Ministry of Finance of the Czech Republic and the Czech National Bank

Assessment of the Fulfilment of the Maastricht Convergence Criteria and the Degree of Economic Alignment of the Czech Republic with the Euro Area

December 2022

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The Assessment of the Fulfilment of the Maastricht Convergence Criteria and the Degree of Economic Alignment of the Czech Republic with the Euro Area provides the Czech Government with a basis for appropriately timing entry into the exchange rate mechanism and subsequent adoption of the euro by the Czech Republic. It is available on the Ministry of Finance website at:

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Abbreviations

СZК	Czech koruna
CNB	Czech National Bank
CZ	Czech Republic
CZSO	Czech Statistical Office
ЕСВ	European Central Bank
EC	European Commission
ERM II	Exchange Rate Mechanism II
EU	European Union (covering all 27 countries)
EUR	euro
GDP	gross domestic product
MF CR	Ministry of Finance of the Czech Republic
IMF	International Monetary Fund

Country codes

AT – Austria, BE – Belgium, BG – Bulgaria, CY – Cyprus, CZ – Czech Republic, DE – Germany, DK – Denmark, EE – Estonia, ES – Spain, FI – Finland, FR – France, GR – Greece, HR – Croatia, HU – Hungary, IE – Ireland, IT – Italy, LT – Lithuania, LU – Luxembourg, LV – Latvia, MT – Malta, NL – Netherlands, PL – Poland, PT – Portugal, RO – Romania, SE – Sweden, SI – Slovenia, SK – Slovakia

Symbols used in tables

A dash (–) in place of a number indicates that the phenomenon did not occur.

Cut-off dates for data sources

The document was prepared using the data available as of 11 November 2022.

Note

Sum totals published in tables may be subject to inaccuracy in the last decimal place in some cases due to rounding.

The Czech Republic undertook to adopt the euro by signing the Act concerning the conditions of accession of the Czech Republic to the European Union. One of the conditions that must be fulfilled by each Member State in the process of joining the euro area is the achievement of a high degree of sustainable convergence, which is assessed according to compliance with the Maastricht convergence criteria. This document assesses the Czech Republic's compliance with these criteria.

Setting a specific date for joining the euro area is fully within the competence of each Member State, but it should ideally depend on its degree of preparedness. Besides undoubted benefits, such as a reduction in transaction costs and the elimination of exchange rate risk, adopting the euro entails giving up independent monetary policy and the exchange rate of the koruna as stabilising macroeconomic instruments. The preparedness of the economy to join the euro area must therefore be assessed from the perspective of its economic alignment and structural similarity with the monetary union, and also from the point of view of its ability to absorb asymmetric shocks using other mechanisms, in particular via fiscal policy and the labour market, after the loss of independent monetary policy.

Next year will mark the 20th anniversary of the signing of the Accession Treaty. Since then, the euro area and the European Union as a whole have experienced the economic recession of 2008 and 2009, followed by the euro area debt crisis. In 2020 and 2021, the world was paralysed by the Covid-19 pandemic, and it has been hit this year by an energy crisis, caused by Russia's military aggression against Ukraine. These and other events shaped euro area integration that aims at strengthening economic and fiscal coordination and completing the banking union and the capital markets union. As a result, new institutions and rules keep changing the form of the euro area and the content of the euro adoption obligation. These facts also need to be properly assessed and considered in decisions about the timing of monetary union entry.

In addition to assessing **legal compatibility**, the **assessment of a country's preparedness** for euro adoption and the related rights, obligations, privileges and commitments includes an assessment of compliance with the **convergence criteria**: the achievement of a high degree of price stability, the sustainability of the government financial position, the observance of the normal fluctuation margins of the exchange rate, and the durability of convergence being reflected in the long-term interest-rate levels.

The analysis contained in this document reveals that the Czech Republic will very probably not fulfil the reference values of any of the criteria in 2022 and 2023. The Czech economy is one of the EU countries with the highest inflation. This is being fuelled by strong supply and demand pressures, and increased inflation expectations. The differences in the intensity of price level growth and the approaches of the Czech National Bank and the European Central Bank to monetary policy have also led to differences in interest rates. Public finances are running high structural deficits following the introduction of a series of support measures during the Covid-19 epidemic. Further measures aimed at reducing the impact of the energy crisis on households and businesses have also contributed to these deficits. Last but not least, the exchange rate fluctuation criterion has not been formally met, as the Czech Republic has not joined the exchange rate mechanism.

As regards the Czech economy's alignment with the euro area and its ability to adjust to possible asymmetric shocks without its own monetary and exchange rate policy, the characteristics of the Czech economy can be divided into three groups. The first group consists of economic indicators suggesting a relatively low level of risk associated with euro adoption in the area analysed. It has long included the Czech economy's close trade and ownership links with the euro area and the high degree of its openness. These factors represent preconditions for the realisation of the benefits of euro adoption and also foster alignment between business cycles. The use of the euro by Czech households has long been very low. However, Czech companies have rapidly increased their euro financing in the last year, also due to the large differential between koruna and euro interest rates. The Czech koruna and the euro remain aligned vis-à-vis the dollar, while the stability of the exchange rate of the koruna against the euro was affected by the CNB's interventions in the foreign exchange market. Inflation persistence, which is relatively low in the Czech Republic, is not a barrier to joining the euro area either. As regards the adjustment mechanisms of the Czech economy, the high participation of the Czech population in the labour market and the low long-term unemployment rate can be positively assessed. The domestic banking sector remains resilient. Its profitability increased last year and this year and its capitalisation and liquidity position remain robust.

The category of **indicators with a neutral message** primarily includes the similarity of monetary policy transmission. Although the Czech Republic differs from the monetary union average in some financial indicators such as the financial assets and liabilities structure and the loans structure of companies and households, this cannot be considered a fundamental barrier to euro adoption. The depth of financial intermediation and the level of private sector debt in the Czech Republic are well below the euro area average and thus do not represent a systemic risk. The alignment of the Czech and euro area financial cycles, which has increased slightly, and the convergence of interest rates, which has decreased due to a stronger tightening of domestic monetary policy, are also assessed as neutral. The observed higher volatility of the Czech koruna against the euro and the decrease in the alignment of the Czech and euro area financial markets, which are a result of geopolitical uncertainty and worse sentiment and are thus probably only temporary, cannot be regarded as a major risk either. As regards labour market flexibility, the geographical mobility of the labour force is rising gradually due to an increase in the share of foreign nationals in the population, while the share of part-time employees is stagnating.

The third group consists of indicators suggesting economic risks associated with euro adoption in the area analysed. These include the unfinished process of economic convergence of the Czech Republic towards the euro area, especially as regards the convergence of the price and wage levels. In the event of euro adoption, a risk may also arise from the lower structural similarity of the Czech economy with the euro area consisting in an above-average share of industry in domestic GDP. The configuration of taxes and benefits on the Czech labour market still contains elements that reduce the incentive to seek employment. The need to stabilise the epidemichit economy using fiscal policy tools and several other expansionary fiscal steps were reflected in the Czech Republic's large government deficits and a marked increase in government debt. This has further intensified

the persistent problem of Czech public finance long-term sustainability stemming, among other things, from an ageing population and the lack of reforms of the pension and health systems.

The design and functioning of the economic and monetary union are evolving over time, so these processes continue to require monitoring and assessment. Apart from benefits, the adoption of the single currency also entails **obligations**, which must be taken into account when deciding on the timing of euro area entry. The total financial costs that will be associated with euro adoption in the future may change. The currently estimated financial obligations for the Czech economy, which were not known when the Czech Republic joined the European Union, mainly include a subscription of capital to the European Stability Mechanism and a transfer of contributions from banks registered in the Czech Republic to the Single Resolution Fund.

The assessment of the Czech Republic's economic preparedness for euro adoption has become considerably more difficult following the Covid-19 crisis and due to the ongoing Russian invasion of Ukraine.

In view of all the above facts, the Ministry of Finance and the Czech National Bank recommend that the Czech government should not set a target date for euro area entry for the time being. This recommendation implies that the government should not aim for the Czech Republic to join the exchange rate mechanism either.

