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

A joint document of the Ministry of Finance of the Czech Republic, the Ministry of Industry and Trade of the Czech Republic and the Czech National Bank approved by the Government of the Czech Republic on November 23, 2005

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Besides requiring the Member States to harmonise their legislation with Articles 108 and 109 of the Treaty establishing the European Community and the Statute of the ESCB and ECB, the EU legislation requires them to achieve a high degree of sustainable convergence as a precondition for joining the euro area. This is measured by the fulfilment of four convergence criteria: a high degree of price stability, as apparent from the rate of inflation; the long-term sustainability of the government financial position, as measured by the government deficit and government debt; exchange rate stability, as measured by movements in the exchange rate within the normal fluctuation margins of the ERM II system for two years without devaluation; and the durability of convergence as reflected in long-term interest rate levels. As an EU Member State, the Czech Republic is obliged to take steps to be prepared for joining the euro area as soon as possible. However, potential non-fulfilment of the convergence criteria has no consequences for the Czech Republic at present. The only exception is the criterion on the sustainability of public finances, which the Czech Republic has so far been unable to satisfy in a sustainable manner in the area of fiscal deficits. The state's fiscal performance is subject to multilateral surveillance of public finance developments. Failure to observe budgetary discipline led to the commencement of the excessive deficit procedure against the Czech Republic shortly after its accession to the EU. As a result, the Czech Republic has undertaken to reduce the government deficit in a sustainable manner to below 3% of GDP by 2008.

1.1 Assessment of Fulfilment of the Convergence Criteria

The Czech Republic is currently compliant with **the criterion on price stability**. The CNB's inflation target for the national consumer price index for the period starting 2006 has been set at 3%. The CNB has at the same time undertaken to endeavour to ensure that actual inflation does not differ from this target by more than one percentage point in either direction. This target creates conditions for the fulfilment of the criterion near its reference value, provided that inflation in the EU Member States does not deviate too far downwards from the ECB's definition of price stability (inflation "below, but close to 2%"). However, the possibility of non-fulfilment of this criterion cannot be ruled out in the case of unforeseen events with a strong inflationary effect or disinflationary shocks in EU Member States leading to a reduction in the reference value.

The Czech Republic is not compliant with **the criterion on the sustainability of the government financial position.** According to the draft 2005 Convergence Programme, a sustainable decrease in the public budgets deficit to below 3% of GDP can be expected from 2008 onwards. This constitutes a major limitation with respect to the timing of euro adoption. The government debt is still relatively low (despite the present upward trend) compared to the reference value of 60% of GDP. Provided that the draft 2005 Convergence Programme is implemented, there should be no danger of non-fulfilment of either component of this criterion as from 2008.

Formal assessment of the **exchange rate criterion** will only be possible after the Czech Republic joins ERM II and announces the central parity for the koruna's exchange rate within this mechanism. Moreover, this criterion should not be interpreted mechanically, but in relation to other economic fundamentals and their impact on any exchange rate fluctuations. The fluctuations in the CZK/EUR exchange rate over the last few years have been distinctly smaller than the hypothetical band of ±15%. Nonetheless, the deviations from the average rate have been quite significant. The koruna has been showing an appreciation trend for some time. At present, therefore, we cannot say for sure whether the past developments would have been assessed as compliant with the condition of movement close to the central parity "without severe tensions".

The Czech Republic is currently compliant with the **long-term interest rate criterion** without any problems. The outlook for several years ahead does not indicate any problems in this area, either. Fulfilment of this criterion is conditional on maintaining financial market confidence in the successful completion of the public finance reform. If the reform is not realised, this may result in a downgrading of the Czech Republic's international rating, a higher risk premium on government bonds and consequently an increase in long-term interest rates (above the reference value in the extreme case).

1.2 Assessment of Economic Analyses

There are numerous indicators that traditionally speak in favour of relatively early adoption of the euro. These include in particular the high degree of openness of the Czech economy, its close trade and ownership links with the euro area, and the achievement of convergence in the inflation rate and nominal interest rates.

In addition, there are some indicators which tended to be unfavourable for the Czech Republic in the past, but which have improved in recent years. These include, for example, GDP per capita, where the Czech Republic is slowly approaching the least advanced countries of the monetary union, and financial sector stability, which has shown a partial improvement.

Long-term stabilisation of public budgets below the 3% reference value and labour market reforms are traditional bottlenecks that will require further efforts prior to euro area entry. The labour market is still characterised by relatively high long-term and structural unemployment, low regional mobility, high costs of terminating employment contracts in the event of their being of short duration, and low motivation for low-income groups to seek jobs. Some positive changes have been introduced recently, for example the introduction of tighter conditions for qualifying for unemployment benefit and easier procedures for setting up businesses. Besides fiscal reforms, greater labour market flexibility is still one of the key challenges going forward.

1.3 Recommendations

Based on the aforementioned analyses and in line with the earlier approved euro adoption strategy, the Ministry of Finance, the Ministry of Industry and Trade and the Czech National Bank recommend that the Czech Government should **<u>not attempt to enter the ERM II during 2006</u>**.

