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 2017

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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:

http://www.mfcr.cz/en/statistics/fulfilment-of-the-maastricht-criteria

We welcome any relevant suggestions for improving the quality of the publication. Please send any comments to:

informace@mfcr.cz

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Abbreviations

CNB .... Czech National Bank
CZ .... Czech Republic
CZK .... Czech koruna
CZSO .... Czech Statistical Office
EC .... European Commission
ECB .... European Central Bank
ERM II .... Exchange Rate Mechanism II
EU, EU28 .... European Union (covering all 28 countries)
EUR .... euro
GDP .... gross domestic product
IMF .... International Monetary Fund
MF CR.. Ministry of Finance of the Czech Republic
MTO .... medium-term objective
OECD .... Organisation for Economic Cooperation and Development

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, UK – United Kingdom

Symbols used in tables

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

Cut-off dates for data sources

Macroeconomic data sources pertain to 18 October 2017 and fiscal data to 2 November 2017.

Note

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

Summary and Recommendations

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, EU Member States are required to achieve a high degree of sustainable convergence **in order to join the euro area**. The **degree of sustainable convergence** is assessed according to the **Maastricht convergence criteria**, which are set out in Article 140 of the Treaty and detailed in Protocol No. 13 annexed to the Treaty on the European Union and the Treaty on the Functioning of the European Union. These comprise a criterion on price stability, a criterion on the government financial position, a criterion on the convergence of interest rates and a criterion on participation in the exchange rate mechanism. The Czech Republic undertook to take steps to be prepared to join the euro area as soon as possible by signing the Act concerning the conditions of accession of the Czech Republic to the EU.

Setting the date for joining the euro area is within the competence of the Member State concerned and depends on its 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 flexible exchange rate of the koruna as effective stabilising macroeconomic instruments. The crisis of previous years has shown just how useful these instruments are in absorbing economic shocks hitting European economies. The preparedness of the economy to join the euro area must therefore be assessed not only from the perspective of its economic alignment and structural similarity with the monetary union, but also from the point of view of its ability to absorb, after the loss of independent monetary policy, asymmetric shocks and adjust appropriately to them, for example via effective fiscal policy, a flexible labour market and a sound financial sector.

EU countries, and especially euro area countries, continued working towards deeper integration over the past year. This entails additional obligations for the Czech Republic in the event of it entering the third stage of the economic and monetary union. The majority of the implemented or planned changes to the economic and monetary union imply new institutional and financial obligations for countries adopting the single currency. The European Commission has presented a *White Paper on the Future of Europe*, with possible scenarios for institutional change, followed up by a *Reflection Paper on the Deepening of the Economic and Monetary Union*. These documents present goals and possible ways of achieving them with a view to making the economic and monetary union more stable. Regarding the first stage of deepening, an extensive reform of the rules for fiscal supervision and economic policy coordination has been carried out in order to strengthen the stability of the euro area and increase financial solidarity. Progress has also been made in completing the banking union, where further steps will be necessary above all in the area of reducing and sharing risks in the financial sector.

In line with the Czech Republic's Updated Euro-area Accession Strategy of 2007 and the related Czech government decree, this document focuses on economic rather than political aspects of adopting the single European currency and is divided into three sections. The first deals with the fulfilment of the Maastricht convergence criteria and the second with the Czech Republic's economic alignment with the euro area. The third section is devoted to current events in the euro area countries, focusing on institutional developments and newly arising obligations for its member states.

Unlike in previous years, compliance with the **criterion on price stability** by the Czech Republic is not guaranteed in 2017, as the inflation forecast for this year is right at the limit of the criterion. In the EU context, the Czech Republic ranks among the countries with higher inflation in 2017. Inflation is currently in the upper half of the tolerance band around the Czech National Bank's target. This primarily reflects robust growth of the Czech economy and related very low unemployment and rapid wage growth. According to the inflation outlook, it will be compliant with this criterion in 2018–2020.

The Czech Republic is compliant with the **criterion on the government financial position**. It is likely to remain compliant with it by a sufficient margin in the medium term. Compliance with the medium-term objective (MTO) is a condition for not exceeding the deficit threshold of the Maastricht convergence criterion even in a recession of the usual depth. Compliance with the MTO is also desirable as regards public finance sustainability, especially given the long-term costs of population ageing. The Czech Republic has de facto been compliant with the MTO since 2013 and is expected to remain so over the entire forecast horizon.

The Czech Republic has long been comfortably compliant with the **criterion on the convergence of interest rates** and, according to the outlook, is likely to remain so until 2020.

The Czech Republic is not compliant with the **criterion on participation in the exchange rate mechanism**, as it has not joined the mechanism. Assessment of this criterion will only be possible after the Czech Republic joins the exchange rate mechanism and the central rate of the koruna against the euro, against which exchange rate fluctuations would be monitored, has been set.

When deciding on euro area entry, account must also be taken of the **Czech economy's alignment with the euro area and its ability to adjust to possible asymmetric shocks** without its own monetary policy. The characteristics of the Czech economy as regards its economic preparedness to adopt the euro can be divided into four groups.

The first group consists of **economic indicators that speak in the long run in favour of adopting the euro**. These include 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 a reduction in transaction costs and the elimination of exchange rate risk. The strong trade and ownership integration also reduces the potential costs associated with adopting the single monetary policy, among other things by fostering a high observed degree of alignment between the Czech and euro area business cycles. It has therefore long been one of the most significant arguments for joining the euro area. The Czech banking sector is not a barrier to joining the euro area either. It is stable and resilient to economic shocks, and the transmission of monetary policy through it is similar to that in the euro area.

The second group contains **areas where trends were disrupted by the global crisis but which currently represent no barrier to euro adoption**. These include gradual stabilisation of financial markets and renewal of their alignment with the euro area. An improvement has also been recorded for general government finance, which showed a structural surplus last year. The medium-term budgetary objective is also expected to be met in the next two years. As a result, the general government debt-to-GDP ratio is falling towards pre-crisis levels in an environment of buoyant economic growth. This is improving the ability of fiscal policy to fulfil its macroeconomic stabilisation role.

The third group consists of **areas where positive trends were disrupted by the crisis, convergence was later renewed, but the distance from the euro area remains large**. This is particularly true of the real economic convergence of the Czech Republic to the euro area. GDP per capita based on purchasing power parity has increased slightly in recent years and exceeds 80% of the euro area average, but there is still considerable room for long-term economic convergence to advanced euro area countries. This applies even more to the long-term convergence of the price level to the euro area, which stands at a mere 63%. Although the price level in the Czech Republic has also started to converge towards the euro area in recent years, it is currently only slightly above the pre-crisis level. The difference between the average wage levels in the Czech Republic and the euro area is much bigger still. A continued process of convergence of economic activity and the price and wage level, accompanied by real appreciation, can be expected. This could imply higher inflation in the event of euro adoption.

The fourth group contains **areas which are showing long-term problems or misalignment and which, moreover, are not showing any significant improvement.** This group traditionally includes population ageing, which remains a risk to the sustainability of public finances, and the health care system. Some problems also persist on the labour market, which has recorded an increase in flexibility in recent years but still has its weak points, including relatively high overall labour taxation and low labour mobility. The flexibility of the Czech product market has worsened slightly relative to other countries (according to Doing Business 2018) and is still being hampered by some administrative barriers. According to an international assessment, quality of institutions, including enforceability of law, a still weak pace of innovation and some labour market efficiency parameters remain weaknesses of the Czech economy in terms of its international competitiveness. Significant differences vis-à-vis the euro area persist in the structure of the Czech economy, which is characterised by a high share of industry and a relatively low share of services. Together with a different structure of financial assets and liabilities of non-financial corporations and households, these factors may be a source of asymmetric shocks and cause the single monetary policy to have different effects.

When deciding on the timing of euro area entry, the costs of euro adoption must also be taken into account. The estimated financial costs associated with euro area entry that were not known when the Czech Republic joined the EU would mainly include a capital deposit in the European Stability Mechanism of just under CZK 50 billion payable within four years (with an additional contingent liability of more than CZK 360 billion) and a transfer of CZK 8.2–19.7 billion in contributions from banks registered in the Czech Republic to the Single Resolution Fund (collected until then in the National Resolution Fund). However, the total magnitude of all the potential costs that will be associated with euro adoption in the future is not known.