1 Fulfilment of the Maastricht Convergence Criteria

Besides being required to harmonise their legislation with Articles 130 and 131 of the Treaty on the Functioning of the European Union (the Treaty) and the Statute of the European System of Central Banks and the European Central Bank, European Union (EU) Member States are required to **achieve a high degree of sustainable convergence** in order to join the euro area. This is determined according to the criteria (also referred to as the Maastricht criteria) for the achievement of a high degree of price stability, the sustainability of the government financial position, the observance of the normal fluctuation margins of the national currency against the euro and the durability of convergence being reflected in the long-term interest-rate levels. The criteria are enshrined in Article 140 of the Treaty and detailed in Protocol No. 13 on the convergence criteria, annexed to the Treaties. This section briefly describes the individual criteria (a more precise definition is given in Appendix A) and analyses their fulfilment. Although the actual assessment of compliance with all the convergence criteria would take place several quarters ahead of the planned changeover date, the Czech Republic will probably not fulfil the reference values of any of the criteria in 2022.

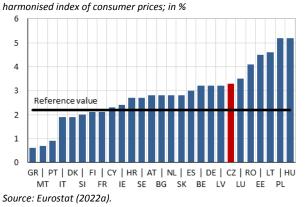
The price stability criterion is very unlikely to be satisfied due to strong supply and demand inflation pressures, while the interest rates convergence criterion will probably not be met due to their sharp increase in response to a tightening of monetary policy by the Czech National Bank (CNB) and rising inflation expectations. Public finances are running deficits significantly exceeding the 3% reference values due to public finance stabilisation measures during the Covid-19 epidemic and expenditure related to the energy and humanitarian crisis triggered by the Russian military invasion on Ukraine. Last but not least, the Czech Republic has not yet joined the relevant exchange rate mechanism which forms the basis for assessing compliance with the fluctuation band for the exchange rate of the national currency against the euro.

1.1 Criterion on Price Stability

The price stability criterion assesses the rate of consumer inflation, which must not be more than 1.5 percentage point higher than the average of the three best performing EU countries in terms of price stability.

The Czech Republic was not compliant with this criterion in 2020 or in 2021, partly because of its low reference value. In 2021, inflation in the Czech Republic was affected by supply-side factors, supported by easy fiscal and monetary policy and a tight labour market. This was reflected in faster growth in wages and prices of production inputs and energy. At the same time, the lifting of anti-epidemic measures led to very fast growth in household consumption. For the above reasons, the Czech Republic ranked among the EU countries with higher inflation in 2021 (see Chart 1.1).

Chart 1.1: Average inflation rate in 2021



The consequences of expansionary fiscal policy, the previously very accommodative monetary policy and the subdued supply-side activity caused by the pandemic

have started to be felt fully this year. At the start of the year, the economy was hit hard by the shock resulting from Russia's invasion of Ukraine. This has led, among other things, to an energy and food crisis. The exceptionally strong growth in consumer prices is being driven not only by prices of food, fuel, electricity and natural gas, but largely also of other categories of goods and services (core inflation is therefore also high). In addition to supply-side issues, inflation is also being fostered by domestic demand pressures exacerbated by a tight labour market and growth in lending activity in the economy. Until recently, lending was particularly strong in the loans for house purchase segment, which led to rapid growth in property prices and a large contribution of imputed rent to inflation. The Czech Republic has ranked among the EU countries with the highest inflation so far this year, and hence it is unlikely to meet the criterion on price stability in 2022 (see Table 1.1).

Next year, inflation pressures should ease as negative supply effects fade out and the effect of the previous increases in the CNB's interest rates manifests itself in full. The problems with supplies of production inputs are expected to be fading over the course of next year. The price of oil should also have an anti-inflationary effect, while the effect of the koruna's exchange rate against major world currencies should be neutral. The growth in the price level will therefore be mainly driven by a further increase in energy prices. Unit labour cost growth is also expected to continue and slow the process of reducing inflation. The Czech Republic will therefore most probably not meet the **criterion on price stability in 2023 either**.

Table 1.1: Consumer prices

harmonised index of consumer prices; average for last 12 months vs. average for previous 12 months of	as of end of period; growth in %

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
									Forecast	Forecast
Average for 3 EU countries with lowest inflation*	-0.2	-0.9	-0.8	0.6	0.7	0.4	-1.0	0.7	7.0	3.8
Reference value	1.3	0.6	0.7	2.1	2.2	1.9	0.5	2.2	8.5	5.3
Czech Republic	0.4	0.3	0.6	2.4	2.0	2.6	3.3	3.3	14.4	9.5

Note: * More precisely, the three best performing Member States in terms of price stability (see Appendix A). These were Denmark, Finland and France for 2022 and Denmark, Luxembourg and Malta for 2023. Malta and Portugal were excluded from the calculation of the criterion in 2022 according to the ECB methodology on 'outliers' used in the ECB's Convergence Reports (ECB, 2022a).

Source: Eurostat (2022a). Forecasts for 2022 and 2023 according to the EC (2022a) and the MF CR (2022a).

1.2 Criterion on the Government Financial Position

The criterion on the government financial position requires the long-term sustainability of the government financial position. Formally, it is fulfilled if an excessive deficit procedure is not ongoing for the country in question. This procedure is usually opened if the country does not fulfil one of the components of the fiscal criterion, i.e. a general government deficit of no more than 3% of GDP and general government debt of no more than 60% of GDP, unless the government debt ratio is sufficiently diminishing and approaching the reference value at a satisfactory pace.

The Czech Republic does not fulfil the reference value for the deficit. However, due to the application of the general escape clause, which allows Member States to deviate temporarily from the common fiscal rules, the Commission did not propose the opening of an excessive deficit procedure (nor is it likely to do so next year). Therefore, the Czech Republic still formally fulfils the criterion on the government financial position.

The Czech Republic recorded a general government surplus in 2016–2019. However, the balance turned negative (below -5% of GDP) in 2020 and 2021. The sharp deterioration in general government finances was due to a decline in economic activity during the Covid-19 pandemic and the related government fiscal stabilisation, support and redistribution policies.

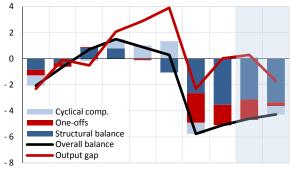
The Ministry of Finance expects a balance of **-4.6% of GDP** in **2022**. The growth in government revenues has been stronger compared to last year due to higher inflation. Epidemic-related subsidies and transfers are having less of an effect on expenditure, but humanitarian expenditure relating to the wave of migration from Ukraine, along with high inflation and the energy crisis, is fostering its acceleration. **In 2023**, a number of one-off or temporary expenditure measures are expected to be financed from one-off revenues. The Ministry of Finance therefore estimates the overall general government deficit at 4.3% of GDP.

From the perspective of fiscal policy and budgetary surveillance, the balance under review is adjusted for the

business cycle and one-off and other temporary measures (the "structural balance"). Chart 1.2 captures the structural components of the general government balance quantified by the OECD method, which is also used in modified form by the European Commission. Under this methodology, the Czech Ministry of Finance expects a moderate widening of the structural balance from -3.1% of GDP in 2022 to -3.3% of GDP in 2023.

Chart 1.2: General government balance

general government balance in % of GDP; output gap in % of potential output



2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 Source: CZSO (2022). MF CR (2022a) calculations and forecasts.

The structural balance is compared with the mediumterm budgetary objective (MTO) of each EU Member State. The MTO for the Czech Republic is currently -0.75% of GDP. **After the Czech Republic joins the euro area, the MTO could be tightened to -0.5 % of GDP** as the Treaty on Stability, Coordination and Governance in the Economic and Monetary Union allows the structural deficit limit of -1.0 % of GDP only if general government debt is well below 60% of GDP and risks to long-term sustainability are low.

Public deficits are reflected in **growth in debt**. Given the current fiscal policy stance, the debt-to-GDP ratio should continue to rise despite an economic recovery, but the **debt level** should remain below the **reference debt level in the convergence criterion** with a predicted value of 46.1% of GDP in 2023.

Table 1.2: General government balance

general government balance and debt; in % of GDP

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
									Forecast	Forecast
Reference value of government balance	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0
Czech Republic	-2.1	-0.6	0.7	1.5	0.9	0.3	-5.8	-5.1	-4.6	-4.3
Reference value of general government debt	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0
Czech Republic	41.9	39.7	36.6	34.2	32.1	30.0	37.7	42.0	43.9	46.1

Note: A precise definition of this criterion is given in Appendix A. Source: CZSO (2022). MF CR (2022a) calculations and forecasts.

1.3 Criterion on the Convergence of Interest Rates

Under the criterion, convergence of interest rates is achieved if yields of bonds with an average residual maturity of 10 years do not exceed by more than 2 percentage points the average of the yields on bonds in the three best performing EU countries in terms of price stability.