The reason is that the conditions have yet to be created for the Czech Republic to meet the requirements for joining the euro area two years after entering the ERM II and to be able to benefit from adopting the euro. Any future change regarding this recommendation depends primarily on progress with the public finance reform and other reforms directed at increasing the flexibility of the Czech economy, and particularly that of the labour market.

2 Assessment of the Current and Expected Fulfilment of the Maastricht Convergence Criteria

The convergence criteria (price stability, the public finance sustainability measured by the government deficit and government debt, exchange rate stability, and the durability of convergence based on long-term interest rates) are defined in the EC Treaty (hereinafter referred to as the "Treaty") and specified in the Protocol on the convergence criteria and the Protocol on the excessive deficit procedure annexed to the Treaty. Fulfilment of the convergence criteria in a sustainable, not only one-off, manner is a necessary condition for adoption of the single currency by a Member State with a derogation.

2.1 Criterion on Price Stability

Box 2.1: Definition of the criterion on price stability

Treaty provisions
The first indent of Article 121 (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 the Protocol on the convergence criteria referred to in Article 121 of the Treaty stipulates that: "the criterion on price stability referred to in the first indent of Article 121 (1) of this Treaty 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
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 notion of "at most, the three best performing Member States in terms of price stability", which is used for the definition of the reference value, is applied by using the unweighted arithmetic average of the rate of inflation in the three countries with the lowest inflation rates, given that these rates are compatible with price stability.[1]

Source: European Central Bank, European Commission

The Czech Republic has been compliant with the criterion on price stability since 2002. The only exception was 2004, when inflation increased temporarily owing to changes to indirect

[1] *The specific implementation of this interpretation in the latest EC Convergence Report (2004) differs somewhat from the interpretation in the latest ECB Convergence Report (2004). Both reports work with the three countries with the lowest inflation (Finland, Denmark and Sweden) excluding Lithuania, which recorded an inflation rate of -0.2% in the reference period. However, the decision to exclude Lithuania is justified in slightly different ways. For the Commission the reason is that Lithuania showed negative inflation, whereas for the ECB it is that the price developments in Lithuania over the reference period were judged to be due to the accumulation of specific factors; in the ECB's opinion, including such factors in the calculation of the reference value might have distorted the reference value and reduced its usefulness as an economically meaningful benchmark.*

taxes and a simultaneous decrease in the reference value due to exceptionally low inflation in some EU countries. According to the current forecast on which the Czech Republic's Convergence Programme is based and to the inflation outlook for EU Member States, there should be no danger of non-fulfilment of this criterion in the future, either (see Table 2.1).

Table 2.1: Harmonised Index of Consumer Prices

(average for last 12 months vs. average for previous 12 months, growth in %)

	2002	2003	2004	8/05	2005	2006	2007	2008
Average for 3 EU countries with lowest inflation	1.4	1.2	0.7	0.9	0.9	1.3	1.3	1.3
Reference value (1st line +1.5 p.p.)	2.9	2.7	2.2	2.4	**2.4**	**2.8**	**2.8**	**2.8**
Czech Republic*	1.4	-0.1	2.6	1.8	**1.5**	**2.2**	**2.0**	**2.1**

Source: Eurostat, European Commission, Convergence Programmes and Stability Programmes of Member States, draft Convergence Programme of the Czech Republic (2005)

Note: The outlook for inflation in the European Union for 2005–2006 is taken from the European Commission's spring economic forecast and that for 2007–2008 from the Member States' Convergence Programmes and Stability Programmes (2004).

* *The forecast for the Czech Republic is taken from the draft Convergence Programme of the Czech Republic (2005), prepared using the data available in September 2005. The CNB's October 2005 forecast expects HICP inflation of 1.7% in 2005, 3.3% in 2006 and 3.1% in 2007.*

The definition of "at most, the three best performing Member States in terms of price stability" provides some latitude in the assessment of the criterion with respect to which states might be excluded from the calculation of the reference value owing to their inflation rate not being considered "compatible with price stability". The calculation of the reference value in Table 2.1 uses the interpretation where the three best performing countries in terms of price stability are the countries with the lowest positive inflation.

The outlook for the reference value derived from the inflation forecasts in individual Member States shows an upward tendency compared to 2004. This is not consistent, however, with the flat inflation expected in the EU. This expectation reflects the far lower degree of variability in the inflation forecasts of the individual Member States, which, with only some exceptions, do not contain values deviating markedly from the ECB's inflation target. The degree of variability of the inflation forecasts is thus lower than that displayed by the historical data, hence the actually measured inflation rates can be expected to show a greater level of differentiation than the inflation forecasts. This can clearly also mean a lower inflation rate in the key countries for the calculation of the criterion, and hence a lower reference value.