To sum up, all the Maastricht criteria except for exchange rate mechanism participation **should be fulfilled** in the medium term. The **preparedness of the Czech Republic itself to adopt the euro** has **improved further** compared to previous years, although some shortcomings persist, especially as regards incomplete real convergence. The economic situation in the euro area cannot be assessed as sufficiently stabilised. Economic alignment across the euro area economies is not adequate either, despite having increased in comparison to last year. Debt and structural problems remain unresolved in a number of countries, regardless of problematic observance and enforceability of the fiscal rules. Another problem facing the EU and the euro area is the increasing **uncertainty about their future institutional set-up**.

In view of the above facts, the Ministry of Finance and the Czech National Bank, in line with the Czech Republic's Updated Euro-area Accession Strategy, **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 during 2018.

1 Fulfilment of the Maastricht Convergence Criteria

Four nominal convergence criteria are assessed upon accession to the euro area: a criterion on price stability, a criterion on the government financial position, a criterion on the convergence of interest rates and a criterion on participation in the exchange rate mechanism. The Czech Republic is compliant with the first three criteria and has not joined the exchange rate mechanism yet. The actual assessment of compliance with all the convergence criteria takes place at least two quarters ahead of the changeover date. Precise definitions of all the criteria are given in Appendix A; this section provides a detailed analysis of compliance with the criteria.

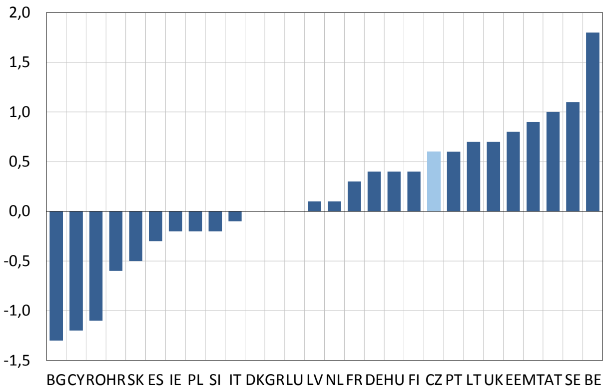
1.1 Criterion on Price Stability

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

The Czech Republic has been compliant with this criterion since 2013. The average inflation rate in 2015 was only 0.3%, the second-lowest level in the history of the independent Czech Republic, mainly because of a sharp decline in the price of oil. This factor continued to put pressure on inflation in 2016, when the average inflation rate was 0.6%. Consumer prices accelerated at the end of that year, due mainly to fade-out of the anti-inflationary effect of oil prices. However, growth in prices in the food and non-alcoholic beverages category acted in the same direction, as did a steady rise in core inflation bolstered by a one-off price increase in the accommodation and food services category when electronic sales registration was introduced. In the EU context, the Czech Republic ranked among the countries with slightly higher inflation in 2006 (see Chart 1.1).

Chart 1.1: Average inflation rates in 2016

(harmonised index of consumer prices; in %)



Source: Eurostat (2017a).

The same factors are reflected in the inflation forecast for 2017, during which the Czech Republic has so far ranked among the EU countries with higher inflation. Czech inflation is in the upper half of the tolerance band around the CNB's target, whereas positive but still low inflation prevails in the other EU countries. Consumer price inflation was higher in the Czech Republic than in the other EU countries in the above categories of food and non-alcoholic beverages and accommodation and food services and also in the health care category.

The higher inflation is due to domestic demand pressures reflecting robust growth of the domestic economy, a related low unemployment rate and rapid wage growth. This situation enabled CNB to discontinue the use of the exchange rate as an additional monetary policy instrument and to start gradually raising domestic interest rates. **Fulfilment of the price stability criterion in 2017 is, however, uncertain.** According to the forecast (Table 1.1), it will be fulfilled by the tightest possible margin.

Inflation should be very close to the inflation target in 2018–2020. The appreciation of the koruna following the exit from the exchange rate commitment and a continued gradual rise in nominal interest rates will help stabilise inflation close to the target. The level of the criterion should meanwhile increase, as a recovery in inflation is forecasted across the EU. Consequently, **the criterion should also be fulfilled in 2018–2020 by an increasing margin**.

Fulfilment of the price stability criterion has long been aided by the CNB's inflation target, which has been set at 2% (for the national consumer price index) since 1 January 2010. The CNB seeks to ensure that actual inflation does not deviate from the target by more than one percentage point. Given the ECB's similar definition of price stability and the inflation targets of the non-euro area EU Member States, this target creates good conditions for future sustainable fulfilment of the price stability criterion.

Table 1.1: Harmonised index of consumer prices

(average for last 12 months vs. average for previous 12 months as of end of period; growth in %)

	2014	2015	2016	2017	2018	2019	2020
Average for 3 EU countries with lowest inflation*	-0.2	-0.9	-0.8	0.9	1.1	1.3	1.5
Reference value	1.3	0.6	0.7	2.4	2.6	2.8	3.0
Czech Republic	0.4	0.3	0.6	2.4	2.3	1.9	1.7

*Note: * More precisely, the three best performing member countries in terms of price stability (see Appendix A). The outlook for 2017–2020 was taken from the Convergence Programmes and Stability Programmes of individual Member States except Greece, which does not submit a stability programme. Owing to the unavailability of average HICP inflation rates, private consumption deflators were used for Germany and Spain and average national CPI inflation rates were used for Austria, Finland, France, Croatia and Slovenia. Bulgaria, Greece and Cyprus were excluded from the calculation of the criteria in the assessment of inflation for 2014, Greece and Cyprus were excluded for 2015 and Cyprus and Romania were excluded for 2016. The approach adopted was thus similar to that used by the EC and the ECB in their June 2014 and June 2016 Convergence Reports. The EC and the ECB published no Convergence Reports in 2017.*

Source: Eurostat (2017a), Convergence Programmes and Stability Programmes of EU Member States. MF CR (2017a) calculations and forecasts.

1.2 Criterion on the Government Financial Position

The criterion on the government financial position is satisfied only when both 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, are fulfilled in a sustainable manner, unless the ratio is sufficiently diminishing towards the reference value.

The general government sector recorded its **best-ever fiscal result** in modern Czech history **in 2016**. **The general government surplus was 0.7% of GDP.** The overall balance improved by 1.4 pp and the structural balance increased by 1.3 pp year on year. Apart from the positive effect of the growing economy, the revenue side was affected by discretionary measures, including measures to combat tax evasion (VAT control statements introduced in spring last year and electronic sales registration phased in since December 2016). On the expenditure side, the improvement in the general government balance was aided in particular by a drop in debt service costs and general government investment financed from EU funds.

The MF CR expects a general government surplus of 1.1% of GDP for 2017. On the revenue side, robust growth in tax revenues – in particular personal income tax including social security contributions and VAT – should continue in an environment of increased economic and wage growth. Most primary expenditures should grow at a modest pace. A recovery in investment expenditure is expected due to increasing implementation of projects co-financed under the 2014–2020 financial perspective. Interest expenditure on general government debt should decrease further.

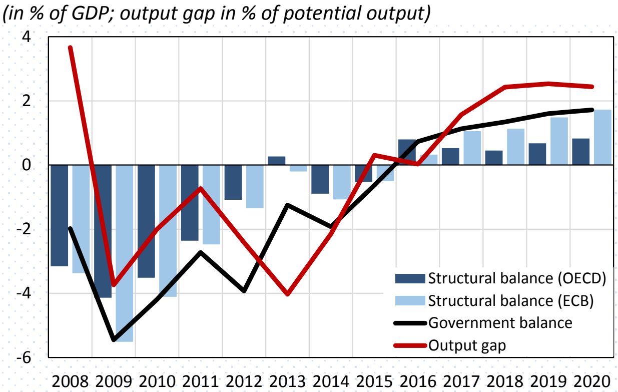
According to current MF CR estimates, **the general government surplus will continue to rise, reaching 1.3% of GDP in 2018, 1.6% of GDP in 2019 and 1.7% of GDP in 2020**. Based on this, the general government balance part of the public finance criterion is expected to be fulfilled comfortably in the future as well.

