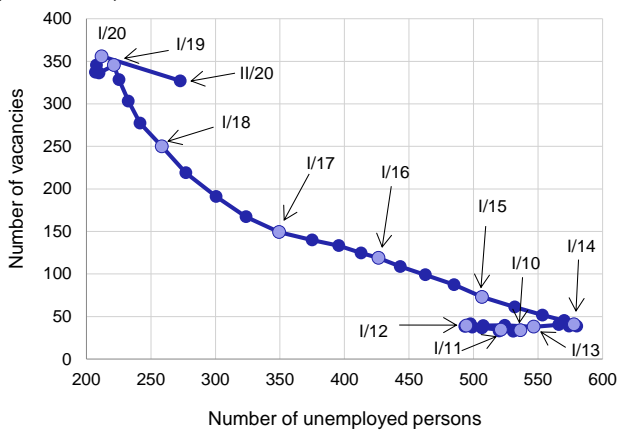
III.2.2. The labour market and the product market

-  Geographical mobility
-  Rate of economic activity
-  Share of part-time jobs in employment
-  Long-term unemployment rate
-  Unemployment trap
-  Labour market efficiency
-  Competitiveness of Czech economy

In recent years, the number of unemployed persons has been falling cyclically and the number of job vacancies has been rising. Although this trend has started to reverse due to the outbreak of the coronavirus pandemic, the number of vacancies is still much higher than the number unemployed.

The number of employees was rising significantly from 2014 onwards owing to favourable economic developments, while average hours worked were broadly flat in the same period. This trend has come to a halt due to the outbreak of the coronavirus pandemic.

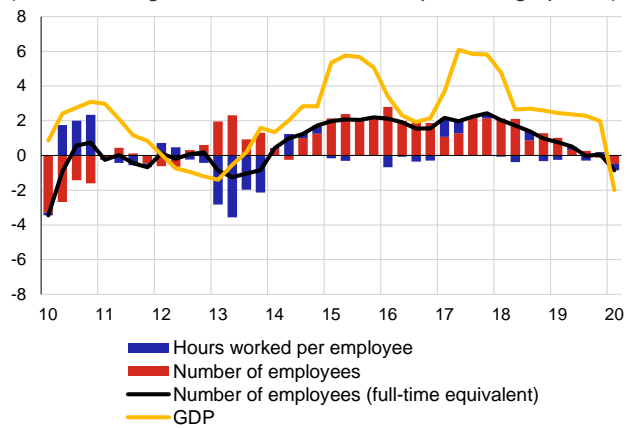
Beveridge curve
(thousands)



Source: Ministry of Labour and Social Affairs.

Average hours worked per employee

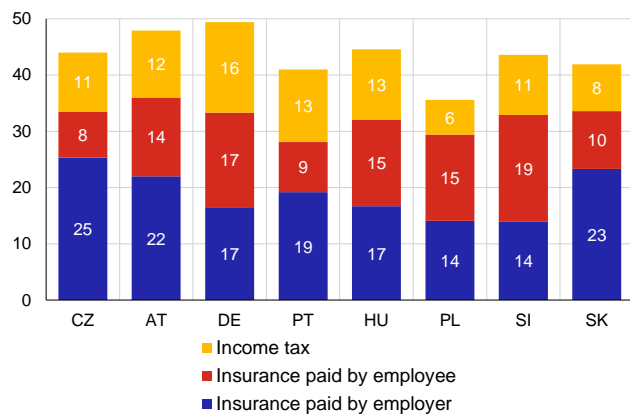
(annual changes in %, contributions in percentage points)



Source: CZSO, CNB calculations.

The relatively high labour taxation rate in the Czech Republic is due mainly to high insurance contributions paid by employers.

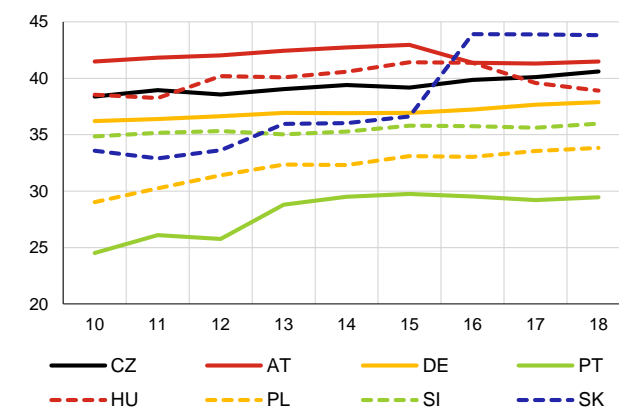
Components of labour taxation
(2019, % of average wage)



Source: OECD.

The Czech Republic is also one of the countries with an above-average overall implicit labour taxation rate among the countries under review.

Implicit labour taxation rates
(%)



Source: Eurostat.

The long-term unemployment rate in the Czech Republic has declined steadily in recent years and is the lowest among the countries under review.

Long-term unemployment rate
(%)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
CZ	3.0	2.7	3.0	3.0	2.7	2.4	1.7	1.0	0.7	0.6
AT	1.2	1.2	1.2	1.3	1.5	1.7	1.9	1.8	1.4	1.1
DE	3.3	2.8	2.4	2.3	2.2	2.0	1.7	1.6	1.4	1.2
PT	5.7	6.2	7.7	9.3	8.4	7.2	6.2	4.5	3.1	2.8
HU	5.5	5.2	5.0	4.9	3.7	3.1	2.4	1.7	1.4	1.1
PL	3.0	3.6	4.1	4.4	3.8	3.0	2.2	1.5	1.0	0.7
SI	3.2	3.6	4.3	5.2	5.3	4.7	4.3	3.1	2.2	1.9
SK	9.2	9.2	9.4	10.0	9.3	7.6	5.8	5.1	4.0	3.4

Note: Shares of persons unemployed for 12 months or more in the labour force (under ILO methodology).
Source: Eurostat.

The share of persons working part-time is just above 6% in the Czech Republic, well below the levels in Austria and Germany.