This criterion has always been fulfilled in the past (see Table 1.3). In mid-2021, the CNB started to respond to sharply rising inflation pressures by markedly raising key interest rates. This subsequently fostered a rise in government bond yields. By contrast, the ECB kept key interest rates at zero until July this year and only then started to increase them significantly too. The expected persistence of the ECB's negative differential vis-à-vis the CNB in the years ahead will probably hinder fulfilment of this criterion.

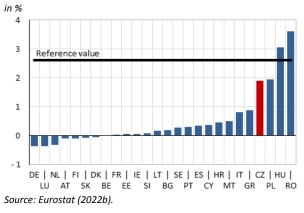
The forecasts in the Convergence Programmes and Stability Programmes (EC, 2022b) of the reference

Table 1.3: Long-term interest rates on government bonds

yields on government bonds with residual maturity of 10 years; 12 month average; in %

countries also expect this criterion to be below the estimated interest rate levels for the Czech Republic in 2022 and 2023.

Chart 1.3: Long-term interest rates in 2021



	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
									Forecast	Forecast
Average for 3 EU countries with lowest inflation*	1.8	1.8	2.1	1.3	2.1	1.3	0.7	0.6	1.3	1.2
Reference value	3.8	3.8	4.1	3.3	4.1	3.3	2.7	2.6	3.3	3.2
Czech Republic	1.6	0.6	0.4	1.0	2.0	1.6	1.1	1.9	4.5	5.2

Note: * More precisely, the three best performing Member States in terms of price stability (see Appendix A). Source: Eurostat (2022b), EC (2022a, 2022b). MF CR (2022a) calculations and forecasts.

1.4 Criterion on Participation in the Exchange Rate Mechanism

The admission of a country into the euro area is conditional on a successful, at least two-year stay of the national currency in the exchange rate mechanism (ERM II). The exchange rate is expected to move within the fluctuation band of ± 15 % without devaluation of the central rate and excessive pressures on the exchange rate. Formal fulfilment of the criterion on exchange rate stability will only be possible after the Czech Republic joins ERM II. Until then, the **assessment** can be made **only at a hypothetical level**.

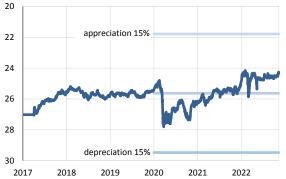
The central rate of the koruna against the euro, against which exchange rate fluctuations would be monitored, would be set before entry into ERM II. The length of stay in the mechanism is set at a minimum of two years before the assessment of preparedness to adopt the euro. The Czech Republic's Euro-area Accession Strategy (CNB, Czech Government, 2003), its update (MF CR, 2007) and the December 2020 Assessment of the Fulfilment of the Maastricht Convergence Criteria and the Degree of Economic Alignment of the Czech Republic with the Euro Area (MF CR, CNB, 2020) imply that the Czech Republic should stay in ERM II for the minimum required period only.

For the purposes of this document, the hypothetical CZK/EUR central rate is set as the average exchange rate in 2020 Q1, i.e. the quarter preceding hypothetical ERM II entry at the start of 2020 Q2, which would have allowed euro adoption on 1 January 2023. Chart 1.4 shows that the **exchange rate fluctuated around the hypothetical central rate for most of the period under review** despite negative external aspects such as the

continuing Covid-19 pandemic and Russia's invasion of Ukraine. The CNB's foreign exchange market interventions during 2022 also helped stabilise the exchange rate. The koruna exchange rate followed an appreciation trend over the last two years, fluctuating comfortably within the ±15% band over the entire period.

According to the MF CR forecast (2022a), the exchange rate of the koruna will be broadly flat in 2023. Long-run appreciation connected with real convergence should not be inconsistent with fulfilment of the exchange rate criterion in the outlook years. This conclusion is supported by the fact that the assessment of this criterion has historically been more lenient on the appreciation side and shifts of the central rate to a stronger level have been tolerated.

Chart 1.4: Nominal CZK/EUR exchange rate



Note: The hypothetical central rate is simulated by the average exchange rate for 2020 Q1. Data up to 11 November 2022. Source: CNB (2022b). MF CR calculations.

2 Assessment of the Degree of Economic Alignment

Future adoption of the single European currency should 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 the stabilising role of a flexible exchange rate. The key factors for a successful functioning of the Czech Republic in the monetary union will therefore be its economic alignment with the euro area and the economy's ability to absorb potential asymmetric shocks using other mechanisms (CNB, 2022a).

This section is thus divided into two basic areas. The first part assesses the similarity of the long-term trends, mediumterm developments and the structure of the Czech economy compared to that of the euro area, including the similarity of monetary policy transmission. It thus captures the risk that the euro area single monetary policy may be inadequate for the Czech economy. The second part answers the question of to what extent the Czech economy is capable of absorbing the impacts of asymmetric shocks using its own adjustment mechanisms, namely autonomous fiscal policy, labour market flexibility, the product market and the banking sector.

2.1 Cyclical and structural alignment

A high degree of alignment of the Czech economy with the euro area economy is a necessary condition for the euro adoption costs arising from the loss of the Czech Republic's own monetary policy to be relatively small.

The economic level of the Czech Republic (as measured by GDP per capita at purchasing power parity) diverged slightly from the euro area average in 2021, but price and wage level convergence has resumed. However, the lag behind the euro area average remains significant, especially in terms of the price and wage levels. The unfinished process of convergence thus remains a factor arguing against early euro adoption. If the euro was adopted, there could be sustained pressure on the overshooting of the current 2% inflation target due to appreciation of the equilibrium real exchange rate and convergence of the wage level.

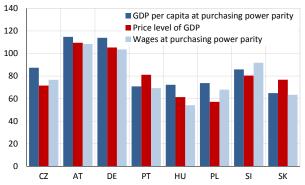


Chart 2.1: Degree of economic convergence in 2021 euro area = 100

Source: Eurostat (2022c). CNB calculations.

The correlation of economic activity in the Czech Republic and the euro area has long been high, with the cyclical alignment of these economies increasing even further in the last two years as a result of external shocks. Similar and identically timed economic impacts of the global pandemic, the war in Ukraine and the related

energy crisis have led to a high correlation of GDP growth in the Czech Republic and the euro area and a strong correlation of Czech exports with economic developments in the euro area. However, as it is not clear to what extent this increase in cyclical alignment is only a temporary consequence of strong global economic shocks, it cannot be regarded as valid evidence of a strengthening of sustained cyclical alignment.

Chart 2.2: Real GDP growth in the Czech Republic and the euro area

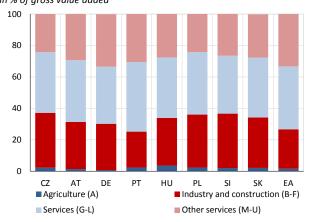
year-on-year; seasonally adjusted; in %

The persisting **differences** in the structure of the

economy consist mainly in an above-average share of industry in Czech GDP. As regards euro adoption, the structural differences pose a risk of asymmetric effects of economic shocks, to which the single monetary policy would not be able to respond in full. There were no major changes in the structural similarity of economies in the pandemic years 2020 and 2021, as the pandemic hit industry and services (albeit with varying intensity) in all euro area and EU countries.

A current example of a potentially asymmetric shock is (albeit now to a lesser extent than before) the still persisting shortage of some components which is slowing the automotive industry. By international comparison, this sector is represented well above average in domestic industry. The rapidly growing electromobility and reduction of energy dependence on Russia will also pose a challenge for this sector and the entire domestic economy.

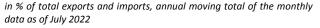
Chart 2.3: Sectoral structure of the economy in 2021 in % of gross value added

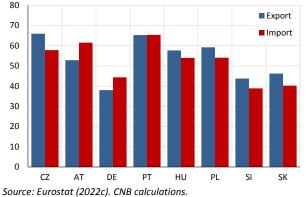


Note: The sectors are broken down by NACE classification. Source: Eurostat (2022c). CNB calculations.

The strong **trade and ownership links** have long been one of the most significant arguments for joining the euro area. Euro adoption would eliminate exchange rate risk and reduce transaction costs for all trade with euro area countries. At the same time, the high intensity of international economic relations, including the high intensity of intra-industry trade, usually leads to greater synchronisation of economic shocks and cyclical alignment and hence to lower costs associated with the loss of independent monetary policy. Alignment is also being supported by a high level of ownership links with the euro area in terms of investment from euro area countries in the Czech Republic.