From the perspective of setting fiscal policy commensurately with macroeconomic trends in the Czech economy (see also section 2.2), efforts also are needed to **fulfil the medium-term objective (MTO) for the structural general government balance.**

The MTO, which, under EU rules, is set for the Czech Republic in terms of a structural deficit of no more than 1% of GDP, should ensure that the deficit threshold of the Maastricht convergence criterion of 3% of GDP is not exceeded even in a recession of the usual depth. Compliance with the MTO is also necessary as regards long-term public finance sustainability, especially given the costs of population ageing.

Chart 1.2: General government balance structure

(in % of GDP; output gap in % of potential output)



Note: The structural balance is calculated using the OECD/EC and ECB methods.

Source: CZSO (2017). MF CR (2017b) calculations and forecasts.

Chart 1.2 captures the structural components of the general government balance using the OECD method, which is also used in modified form by the European Commission, and using the alternative ECB method (for details, see Appendix C). Based on the OECD method, the MF CR expects a structural balance of 0.5% of GDP in 2017, increasing gradually to 0.8% of GDP in 2020. The estimates of the structural balance under the ECB method also show a rising tendency from 1.1% of GDP in 2017 and 2018 to 1.7% of GDP in 2020. Besides the fact that the **MTO has de facto been fulfilled since 2013**, the government's plans given the expected economic developments are therefore heading towards **compliance over the entire outlook period as well**.

After the Czech Republic's joins the euro area, the MTO for the structural deficit may be tightened to no more than 0.5% of GDP under the Treaty on Stability, Coordination and Governance in the Economic and Monetary Union. For parties to the Treaty, the structural deficit limit of 1.0% of GDP only applies if the government debt ratio is significantly below 60% of GDP and risks to long-term fiscal sustainability are low.

General government debt surged in 2009–2012 from less than 30% of GDP to around 45% of GDP in 2013 owing to the global financial and economic crisis. Since then, however, the government debt-to-GDP ratio has been falling markedly, mainly due to a primary general government surplus and a positive financial market situation. Given the above, **compliance with this item of the criterion is not a problem in the Czech Republic**.

Given the current fiscal policy settings and forecasted economic growth, **the debt-to-GDP ratio should continue to decline, reaching 30.9% of GDP in 2020**. It should thus be well below the reference debt level defined in the Maastricht convergence criteria. Total general government debt is lower than the EU average. Desirable leeway is thus being created to avoid reaching the Maastricht limit even in the event of another deep recession.

The adverse fiscal effects of population ageing pose the main risk to the long-term development of general government finance. Quite significant changes were made to the pay-as-you-go pension system in previous years. The latest EC Ageing Report (2015) was thus more optimistic for the Czech Republic, with the long-term projection indicating broad sustainability. However, some measures have been taken recently which worsen the financial sustainability of the public pension system. These include in particular the establishment of a retirement age ceiling of 65 years in combination with a revision mechanism for periodically testing that ceiling and an adjustment to the indexation equation whereby pensions will go up by the general consumer price inflation index or the pensioners' costs of living index (whichever is higher) plus one-half of real wage growth. Risks also stem from other areas of long-term expenditure, specifically from the configuration and functioning of the health and long-term care systems.

Table 1.2: General government balance
(in % of GDP)

	2014	2015	2016	2017	2018	2019	2020
Reference value	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0
Czech Republic	-1.9	-0.6	0.7	1.1	1.3	1.6	1.7

Note: A precise definition of this criterion is given in Appendix A.
Source: CZSO (2017). MF CR (2017b) calculations and forecasts.

Table 1.3: General government debt
(in % of GDP)

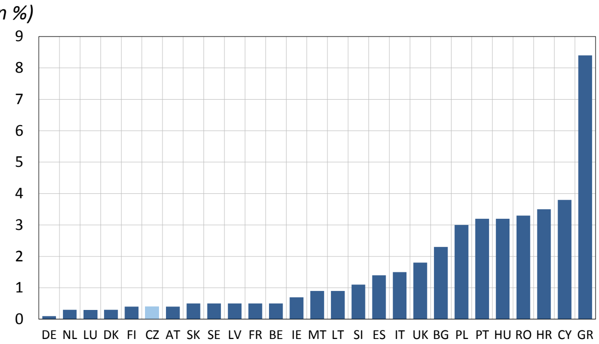
	2014	2015	2016	2017	2018	2019	2020
Reference value	60.0	60.0	60.0	60.0	60.0	60.0	60.0
Czech Republic	42.2	40.0	36.8	34.7	33.1	32.1	30.9

Note: A precise definition of this criterion is given in Appendix A.
Source: CZSO (2017). MF CR (2017b) calculations and forecasts.

1.3 Criterion on the Convergence of Interest Rates

Under this criterion, convergence of interest rates is achieved if yields on bonds with a residual maturity of 10 years do not exceed by more than 2 pp the average of the yields on relevant bonds in the three best performing EU states in terms of price stability. Annual average long-term interest rates on Czech government bonds have been below 1% since the end of 2014. **This criterion was fulfilled in the period under review by considerable margin**, thanks in part to easy domestic monetary policy.

Chart 1.3: Long-term interest rates in 2016
(in %)



Note: Data are not available for Estonia.
Source: Eurostat (2017b).

Credible fiscal policy and overall macroeconomic and financial stability are reflected in the Czech Republic's high sovereign rating and in smooth subscription of Czech government bonds. In an environment of still subdued inflation and low interest rates throughout the EU, this is fostering current only very slow growth in Czech government bond yields. Based on previous and expected developments and on the construction of this criterion, it is unlikely that the Czech Republic will not fulfil this criterion in the medium term.

However, this is conditional on maintaining financial market confidence in sound macroeconomic developments and the sustainability of Czech public finance.

Table 1.4: Long-term interest rates on government bonds
(yields on government bonds with residual maturity of 10 years; 12-month average; in %)

	2014	2015	2016	2017	2018	2019	2020
Average for 3 EU countries with lowest inflation*	1.8	1.8	2.1	2.8	3.4	1.7	3.6
Reference value	3.8	3.8	4.1	4.8	5.4	3.7	5.6
Czech Republic	1.6	0.5	0.4	0.9	1.5	2.0	2.3

*Note: * More precisely, the three best performing Member States in terms of price stability (see Appendix A). The outlook for long-term interest rates in 2017–2020 was taken from the Convergence Programmes and Stability Programmes. Owing to the unavailability of data for some reference countries, the criterion was partly calculated by fixing the current real interest rates and adding the inflation outlooks for those countries.*
Source: Eurostat (2017b), Convergence Programmes and Stability Programmes of EU Member States. MF CR calculations.

1.4 Criterion on Participation in the Exchange Rate Mechanism

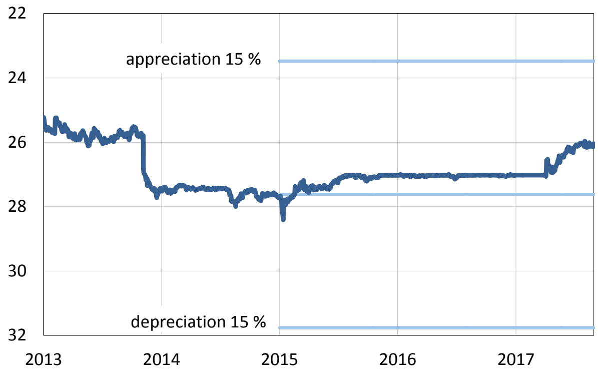
The admission of a state into the euro area is conditional on a successful, at least two-year stay of the national currency in the exchange rate mechanism. The mechanism expects the exchange rate to move within the fluctuation band of ±15% without devaluation of the central rate and excessive pressures on the exchange rate. Formal fulfilment of the criterion on exchange rate stability will only be possible after the Czech Republic joins the exchange rate mechanism, so **the assessment of its fulfilment** can be made **only at an analytical level**.

For these purposes, the hypothetical CZK/EUR central parity is set as the average exchange rate in 2015 Q1, i.e. the quarter preceding hypothetical ERM II entry at the start of 2015 Q2, which would have allowed euro adoption on 1 January 2018. With the aid of this parity it is theoretically possible to monitor whether the Czech Republic would have fulfilled the exchange rate stability criterion in the given time period.

Chart 1.4 shows that **the exchange rate fluctuated closely around the hypothetical central parity for most of the period under review**. A slight appreciation occurred in 2017 after CNB discontinued its exchange rate commitment. Even then, however, the rate fluctuated comfortably within the ±15% band.