Part-time employees

(%)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
CZ	5.1	4.6	4.9	5.7	5.4	5.2	5.6	6.0	6.2	6.1
AT	24.9	25.0	25.7	26.5	27.4	27.7	28.2	28.2	27.6	27.5
DE	25.7	25.9	25.9	26.7	26.6	26.8	26.8	26.9	26.8	27.2
PT	8.4	10.1	11.0	10.8	9.9	9.6	9.2	8.6	7.8	7.9
HU	5.5	6.4	6.7	6.4	6.0	5.7	4.7	4.3	4.2	4.3
PL	7.3	7.0	6.9	6.9	6.8	6.6	6.2	6.3	6.2	5.9
SI	9.2	8.6	8.5	8.5	9.2	9.3	8.9	9.6	9.1	7.9
SK	3.7	3.9	3.9	4.5	5.0	5.7	5.7	5.7	4.8	4.5

Source: Eurostat.

A stagnating supply of part-time jobs was also reflected in subdued growth in the rate of economic activity in the Czech Republic.

Rates of economic activity in the 15–64 age category

(%)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
CZ	70.2	70.5	71.6	72.9	73.5	74.0	75.0	75.9	76.6	76.7
AT	74.4	74.6	75.1	75.5	75.4	75.5	76.2	76.4	76.8	77.1
DE	76.7	77.3	77.2	77.6	77.7	77.6	77.9	78.2	78.6	79.2
PT	73.7	73.6	73.4	73.0	73.2	73.4	73.7	74.7	75.1	75.5
HU	61.9	62.4	63.7	64.7	67.0	68.6	70.1	71.2	71.9	72.6
PL	65.3	65.7	66.5	67.0	67.9	68.1	68.8	69.6	70.1	70.6
SI	71.5	70.3	70.4	70.5	70.9	71.8	71.6	74.2	75.0	75.2
SK	68.7	68.7	69.4	69.9	70.3	70.9	71.9	72.1	72.4	72.7

Note: The rate of economic activity is the share of economically active persons (employed and unemployed) in the population.

Source: Eurostat.

The regional differences in unemployment rates in the Czech Republic are medium-high compared to the other countries under review and are roughly the same as in Germany.

Coefficients of variation of the unemployment rate

(%)

	NUTS II regions										NUTS III regions									
	09	10	11	12	13	14	15	16	17	18	09	10	11	12	13	14	15	16	17	18
CZ	34	31	28	33	31	30	33	33	30	34	35	32	29	34	32	30	33	34	32	36
AT	34	37	40	43	39	43	45	46	47	56	36	39	42	45	41	45	47	49	49	57
DE	37	36	41	40	39	39	37	32	32	31	43	42	48	47	46	-	-	-	-	-
PT	18	20	13	14	16	13	14	14	13	12	-	-	-	-	-	-	-	-	-	-
HU	31	23	26	23	20	30	33	40	46	44	36	28	30	27	24	34	36	45	51	52
PL	19	14	15	15	19	21	22	26	29	35	29	26	26	27	28	29	30	33	36	43
SI	-	-	-	-	-	-	-	-	-	-	-	22	28	21	19	22	21	21	17	26
SK	32	27	32	31	29	28	26	29	37	41	38	29	33	33	31	30	31	33	42	45

Note: The coefficient of variation is the ratio of the standard deviation weighted by region size to the average unemployment rate in per cent. More recent data are unavailable.

Source: Eurostat (LFS).

The willingness of the domestic population to migrate within the Czech Republic remains low, at around half the level of Germany and Austria.

Internal migration

(per 1,000 inhabitants)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
CZ	23	22	22	22	23	23	24	23	23	-
AT	37	38	39	39	40	43	44	42	41	40
DE	44	47	47	48	49	53	54	48	48	-
HU	20	20	19	19	22	22	26	27	29	29
PL	11	11	10	11	11	10	10	11	12	12
SI	52	53	55	55	55	53	54	54	50	47
SK	16	16	15	16	17	17	18	18	18	18

Note: Migration between municipalities (HU, PL and SI – all changes in permanent residence). Data are not available for Portugal. The calculations do not take into account differences in the sizes of territorial units in the chosen countries.

Source: Statistical yearbooks, Eurostat, CNB calculations.

The geographical mobility of the labour force in the Czech Republic was rising slightly until 2019 via an increasing share of foreign nationals in the population.

Shares of foreign nationals in the population

(%)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
CZ	4.0 (1.3)	4.0 (1.3)	4.0 (1.4)	4.0 (1.5)	4.1 (1.6)	4.3 (1.7)	4.5 (1.9)	4.8 (2.0)	4.9 (2.1)	5.2 (2.2)
AT	10.5 (4.0)	10.8 (4.2)	11.3 (4.5)	11.8 (4.9)	12.5 (6.1)	13.3 (6.6)	14.5 (7.1)	15.2 (7.5)	15.7 (7.9)	16.1 (8.2)
DE	8.7 (3.1)	7.6 (2.8)	7.9 (3.0)	8.3 (3.3)	8.7 (3.9)	9.3 (4.3)	10.5 (4.6)	11.2 (4.8)	11.7 (5.1)	12.2 (5.3)
PT	4.3 (0.9)	4.2 (1.0)	4.1 (1.0)	4.0 (1.0)	3.8 (1.0)	3.8 (1.0)	3.8 (1.0)	3.9 (1.1)	4.1 (1.3)	4.7 (1.5)
HU	2.0 (1.2)	2.1 (1.3)	1.4 (0.8)	1.4 (0.8)	1.4 (0.8)	1.5 (0.8)	1.6 (0.9)	1.5 (0.8)	1.5 (0.8)	1.8 (0.8)
PL	0.2 (0.1)	0.2 (0.1)	0.2 (0.1)	0.2 (0.1)	0.3 (0.1)	0.3 (0.1)	0.3 (0.1)	0.5 (0.1)	0.6 (0.1)	0.8 (0.1)
SI	4.0 (0.2)	4.0 (0.3)	4.2 (0.3)	4.4 (0.3)	4.7 (0.8)	4.9 (0.8)	5.2 (0.9)	5.5 (0.9)	5.9 (0.9)	6.6 (1.0)
SK	1.2 (1.0)	1.3 (1.0)	1.3 (1.0)	1.3 (1.0)	1.1 (0.8)	1.1 (0.9)	1.2 (0.9)	1.3 (1.0)	1.3 (1.0)	1.4 (1.1)

Note: Foreign nationals from EU countries are given in parentheses.

Source: Eurostat, CNB calculations.

Owing to repeated substantial increases in the minimum wage, its ratio to the average wage has risen in recent years. However, it is still the lowest among the countries under review, although it is now approaching the German and Slovak levels.

