# *The Czech Republic's Progress on its Road to the Euro Area*[1]

## *Pokrok České republiky na cestě do eurozóny*

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## 1 Introduction

The Czech Republic's accession to the euro area is being discussed increasingly, due also to Slovakia's quick entry into the monetary union in early 2009. What are the economic criteria relevant for the decision on the preparedness to adopt the euro? Just a glimpse is enough to evaluate the Maastricht (nominal) convergence criteria. The real convergence criteria are no less important, including adjustment mechanisms, which replace the national monetary policy.

This paper initially summarises the circumstances under which the Czech Republic has to adopt the euro sooner or later. The subsequent sections deal with the nominal and real criteria of the Czech Republic's convergence towards the euro area, including the assessment of the degree of the convergence. The conclusion presents a sci-fi time schedule of adopting the euro at the beginning of 2012.

## 2 The Czech Republic as an EU Member State with a derogation

By accession to the European Union, the Czech Republic automatically undertook to participate in the third stage of the Economic and Monetary Union (EMU), which also includes the replacement of a national currency with a single one.[2] Nevertheless, the Czech Republic is one of what are known as the "Member States with a derogation". This includes countries which fail to comply with the conditions required for the introduction of the single currency, and which are consequently, under Article 122 of the Treaty establishing the European Community (ex Article 109k), subject to an exemption from the rules of the fiscal and monetary policy applicable to Members of the Monetary Union. Also, this position is explicitly expressed in the Act concerning the conditions of accession of the Czech Republic (Article 4): "Each of the Member States shall participate in Economic and Monetary Union from the date of accession as a Member State with a derogation within the meaning of Article 122 of the EC Treaty."

*1 This article was created as part of a project of the Internal Grant Agency at the Institute of Finance and Administration (VŠFS) (No 7701). The data included herein reflect the status of the examined issue in late 2008.*

*2 In compliance with the wording of the EU Treaty, I use the term "single currency", rather than "common currency".*

The obligation of an EU Member State to adopt the single euro currency sooner or later stems from the establishing treaties, namely:[3]

- from Article 2 of the Treaty on EU: The objective of the Union is "to promote economic and social progress [….] through the establishment of economic and monetary union, ultimately including a single currency in accordance with the provisions of this Treaty,"
- from Article 2 of the Treaty establishing the EC: "The Community shall have as its task, by establishing [….] an economic and monetary union [….] to promote development of economic activities,"
- from Article 4, paragraph 2 of the Treaty establishing the EC: Member States' activities include "the irrevocable fixing of exchange rates leading to the introduction of a single currency."
- and from Article 98 of the Treaty establishing the EC: "Member States shall conduct their economic policies with a view to contributing to the achievement of the objectives of the Community, as defined in Article 2."

The European Central Bank (ECB) notifies new Member States of their obligation to adopt the euro in the ECB Governing Council's opinion: "[….] while not yet adopting the euro, they will be committed to striving towards the eventual adopting to euro. [….] The Treaty foresees that: i) at some point following accession, new Member States will join the Exchange Rate Mechanism II (ERM II); and ii) when they are deemed to have fulfilled the Maastricht convergence criteria, they will adopt the euro"[4].

Setting the accession date lies within the competence of each Member State, depending on its preparedness. The National Euro Changeover Plan for the Czech Republic, prepared in 2007 (part I, p. 1), interprets the Treaty in such a way that a country with a temporary derogation "must work to introduce the euro as soon as possible." According to another interpretation of the Czech Government and the Czech National Bank (CNB), the Czech Republic is "obliged to take steps to be prepared to join the euro area as soon as possible"[5]. The interpretation of "as soon as possible" is not explicitly specified in the binding documents of the European Union[6]. Perhaps, we could draw a conclusion from the diction of Articles 121/1 and 122/2 of the Treaty establishing the EC, which put an obligation on the Commission and the European Monetary Institute (the forerunner of the ECB) to present what are known as the "reports on the progress" of EU Member States in fulfilling their obligations to implement the EMU to the Council, and to do so at least once in two years or upon Member State's request. This interest by the Council in receiving the "reports" quite

3 *According to the consolidated versions of the Treaty on European Union and the Treaty establishing the European Community (Official Journal of the EU, C 321 E/1, 29. 12. 2006).*

4 *European Central Bank, 2003, p. 1.*

5 *Assessment, 2008, p. 4. The same statement is also available in the previous Assessments, of 2004 – 2007.*