The koruna weakened sharply to close to CZK 27 to the euro after the exchange rate commitment was announced in November 2013. The exchange rate then stabilised for some time close to CZK 27.5 to the euro without further foreign exchange interventions. In 2015 Q2, the koruna began to firm towards CZK 27 to the euro due to favourable domestic economic growth. CNB kept the rate just above this level by making more interventions against the continuing appreciation pressure on the koruna vis-à-vis the euro until early April 2017, when the exchange rate commitment was ended given a clear prospect of sustainable fulfilment of the inflation target in the future. The koruna then appreciated slightly, reaching levels close to CZK 26 to the euro during Q3.

Chart 1.4: Nominal CZK/EUR exchange rate



Note: The hypothetical central parity is simulated by the average exchange rate for 2015 Q1. Data up to 31 August 2017.
Source: CNB (2017a). MF CR calculations.

Any further appreciation connected with real convergence should not be inconsistent with fulfilment of the exchange rate criterion. 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 parity towards a stronger rate have been tolerated. Moreover, the appreciation may be dampened in the coming quarters by koruna market "overboughtness". The CNB has meanwhile stated that it is ready to use its instruments to react to any excessive exchange rate fluctuations.

The length of stay of an EU Member State in the exchange rate mechanism is set by the Treaty at a minimum of two years before the assessment of preparedness to adopt the euro. The Czech Republic's

September 2003 Euro-area Accession Strategy and its August 2007 update state that **the Czech Republic should stay in ERM II for the minimum required period only**. This implies that the Czech Republic should enter the ERM II only after it has achieved a high degree of economic alignment and after conditions have been established which enable it to introduce the euro shortly after the assessment of the exchange rate criterion. In addition, the Czech Republic should enter ERM II amid an appropriate situation in the domestic economy and stable global financial markets.

2 Assessment of the Degree of Economic Alignment

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, as it will lead to the elimination of exchange rate risk vis-à-vis the euro area and to a related reduction in trade and investment costs. Besides these benefits, however, euro adoption simultaneously entails costs and risks arising from the loss of independent monetary policy and exchange rate flexibility and costs arising from new institutional obligations.

This section is divided into two basic areas.[1] The first part describes the size of the risk of economic developments being different in the Czech Republic compared to the euro area and hence the risk of the single monetary policy being inappropriate for the Czech economy. The following part answers the question of to what extent the Czech economy is capable of absorbing the impacts of potential asymmetric shocks using its own adjustment mechanisms. The basic theoretical starting point is the theory of optimum currency areas.

2.1 Cyclical and Structural Alignment

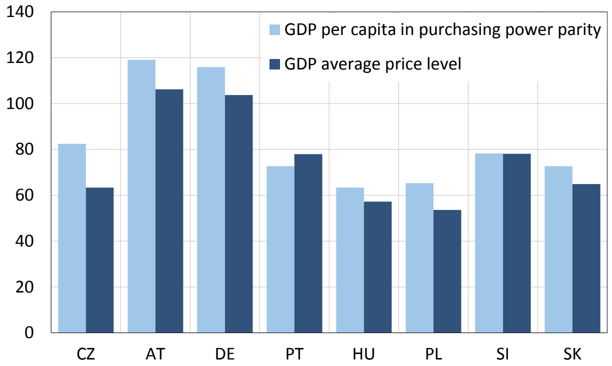
A high degree of alignment of the Czech economy with the euro area economy is a necessary condition for the euro adoption costs arising from the loss of the Czech Republic's own monetary policy to be relatively small.

The **degree of real economic convergence** is an important indicator of the Czech economy's similarity to the euro area. The Czech economy was converging towards the euro area in real terms until 2008, when this trend was halted by the global financial and subsequently economic crisis. It resumed in 2013, and in 2016 the level of Czech GDP per capita reached 82.5% of the euro area average. The price level did not start to converge towards the euro area again until 2015 and was only slightly above the pre-crisis period a year later (63.4% of the euro area average). In 2016, the wage level in the Czech Republic was only around 40% of the euro area average when converted using the exchange rate and was virtually unchanged compared with the onset of the global crisis. At purchasing power parity, it was just above 62% of the monetary union average and was somewhat higher than in the pre-crisis period. Continued convergence in economic activity and the price and wage level can be expected. The corresponding real appreciation would imply higher inflation compared to the monetary union average in the event of euro adoption. The related low or even negative real interest rates could simultaneously increase the risk of macro-financial imbalances.

Sufficient **cyclical alignment of economic activity** increases the likelihood that the single monetary policy in the monetary union will be appropriately configured from the perspective of the Czech economy. The analyses indicate a sustained high degree of alignment of the Czech Republic with the euro area in terms of overall economic activity over the business cycle, even when adjusted for the strong common external shock in the form of the global financial and economic crisis.

Chart 2.1: Economic convergence of selected countries towards the euro area in 2016

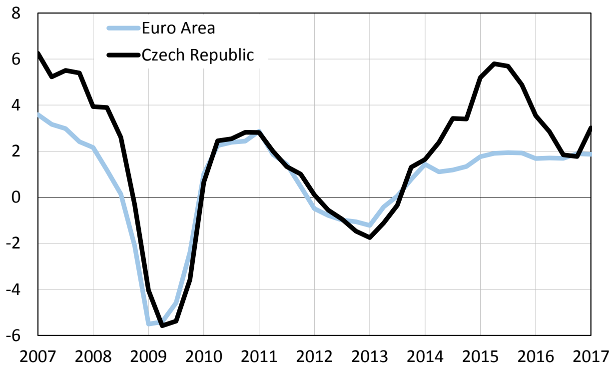
(euro area = 100)



Source: Eurostat (2017c). CNB calculations.

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

(year-on-year, seasonally adjusted, in %)



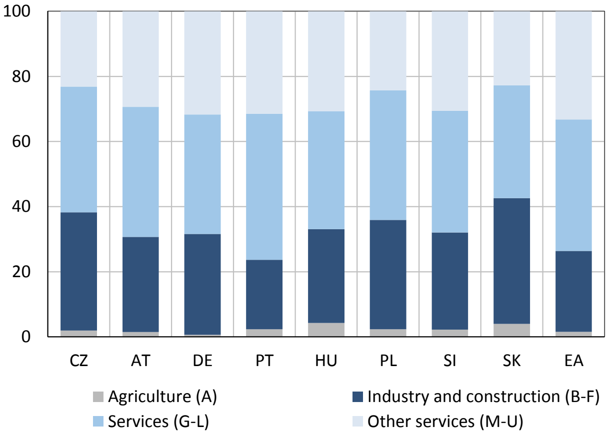
Source: Eurostat (2017f). CNB calculations.

Similarity of the **structure of the economy** with the euro area should reduce the risk of asymmetric economic shocks. However, the differences in the structure of the Czech economy compared to that of the euro area, consisting in a higher share of industry and a lower share of services, are not decreasing. The shares of industry and services have been broadly stable over the last ten years. This may lead to asymmetric shocks in the Czech economy, to which the single monetary policy

[1] The analyses outlined in this section are presented in detail in the CNB's *Analyses of the Czech Republic's Current Economic Alignment with the Euro Area in 2017*.

would not be able to respond in full. Structural misalignment thus still poses a risk as regards euro adoption.

Chart 2.3: Sectoral structure of the economy in 2016
(in % of gross value added)



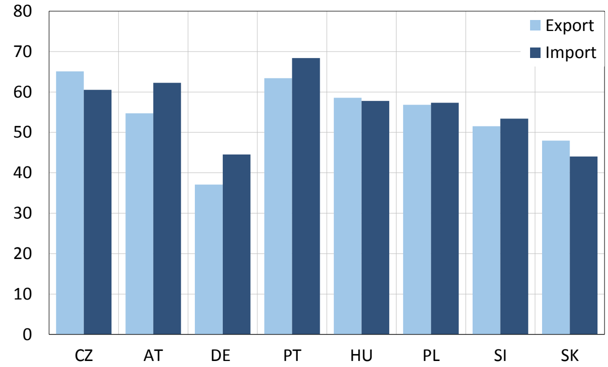
Note: The sectors are broken down by NACE classification: A: agriculture, forestry and fishing; B–F: industry and construction; G–L: services (trade, transport, ICT, financial intermediation, real estate services); M–U: other services.
Source: Eurostat (2017g). CNB calculations.