If we derive the outlook for the reference value from past data, in 1999–2004 the criterion ranged between 2.2% and 2.9%. The CNB's inflation target for the national consumer price index for the period starting 2006 has been set at 3%[2] (the CNB has at the same time undertaken to endeavour to ensure that actual inflation does not differ from this target by more than one percentage point in either direction). This target thus creates conditions for the fulfilment of the criterion near its reference value. The HICP in the Czech Republic has systematically recorded lower inflation levels than the national index[3]. Nonetheless, in 2004,

[2] *For details, see the document "The CNB's inflation target from January 2006" of 11 March 2004, which is available at http://www.cnb.cz/www.cnb.cz/en/monetary_policy/strategic_documents/download/mp_cil_2006_a.pdf.*

[3] *There are some differences in structure between the consumer basket of the Czech Republic's national consumer price index and that of the HICP. The HICP weights include revenues from purchases by foreigners*

for example, disinflationary shocks in some EU countries resulted in a reduction in the reference value, whereas inflation in the Czech Republic recorded a temporary increase, meaning that the Czech Republic was non-compliant with the price stability criterion for a short time. Obviously, non-compliance with the criterion for a time, especially due to external developments, cannot be ruled out in the future, either.

2.2 Criterion on the Sustainability of Public Finances[4]

Government deficit criterion

The first part of the criterion on the sustainability of public finances is focused on short-term to medium-term fiscal developments. The benchmark is the general government deficit under ESA95 national accounts methodology. The current settings of the Czech Republic's public finance parameters prevent it from satisfying the government deficit criterion in a sustainable manner. The outlook for the period ahead suggests that the temporary decline in the deficit to 3% of GDP in 2004 cannot be regarded as sustainable. The ongoing consolidation of public finances is aimed at gradual reducing the government deficit. Provided that the reform continues successfully, fulfilment of the convergence criterion can be expected in 2008 (see Table 2.2).

Table 2.2: Government deficit *(ESA 1995 methodology, in % of GDP)*

	2002	2003	2004	2005	2006	2007	2008
Reference value	-3.0	-3.0	-3.0	**-3.0**	**-3.0**	**-3.0**	**-3.0**
Czech Republic*	-6.8	-12.5	-3.0	**-4.8**	**-3.8**	**-3.3**	**-2.7**

Source: CZSO, draft Convergence Programme of the Czech Republic (2005)
** The forecast for the Czech Republic is taken from the draft Convergence Programme of the Czech Republic (2005), prepared using the data available in September 2005. The CNB's October 2005 forecast expects a public finance deficit of 3.6% of GDP in 2005, 3.0% of GDP in 2006 and 2.8% of GDP in 2007.*

Box 2.2: Definition of the criterion on the sustainability of the government financial position

Treaty provisions
The second indent of Article 121 (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 104 (6)".

Article 2 of the Protocol on the convergence criteria referred to in Article 121 of the Treaty 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 104 (6) of this Treaty that an excessive deficit exists".

in the Czech Republic, but do not include hypothetical rents, whereas the national consumer price index does not include revenues from purchases by foreigners, but does include hypothetical rents. Owing to this difference in basket composition, the HICP inflation rate is on average 0.3 percentage point lower than the national CPI inflation rate.

[4] *The criterion on the sustainability of public finances is satisfied only when both fiscal criteria, i.e. the government deficit and government debt, are fulfilled in a sustainable manner.*

Article 104 of the Treaty sets out the excessive deficit procedure. According to Article 104 (2) and (3), the European Commission prepares a report if a Member State does not fulfil the requirements for fiscal discipline, in particular if:

1. the ratio of the planned or actual government deficit to GDP exceeds a reference value (defined in the Protocol on the excessive deficit procedure as 3% of GDP), unless:

- either the ratio has declined substantially and continuously and reached a level that comes close to the reference value; or, alternatively,
- the excess over the reference value is only exceptional and temporary and the ratio remains close to the reference value;

2. 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.

Other Treaty provisions – Excessive deficit procedure
The report prepared by the European Commission under Article 104 (3) of the Treaty should also take into account whether the government deficit exceeds government investment expenditure and all other relevant indicators, including the medium-term economic and budgetary position of the Member State.

The Commission may also prepare a report if, notwithstanding the fulfilment of the criteria, it is of the opinion that there is a risk of an excessive deficit in a Member State. The Economic and Financial Committee formulates an opinion on the Commission's report.

In accordance with Article 104 (6), the EU Council, on the basis of a recommendation from the Commission and having considered any observations which the Member State concerned may wish to make, decides, acting by qualified majority and following an overall assessment, whether an excessive deficit exists in a Member State. Under Article 104 (7) of the Treaty, the EU Council then makes recommendations to the Member State concerned with a view to bringing the deficit below the 3% level within a given period.

Source: European Central Bank, European Commission

Government debt criterion

The second part of the criterion monitors the sustainability of public finances from a longer-term perspective based on the level and trend of the general government debt. Given its low initial level of government debt, the Czech Republic has no problem fulfilling this criterion. The government debt growth in recent years largely reflects the inclusion of the majority of the indirect liabilities of the government (particularly government guarantees and the sectorisation of Česká inkasní, the Czech Consolidation Agency and their subsidiaries in the general government sector). The rate of growth in debt is slowing thanks to the public finance reform. Successful completion of the fiscal consolidation should stabilise the government debt level safely below the reference level (see Table 2.3).