Minimum wage

(% of average wage)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
CZ	33.3	32.5	31.7	32.6	32.8	34.4	35.5	36.9	37.9	39.0
DE	-	-	-	-	-	41.7	40.8	41.4	40.3	40.7
PT	42.8	42.6	43.3	43.1	44.9	44.5	46.3	48.5	49.4	50.0
HU	38.8	39.1	44.2	45.1	45.5	45.3	45.1	45.9	44.8	43.7
PL	41.4	41.3	43.1	44.3	45.1	45.4	46.2	47.3	46.3	46.3
SI	47.5	49.0	50.0	51.4	51.2	50.8	49.8	49.4	50.1	50.5
SK	36.6	36.6	36.7	36.9	36.4	37.9	38.6	39.3	40.7	41.2

Note: No minimum wage was defined at the national level in Germany until 2014; a minimum wage was introduced in January 2015. In Austria the minimum wage is only defined for some specific occupations and represents around 30% of the average wage.

Source: Eurostat.

The ratio of the minimum wage to the wage in the first (lowest) decile of the wage distribution in the Czech Republic is traditionally high in low-skilled occupations and has risen constantly in recent years owing to repeated significant increases in the minimum wage.

Ratio of the minimum wage to the gross monthly wage in selected professions

(%)

Main employment class	Minimum wage / 1st decile									
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Total for Czech Republic (business sector)	63.5	71.6	71.2	71.7	72.9	77.1	77.8	78.6	77.9	79.5
elementary occupations	89.1	90.5	89.4	90.0	93.0	95.6	95.4	95.5	98.1	98.7
services and shop workers	86.5	89.1	88.8	87.5	88.1	91.0	90.8	90.9	88.3	89.2
qualified workers in agriculture, forestry and fishing	65.2	67.2	67.7	67.2	67.8	76.5	78.3	81.3	80.5	81.7

Note: The table gives the data for the Czech Republic as a whole and for the three professions with the highest figures in 2019.

Source: Average Earnings Information System (Ministry of Labour and Social Affairs), CNB calculations.

Overall labour taxation in the Czech Republic was relatively high, but was nonetheless lower than in advanced neighbouring countries (Germany and Austria) and in Hungary in the period under review.

Overall labour taxation

(%)

	100% of average wage					67% of average wage				
	2009	2016	2017	2018	2019	2009	2016	2017	2018	2019
CZ	42.0	43.0	43.4	43.8	43.9	38.8	40.3	40.8	41.4	41.7
AT	47.9	47.3	47.4	47.6	47.9	43.3	43.0	43.1	43.3	43.6
DE	50.8	49.5	49.6	49.5	49.4	45.9	45.4	45.4	45.4	45.2
PT	36.5	41.5	41.4	40.8	41.0	31.9	36.4	36.6	36.5	36.7
HU	53.1	48.2	46.2	45.0	44.6	46.2	48.2	46.2	45.0	44.6
PL	34.1	35.6	35.7	35.8	35.6	33.1	34.9	35.0	35.1	35.0
SI	42.2	42.7	42.9	43.2	43.6	39.7	38.7	40.0	39.8	40.3
SK	37.7	41.5	41.7	41.8	41.9	34.4	39.0	39.4	39.6	39.7

Note: Income tax and contributions paid by employees and employers as a percentage of total labour costs. Data for employees (childless individuals) earning 100% (left-hand part of the table) and 67% (right-hand part of the table) of the average wage.

Source: OECD.

The configuration of the Czech tax and social system still leads to a relatively weak incentive to return from unemployment to employment.

Unemployment trap

(%)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
CZ	80.0	80.2	80.1	80.1	80.2	80.3	80.4	80.6	80.8	80.9
AT	80.4	74.8	74.8	74.6	74.3	73.9	72.0	72.1	71.7	71.2
DE	73.5	73.3	73.3	73.0	73.1	73.1	73.3	73.3	73.2	73.5
PT	79.0	79.0	79.2	79.9	79.8	80.3	80.3	80.4	80.4	80.4
HU	79.9	79.6	79.5	78.8	78.6	78.4	78.1	78.5	78.5	78.5
PL	81.0	80.1	80.3	80.4	78.9	78.0	77.1	75.8	74.6	73.2
SI	83.2	89.7	89.5	89.8	89.7	89.6	87.2	88.3	89.1	89.8
SK	55.5	57.6	57.8	58.0	58.7	48.5	49.4	51.2	52.7	54.3

Note: The unemployment trap measures the proportion of additional gross income associated with financial gain from employment that is taken away when an unemployed person enters employment due to higher taxes and social security contributions and the loss of unemployment benefit and other social benefits. The figures are based on a model example of an unmarried, childless individual with a wage of 67% of the average wage.

Source: European Commission (Tax and benefits).

The low wage trap reduces the incentive to seek better-paid work. In the Czech Republic, about one-third of the additional gross income after a wage increase from 67% to 100% of the average is taken away due to the configuration of the tax and social system. However, this figure is one of the lower ones among the countries under review.

Low wage trap

(%)