Chart 2.4: Exports to the euro area and imports from the euro area





According to CNB calculations, the alignment of the Czech and euro area financial cycles increased slightly last year.

The continued tightening of monetary policy by the CNB in 2022 significantly outpaced the ECB's steps, leading to a marked increase in the **interest rate differential** in short-term rates. The response in long-term rates was more moderate, although the spread between Czech and German government bond yields is at its highest levels in ten years.

The Czech currency reacts to changes in the environment outside the euro area similarly to the euro. The correlation between the koruna-dollar exchange rate and the euro-dollar exchange rate worsened temporarily following the start of Russia's invasion of Ukraine. Later this year, the correlation increased noticeably due to the CNB's foreign exchange interventions against depreciation of the koruna vis-à-vis the euro. The volatility of the koruna-euro exchange rate increased markedly after the outbreak of the war. This trend, also observed for other Central European currencies, reflected worse financial market sentiment linked with geopolitical uncertainty, an impending recession and an appreciation of the dollar. Overall, the results of the analyses of financial market convergence also indicate the significant effect of extraordinary events in the global economy (the fading impacts of the coronavirus crisis, an increase in general risk connected mainly with the war in Ukraine and the asymmetric response by central banks to this situation). The alignment of the individual segments of the Czech financial market with the euro area is moving away from the pre-pandemic level. However, the rate of transmission of global news on the Czech money and foreign exchange markets remains at the levels of the last decade.

The depth of financial intermediation and the level of private sector debt in the Czech Republic are relatively low and thus do not pose a systemic risk. Their levels remain well below the euro area average. However, the euro area levels do not represent the levels to which the Czech financial sector should converge, as an excessively large financial sector and overleveraged private sector may pose a risk of exacerbating the cyclical decline in the real economy due to a possible negative shock. Moreover, the elevated private sector debt may limit the room for manoeuvre of monetary or other economic policies in economies with higher debt levels.

The similarity of the structure of the financial liabilities of Czech non-financial corporations and companies in the euro area has remained relatively high despite a drop last year, while the similarity of the structure of the financial assets of Czech and euro area households is still low despite a gradual increase. The decrease in the structural similarity of the financing of Czech companies with those in the euro area was due to a marked decline in the share of debt securities in the Czech Republic relative to this share in the euro area. By contrast, a decrease in the structural mismatch has long been fostered by a gradual decline in other accounts payable (especially trade credits and advances, i.e. short-term financing by bridging the period of time until the due date of invoices, etc.) of Czech firms, whose share in the total liabilities of the domestic business sector was much higher than in euro area countries. The structural similarity of the financial assets of Czech households and households in the euro area has risen slightly but remains relatively low. The persisting dissimilarity is due mainly to Czech households' preference for cash and deposit holdings, together with holdings of units and shares, while households in the euro area hold a large part of their balance sheets also in insurance and pension schemes. The increase in similarity last year was due to a decrease in the share of cash and deposits in the Czech Republic and its rise in the euro area. Differences in the asset structure of households in the Czech Republic and in the euro area may imply their different sensitivities to changes in interest rates and hence the different impacts of a possible single monetary policy.

The interest rate fixation structure of loans in the Czech Republic and the euro area followed a similar trend for both non-financial corporations and loans for house purchase. The share of loans to non-financial corporations with longer fixation periods has increased in both the Czech Republic and the euro area in the last ten years. Nevertheless, 88% of new loans to non-financial corporations in the Czech Republic have floating rates or fixed rates of up to one year. This gives rise to fast transmission of changes in monetary policy rates and, in turn, market rates to loan rates provided to firms. The spread between client rates on loans to non-financial corporations and the overnight interbank rate remains lower in the Czech Republic than in the euro area. The structure of the spread differs significantly, as monetary policy rates in the Czech Republic have risen rapidly in the last year and have been reflected in the individual interest rate segments gradually and to different extents. The Czech Republic's ten-year government bond yield in particular reflects monetary policy rates to only a limited extent, as it is also shaped by factors outside domestic monetary policy (such as long-term market expectations, fiscal policy and external developments on the bond markets). More specifically, the spread between the tenyear bond yield and the overnight interbank rate is significantly negative, i.e. short-term money market rates are markedly higher than the ten-year government bond yield. By contrast, the spread between the client rate on loans to non-financial corporations and the ten-year

government bond yield is strongly positive. This, together with other factors, is due to the inverted shape of the yield curve. However, from the perspective of monetary policy transmission, the size of this spread is immaterial, as changes in monetary policy rates are most often transmitted to client rates on loans to non-financial corporations through the three-month PRIBOR and the transmission of the increase in monetary policy rates to client rates has thus been substantial. In previous years, loans to households for house purchase have been shifting towards longer fixation periods in both the Czech Republic and the euro area due to low market and client interest rates. This trend has been fading in the Czech Republic over the last year, reflecting households' efforts to lock in lower levels of interest rates on house purchase loans before their expected increase. Fixation periods of over 10 years predominate in the euro area, with fixation periods of five years prevailing in the Czech Republic. Different fixation periods may imply different levels of sensitivity to changes in market and monetary policy rates. A shift towards longer fixations may also lead to a decrease in the sensitivity of client interest rates to changes in financial market rates.

Companies have increased their euro-denominated loan financing due to a rise in the interest rate differential, while the share of foreign currency loans and deposits of Czech households has long remained very low. In the case of companies, the share of foreign currency loans has long been showing an upward trend due to high trade integration with the euro area and to natural hedging of exchange rate risk. A high differential between koruna and euro interest rates has led to a marked acceleration in this upward trend in euro-denominated loans in the last year. Their share in total corporate loans thus reached a historical high (more than 40% in August). In terms of sector and company size, this trend was relatively broad-based and may lead to an increase in exchange rate risk in some companies in the event of more significant depreciation of the koruna and weaker transmission of domestic monetary policy in the interest rate channel. The degree of euroisation in Czech companies could increase further due to the government's intention to allow firms to keep accounts and pay taxes in euro. Firms' changeover to the euro (as their operating currency) may result in the CNB's monetary policy being less effective.

2.2 Adjustment mechanisms

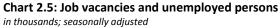
If set correctly, **fiscal policy** – like monetary policy – should have a countercyclical effect and thus be a stabilising element for the economy. Otherwise it becomes a source of shocks and deepening macroeconomic imbalances. Fiscal policy played an important role in stabilising the Czech economy during the Covid-19 pandemic. Owing to an extension of the

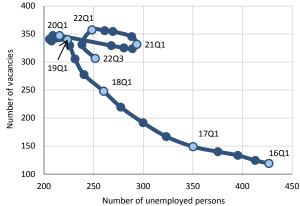
effect of several fiscal stabilisation measures and the adoption of new measures, the Czech Republic recorded a sizeable general government deficit in 2021 again, albeit slightly lower than in 2020. The Czech Republic exceeded the 3% Maastricht convergence criterion for the general government deficit (for details see section 1.2) and failed to meet the medium-term objective for the structural balance (-0.75% of GDP) for the second consecutive year. However, in view of the application of the general escape clause of the EU fiscal framework, which allowed Member States to temporarily deviate from the common fiscal rules, these developments were in line with European legislation. Large-scale fiscal stimulus was also possible thanks to a favourable initial level of general government debt (30% of GDP in 2019). Therefore, the fulfilment of the Maastricht debt criterion has not yet been jeopardised, and the national debt limit has not been exceeded. However, some measures with significant and potentially lasting fiscal impacts were not directly linked to the pandemic (a reduction in personal income tax, for example) and exerted additional constant pressure on Czech public finance due to their size and unlimited duration. Moreover, Czech public finance will face further challenges in the long run owing to the ageing of the Czech population (see, for example, the Czech Ministry of Finance, 2022b).

Fiscal policy should gradually return to compliance with European fiscal rules and create room for the still unresolved reforms of the pension and health systems. Under the current legislation, and in view of the recovery of the Czech economy, public finance consolidation should have commenced this year. The statutory minimum level of structural balance consolidation of 0.5 percentage point per year is likely to be achieved this year without additional restrictive measures.

Despite the evident and necessary costs of the fight against the impacts of the energy crisis on the Czech economy, the government keeps to its commitment to formulate and implement fiscal consolidation. This will broaden the room for reducing the cyclical fluctuations of the economy, which is particularly necessary if a country loses its domestic monetary policy after euro adoption.