Table 2.3: Government debt *(ESA 1995 methodology, in % of GDP)*

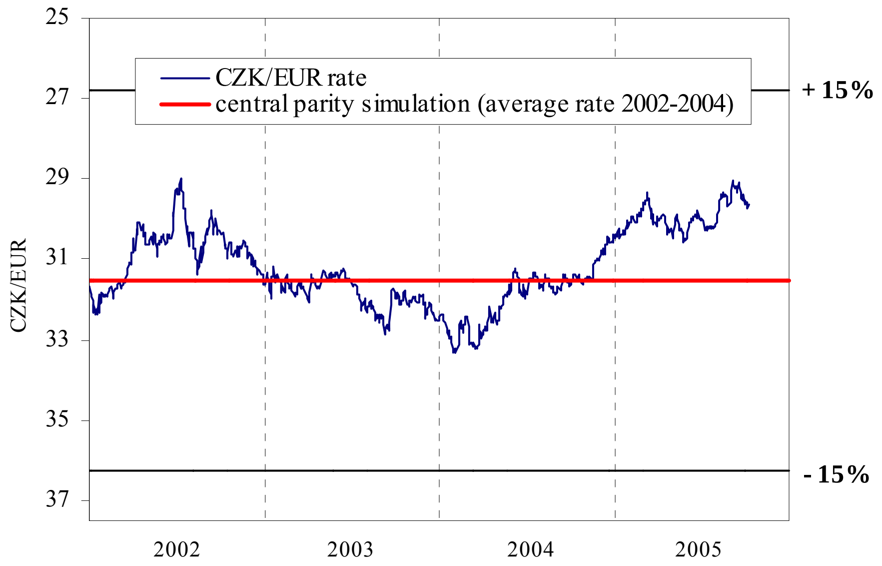
	2002	2003	2004	2005	2006	2007	2008
Reference value	60.0	60.0	60.0	**60.0**	**60.0**	**60.0**	**60.0**
Czech Republic*	29.8	36.8	36.8	**37.4**	**37.1**	**37.9**	**37.8**

Source: CZSO, draft Convergence Programme of the Czech Republic (2005)
** The forecast for the Czech Republic is taken from the draft Convergence Programme of the Czech Republic (2005), prepared using the data available in September 2005. The CNB's October 2005 forecast expects a government debt of 35.8% of GDP in 2005, 36.1% of GDP in 2006 and 36.7% of GDP in 2007.*

2.3 Criterion on Exchange Rate Stability

The Czech Republic does not participate in ERM II, so the central parity of the CZK/EUR rate has not been set yet. For this reason, the exchange rate criterion cannot be formally assessed. In Chart 2.1, the central parity is, for illustration, assumed to be the average of the daily rates for 2002–2004.

Chart 2.1: Nominal CZK/EUR rate



Source: CNB
Note: In the chart, an upward movement in the exchange rate means an appreciation of the koruna. The hypothetical central parity is simulated by the average rate for 2002–2004.

The fluctuations in the CZK/EUR exchange rate over the last few years have been distinctly smaller than the hypothetical band of ±15%. Nonetheless, the deviations from the average rate have been quite significant. The koruna has been showing an appreciation trend for some time. The definition of the criterion implies that its interpretation is not entirely clear and that the assessment of fulfilment of this criterion will take also into account other factors than the exchange rate level alone. We cannot therefore say for sure whether the present situation would be assessed as compliant with the condition of movement close to the central parity "without severe tensions".

Box 2.3: Definition of the criterion on exchange rate stability

Treaty provisions
The third indent of Article 121 (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 currency of any other Member State".

Article 3 of the Protocol on the convergence criteria referred to in Article 121 (1) of the Treaty stipulates that: "the criterion on participation in the exchange-rate mechanism of the European Monetary System referred to in the third indent of Article 121 (1) of this 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 any other Member State's currency on its own initiative for the same period."

Application of Treaty provisions
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 assesses 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 EMI Council in October 1994 and its statements in the November 1995 report entitled "Progress towards Convergence".

The EMI 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 "the EMI Council 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 121 (1) of the Treaty and the relevant Protocol".

In the November 1995 report entitled "Progress towards Convergence" 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%, and 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.

Source: European Central Bank, European Commission

Successful participation in ERM II depends in particular on the degree of alignment with the euro area economy, on market flexibility and on the consistency of economic policies. The euro-strategy recommends participation in ERM II for the minimum required period of two years only. This implies that "the Czech Republic should enter the ERM II only after conditions have been established which enable it to introduce the euro at the time of the assessment of the exchange rate criterion and to then benefit from its introduction without experiencing any problems"[5].

Compared to the present exchange rate regime of managed floating, ERM II entry will be a new element which might have a substantial effect on the behaviour of the exchange rate. The key problem with switching to the ERM II mechanism will be setting the appropriate (sustainable) central parity.

[5] *For details, see the joint document of the CNB and the Czech Government entitled "The Czech Republic's Euro-area Accession Strategy" at http://www.mfcr.cz/cps/rde/xchg/mfcr/hs.xsl/eu_acc_stra_13438.html.*

2.4 Criterion on long-term interest rates

Box 2.4: Definition of the criterion on long-term interest rates

Treaty provisions
The fourth indent of Article 121 (1) of the Treaty requires: "the durability of convergence achieved by the Member State and of its participation in the exchange-rate mechanism of the European Monetary System being reflected in the long-term interest-rate levels".

Article 4 of the Protocol on the convergence criteria referred to in Article 121 (1) of the Treaty stipulates that: "the criterion on the convergence of interest rates referred to in the fourth indent of Article 121 (1) of this Treaty 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 2 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."