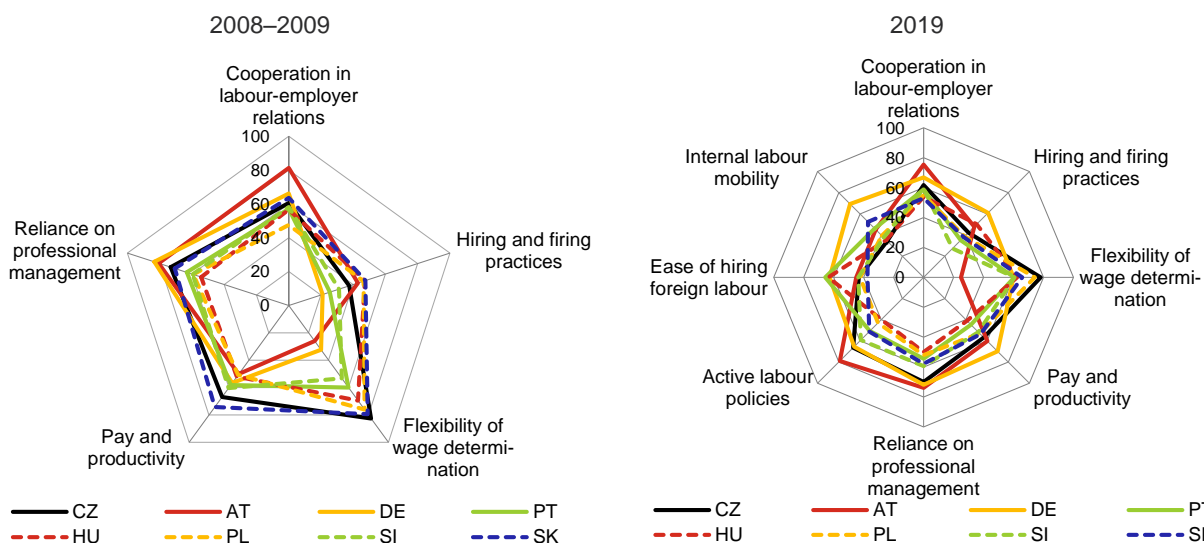
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
CZ	35.5	35.8	35.5	35.4	23.4	25.0	26.9	29.8	31.1	31.1
AT	62.1	61.7	60.2	58.4	57.2	55.7	48.8	48.4	46.9	44.5
DE	53.6	50.0	47.8	46.9	45.6	44.4	52.6	51.4	49.0	47.5
PT	21.0	24.3	22.8	26.6	25.5	25.5	24.0	25.9	26.8	27.3
HU	50.2	20.9	22.6	22.9	25.9	25.9	33.5	33.5	33.5	33.5
PL	45.8	45.0	44.5	46.7	47.4	53.4	54.6	90.6	86.8	91.0
SI	61.7	61.3	30.6	30.2	30.6	30.9	31.3	32.0	33.1	53.3
SK	13.6	20.5	20.5	20.2	21.2	22.2	23.4	25.6	27.5	28.9

Note: The low wage trap measures the proportion of additional gross income that is taken away due to the combined impact of income taxes, social security contributions and the loss of benefits when gross income increases from 67% to 100% of the average income of an employee in the business sector. This indicator is compiled for persons living as a couple, only one of whom earns an income, with two children.

Source: European Commission (Tax and benefits).

In an international GCI comparison, the Czech Republic continues to rank among the leaders in market competitiveness.

Global Competitiveness Index – labour market scores

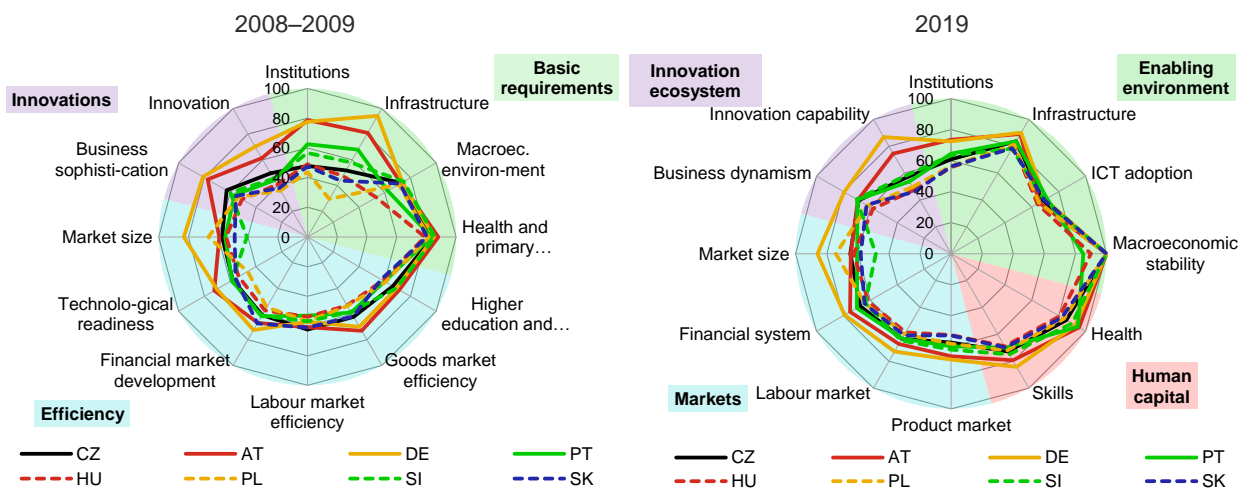


Note: As from 2018, the GCI for the labour market is broken down into new categories. For each category, it now takes values ranging from 0 to 100, where a higher index value means higher competitiveness in the relevant area. To aid comparison, the 2008/2009 levels are normalised according to the new index methodology. More recent data are not available.

Source: World Economic Forum (2009, 2019).

The competitiveness of the Czech economy has increased across most of the monitored areas over the last ten years.

Global Competitiveness Index – overall scores



Note: As from 2018, the GCI is broken down into new categories. For each category, it now takes values ranging from 0 to 100, where a higher index value means higher competitiveness in the relevant area. To aid comparison, the 2008/2009 levels are normalised according to the new index methodology. More recent data are not available.

Source: World Economic Forum (2009, 2019).

Selected scores for the institutional conditions for doing business remain at a similar level to those in Austria.**Conditions for starting and closing a business**

(scores in given category; country rankings in given year in parentheses)