The labour market is another important mechanism through which the economy can cope with asymmetric shocks in the absence of independent monetary policy. Czech labour market indicators deteriorated only slightly after the onset of the coronavirus pandemic thanks to measures to protect jobs, and started to improve gradually last year. This was reflected mainly in renewed growth in employment, a return in the rate of economic activity of the population to the pre-crisis levels and a continued excess of the number of vacancies over the number of unemployed persons. The very low long-term unemployment rate, which is among the lowest in Europe, also remains a positive factor. The growing labour market flexibility is being fostered by an increasing share of foreign nationals in the population, which will be additionally strongly supported by the arrival of war refugees from Ukraine this year. By contrast, the share of part-time jobs remains low. Tax changes helped to reduce overall labour taxation last year, which might have fostered the incentive to seek better-paid work.

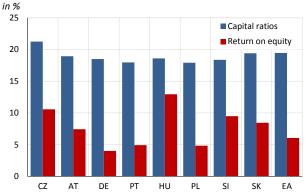




Source: Ministry of Labour and Social Affairs (2022). CNB calculations.

The condition of the financial sector plays an important role in the economy's ability to absorb economic shocks. The domestic banking sector developed favourably in 2021 and thus maintained its high resilience to potential adverse shocks. The stabilisation of economic conditions after the pandemic has led to a decline in the level of credit risk perceived by banks. This was positively reflected in the banking sector's profitability in 2021, which remains high by international comparison. Growth in profits strengthened further in the first half of this year due to higher margins related to the process of the CNB raising monetary policy rates and the persistent, relatively strong growth of the main credit portfolios. The capitalisation of the domestic banking sector remains robust and high by international comparison. The gradual build-up of the countercyclical capital buffer, which is continuing this year, is enhancing the resilience of the banking sector. Overall, capital buffers create favourable conditions for smooth lending to the real economy and absorption of any increased credit losses, which may arise from geopolitical tensions, elevated inflation or the related potential economic recession. The liquidity position remains strong due to a persistently high proportion of liquid assets.





Note: The capital ratio is the ratio of a bank's capital to its risk-weighted assets. It thus expresses the bank's financial strength and measures its ability to cover any future losses with capital. Source: ECB (2022b).

3 Situation and Institutional Developments in the Euro Area

Next year marks the 20th anniversary of signing the Czech Republic's obligation to adopt the euro. During that period, the EU has been through a major economic recession which – in euro area countries – subsequently transformed into a debt crisis, followed by a pandemic crisis and, this year, an energy crisis triggered by Russia's military aggression against Ukraine. These and other events have shaped and will continue to affect euro area integration aimed at strengthening economic and fiscal coordination and completing the banking union and the capital markets union. Over the years, the euro area has also expanded to include new members. Croatia will become the newest member on 1 January 2023, while Bulgaria is also moving towards euro adoption from January 2024. Euro adoption 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 European Stabilisation Mechanism. The new institutions and rules are thus changing the shape of the euro area and the content of the obligation to adopt the euro, which should be properly assessed and taken into account when deciding on the timing of entry into the monetary union.

3.1 Situation in the Euro Area

Economic alignment of euro area countries is essential to the smooth functioning of the monetary union. However, the series of events faced by the global economy after 2019 exacerbated the macroeconomic imbalances of the euro area countries, amplifying the already fundamental **structural and economic differences**.

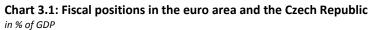
The Covid-19 pandemic caused a sharp drop in the GDP of most euro area countries. Its impact differed from country to country and also depended on the structure of individual economies. Also, the recovery and the return to pre-crisis levels did not take place at the same pace. Persisting restrictions in the tourism industry have adversely affected the economic recovery of the southern European countries. By contrast, the Covid-19 pandemic had a much weaker impact on Luxembourg, Finland and the Baltic states. The trends in the relative economic levels of the Member States remain very uneven.

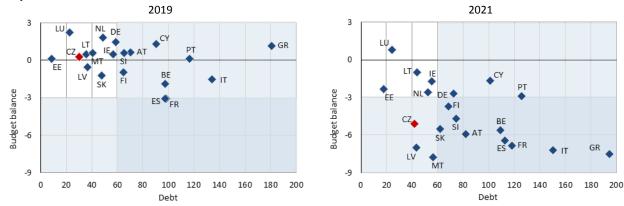
Similarly, significant differences persist in the **labour market** despite a slight improvement. In 2021, the unemployment rate exceeded 14% in Greece and in Spain, while in Italy it was above 9%. The long-term unemployed account for a large proportion of the total unemployed. By contrast, the unemployment rate in Germany and Malta fluctuated below 4% in the same year. In the course of 2022, this indicator showed a downward trend in the euro area, reaching a historical low of 6.6% in September. However, given the expected deterioration in economic activity and a likely recession in late 2022 and early 2023, we can expect the decline in unemployment to halt and labour market conditions to deteriorate.

The euro area is currently facing the highest inflation in its history due to **rising** food and energy commodity **prices**. There has been a considerable widening of inflation differentials between countries this year. Consumer price inflation in France, Spain and Malta is around 7%, while it exceeded 20% in the Baltic states. The high inflation spread may be explained by the Baltic states' closer ties to Russia and the related high dependence on Russian gas imports, the different structure of the economies and the greater weight of energy and food in their consumer baskets. In response to the price developments, the ECB raised its interest rate on the main refinancing operations to the current 2%. A further monetary policy tightening can be expected by the end of 2022. The aim of the measure is to reduce inflationary pressures and anchor inflation expectations. On the other hand, it should be taken into account that it will lead to a rise in government bond yields and an increase in government debt servicing costs.

The impacts of Covid-19 over the last two years and stabilisation measures have led to a marked deterioration in public finance performance in euro area countries (see Chart 3.1). The euro area general government **deficit** averaged 5.1% of GDP last year. **General government debt** exceeded 60% of GDP in 12 countries, with debt-to-GDP ratios exceeding 100% in seven countries (Belgium, France, Italy, Cyprus, Portugal, Greece and Spain). The average debt in the euro area was 95.4% of GDP. In 2021, only five of the 19 euro area countries were compliant with both the deficit and debt benchmark (Estonia, Ireland, Lithuania, Luxembourg and the Netherlands).

The planned consolidation of public budgets was disrupted by the energy crisis and the related rise in the price level. In response to this situation, individual Member States are taking extraordinary measures aimed at mitigating the impacts on households and firms. In this context, we expect a reassessment or relaxation of debt reduction plans. According to estimates, only three euro area countries (Estonia, Luxembourg and Ireland) are expected to comply with both fiscal reference criteria in 2022. The energy crisis, high inflation, rising debt servicing costs and concerns of households and firms about the onset of a recession are major negative factors for euro area members' economic growth and mutual convergence. The debt problems of some Member States may be added to these factors in the coming periods.





Note: The Czech Republic is not an euro area country and is only listed here for comparison. Data as of 21 October 2022. Source: Notification tables of the various countries, Eurostat (2022d).

3.2 Institutional Developments in the EU and Related Obligations

Since the Czech Republic joined the EU, many reforms have been implemented to **enhance the stability, and deepen the integration, of the EU**. Nonetheless, the institutional framework of the EU and the euro area is continuing to evolve. The Czech Republic faces further institutional or financial changes and obligations arising from the previously submitted and expected future proposals. These must be taken into account when discussing the timing of euro area entry.

A Strategic Agenda for 2019–2024 was adopted at the European Council meeting in June 2019. This set out priorities for the direction of the EU and, among other things, confirmed that deepening the economic and monetary union is a priority for the EU in order to strengthen its economic stability, resilience and growth potential.

In June 2019, the euro area member states took another minor step towards achieving this goal by agreeing on the main elements of the budgetary instrument for euro area and non-euro area countries. However, the debate on these proposals was suspended as a result of the approval of the Next Generation EU instrument, which was prepared in response to the effects of the Covid-19 pandemic.

Completing the **banking union** is part of the deepening of the **economic and monetary union**. This project was created in response to the rise in market distrust in the euro area banking systems and the collapse of major banks and cross-border banking groups located in the euro area, whose bail-out required high public spending during the financial and debt crisis after 2008. Its aim is to ensure the safety and soundness of the euro area banking sector, which affects the stability of the EU as a whole, and to ensure that the failure of non-viable banks is addressed without the need to use taxpayers' money and with minimal impact on the real economy.