Smooth euro area entry should be preceded by gradual and fundamental-based **nominal interest rate convergence**, which will leave no room for a one-off shock associated with euro adoption. The difference between Czech and euro area market interest rates has long been very small. The risk of the said one-off shock upon euro adoption is thus low. Moreover, financial markets view the Czech Republic's government debt as sustainable.

The **exchange rate** of the koruna against the euro has been affected in recent years by the CNB's use of the exchange rate as an additional instrument for easing monetary policy from November 2013 until April 2017. The volatility of the koruna-euro rate showed temporary increases in the periods around the introduction of and the exit from the exchange rate commitment. However, it remains relatively low and stable in the long run, which is a favourable factor in terms of euro adoption. The correlation between the koruna-dollar and euro-dollar exchange rates is relatively high and stable. The Czech currency therefore reacts to changes in the environment outside the euro area similarly to the euro. This indicates a high degree of alignment. The outlook for the average rate of equilibrium real (and de facto nominal) appreciation of the Czech koruna for the following five years is estimated at 0.4%–2.7%.

The Czech economy's strong **trade and ownership links** with the euro area creates potential for large benefits stemming from the elimination of exchange rate risk and from transaction cost savings. The euro area is the destination for about two-thirds of Czech exports and the source of about 60% of Czech imports.

Chart 2.4: Shares of exports to the euro area and shares of imports from the euro area in 2017 H1
(in % of total exports and imports)



Source: Eurostat (2017e), IMF. CNB calculations.

The share of intra-industry trade is also relatively high. The intensity of the Czech Republic's foreign trade with the euro area has thus long been one of the most significant arguments for joining the euro area. The Czech economy's intensive ownership integration with the euro area, as represented by a high level of FDI from the euro area, also increases the probability of economic alignment with the monetary union economy, thus reducing the risk of asymmetric shocks if the euro were to be adopted.

The **financial sector** in the Czech Republic is still significantly smaller than that in the euro area, and the gap widened further in 2016. However, the depth of financial intermediation in the euro area should not be regarded as a target, as an excessively large financial sector can represent a source of risks. The smaller depth of financial intermediation in the Czech Republic is due to lower private sector debt. However, given the loan growth in the domestic economy and ongoing private sector deleveraging in some euro area countries, convergence towards the euro area can be expected to renew in this area.

A similar **structure of the financial assets and liabilities of key sectors** of individual economies is a key condition for the single monetary policy to have a symmetric effect and for the transmission mechanism to function. The structure of the financial balance sheet of Czech non-financial corporations continues to differ somewhat from that of euro area firms, the main persisting difference being a lower loan-to-GDP ratio in the Czech Republic. The net creditor position of the Czech household sector is about half that in the euro area. There are also persisting differences in the structure of households' balance sheets. In particular, the debt ratio is half that in the euro area, and on the asset side there is a higher ratio of the liquid component of the portfolio at the expense of the investment component. There are also differences in the preferences of European and Czech households as regards the use of specific financial instruments as part of the investment component of assets. These differences may give rise to an asymmetric effect of monetary policy, as they may lead to weaker monetary policy transmission in the Czech Republic than in the euro area.

A similar function of the **interest rate channel of monetary policy transmission** across the countries of the monetary union is a prerequisite for successful functioning of the single monetary policy. Client interest rates remain heterogeneous in the euro area itself. This represents one of the main challenges to ensuring that the single monetary policy has a symmetric effect. The spread between client rates on loans to non-financial corporations and the overnight interbank rate in the Czech Republic is slightly lower than that in the euro area and also differs in structure. The correlation between client rates on loans to non-financial corporations and market rates in the Czech Republic is strong and comparable with that in the other countries under review. As regards loans for house purchase, the fixation structure in the Czech Republic converged towards that in Germany and the euro area as a whole. The pass-through of changes in financial market interest rates to client rates in the Czech Republic thus does not differ greatly from that in the euro area and represents no barrier to future euro adoption.

Differences in the speed at which inflation returns to equilibrium after a shock can result in the single monetary policy having different impacts in the individual countries of the monetary union. **Inflation persistence** in the Czech Republic is one of the lowest among the countries under comparison and thus poses no risk as regards future euro adoption.

The results of the analysis of **alignment of financial markets** (the money, foreign exchange, government bond and stock markets) still rank the Czech Republic among the countries with a higher degree of alignment with the euro area. Moreover, the alignment of the individual segments of the Czech financial market has been gradually increasing since 2009.

The degree of **euroisation** in the Czech Republic is gradually rising, but remains relatively low. The use of the euro in the Czech economy is rising in non-financial corporations, while remaining very low in the household sector. The gradual growth in euroisation in the corporate sector is associated with the export orientation of Czech firms and the openness of the economy. This trend was intensified by a surge in demand for euro-denominated loans while the CNB's exchange rate commitment was in place (especially towards the end of the commitment). Firms took out such loans as an exchange rate hedge on expectations that the koruna would appreciate after the commitment ended.

2.2 Adjustment Mechanisms

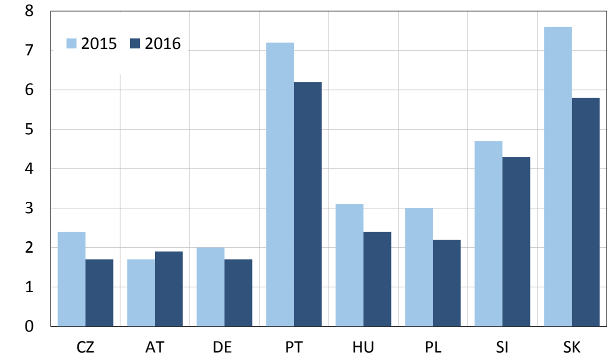
If set correctly, **fiscal policy** – like monetary policy – should have a countercyclical effect and thus be a stabilising element for the economy. Otherwise it becomes a source of shocks and deepening macroeconomic imbalances. The closer the structural part of the general government balance is to zero and the lower is the general government debt, the more room there will be at a time of economic downturn for automatic stabilisers to function and countercyclical discretionary measures to be implemented. Czech budget policy had the desirable countercyclical nature in 2009, when government anti-crisis measures were adopted. By contrast, the fiscal consolidation launched in 2010 significantly reduced the budget deficits, albeit at the cost of procyclical restrictive fiscal policy and an economic downturn in 2012 and 2013. In 2014–2015, it contributed to a recovery of the economy and to higher growth, mainly by means of investment co-financed by EU funds. Nevertheless, the domestic fiscal position has been improving again since 2014, to the point where a structural general government surplus was achieved in 2016. This is a precondition for fiscal policy to be ready to fulfil its macroeconomic stabilisation role effectively after the loss of independent monetary policy associated with euro adoption.

The Czech Republic's total **general government debt** is low compared to that of many EU countries and to the euro area average. However, coping with population ageing, especially in the pension system and the health and long-term care system, will be of key importance for sustainability. A risk is also posed by the relatively high share of mandatory expenditures, which are time-consuming and politically challenging to change and limit the room for discretionary policy measures. Although the Czech Republic's preparedness to enter the euro area has improved significantly in this respect, among other things through the enactment of budgetary responsibility laws, fiscal space and the effectiveness of adjustment mechanisms, especially in the long term, remain an area that needs attention.

The **labour market** is another important mechanism through which the economy can cope with asymmetric shocks in the absence of independent monetary policy. The flexibility of the Czech labour market has increased in response to the previous economic crisis, especially in the area of use of shorter working hours. Owing to greater use of shorter working hours and increases in the retirement age, the rate of economic activity has also been rising in recent years. The long-term unemployment rate is also showing a positive trend, being one of the lowest among the countries under comparison. Nevertheless, the Czech Republic constantly displays medium-high regional differences in unemployment rates. Minor problems persist in the areas of unemployment and internal labour market flexibility, especially as regards labour mobility, which remains significantly lower than in advanced European countries. This limits the ability of the economy to adjust flexibly to asymmetric shocks.