	Starting a business							Closing a business						
	13	14	15	16	17	18	19	13	14	15	16	17	18	19
CZ	79.5 (110.)	81.3 (90.)	81.3 (88.)	83.0 (81.)	83.5 (81.)	82.1 (115.)	82.1 (134.)	78.8 (20.)	79.1 (20.)	79.3 (22.)	79.6 (26.)	79.8 (25.)	80.0 (15.)	80.1 (16.)
AT	80.0 (113.)	82.8 (101.)	82.8 (106.)	83.1 (111.)	83.1 (118.)	83.2 (118.)	83.2 (127.)	78.7 (16.)	78.8 (16.)	78.9 (18.)	78.9 (20.)	77.4 (23.)	77.5 (21.)	77.4 (22.)
DE	81,73 (103.)	81,36 (110.)	82.7 (107.)	83.4 (114.)	83.5 (113.)	83.6 (114.)	83.7 (125.)	91.7 (3.)	91.8 (3.)	91.9 (3.)	92.3 (3.)	90.3 (4.)	90.1 (4.)	89.8 (4.)
PT	92,44 (10.)	90,98 (10.)	91.0 (31.)	91.0 (32.)	90.9 (48.)	90.9 (57.)	90.9 (63.)	83.9 (11.)	79.8 (9.)	80.6 (8.)	81.2 (7.)	79.7 (15.)	80.0 (16.)	80.2 (15.)
HU	89.3 (24.)	86.6 (56.)	87.1 (55.)	87.3 (75.)	87.6 (79.)	87.9 (82.)	88.2 (87.)	51.9 (64.)	52.9 (64.)	53.7 (63.)	54.4 (63.)	54.8 (62.)	55.0 (65.)	55.0 (66.)
PL	82.5 (80.)	82.6 (80.)	82.7 (102.)	82.8 (107.)	82.8 (120.)	82.8 (121.)	82.9 (128.)	68.6 (30.)	69.7 (31.)	70.4 (33.)	76.4 (27.)	77.7 (22.)	76.5 (25.)	76.5 (25.)
SI	94.4 (14.)	94.4 (14.)	94.5 (45.)	94.6 (49.)	94.7 (46.)	92.9 (38.)	93.0 (41.)	62.9 (39.)	62.9 (41.)	83.4 (12.)	84.0 (12.)	83.7 (10.)	83.7 (9.)	84.4 (8.)
SK	78.5 (83.)	80.3 (71.)	81.8 (64.)	81.9 (68.)	82.0 (83.)	82.0 (127.)	84.8 (118.)	69.7 (28.)	69.9 (30.)	70.0 (34.)	70.5 (35.)	66.1 (42.)	66.9 (42.)	65.5 (46.)
No. of countries	189	189	189	190	190	190	190	189	189	189	190	190	190	190

Note: Scores for conditions for starting and closing a business take values ranging from 0 to 100, where a higher value means better conditions. Starting a business: number of procedures, time (days), cost and minimum capital requirements in % of income per capita. Closing a business: time (years), cost in % of total assets and recovery rate in cents on the dollar. The country rankings include subsequent data revisions (more information can be found at <http://www.doingbusiness.org/>). More recent data are not available.

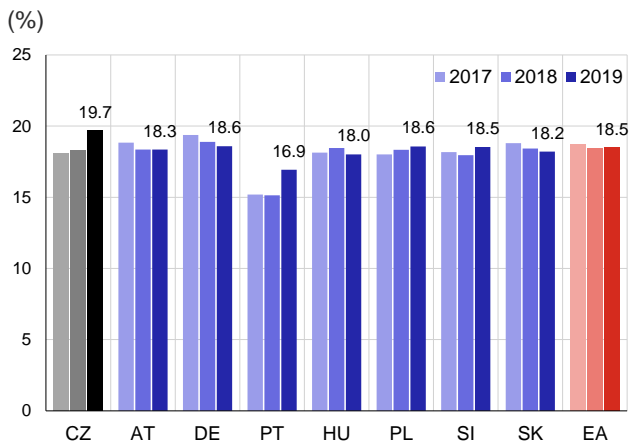
Source: World Bank (2019).

III.2.3. The banking sector and its shock-absorbing capacity

-  Capital position
-  Profitability
-  Liquidity position
-  Credit risk

The capital ratio indicates high resilience of the Czech banking sector.

Capital ratios

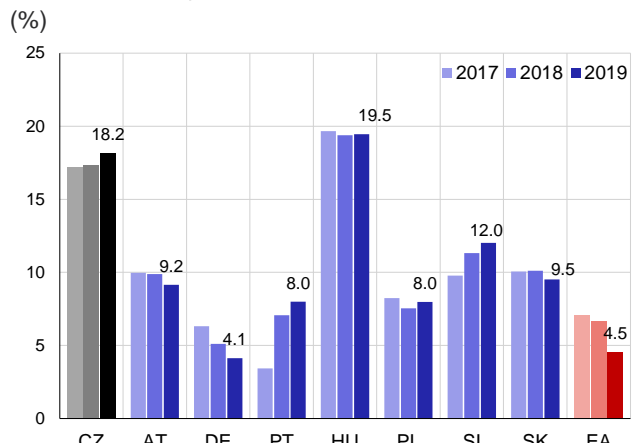


Note: The capital ratio is the ratio of a bank's capital to its risk-weighted assets. EA represents the GDP-weighted average of the euro area member countries.

Source: IMF, Eurostat.

Return on equity remained high in the Czech Republic in 2019.

Return on equity (RoE)

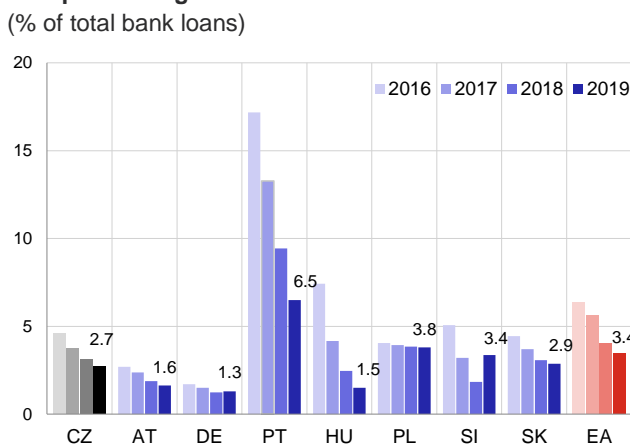


Note: EA represents the GDP-weighted average of the euro area member countries.

Source: IMF, Eurostat.

The non-performing loan ratio in the Czech Republic fell to an all-time low.

Non-performing loans

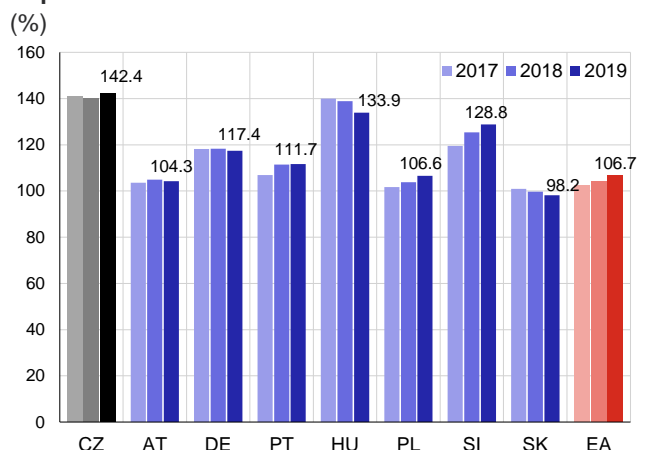


Note: EA represents the GDP-weighted average of the euro area member countries.