Partial progress in creating the banking union was achieved in 2019 (i.e. before the pandemic), when a banking package was adopted to strengthen the resilience and resolvability of EU banks. The package enshrined a set of reforms aimed at improving the situation in those areas. It also implements important international standards and aims to help complete the implementation of "post-crisis" international regulation. In the context of strengthening bank resilience, it is worth mentioning the publication of another banking package of legislative proposals in 2021, which is focused primarily on completing the implementation of the rest of the Basel III standards. The package includes legislative proposals for which the legislative process has not yet been completed: a review of the Capital Requirements Directive and the Capital Requirements Regulation.

During 2020, the efforts at EU level were focused primarily on measures directly connected with containing the Covid-19 pandemic, and, as a result, activities related to the completion of the banking union were set aside. In December 2020, the Euro Summit mandated the Eurogroup to develop, by consensus, a roadmap for the completion of the banking union, focusing on setting the course of action in four defined areas. Despite considerable efforts to find consensus, this objective has not been achieved. As a follow-up, the Eurogroup adopted a statement in June 2022 declaring that work on completing the banking union should focus directly on strengthening the crisis management framework for banks and national deposit insurance schemes. However, the other three topics – the introduction of a European deposit insurance scheme, the strengthening of crossborder integration of banking groups and the regulation of holdings of sovereign exposures (government bonds) by domestic banks – will be left aside for the time being.

The Commission has worked continuously with the Member States concerned to reduce the level of nonperforming loans (NPLs) under the European Semester and elsewhere. Banks have made considerable progress since the last economic and financial crisis, with the NPL ratio for all EU banks falling to 2.8% in 2019 Q4. They also made good progress in increasing capital adequacy, improving the quality of their loan portfolios, and increasing liquidity. However, due to the impact of the pandemic, the NPL ratio edged up to 3.0% in 2020 Q1. Banks generally managed to reduce the NPL ratio, even during the pandemic (to 2.0% in 2022 Q1). However, there is still a risk of it rising, especially after the moratoria on loan repayments end and given the unfavourable economic outlook. To prevent a further increase in the NPL ratio, the European Commission issued an Action Plan to tackle non-performing loans in the aftermath of the Covid-19 pandemic in December 2020. At the same time, the Council agreed on the need to complete the implementation of measures not adopted under the 2017 Action Plan. The intention to proceed swiftly with legislative proposals on secondary markets for NPLs and accelerated extrajudicial collateral enforcement was underlined. Substantial progress has been made in developing a secondary market for NPLs, in particular the adoption of Directive (EU) 2021/2167 of the European Parliament and of the Council on credit servicers and credit purchasers.

In the context of the negotiations on deepening the economic and monetary union, negotiations were held from the end of 2017 to March 2020 on reforming the European Stability Mechanism. This reform also concerned the introduction of a new instrument called a common backstop to the Single Resolution Fund. This is a last resort instrument to be used if the Single Resolution Fund becomes depleted. As non-euro area banking union countries are not members of the European Stability Mechanism, they are to provide parallel credit lines under similar conditions to ensure equal treatment. The sum total of all the credit lines should equal the target level of the Single Resolution Fund, i.e. about EUR 80 billion. The backstop will be fiscally neutral in the medium term, because the funds used in individual cases will always be repaid within three to five years, out of contributions collected from the banks in the banking union.

In 2021 Q1, Member States signed an agreement providing the legal basis for a set of new competences for the European Stability Mechanism. The reformed treaty will enter into force after ratification by the parliaments of the countries concerned. Germany and Italy are the

last signatory Member States that have yet to ratify the reformed Treaty.

Since 2015, the EU has been developing the concept of a **capital markets union**. Building on a 2017 Mid-Term Review of the implementation of legislative and nonlegislative measures, and following calls from the European Parliament (EP, 2020) and the Council (Council of the EU, 2019), the European Commission in September 2020 published a new, ambitious Action Plan to boost the EU's capital markets union over the coming years, which should ensure access to market funding.

In the Action Plan, the Commission introduced 16 legislative and non-legislative proposals which focus on simplifying access to company information, making it easier for SMEs to access non-bank finance, strengthening investor protection, harmonising national insolvency legislation and creating a single rulebook for EU capital market supervision.

In light of the Action Plan, the Commission presented another package of legislative proposals aimed at integrating capital markets in November 2021. The capital markets union project is politically exposed and focuses mainly on post-pandemic economic growth, sustainable finance, digitalisation, and also puts greater emphasis on EU autonomy in some areas. The Council has already reached a common position on some legislative proposals.

The **response** at the European level **to the economic situation caused by the Covid-19 pandemic** has supported the EU's economic resilience, even in the current geopolitical and economic context. The elements of the joint response included a **European Stability Mechanism credit line**, an EU budget instrument (especially **SURE**, an instrument for support to mitigate unemployment risks in an emergency) and a **guarantee fund provided by the European Investment Bank**.

In addition, the European Commission published a communication on the plan to support economic recovery in the EU (EC, 2020). The aim of the proposal was to harness the full potential of the EU budget to mobilise investment and frontload financial support in the first crucial years of recovery. The proposals were endorsed politically at the July 2020 European Council, followed by approval of the related legislation in the Council and the European Parliament.

The main pillar of the recovery plan is the **multiannual financial framework** for 2021–2027, approved at EUR 1,074 billion (at 2018 prices). New tools will be created and key programmes strengthened so that investment can be directed quickly to where it is most needed. The other pillar is the EUR 750 billion **Recovery plan for Europe** – **"Next Generation EU"** – aimed at temporarily boosting the EU budget with financing raised on the financial markets. The centrepiece of the recovery plan is a **Recovery and Resilience Facility**. The aim of the facility is to provide large-scale financial support for reforms in the Member States and for public investment projects that will strengthen the cohesion and resilience of the Member States. The proposed allocation of EUR 672.5 billion (at 2018 prices) is a combination of grants (EUR 312.5 billion) and supplementary voluntary preferential loans (EUR 360 billion). To some extent, the Facility builds on the work on the above-mentioned budgetary instrument for the euro area and the EU and finances part of the targeted reforms and investments undertaken by Member States by the end of 2026. Unlike the previous plans, this has been declared a one-off instrument aimed at addressing the impacts of the pandemic. All Member States have already submitted their national recovery plans and the Commission had already disbursed EUR 112 billion by the cut-off date for this assessment.

The general escape clause of the Stability and Growth Pact was to be deactivated at the end of 2022 for the first time since the outbreak of the Covid-19 pandemic in the EU in March 2020. In light of the uncertainties and risks regarding upcoming macroeconomic developments (including in the context of the current war in Ukraine and rising energy prices), it was concluded that the clause needed to be extended for another year. It is therefore not expected to be deactivated until 2024, which means, among other things, that until then Member States will not be required to comply with the medium-term budgetary objective or the adjustment path towards it (in terms of the structural balance), provided that mediumterm fiscal sustainability is maintained. In view of the persisting uncertainties, the European Commission has so far concluded that it is not possible to set a credible path for fiscal adjustment, on the basis of which it considered it inappropriate to propose the opening of an excessive deficit procedure vis-à-vis individual Member States. This is important, among other things, for the assessment of the criterion on the government financial position.

In addition, the European Commission followed up on its pre-pandemic initiative to reform the EU's existing fiscal rules. To this end, the Commission already launched a public consultation in October 2021, on the basis of which it intends to submit an initial proposal for such a reform. Following the **REPowerEU** initiative, which aims to end the EU's dependence on imports of fossil fuels from Russia, legislative adjustments are underway to increase the financial envelope of this instrument by EUR 20 billion.

In the context of the enlargement of the monetary union, attention should be drawn to the Council decision of July 2022, under which Croatia will become the 20th member of the euro area on 1 January 2023, and recall that its entry (and that of Bulgaria) into the ERM II as part of the process of adopting the single currency was accompanied for the first time by simultaneous entry into the banking union. Such an approach was identified by the ERM II parties as a precedent for other ERM II candidates, although EU law does not stipulate such a condition for ERM II entry. Therefore, the Czech Republic still does not regard participation in the banking union as a necessary condition for ERM II entry.

Given the ongoing discussions in the EU about the future institutional arrangement of the euro area, the obligations that would arise for the Czech Republic on accession to the euro area cannot be fully assessed at present. The estimated financial costs associated with the Czech Republic's hypothetical entry into the euro area, which arise mainly from participation in the banking union and the ESM and payment of the rest of the share in the subscribed capital of the ECB, are quantified in Appendix B.