Application of Treaty provisions
First, with regard to "an average nominal long-term interest rate" observed over "a period of one year before the examination", the long-term interest rate has been calculated as an arithmetic average over the latest 12 months for which HICP data were available.

Second, the notion of "at most, the three best performing Member States in terms of price stability" which is used for the definition of the reference value has been applied by using the unweighted arithmetic average of the long-term interest rates in the three countries with the lowest inflation rates. Interest rates have been measured on the basis of harmonised long-term interest rates, which were developed for the purpose of assessing convergence.

Source: European Central Bank (ECB)

The Czech Republic is currently compliant with the criterion on long-term interest rates and no problems are expected in this area in the future[6] (see Table 2.4).

Table 2.4: 10-year interest rates on government bonds on the secondary market

(average for the last 12 months, in %)

	2002	2003	2004	7/05	2005	2006	2007	2008
Average for 3 countries with lowest inflation	4.90	4.12	4.28	3.76	3.8	4.2	4.2	4.2
Reference value (1st line + 2.0 p.p.)	6.90	6.12	6.28	5.76	**5.8**	**6.2**	**6.2**	**6.2**
Czech Republic	4.94	4.12	4.75	4.01	**3.3**	**3.4**	**3.9**	**4.0**

Source: Eurostat, Macroeconomic Forecast of the Czech Ministry of Finance (October 2005)

The forecast for interest rates on government bonds in the Czech Republic is dependent on the successful completion of the public finance consolidation. Any loss of financial market confidence in the outcome of the fiscal reform could very quickly pass through into a rise in the risk premium on long-term interest rates and endanger the fulfilment of this convergence criterion.

[6] *As no forecast for the time horizon under review is available for the long-term interest rates of the countries that should, according to the inflation forecast, form the basis for calculating the criterion, the projection of the reference value in Table 2.4 is based on the technical assumption that long-term interest rates will move in line with inflation, i.e. real interest rates will not change. The reference value in 2005–2008 should therefore be viewed as only tentative.*

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

This part summarises the results of a set of analyses directed at assessing the Czech economy's alignment with the euro area over and above the formal criteria whose fulfilment is assessed in the previous part. Entry into the euro area will fundamentally change the Czech economy's possibilities for adjusting to economic shocks. There will be no possibility of adjusting to the euro area countries, i.e. the Czech Republic's biggest trading partners, through movements in the exchange rate. Monetary policy will be formulated at the euro area level; hence, there will be a risk of the monetary conditions not corresponding to the situation in the Czech economy at any given moment. Therefore, it is important to examine how big this risk is and how well the Czech economy will be able to respond if it materialises.

The analyses are divided into two basic groups by the type of question which they try to answer. The section entitled "Cyclical and Structural Alignment" indicates the size of the risk of economic shocks whose impact on the Czech economy will differ from that on the euro area as a whole ("asymmetric shocks"). The section entitled "Adjustment Mechanisms" answers the question of to what extent the Czech economy is capable of absorbing the impacts of possible asymmetric shocks. The basic theoretical starting point for the underlying analyses is the theory of optimum currency areas. These analyses are aimed at assessing the evolution of the alignment indicators over time and in comparison with selected countries which either are euro area members already (Austria, Portugal and Greece[7] were selected) or aspire to such membership (Poland, Slovakia and Hungary)[8]. The conclusion as to whether the Czech economy is sufficiently prepared for adopting the single currency cannot be made in absolute terms, but can ensue from the aforementioned comparison with other countries and the assessment of developments over time. In general, it can be expected that the benefits of adopting the single currency will grow with greater economic alignment and stronger adjustment mechanisms.

3.1 Cyclical and Structural Alignment

The costs arising from the loss of the Czech Republic's own monetary policy will be particularly felt if the Czech economy is not aligned with the euro area economy and its develoment, therefore, deviates frequently from that in the euro area. The risks arising from the Czech Republic's accession to the euro area will decrease as the degree of alignment increases.

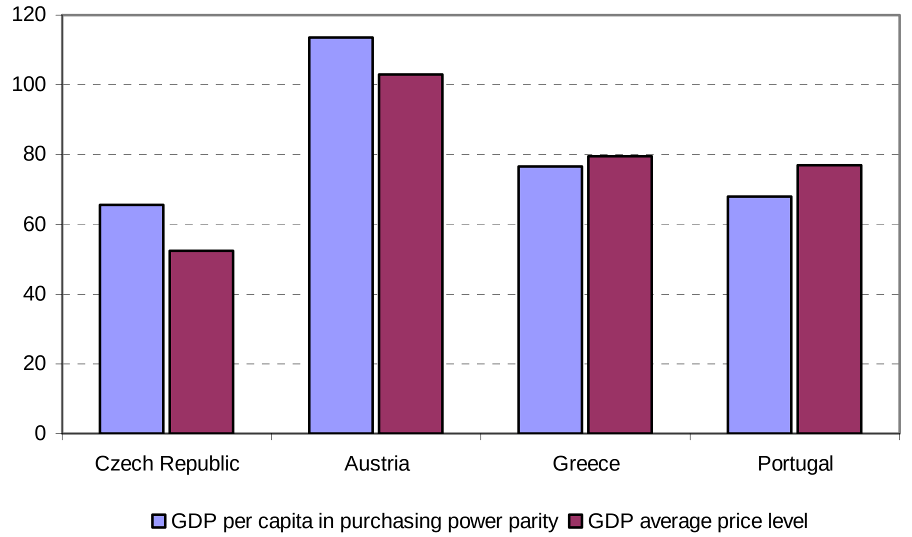
The degree of real economic convergence is a fundamental indicator of the economy's similarity to the euro area. A higher degree of convergence prior to ERM II entry and euro adoption will decrease the potential pressures stemming from price level convergence and appreciation of the real exchange rate. In terms of GDP per capita, the Czech Republic is slowly approaching the least advanced countries, while it is lagging in price level (see Chart