Source: EBA, IMF, Eurostat.

The liquidity position as expressed by the deposit-to-loan ratio remains very good in the Czech Republic.







Deposit-to-loan ratios



Note: Deposits/loans to residents. EA represents the GDP-weighted average of the euro area member countries.

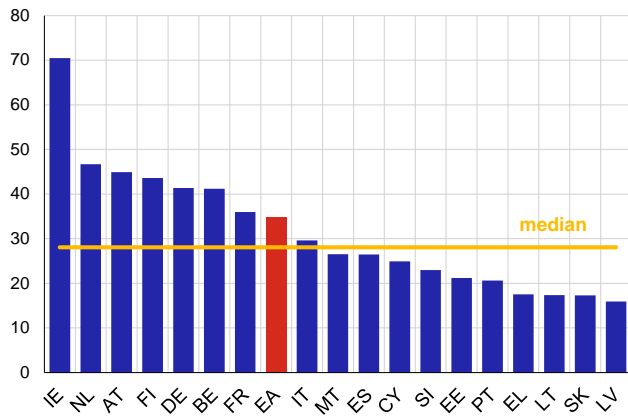
Source: ECB, national central banks.

III.3. ECONOMIC ALIGNMENT OF EURO AREA COUNTRIES

-  Convergence of euro area countries' wealth levels
-  Public finance sustainability
-  Business cycle alignment
-  Monetary policy transmission (interest rate channel)
-  Financial cycle alignment as captured by credit growth
-  Inflation alignment

Economic performance remains very heterogeneous across euro area countries...

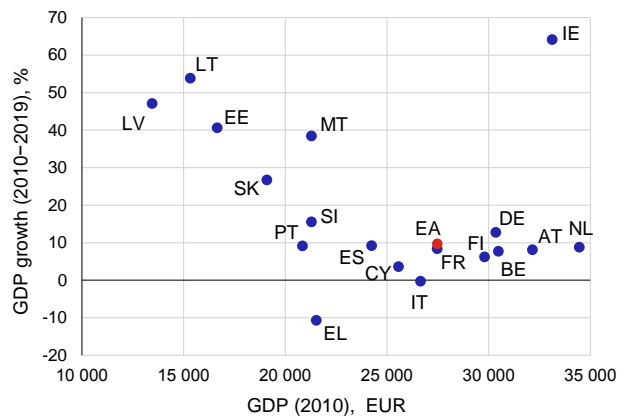
GDP per capita in euro area countries
(2019, GDP at current prices in EUR thousands)



Note: Luxembourg is not included in either of the charts due to the many specificities of its economy, which result in exceptionally high GDP per capita.
Source: Eurostat.

...with real convergence taking place in new member countries only.

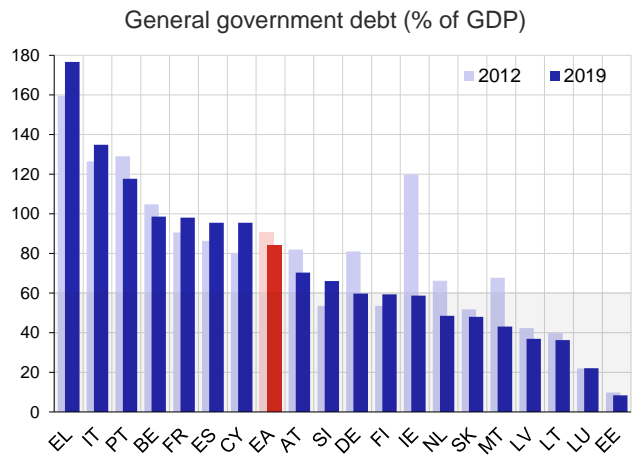
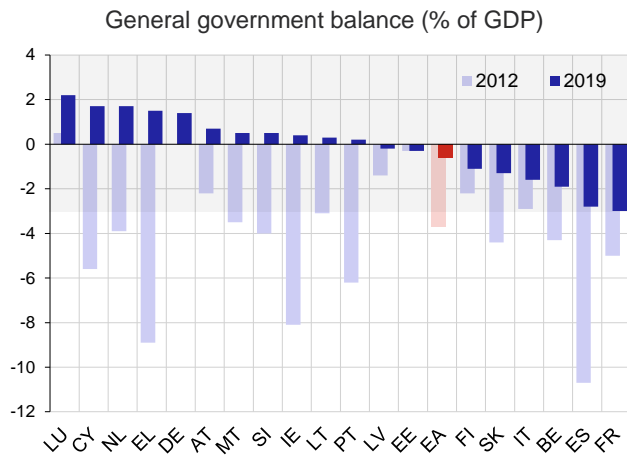
Beta-convergence of real GDP in euro area countries



Note: The chart depicts the relation between GDP growth per capita in each country and its initial level (beta-convergence). The x-axis shows GDP per capita in PPS and the y-axis shows real GDP growth.
Source: Eurostat.

The southern countries have recorded a stagnation or decline in performance, partly due to public finance consolidation; for this and other reasons, their general government debt-to-GDP ratios have not fallen much.

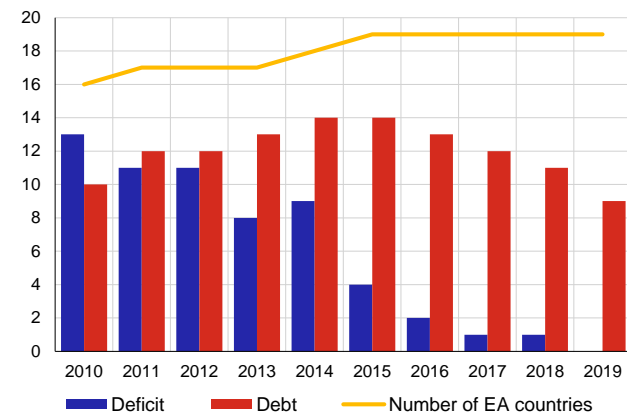
Fiscal situation of euro area countries



Note: Countries in the grey area are compliant with the Stability and Growth Pact (SGP) criterion. The SGP sets limits on government deficits (3% of GDP) and debt (60% of GDP). The starting point (2012) was chosen to capture the negative fiscal effects of the financial crisis (such as rescue programmes in banking sectors financed from state budgets). Source: Eurostat.