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A Appendix – Maastricht Convergence Criteria

Criterion on Price Stability

Treaty provisions

The first indent of Article 140(1) of the Treaty requires: "the achievement of a high degree of price stability; this will be apparent from a rate of inflation which is close to that of, at most, the three best performing Member States in terms of price stability".

Article 1 of Protocol No. 13 on the Convergence Criteria also stipulates that: "The criterion on price stability shall mean that a Member State has a price performance that is sustainable and an average rate of inflation, observed over a period of one year before the examination, that does not exceed by more than 1.5 percentage points that of, at most, the three best performing Member States in terms of price stability. Inflation shall be measured by means of the consumer price index on a comparable basis taking into account differences in national definitions".

Application of Treaty provisions in ECB and EC Convergence Reports

With regard to "an average rate of inflation, observed over a period of one year before the examination", the inflation rate is calculated using the increase in the latest available 12-month average of the Harmonised Index of Consumer Prices (HICP) over the previous 12-month average.

The reference value of the price criterion is calculated as 1.5 percentage points plus the simple arithmetic average of the rate of inflation in the three countries with the lowest inflation rates, provided that this rate is compatible with price stability.

Implementation of the price stability criterion – current practice

Both the Treaty and the Protocol in some areas leave scope for interpretation by the institutions that assess the fulfilment of the criteria in their Convergence Reports (the European Commission and ECB). Therefore, when assessing the fulfilment of the criteria one should also take into account the specific way in which these institutions implement the criterion. Previous practice shows that countries with low or negative inflation rates are not automatically excluded as reference countries. Only countries that record significant deviations in inflation from the other EU countries owing to extraordinary or specific factors are excluded.

Criterion on the Government Financial Position

Treaty provisions

The second indent of Article 140(1) of the Treaty requires "the sustainability of the government financial position; this will be apparent from having achieved a government budgetary position without a deficit that is excessive as determined in accordance with Article 126(6) of the Treaty".

Article 2 of Protocol No. 13 on the Convergence Criteria stipulates that this criterion "shall mean that at the time of the examination the Member State is not the subject of a Council decision under Article 126(6) of this Treaty that an excessive deficit exists".

Article 126 of the Treaty sets out the excessive deficit procedure, which is specified in more detail in the Stability and Growth Pact. According to Article 126(3) of the Treaty, the European Commission shall prepare a report assessing whether an excessive deficit exists on the basis of the following two criteria if a Member State does not fulfil the requirements for budgetary discipline.

- 1. whether the ratio of the planned or actual government deficit to GDP exceeds a reference value (defined in Protocol No. 12 on the excessive deficit procedure as 3 % of GDP), unless:
 - a. either the ratio has declined substantially and continuously and reached a level that comes close to the reference value;
 - b. or, alternatively, the excess over the reference value is only exceptional and temporary and the ratio remains close to the reference value.
- 2. whether the ratio of government debt to GDP exceeds a reference value (defined in the Protocol on the Excessive Deficit Procedure as 60% of GDP), unless the ratio is sufficiently diminishing and approaching the reference value at a satisfactory pace.

However, several other steps need to be taken between the European Commission's report and the start of the excessive deficit procedure. The excessive deficit procedure is opened by the EU Council, acting on a proposal from the European Commission. The EU Council also closes the procedure, acting on a recommendation from the Commission.

Criterion on the Convergence of Interest Rates

Treaty provisions

The fourth indent of Article 140(1) of the Treaty requires: "the durability of convergence achieved by the Member State...and of its participation in the exchange-rate mechanism being reflected in the long-term interest-rate levels".

Article 4 of Protocol No. 13 on the Convergence Criteria specifies that: "The criterion on the convergence of interest rates...shall mean that, observed over a period of one year before the examination, a Member State has had an average nominal long-term interest rate that does not exceed by more than two percentage points that of, at most, the three best performing Member States in terms of price stability. Interest rates shall be measured on the basis of long-term government bonds or comparable securities, taking into account differences in national definitions".

Implementation of the criterion on the convergence of interest rates

As in the case of the price stability criterion, the Treaty and the Protocol provide scope for a looser interpretation of the specific value of the criterion. It is within the competence of the assessing institutions to decide whether the calculation of the interest rate criterion will include all three countries used for the calculation of the price stability criterion or whether certain countries will be excluded from the calculation of the interest rate criterion.

Interest rates measured on the basis of long-term government bonds or comparable securities are regarded as longterm interest rates. These interest rate statistics are based on monthly average interest rates on long-term government bonds in per cent per annum. Bonds with residual maturities ranging from 8 to 12 years are classified as benchmark bonds (this range is fully in line with the conditions on the Czech government bond market and is based on the Czech government bond issue frequency). A combination of bonds whose average residual maturity is as close to 10 years as possible is then generated from this set.

Criterion on Participation in the Exchange Rate Mechanism

Treaty provisions

The third indent of Article 140(1) of the Treaty requires: "the observance of the normal fluctuation margins provided for by the exchange-rate mechanism of the European Monetary System, for at least two years, without devaluing against the euro".

Article 3 of Protocol No. 13 on the Convergence Criteria stipulates that: "The criterion on participation in the exchangerate mechanism of the European Monetary System referred to in the third indent of Article 140(1) of the Treaty shall mean that a Member State has respected the normal fluctuation margins provided for by the exchange-rate mechanism of the European Monetary System without severe tensions for at least the last two years before the examination. In particular, the Member State shall not have devalued its currency's bilateral central rate against the euro on its own initiative for the same period".

Application of Treaty provisions in ECB and EC Convergence Reports

The Treaty refers to the criterion of participation in the European exchange-rate mechanism (ERM until December 1998 and ERM II since January 1999).

First, the ECB and the EC assess whether the country has participated in ERM II "for at least the last two years before the examination", as stated in the Treaty.

Second, as regards the definition of "normal fluctuation margins", the ECB recalls the formal opinion that was put forward by the European Monetary Institute Council in October 1994 and its statements in the November 1995 report entitled "Progress towards Convergence".

The European Monetary Institute Council's opinion of October 1994 stated that "the wider band has helped to achieve a sustainable degree of exchange rate stability in the ERM", that it "considers it advisable to maintain the present arrangements", and that "member countries should continue to aim at avoiding significant exchange rate fluctuations by gearing their policies to the achievement of price stability and the reduction of fiscal deficits, thereby contributing to the fulfilment of the requirements set out in Article 140(1) of the Treaty and the relevant protocol".

In the "Progress towards Convergence" report it was stated that "when the Treaty was conceived, the 'normal fluctuation margins' were ±2.25 % around bilateral central parities, whereas a ±6 % band was a derogation from the rule. In August 1993 the decision was taken to widen the fluctuation margins to ±15%. The interpretation of the criterion, in particular of the concept of 'normal fluctuation margins', became less straightforward." It was then also proposed that account would need to be taken of "the particular evolution of exchange rates in the European Monetary System (EMS) since 1993 in forming an ex post judgement".

Against this background, in the assessment of exchange rate developments the emphasis is placed on exchange rates being close to the ERM II central rates.

Third, the issue of the presence of "severe tensions" or "strong pressures" on the exchange rate is addressed by examining the degree of deviation of exchange rates from the ERM II central rates against the euro. Other indicators, such as short-term interest rate differentials vis-à-vis the euro area and their evolution, are used as well. The role played by foreign exchange interventions is also considered.

B Appendix – Financial Obligations for the Czech Republic of Euro Area Entry

This Appendix lists the estimated direct financial costs in the hypothetical case of the Czech Republic entering the euro area, and the financial obligations closely linked with entry. These are the financial costs and obligations for the Czech Republic (general government) or economic entities established in the Czech Republic. With the exception of the obligation vis-à-vis the ECB, these obligations arose after the Czech Republic's EU entry as a result of the further development of the EU, and therefore were not known at the time the Czech Republic committed to adopt the euro. Besides the current legislation, the calculations are based on a number of assumptions. An exchange rate of CZK 24.5 to the euro, the expected exchange rate in 2022 Q4, was always used to convert the obligations and costs expressed in euro into Czech koruna.