[7] The euro area countries were selected so as to include countries that are comparable in terms of economic level and countries with which the Czech economy has trading links.

[8] All the analyses attempted to make comparisons with all the selected countries, but in some cases that was not possible owing to a lack of relevant statistical data.

3.1). Going forward, we can expect a real appreciation of the koruna against the euro of 2%–3% year on year, with a gradually declining tendency. In the presence of a persisting need for a high rate of real appreciation of the koruna after joining the euro area, we can expect rather higher domestic inflation than average inflation in the euro area and, as a result, lower real interest rates than the average for the euro area. Were this situation to persist in the long term, it could pose a certain risk.

Chart 3.1: Real economic convergence of selected states towards euro area in 2004
(euro area average = 100)



Source: Eurostat, CNB calculation

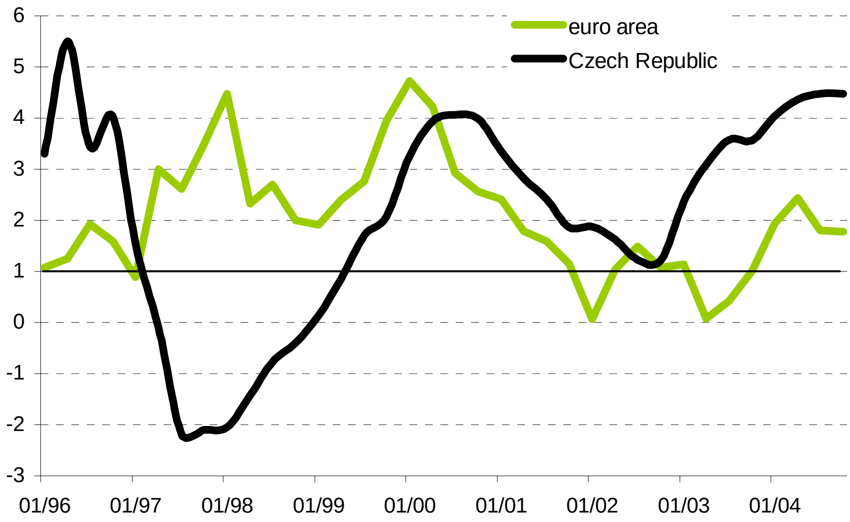
Sufficient **alignment of the business cycle and similarity of economic shocks** are preconditions for a single monetary policy to have an effective and appropriate effect on an economy in a monetary union. Statistical calculations for the period 1995–2004 show that the alignment of the business cycle of the Czech economy with the euro area has been increasing since 1999 (see Chart 3.2). However, this trend is not very robust so far.[9]

An **analysis of the potential impacts of the increased inflow of money from EU structural funds**, which could generate a short-term fiscal impulse for domestic demand, formed part of the analyses conducted. According to current forecasts, this impulse should peak in 2007 and 2008. The analysis reveals that monetary policy, if co-ordinated with other macroeconomic policies, can help to deal with the macroeconomic impacts of this inflow using standard instruments, and that the risk of large movements in interest rates, exchange rate and inflation might arise only in the event of other simultaneous shocks acting in the same direction.

The structure of the Czech economy in terms of product creation is broadly similar to that of the euro area economy, although it retains a specific feature in the form of a higher share of industry at the expense of services. However, the Czech economy has a lower (and slowly falling) degree of structural similarity compared to some countries (e.g. Hungary, Portugal and Austria).

[9] *The methods used were correlation analysis and VAR model analysis.*

Chart 3.2: GDP growth in the Czech Republic and the euro area *(in %, year on year)*