Fiscal indiscipline is a long-standing problem in the euro area.

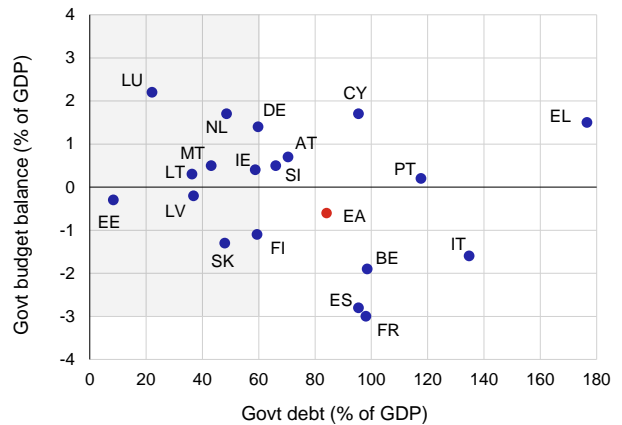
Non-compliance with the fiscal criteria
(number of countries non-compliant with the Stability and Growth Pact)



Note: Number of countries non-compliant with the deficit and debt criteria. Source: Eurostat, European Commission, CNB calculations.

Only ten euro area countries were compliant with both the debt and deficit criteria in 2019.

Fiscal positions of euro area countries (2019)



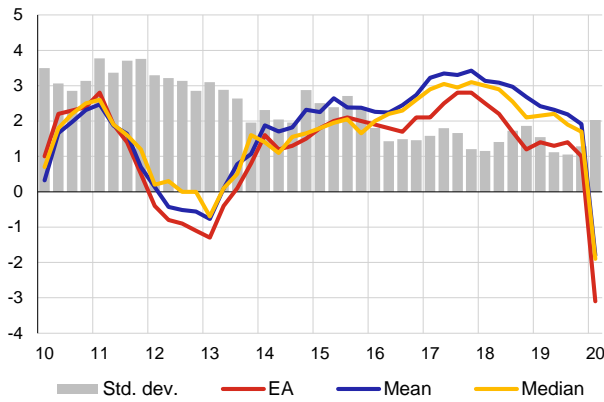
Note: Countries compliant with the Stability and Growth Pact lie in the grey area. Source: Eurostat.

An improvement in the public finance situation has been aided by economic growth, which, however, has been slowing since 2018. Moreover, the euro area economies contracted significantly in 2020 due to the impacts of the pandemic.

Some improvements have been observed in the labour market situation in recent years. However, unemployment increased at the start of 2020 due to the pandemic.

Real GDP growth in euro area countries

(y-o-y, %)

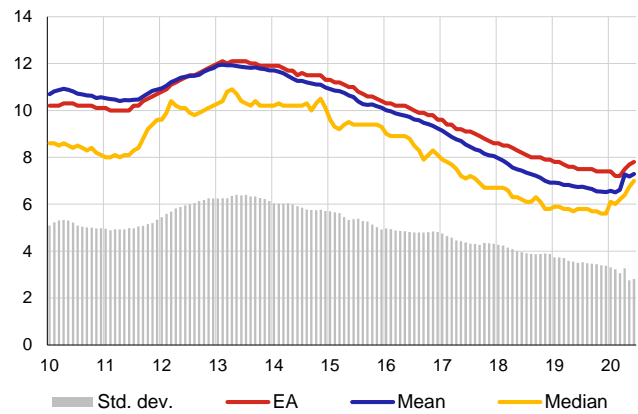


Note: The quarterly mean series depicts the unweighted arithmetic mean of GDP growth in the given quarter across euro area countries. Data for Ireland were not included due to exceptionally high growth in 2015, which exceeded 20% owing to the relocation of the headquarters of several international corporations to Ireland. The source series are seasonally adjusted.

Source: Eurostat, CNB calculations.

Unemployment in euro area countries

(%)



Note: The monthly mean series depicts the unweighted arithmetic mean of unemployment in the given month across euro area countries. The source series are seasonally adjusted. Data for Greece for May and June 2020 and data for Estonia for June 2020 are not included due to data unavailability.

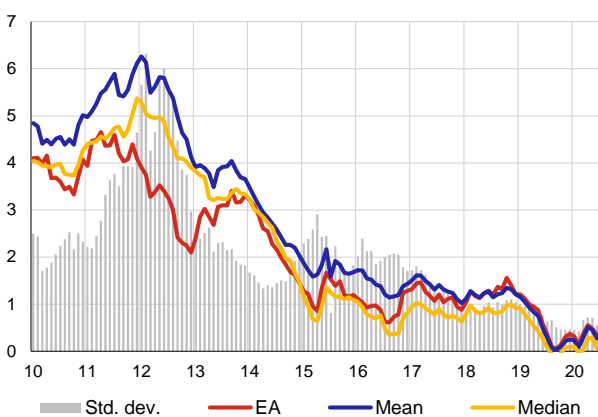
Source: Eurostat, CNB calculations.

Government bond yields fell sharply on expectations that the ECB would relaunch its asset purchase programme. The programme started at the end of 2019 and was scaled up considerably in 2020 due to the pandemic.

Interest rates on client loans also continue to hover around historical lows.

Long-term government bond yields in euro area countries

(%)

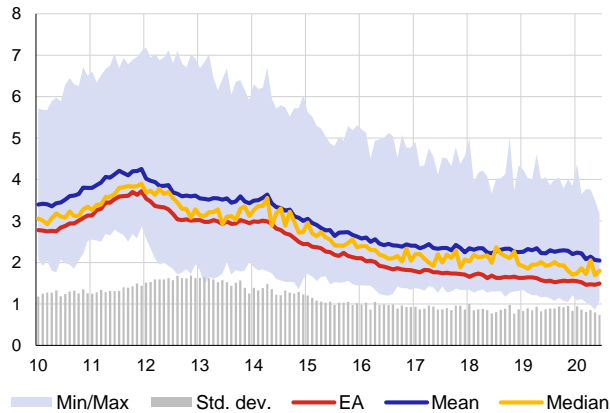


Note: Bond yields for the convergence criteria. The bond maturity is about ten years. Estonia is not included because the time series is not available. The monthly EA series is a weighted average of ten-year euro area government bonds.