Payment of the rest of the Czech Republic's share in the subscribed capital of the ECB	Estimate ¹⁾
- Following euro area entry, the CNB would have to pay up the outstanding amount of the	EUR 0.2 billion
subscribed capital of the ECB (Article 48 of the Protocol on the Statute of the European System	CZK 4.8 billion
of Central Banks and of the ECB).	
- Only a minimal percentage (3.75%) of the subscribed capital of the ECB has been paid up to	
date, as a contribution to the operational costs of the ECB (Decision ECB/2013/31).	
Obligations associated with the Czech Republic's participation in the European Stability	
Mechanism	Estimate ²⁾
- The total obligation is CZK 413.7 billion, of which CZK 365.2 billion is a contingent liability	EUR 1.9 billion
payable in the event of full use of the European Stability Mechanism's lending capacity and in	CZK 46.6 billion
the extreme scenario.	
- The Czech Republic would then have to pay up capital totalling around CZK 46.6 billion within	
four years. These funds will remain the property of the Czech Republic, which in exchange will	
receive shares of the European Stability Mechanism of the same total nominal value. The Czech	
Republic will also acquire the relevant shareholder's rights and obligations.	
- The Czech Republic may theoretically adopt the euro without becoming a contracting party to	
the European Stability Mechanism, but euro area members can de facto make their consent	
to euro adoption in the Czech Republic conditional on European Stability Mechanism entry.	
Liabilities to the Single Resolution Fund	Estimate ³⁾
- The Czech Republic is obliged to join the banking union no later than upon euro adoption.	up to
- The intergovernmental Agreement on the transfer and mutualisation of contributions to the	EUR 1.5 billion
Single Resolution Fund requires that the contributions of banking institutions be transferred	up to
to the fund by the end of a transitional period.	CZK 37 billion
 The annual fees that Czech banks would pay for the operation of the Single Resolution Board. 	
 Euro area countries can make their consent to euro adoption in the Czech Republic conditional 	
on the completion of ratification of this Agreement in the Czech Republic.	a few million EUR
 The provisions of the Agreement will start to apply to the Czech Republic upon euro area entry 	
(or banking union entry, should the Czech Republic join the banking union before adopting the	
euro). ⁴⁾	
Costs associated with the Czech Republic's participation in the Single Supervisory Mechanism	
(an obligation since 2014)	Estimate
 The annual fees that Czech banks would pay the ECB for supervision. 	a few million EUR

- Note: 1) Moreover, euro adoption is connected with an obligation to transfer to the ECB a part of the international reserves (and contribute to the ECB's reserve funds). In accordance with the Statute of the ESCB, the ECB specifies the details in its decision on the country's euro area entry. This obligation would total approximately EUR 800–900 million.
 - 2) Paid-up capital represents CZK 46.6 billion of the Czech Republic's share in the subscribed capital of the European Stability Mechanism; the rest is contingent liabilities. The Czech Republic's share in the subscribed capital does not take into account a temporary correction of the European Stability Mechanism capital subscription key, to which economically weaker European Stability Mechanism members are entitled (and to which the Czech Republic would also be entitled in the current situation).
 - 3) This is the upper limit signifying the target level of the National Resolution Fund (CZK 37 billion). The size of banks' contributions in the banking union will depend on their risk profile and on the specific number of Member States that join the banking union. In the case of the Czech Republic, with its less risky banking sector, the amount transferred would probably be lower than stated here.
 - 4) In the event of accession to the banking union after 2023, the contributions in the National Resolution Fund would have to be transferred to the SRF as of the date of entry.

On the other hand, the Appendix does not capture other factors that would have an impact on the Czech Republic's budget or, more broadly, on the conduct of budgetary and fiscal policy in the event of euro area entry. Budgetary impacts would stem from any financial penalties that might be imposed on euro area countries under EU surveillance of members' budgetary policies or surveillance of macroeconomic imbalances. The implementation of budgetary and fiscal policy in the Czech Republic would be affected, among other things, by Regulation (EU) No. 473/2013 of the European Parliament and of the Council, which deepens EU surveillance of euro area members' budgetary policies.

Glossary

An **asymmetric shock** is a macroeconomic shock with an uneven impact on the individual countries of the monetary union.

Convergence means the tendency of less advanced economies to catch up with the more advanced ones. As a rule, the level of gross domestic product per capita at purchasing power parity is compared.

Correlation is the statistical expression of the relationship between two variables. Correlation does not imply that the evolution of one variable is a cause and that of the other a consequence.

The **cyclically adjusted balance** of the general government sector is used to identify the fiscal policy stance, as it does not include revenues and expenditures generated by the position of the economy in the business cycle.

Discretionary measures are direct interventions by executive or legislative authorities in the revenues and expenditures of the general government sector.

The **euro area** comprises the EU Member States that have adopted the euro under the Treaty. As of 1 January 1999, the euro area consisted of eleven countries – Austria, Belgium, Finland, France, Germany, Ireland, Italy, Luxembourg, the Netherlands, Portugal and Spain. Greece joined the euro area in 2001, followed by Slovenia in 2007, Cyprus and Malta in 2008, Slovakia in 2009, Estonia in 2011, Latvia in 2014 and Lithuania in 2015. Croatia will become a euro area member on 1 January 2023.

The **European Stability Mechanism** is a financial assistance fund for EU Member States that use the euro as their currency. It was established in 2012 by an international treaty outside EU law, so it is an independent international financial institution. However, its operations are closely linked with EU law as well as EU and euro area institutions.

The **general government sector** is defined using internationally harmonised rules at EU level. In the Czech Republic, it consists of three main subsectors under ESA 2010 methodology: central government, local government and social security funds.

The **Harmonised Index of Consumer Prices** is an index measuring the price level. It is constructed on the basis of regular monitoring of prices of selected goods and services, which have certain weights in the consumer basket. Its calculation in EU countries is governed by unified and legally binding procedures, which enables cross-country comparisons. It is therefore used to assess the criterion on price stability.

Inflation is growth in the general price level, i.e. internal depreciation of a currency. The price level is measured using price indices such as the Harmonised Index of Consumer Prices.

Long-term interest rates are measured on the basis of longterm government bonds or comparable securities. These interest rate statistics are based on monthly average interest rates on long-term government bonds in per cent per annum. Bonds with residual maturities ranging from 8 to 12 years are classified as benchmark bonds (this range is fully in line with the conditions on the Czech government bond market and is based on the Czech government bond issue frequency). A combination of bonds whose average residual maturity is as close to 10 years as possible is then generated from this set. The **medium-term objective** is expressed in terms of the structural balance and implies public finance sustainability in the country concerned. For the Czech Republic, it currently equates to a structural balance of -0.75% of GDP.

One-off and other temporary operations are measures on the revenue or expenditure side that have only a temporary effect on the general government balance and often stem from events beyond the direct control of executive or legislative authorities (e.g. expenditure on flood damage repairs).

The **Single Resolution Fund** is a fund financed by contributions from banks, collected by the participating countries. Lending between national compartments will be allowed. To prevent a shortage of funds in the Single Resolution Fund during a transitional period (until the end of 2023), the states of the banking union have agreed on temporary public funding in the form of individual (not mutualised) credit lines. A permanent mechanism of financial backstops should be fully operational by the end of the transitional period.

The **Single Resolution Mechanism** is a mechanism comprising a centralised board, which will prepare proposals for bank resolution procedures, and a fund for bank resolution in the banking union. Its objective is to ensure proper bank resolution with a minimal impact on public budgets, as the bank's shareholders and creditors, as well as a dedicated fund financed by banks themselves, will bear primary responsibility for covering any losses.

The **Single Supervisory Mechanism** is a new system of banking supervision in the EU. It falls within the competence of the ECB and the national competent authorities of the participating countries.

The **Stability and Growth Pact** is a binding framework for the coordination of national fiscal policies in the European Union. If an EU Member State has a general government deficit exceeding 3% of GDP, or does not reduce its debt exceeding 60% of GDP at a sufficient pace, an **excessive deficit procedure** is usually opened against it. This procedure is opened on the basis of a comprehensive assessment of the country's economic and budgetary situation. For example, if the excessive deficit (or debt) is only temporary, caused by adverse (cyclical) economic developments, an excessive deficit procedure may not be launched. The penalties imposed differ according to whether or not the country is a member of the euro area.

The **structural balance** is the difference between the cyclically adjusted balance and one-off and temporary operations (see above).

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Czech National Bank Na Příkopě 28 115 03 Praha 1 countries, exchange rate mechanism, accession to the euro area, fulfilment of the convergence criteria, economic alignment, criterion on price stability, criterion on the government financial position, criterior

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