Chart 2.5: Long-term unemployment rates

(in %)



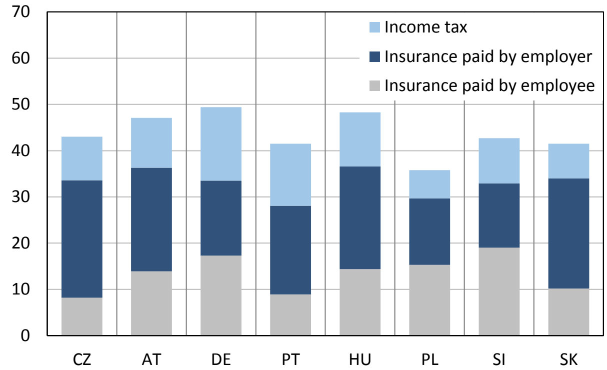
Source: Eurostat (2017h).

The functioning of the labour market as an adjustment mechanism is significantly affected by its **institutional rules**. One such rule is the minimum wage, whose ratio to the average wage has been rising gradually in the Czech Republic in recent years in line with the government's 2013 Programme Declaration. Until recently, the ratio of the minimum wage to the average wage was one of the lowest among the countries under comparison. However, it is currently converging to the other countries from below. A further sizeable increase in the minimum and guaranteed wage could start to disrupt labour market flexibility. Overall labour taxation in the Czech Republic is relatively high and has risen slightly further in the last year. Implicit labour taxation, which expresses the real tax burden as it includes health and social insurance, is also relatively high. The recent changes in the configuration of taxes and benefits are generally reducing the incentive to work. Last year, however, they were outweighed by growth in wages reflecting a marked expansion of the economy.

The Czech Republic's position in the area of **product market flexibility** worsened slightly compared to the previous year with respect to the number of administrative and regulatory barriers and is roughly in the middle of the countries under comparison.

Chart 2.6: Components of labour taxation in 2016

(in % of average wage)

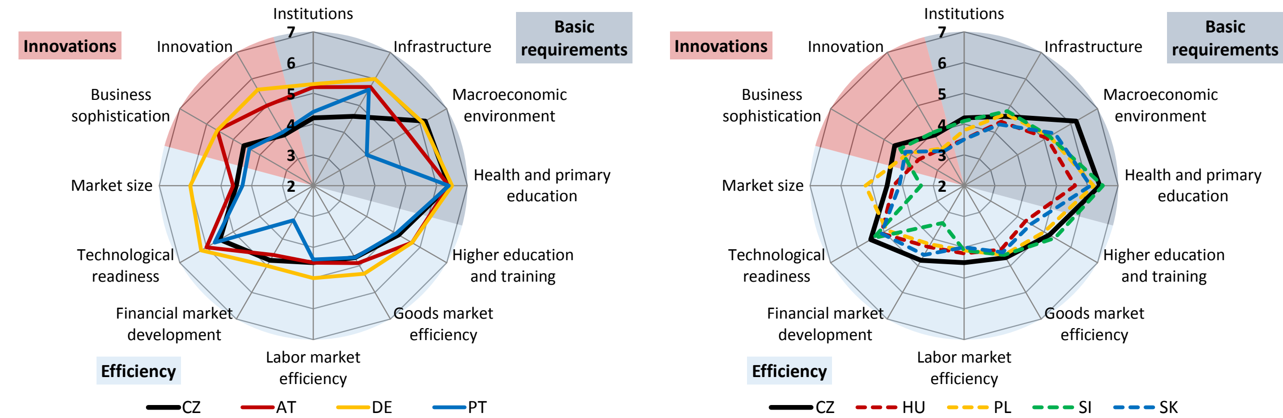


Source: OECD (2017).

The Czech Republic's ranking as regards barriers to growth and competitiveness has improved slightly since 2007. The chart below shows that its score for basic factors affecting economic growth is relatively good, but quality of institutions, including enforceability of law, remains a weakness; the pace of innovation and labour market efficiency have not improved either. These shortcomings in the business environment reduce product market flexibility.

Chart 2.7: Barriers to growth and competitiveness

(Global Competitiveness Index; scores for main pillars of index, 2017–2018)

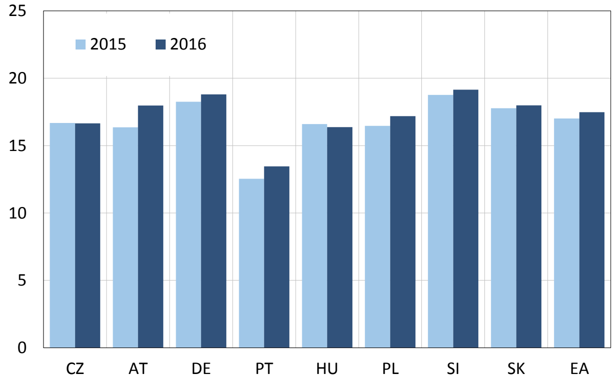


Note: The Global Competitiveness Index evaluates countries' competitiveness by means of scores in 12 pillars grouped into three categories (basic requirements, innovation and efficiency). The index takes values in the range of 1–7, with a higher index value meaning higher competitiveness.
Source: World Economic Forum (2017).

The **condition of the financial sector** of an economy plays an important role in its ability to absorb economic shocks. The resilience of the Czech banking sector to adverse shocks is high by international comparison. An excess of loans over deposits and low private sector indebtedness by international comparison preserve room for banks to further expand their lending while maintaining sufficiently high liquid assets. The link of domestic banks to the euro area banking sector is due mainly to the foreign ownership structure of the domestic banking sector. The biggest risk to the Czech banking sector at the moment is that of a continued spiral between property prices and property purchase loans.

Chart 2.8: Overall capital ratios

(in %)



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: IMF (2017).

3 Situation in the Euro Area and Newly Arising Obligations for Accession Countries

The economic situation in the euro area has stabilised after the financial and economic crisis and economic growth is gradually gaining momentum. However, developments remain mixed across countries. In many countries, a stronger economic recovery is being hampered by structural problems, labour market rigidity, loss of competitiveness, sluggish investment growth or high public and private sector debt.

Since the Czech Republic joined the EU, many institutional reforms have been implemented at EU level to enhance the stability of the union. Further potential obligations may arise from the process of deepening of the EU, especially the economic and monetary union. These obligations must be taken into consideration when deciding on euro area entry.

3.1 Situation in the Euro Area

Economic alignment of euro area countries is essential to the smooth functioning of the monetary union. Persisting differences in economic level are reducing the effectiveness of the single monetary policy, even though some external and internal imbalances have narrowed owing to a stricter regulatory framework.

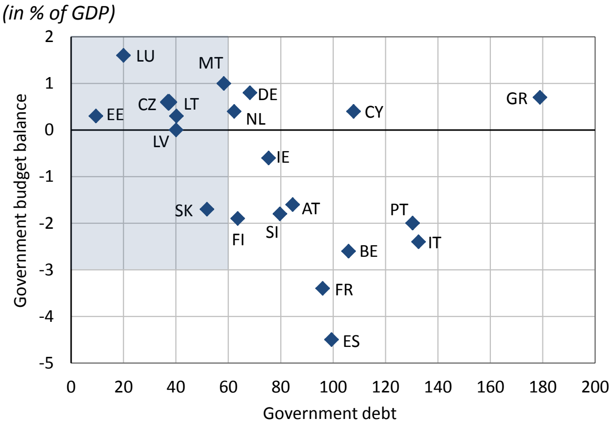
Although the situation in Greece has calmed quite a bit and rating agencies have improved their long-term ratings of its liabilities, its problems cannot be regarded as resolved yet.[2] The economic and political uncertainty throughout the EU was increased by the outcome of last year's Brexit referendum. The situation was further complicated by the result of general election in the UK in June this year and by the UK government's unclear position and negotiating strategy on the exit from the EU. Although the UK is not a euro area member state, it is the second largest EU economy. Given the persisting uncertainty and a whole range of still unknown factors, the impacts of Brexit cannot be quantified.

Contrary to the euro area founders' original expectations, the euro area countries have seen no major economic convergence, rise in economic growth or harmonisation of business cycles. Developments in economically weaker euro area countries have been mixed. The economic level of Ireland and the Baltic States relative to the euro area average has improved markedly since 2009, while that of the countries on the southern periphery (Greece, Cyprus, Spain, Italy and Portugal) has gone down since the onset of the crisis. Similarly, differences between the euro area countries are apparent on the labour market. Although labour market imbalances are gradually decreasing, in Greece and Spain the unemployment rates are still over 15% and even around 40% in the 15–24 age category. In Germany, by contrast, the unemployment rate has dropped below 4%.