Source: ECB (including the EA series), CNB calculations.

Funding costs of non-financial corporations

(%)



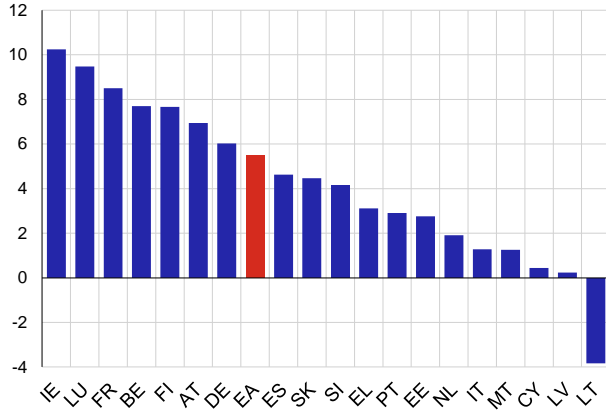
Note: The composite indicator comprises a weighted average of short-term and long-term loans to non-financial corporations. The data are monthly.

Source: ECB (MIR database), CNB calculations.

Bank loans to non-financial corporations increased in almost all euro area countries due to relatively accommodative monetary policy.

Growth in bank loans to domestic non-financial corporations

(2020 H1, y-o-y, %)



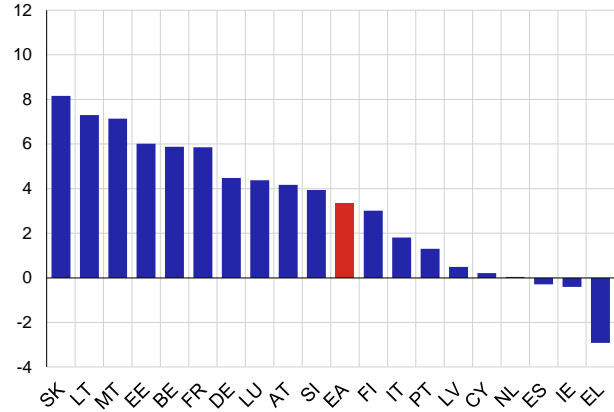
Note: Annual growth in loans provided by monetary financial institutions; average growth rates in the first six months of 2020.

Source: ECB (BSI database), CNB calculations.

The volume of loans to households also rose in most euro area countries. Its high growth rates in some countries reflect an expansion of mortgage lending.

Growth in bank loans to households

(2020 H1, y-o-y, %)



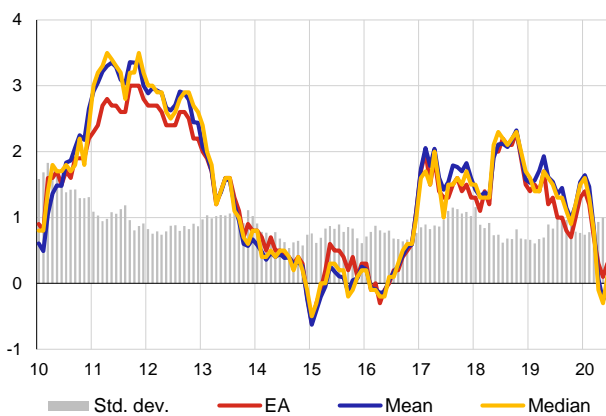
Note: Annual growth in loans provided by monetary financial institutions; average growth rates in the first six months of 2020.

Source: ECB (BSI database), CNB calculations.

Inflation in the euro area countries dropped in 2019 as a result of lower contributions from energy and food prices. In 2020, it fell to zero due to the pandemic.

Headline inflation in euro area countries

(y-o-y, %)



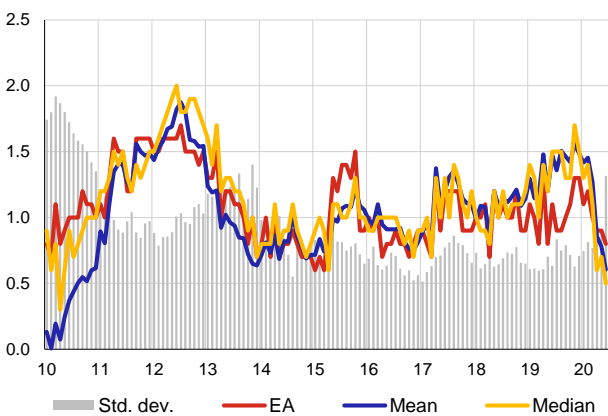
Note: The mean series depicts the unweighted arithmetic mean of inflation in the given year across euro area countries.

Source: Eurostat, CNB calculations.

However, core inflation in the euro area was hovering around 1% until roughly the middle of this year...

Inflation excluding energy, food, alcohol and tobacco prices

(y-o-y, %)



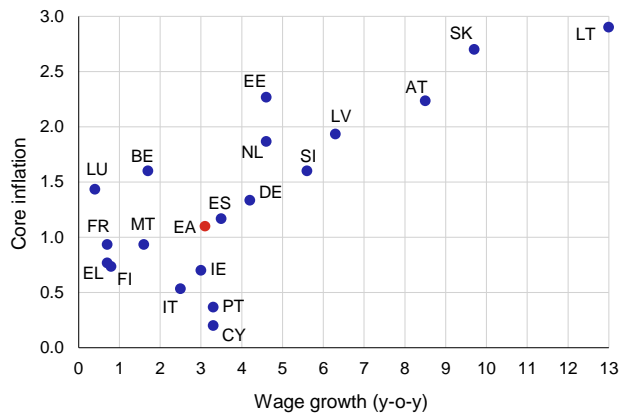
Note: The mean series depicts the unweighted arithmetic mean of inflation in the given year across euro area countries.

Source: Eurostat, CNB calculations.

...and its dispersion across euro area countries reflected diverse wage growth rates, among other factors.

Growth in wage costs, core inflation

(y-o-y growth rates in 2020 Q1, %)



Note: The wage growth series are seasonally adjusted.
Source: Eurostat.

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Issued by:
CZECH NATIONAL BANK
Na Příkopě 28
115 03 Praha 1
Czech Republic

Contact:
COMMUNICATIONS DIVISION
GENERAL SECRETARIAT
Tel.: +420 224 413 112
Fax: +420 224 412 179
www.cnb.cz