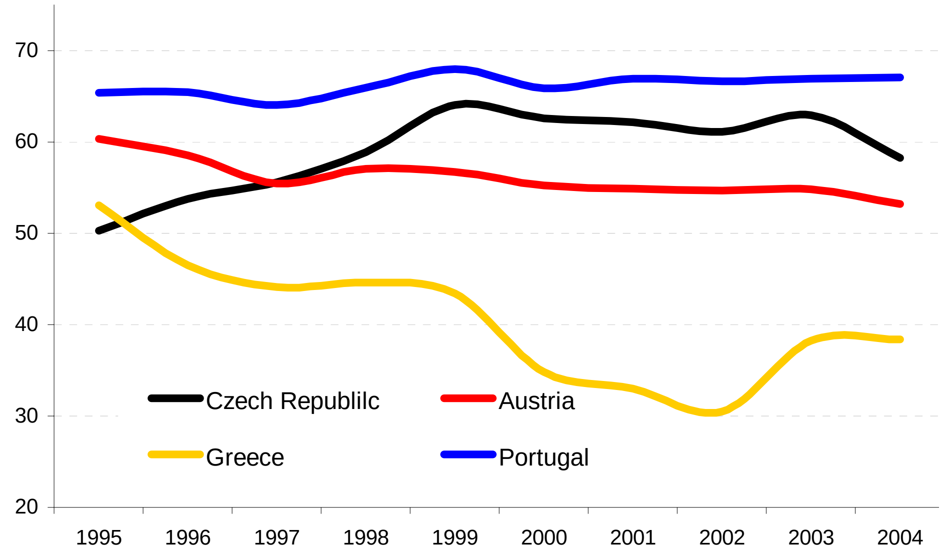


Source: Eurostat, CNB calculation

Nominal interest rates in the Czech Republic do not differ significantly from those in the euro area. Czech interest rates have been close to, or lower than, euro area rates since 2002. The economy would thus not suffer a shock by moving to the single monetary policy. In the other new member states monitored, the difference in interest rates is distinctly larger. In recent years, the koruna's **exchange rate** against the dollar has been moving similarly to the euro's exchange rate against the dollar. This reflects the absence of major asymmetric pressures. Of the other Central European countries monitored, only Slovakia has a similarly strong link between its domestic currency and the euro.

The high degree of **openness of the Czech economy** to the euro area is the principal argument for adopting the single currency. The share of exports and imports of goods and services from the euro area in total Czech exports and imports has been fluctuating around 60% since the end of the 1990s (see Chart 3.3). Austria and Portugal, i.e. the countries included in the comparison apart from Greece, have a similar degree of openness to the euro area. The Czech economy's ownership links with the euro area are also relatively high by comparison with other countries. The existence of strong economic integration creates conditions for future convergence of the business cycles in the Czech economy and the euro area and for a decline in the probability of asymmetric shocks. The high openness of the Czech economy also increases the potential benefits arising from the elimination of potential exchange rate fluctuations vis-à-vis our main trading partners. Another positive aspect is the share of intra-industry trade between the Czech Republic and the EU, which is quite high relative to the EU Member States included in the comparison.

Chart 3.3: Exports to the euro area as a percentage of total exports



Source: IMF (Direction of Trade Statistics), CNB calculation

Differences in **financial intermediation** may cause similar shocks – and the ECB's subsequent single monetary policy measures – to have different impacts on different economies. An unstable financial sector may also be a source of shocks itself. The relative size of the financial sector in the Czech Republic, as measured by the ratio of assets to GDP, is roughly two-fifth of that in Austria and Portugal and the euro area average. A more detailed look reveals that the Czech Republic is lagging behind the euro area countries in lending. By comparison with Austria and Portugal, the volume of loans in relative terms (including the government sector) is up to three times lower. However, the Czech Republic has the most developed financial intermediation system of the new Member States included in the comparison. The qualitative indicators attest to the maintenance of financial stability in the Czech Republic.

Overall, we can say that the financial sector is prepared for smooth functioning in the euro area, with strong ownership links to European banks and a standard range of financial services. The financial sector's openness to, and integration with, European markets may to some extent lower the costs incurred by economic agents due to the existence of independent monetary policy. The rapid increase in lending and in particular the fast growth in loans to households are attracting attention as regards financial stability. The banking sector should be capable of handling these processes provided that the related risks are managed in a prudent manner, in particular with respect to the rate of growth of total household debt.

3.2 Adjustment Mechanisms

The loss of independent monetary policy will mean that the adjustment of the economy to shocks will place higher demands on other adjustment mechanisms. This chiefly concerns the stabilisation function of public budgets, labour market flexibility and the ability of the financial system to absorb shocks.

Compliance with the Maastricht criteria on the government deficit and debt is only one dimension in assessing whether **the public finances of the Czech Republic** are capable of functioning within the European fiscal regulations. From the macroeconomic point of view, it is vital to take into account whether sufficient room has been created for the stabilisation function of public budgets. The ability to respond via public finances to any negative exogenous shocks will be determined by the distance of the current deficit from the 3% reference value. The more the government can reduce the government sector deficit towards zero, especially in its structural part, the more room it will have for the functioning of automatic stabilisers and, in the extreme case, also for implementing active discretionary fiscal policy. Emphasis should be placed, above all, on creating government sector surpluses in periods of high economic growth. Continuing consolidation of Czech public finances is an important factor not only as regards future fulfilment of the Maastricht criterion on the public budget deficit, but also for creating room for the stabilisation function of public budgets after the country joins the euro area.

The growth in nominal public debt, despite the expected stabilisation of its share in GDP, has in recent years led to growing debt service costs. This could reduce the room for the stabilising function of public budgets. Achieving long-term sustainability of public finances, especially by dealing with the effect of population ageing on the social system, is a challenge for maintaining fiscal policy effectiveness.