Differences in general government debt levels are also apparent. Debt ratios exceeded 100% of GDP in five euro area countries in 2016 (see Chart 3.1). The weighted average of the general government debt-to-GDP ratio in the euro area peaked at 92% in 2014 and fell slightly to a still very high 89.2% in 2016. The euro area general government deficit has been falling steadily since 2009, reaching 1.5% of GDP in 2016. In the same year, only six of the 19 euro area countries were below both the deficit and debt thresholds.

Chart 3.1: Fiscal positions in the euro area and the Czech Republic in 2016

(in % of GDP)



Source: Eurostat (2017d).

Economic growth in the euro area is gradually gaining momentum and is fairly broad-based across the member states. However, the main obstacles to faster economic growth are persisting systemic structural shortcomings, which have not been removed by the implementation of structural reforms, and Brexit-related political uncertainty. Geopolitical risks linked with the migration crisis are another adverse factor for economic growth.

[2] For example, the International Monetary Fund still rates the Greek government debt as unsustainable and has proposed a partial write-off.

3.2 Institutional Developments in the EU and Newly Arising Obligations

Since the Czech Republic joined the EU, many institutional reforms have been implemented at EU level to enhance the stability of and deepen the union. However, the process of institutional change is still not finished. In the Rome Declaration of March 2017, the **Member States confirmed their commitment to complete the economic and monetary union**. Additional potential institutional and financial obligations may thus arise for the Czech Republic from the submitted and possible future proposals. These must be taken into consideration when deciding on euro area entry.

A debate on further institutional change and newly arising obligations is currently ongoing on the basis of the ***Reflection Paper on the Deepening of the Economic and Monetary Union*** (EC, 2017b) published by the European Commission in May 2017. The paper follows up on the March 2017 ***White Paper on the Future of Europe*** (EC, 2017c), which contains possible scenarios for institutional change, and the ***Five Presidents' Report*** (EC, 2015a), which discusses deepening European integration in the economic, financial and fiscal areas and enhancing democratic accountability and legitimacy, especially in the euro area. The measures to complete the economic and monetary union are divided into several stages. In the first stage, measures were taken to strengthen the European semester, an independent advisory European Fiscal Board and Structural Reform Support Service were established and a recommendation on the establishment of independent national productivity boards was issued for euro area countries. In the ongoing debate on the deepening of the economic and monetary union, the **Commission President** (EC, 2017e) called for the establishment of a European minister of economy and finance and an instrument offering technical and financial assistance to non-euro area states. He also stressed the need to anchor the European Stability Mechanism in EU primary law and for a euro area budget line within the EU budget. The topic was also discussed by the **French President** (Elysee, 2017), who proposed a euro area budget, finance minister and parliament. The Commission is expected to submit legislative proposals in this area in December 2017. The deepening of the economic and monetary union will be discussed for the first time at the Euro Summit in December 2017.

Efforts continue to be directed at completing the **banking union**, where further steps have been proposed in the area of reducing and sharing risks in the financial sector. The Single Resolution Mechanism (SRM) became fully operational on 1 January 2016. The SRM includes the Single Resolution Fund, in respect of which the participating states agreed in December 2015 on temporary public funding as a last resort in the event of a lack of funds. Also related to the banking union is the direct bank recapitalisation instrument contained in the European Stability Mechanism, for which EUR 60 billion has been earmarked. Proposals are being discussed to establish a European deposit insurance scheme and a joint fiscal backstop for the Single Resolution Fund aimed at providing the Fund with sufficient financial capacity in the event of very serious problems in the banking system. In the Czech Republic, the political debate on possible participation in the banking union before euro adoption is based on the regular update of the *Impact Study of Participation or Non-participation of the Czech Republic in the Banking Union*.

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 European Stability Mechanism and payment of the rest of the share in the subscribed capital of the ECB, are quantified in Appendix B.

The ***White Paper on the Future of Europe*** maps out possible institutional changes and presents five scenarios for the EU by 2025 to help steer the debate on the future of Europe. It contains no specific institutional proposals, but merely outlines a possible range of future forms of the EU. As regards economic policy, it works on the one hand with options of deepening cooperation and on the other with the possibility of limited integration focusing on cooperation within the single market. The scenario involving deeper cooperation between member states in all areas of integration takes the view that countries on their own are not well equipped enough to safeguard the stability of the union and that the current common policies are also insufficient. It therefore presents the option of sharing more resources and powers at the EU level. This would mean greater coordination of fiscal, social and taxation matters in the economic policy area, leading to financial, economic and fiscal union as envisioned in the *Five Presidents' Report*. More detailed possible measures in specific areas are contained in the follow-up ***Reflection Paper on the Deepening of the Economic and Monetary Union***. However, their potential impact cannot be quantified until their precise specification is known.

Another possible scenario is a change in the institutional framework based on enhanced cooperation in the areas of social standards and taxation between states willing to implement specific solutions. As regards the scenarios under consideration, it is important for the Czech Republic as a non-euro area state that no distinction is made between euro area states and EU Member States with their own currencies if measures to strengthen economic and social convergence are implemented.

Intensive discussions on the documents are to be conducted in cooperation with the European Parliament, the governments and parliaments of

Member States, local and regional governments and representatives of civil society so that the first conclusions can be made at the European Council meeting in December 2017 and their implementation can commence before the European Parliament elections in **June 2019**.

Convergence in a more integrated economic and fiscal union **can be achieved in various manners** entailing **various levels of obligations** for the Member States. The emphasis is on greater public finance accountability of the Member States on the one hand and greater financial solidarity on the other.

It is vital to find a combination of instruments that will lead to greater economic resilience and a better ability to react flexibly to economic shocks without generating further economic and social imbalances. Given the specificities of the EU national economies, these general goals of the Reflection Paper can best be met by allowing the Member States to apply their own approaches while strengthening instruments leading to real and nominal convergence.

The Czech economy depends largely on international trade, and 80% of its total exports go to EU countries. It is therefore important that trading partners are resilient to economic shocks that could spill over to the Czech economy. Some euro area economies are still facing serious structural issues or only gradually fading impacts of the economic and debt crisis. The current institutional instruments have failed to eliminate these problems.

Box: The Commission's Contributions to the Debate on the Completion of the Economic and Monetary Union

The *Reflection Paper on the Deepening of the Economic and Monetary Union* (EC, 2017a) presents possible ways of increasing convergence while taking into account EU specifics. Specifically, it focuses on strengthening economic policy coordination, reinforcing links between national reforms considered in Council recommendations and EU funding, and creating a macroeconomic stabilisation function of the common budget. The Reflection Paper does not mention whether the measures under discussion should be introduced only in euro area countries or across the entire EU and leaves this discussion to the Member States, in line with the White Paper.

To achieve convergence, the Commission accentuates **strengthening economic policy coordination**, especially by linking the role of compliance with specific Council recommendations and the implementation of reforms. Technical assistance support measures for the implementation of structural reforms should be deepened by June 2019. The adoption of binding standards, such as in the areas of tax and benefit systems, combined with minimum social standards based on the European Pillar of Social Rights, as presented in the Five Presidents' Report, would also have a potential fiscal impact. The enactment of binding standards would probably require the unanimous agreement of the Council and potentially also a change in primary law.

Under the current distribution of powers in the EU, structural reforms leading to convergence must be initiated primarily by Member States. Most reforms are costly in the short term or may reduce standards of living in some groups of the population. This discourages national governments from implementing them. The Reflection Paper discusses the option of **reinforcing links between national reforms and existing EU funding**. Until June 2019, the discussion on the proposed institutional changes is to focus on the possibility of providing technical support for reforms and strengthening the link between reforms and the priorities of the euro area and compliance with specific Council recommendations. According to the Commission paper, a special fund could be established by 2025 to create incentives for the implementation of national reforms. The reforms could also be co-financed to some extent from the European Structural and Investment Funds. This debate will be closely linked to the EU budget reform options based on the *Reflection Paper on the Future of EU Finances* (EC, 2017c).