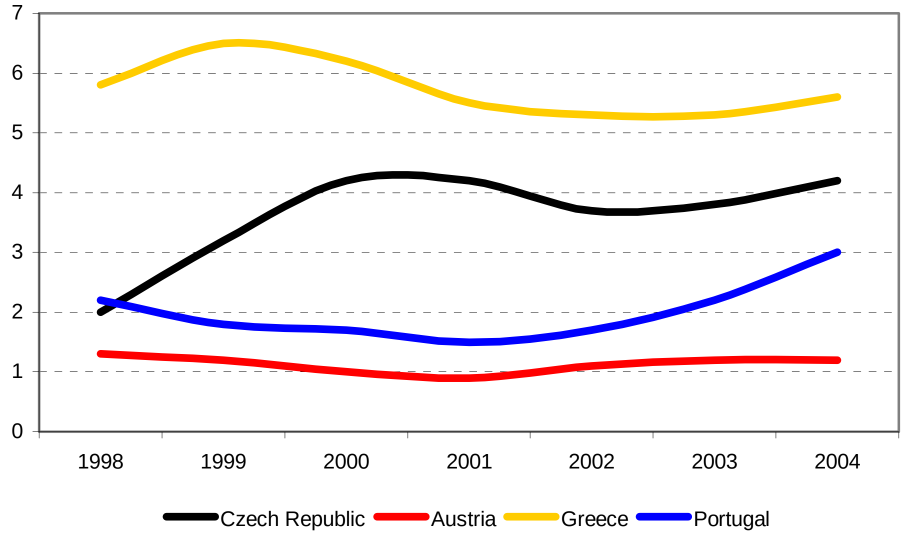
Price and wage flexibility is an important precondition for the economy to be able to absorb shocks to which the single monetary policy cannot respond. The analyses show that the flexibility of real wages in the Czech Republic is similar to that in most of the countries included in the comparison (i.e. Hungary, Poland and Slovakia), although it seems to have been falling somewhat over time. Lower flexibility by comparison with the other countries is also observed for prices.

The ability of the Czech labour market to absorb shocks is average by European comparison (this, however, may be a fairly low standard, because the European labour market is itself going through a period where there is a need for structural reforms). Nevertheless, in some areas the labour market is considerably less flexible and the monitored indicators suggest a risk of further deterioration. The institutional rules on the labour market still handicap above all people with low skills. The main risk factors are the interaction of taxes and social benefits, the costs of dismissing employees having open-ended employment contracts, and a rising minimum wage.

The labour market is still characterised by relatively high long-term and structural unemployment (see Chart 3.4). Although long-term unemployment is still a smaller problem than in some other countries (particularly Poland, Slovakia and Greece), the regional differences in unemployment in the Czech Republic are quite large by comparison with other countries. This may be due to significant regional gaps between the demand for, and supply of, labour and the low regional mobility of the labour force. The relatively low mobility within the Czech Republic suggests the likelihood of low international mobility and therefore it cannot be relied on as an adjustment mechanism. Moreover, international mobility within the European Union is administratively restricted for the new EU members in most of the original Member States.

Labour market flexibility is to a great extent determined by institutional rules. The effect of collective pay agreements on wage setting is relatively low in the Czech Republic by comparison with other countries. According to the comparisons performed, the impact of the minimum wage on the flexibility of low wages and on job creation is lower on average in the Czech Republic than in some other countries. Employment protection can have an adverse effect on the demand for labour. The costs of terminating an open-ended employment contract in the event of it being of short duration are relatively high.

Chart 3.4: Long-term unemployment: ratio of persons unemployed for more than one year to the labour force *(%)*



Source: Eurostat

Overall labour taxation is also high in the Czech Republic; this could be another risk factor for labour market flexibility should the cost of labour rise to the level usual in EU countries. Compared to other countries, the Czech Republic also continues to have relatively high taxation of people with low skills. Thanks to tighter conditions for qualifying for unemployment benefit and social benefits, the motivation to seek employment seems to have improved slightly, although the system of taxes and social benefits has not been fundamentally changed. Some improvement has been recorded in the regulation of the business environment, with the introduction of easier procedures for setting up businesses in 2005. This may positively affect job creation and thereby improve labour market flexibility. However, by international comparison, entrepreneurship in the Czech Republic is still hampered by major administrative obstacles.[10]

Stability and profitability of the financial sector is a precondition for the sector to be able to assist in eliminating the impacts of economic shocks.[11] Recent years have seen privatisation-related and state-supported clean-ups of banks' balance sheets and improvements in their credit portfolios. As of the end of 2004, the Czech banking sector had better-quality loan portfolios than Poland, Slovakia and Greece. The coverage of non-performing loans by provisions in the Czech banking sector is comparable to that in the euro area. The capital adequacy ratio of the Czech banking sector (12.6% in 2004) indicates

[10] *An OECD index was used to compare the aforementioned administrative obstacles – see the 2005 study entitled "Product Market Regulation in OECD Countries, 1998 to 2003".*

[11] *The stability and profitability of the financial sector were examined using data on the situation in the banking sector. This approach was used because of the banking sector's decisive weight in the financial sector, the scope of supervision and the availability of relevant data for the international examination.*

sufficient coverage of the potential risks. The sector’s resilience is enhanced by its high profitability. The banking sector as a whole has secured its stability and maintained its ability to absorb potential shocks, as evidenced by the results of statistical simulations called “stress tests”.