Providing financial support for national reforms may, for example, drain resources from EU funds or give rise to a need to increase states' supranational contributions. The financial impact on the Czech Republic would depend on the manner of financing such reforms and the criteria for obtaining support for them. If support for national reforms is to be co-financed in countries with serious structural problems, a negative financial impact can be expected on the position of the Czech Republic vis-à-vis the EU budget, as the Czech Republic's relative position is quite good in this respect.

The Commission is also considering **establishing a macroeconomic stabilisation function in the euro area**. The stabilisation function discussed in the Five Presidents' Report would use fiscal transfers to help the participating states cope with an economic shock. It would complement the national budget stabilisers in the event of asymmetric shocks and it would allow running smoother fiscal policies in euro area countries in the event of symmetric shocks if monetary policy was unable to cope fully. In the ideal case, a macroeconomic stabilisation function, if established, could contribute to business cycle alignment. Given the current level of economic policy coordination and the approach to compliance with EU law, it is not clear whether the risks and potential costs for the Czech Republic would outweigh the benefits of this function.

The paper presents three options for a stabilisation function. The first – a **European Investment Protection Scheme** – would subsidise planned projects or activities in a recession so that investment projects could still be continued with a budget burdened by an economic shock. From the economic policy perspective, this option is insufficient for smoothing a shock because the investment protection scheme does not support the pursuit of countercyclical fiscal policy in the form of investment growth. It would only finance running and planned projects. Even the investment clause relating to compliance with the MTO has failed to support investment growth in recessions. However, the Commission paper does not mention that a country which is compliant with the fiscal rules and has sufficient potential fiscal capacity is able to continue financing its investment projects even in a recession. This concept would also largely duplicate the function of part of the structural funds and the Cohesion Fund, which have been incapable of delivering sufficient convergence by supporting investment projects.

The second option for a stabilisation function is a **European Unemployment Reinsurance Scheme**, which would provide financial assistance to states only in the event of a sudden rise in unemployment. It is hard to imagine this system playing a major role in the stabilisation function if it only financed the cyclical component of unemployment. Given its current low unemployment, the Czech Republic would probably be only a donor of this scheme. As mentioned in the Reflection Paper, effective functioning of the unemployment reinsurance scheme would depend on adequate convergence of labour market policies. The MF CR believes that relatively strict harmonisation of unemployment insurance is necessary if fiscal transfer funds are to be used effectively, as is the case in the already functioning fiscal unions. Transfers to costly social systems may not be sufficient to smooth shocks and would just become a burden on the system.

The third option, **a rainy day fund**, would accumulate funds and disburse them on a discretionary basis to cushion shocks. The document does not mention the mode of use of the funds, so it is impossible to estimate the mechanism's potential costs and benefits for the Czech Republic. The mechanism would essentially duplicate the already implemented economic coordination instrument and increase moral hazard. The EU already has measures such as the MTO in place to ensure an increase in fiscal capacity for worse times. If they comply with those measures, the Member States should be able to create reserves themselves.

The establishment of a macroeconomic stabilisation function is a hotly debated and potentially problematic project, as it would probably be built on financial solidarity in an effort to minimise moral hazard. **Moral hazard** in the drawdown of funds should be reduced by means of a wider economic supervision framework, primarily involving compliance with EU fiscal rules and the implementation of structural policies leading to greater convergence. Compliance with the rules should enable the Member States to boost their fiscal capacity and thereby increase their ability to cope with shocks without the aid of a macroeconomic stabilisation function.

According to the Reflection Paper, **avoiding permanent transfers** should be another principle in addition to minimising moral hazard. This principle is important for establishing a fiscally sustainable stabilisation function.

The potential costs will be probably be the most important factor for the Czech Republic when deciding on participation in a macroeconomic stabilisation function, if established. If the function was to help smooth economic shocks, it would need a stable revenue stream and a higher budget than the current EU budget can offer. One option mentioned by the Reflection Paper is the establishment of a new instrument to finance the specific goals of the macroeconomic stabilisation function. Contributions based on a share of GDP or a share of VAT, or revenues from excises, levies or corporate taxes, could be used as sources of financing. The redistribution function of the mechanism and different tax and benefit rates would have to be considered when deciding on the source of financing.

If the current structure and sources of budget financing remained the same, an additional contribution to a macroeconomic stabilisation function amounting to, say, 1% of national GDP would represent a fairly significant burden on public budgets. Yet such a budget would probably be insufficient to fulfil the stabilisation function. Without a change to primary law, the stabilisation function would not be able borrow in the financial market and would have to rely on contributions from the participating states. For the Czech Republic as a country with relatively favourable macroeconomic indicators and sufficient fiscal capacity, the decision on participation in this function, if established, would probably be based on financial solidarity between it and the participating states.

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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 long-term 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 exchange-rate 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 – Estimated Financial Costs for the Czech Republic of Hypothetical Euro Area Entry

The table below lists the estimated direct financial costs in the hypothetical case of the Czech Republic entering the euro area, and the financial costs closely linked with entry, based on the current legal settings and a number of simplifying assumptions about economic factors. An exchange rate of CZK 25.5 to the euro is used for all currency conversions.

The table does not capture other facts that would have an impact on the Czech Republic's budget or, more broadly, on the method of implementing 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. Euro area countries could also de facto make euro adoption in the Czech Republic conditional on the completion of ratification of the Treaty on Stability, Coordination and Governance in the Economic and Monetary Union. The aforementioned Regulation and Treaty require the introduction of national legal regulations or institutions that will support compliance with the EU rules on budgetary discipline (the Stability and Growth Pact). Moreover, the Treaty tightens these rules in some cases, and that could also affect the Czech Republic.

Payment of the rest of the Czech Republic's share in the subscribed capital of the ECB	**Unit**	**Estimate**
− Following euro area entry, the CNB would have to pay up the outstanding amount of the subscribed capital of the ECB (Article 48 of the Protocol on the Statute of the European System of Central Banks and of the European Central Bank).	*EUR mil* *CZK bn*	167.5 4.3
− 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	**Unit**	**Estimate**
− The total obligation is CZK 413.7 billion, of which CZK 365.2 billion is a contingent liability payable in the event of full use of the European Stability Mechanism's lending capacity.	*EUR bn* *CZK bn*	1.9* 48.5*
− The Czech Republic would then have to pay up capital totalling CZK 48.5 billion within four years.		
− 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.		

Obligations associated with membership of the Single Resolution Mechanism	**Unit**	**Estimate**
− 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 Single Resolution Fund requires that the contributions of banking institutions be transferred to the fund by the end of a transitional period.	*EUR bn* *CZK bn*	0.98** up to 25.0**
− 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.		
− 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).***		

Obligations associated with the Czech Republic's participation in the Single Supervisory Mechanism	**Unit**	**Estimate**
− They reflect the total annual fees paid by Czech banks to the ECB for the conduct of supervision.	*EUR mil* *CZK mil*	2.2 56.1

Note: * *Paid-up capital represents CZK 48.5 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 (in the current situation, the Czech Republic would also be entitled to it). The European Stability Mechanism is one of Greece's biggest creditors. In the hypothetical event of a Greek default, which would lead to the write-off of the European Stability Mechanism's entire claim of EUR 39.4 billion and hence the maximum possible loss, the loss incurred by the Czech Republic as a European Stability Mechanism member, based on the capital subscription key, would be around EUR 0.91 billion, or CZK 23.2 billion.*

** *This is the upper limit signifying the target level of the National Resolution Fund (CZK 25.0 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 less risky banking sector, the figure could be lower and the amount transferred would probably be lower than stated here, i.e. between CZK 8.2 billion and CZK 19.7 billion.*

*** *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. In addition, Czech credit institutions would pay fees connected with the administration of the Single Resolution Board in order to participate in the SRF. These fees would be similar to those levied in the Single Supervisory Mechanism.*

C Appendix – Glossary

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

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.

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 long-term 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 -1% 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).

Ratings are a standard international tool for assessing the creditworthiness of countries in order to evaluate their credibility. A rating tells foreign firms how risky it is to do business in the country and quantifies how likely it is that the country will be able to meet its obligations. It therefore reflects the quality of a country as a borrower and its economic ability to meet its obligations and repay both interest and principal in time and in full.

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 SRF 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 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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