6 *Not included in the Treaty on European Union, in the Act concerning the conditions of accession, in the Treaty concerning the accession to the EU, in the Final Act concerning the accession to the EU, nor in the Commission's opinion on the applications for accession.*

frequently (in fact, they are referred to as "Convergence Reports"[7]) may signal that European authorities wish that EU Member States join the euro area soon. On the other hand, the above ECB's statement "at some point following accession" is evidence of enough tolerance to delays in introducing the euro. The same tolerance is also evident in regard to the position of Sweden, which actually complies with all Maastricht convergence criteria (including the stable exchange rate) but lingers in joining the ERM II (whereby it, de jure, fails to comply with the criterion of exchange rate stability), thus postponing its accession to the euro area in the long term.[8]

Certain aspect of 'acceleration' can be found in the First report on the practical preparations for the future enlargement of the euro area: "New Member States must therefore start preparing themselves in order to be ready in time [….] The transition from the national currency to the euro is expected to be much faster [compared to the first wave, due to experience, the knowledge of the euro, etc. – note by M. H.]"[9]. However, these Reports are not legally binding; they are informative only.

When does the Czech Republic wish to introduce the euro?

- The Czech Republic and the Euro – Draft Accession Strategy (of December 2002) mentions such preparations as "not to rule out" the year 2007.
- The Czech Republic's Euro-area Accession Strategy (of September 2003) states the "2009-2010 horizon," which was specified more accurately later (in September 2005) as 1 January 2010.
- The Pre-Accession Economic Programme (PEP), adopted by the Government of the Czech Republic in July 2003, also predicts that the criteria required for the adoption of the euro will be met at the end of the decade.
- On 25 October 2006, the Government of the Czech Republic decided not to strive for entry into the ERM II in 2007, and this meant the abandonment of the original plan to join the euro area in 2010. No new date was set.
- Another important document, The Czech Republic's Updated Euro Area Accession Strategy (of August 2007), confirmed both the withdrawal from the original accession year 2010 and the absence of a new accurate date of the planned accession to the euro area. The date of adopting the euro will 'depend' on resolving the 'problematic aspects' of the Czech economy, notably the public finance reform and the flexibility of the economy, the labour markets in particular.
- The Assessment of the Fulfilment of the Maastricht Convergence Criteria (of December 2008) as well as the Assessment of 2007 continue to recommend the government to avoid setting the date of adopting the euro, and consequently to refrain from entering the ERM II in 2009.

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*7 In addition, once or twice a year, the Commission issues the "Report on the practical preparations for the future enlargement of the euro area."*

*8 In addition, Sweden has not fully completed the harmonisation of its legislation according to Treaty requirements.*

*9 Commission, First Report, 2004, p. 2, 8. The Commission also expected that countries would be interested "in making the changeover period as short as possible," in view of the concerns about the parallel informal circulation of the euro and a national currency. (p. 9)*

The main reason for the current cautious position is the impact of the ongoing global financial crisis, and no longer a troublesome condition of the public finances; the reasons are as follows (according to the 2008 Assessment):

- The financial crisis works as an asymmetric shock (let us add: the need for individual monetary and exchange rate policy has consequently increased),
- The risks stemming from the participation of the koruna in the ERM II are increasing,
- The financial crisis may have negative implications for the alignment of economies if it led to easing the fiscal discipline.

Expert community as well as political circles express various ideas as to the possible date of introducing the euro. The withdrawal from the original date was immediately followed by a new "working date" – 2012 (by Minister of Finance Kalousek, supported by representatives of the industrial sector), but this date was also revoked soon afterwards. CNB Governor Tůma cited a "nice date" of 2019 in printed media while Prime Minister Topolánek "could even say 2020 as a joke." Czech President, through his advisors, expresses his position on the euro "no sooner than in 10 years."

In spite of these circumstances, which indicate a cautious and sceptical position of the current Czech central authorities on the introduction of the euro, the recent assessments of the Czech Republic by the EU in regard to the progress of its preparations for membership of the euro area have been surprisingly favourable. The Reports from the Commission on the practical preparations for the future enlargement of the euro area are evidence of this:

- The Second Report (of November 2005) states that the "practical preparations in the Czech Republic are in a very preliminary stage";
- The Third Report (of June 2006) evaluates that the "practical preparations in the Czech Republic are still at preliminary stage";
- The Fourth Report (of November 2006) only mentions the cancellation of the original target date and approval of the "Big Bang" scenario, approved by the Government of the Czech Republic in October 2006;
- The Fifth Report (of July 2007) states that the Czech Republic is a good example of the timely preparations even without any target date set. The Report particularly appreciates the adoption of the National Euro Changeover Plan for the Czech Republic (of April 2007).

The Sixth Report (of November 2007) only mentions the adoption of the Updated Strategy (in August 2007). Likewise, the Seventh Report (of July 2008) only enumerates the existing steps mentioned above and adds later measures[10]. The Eighth Report (December 2008) only extends the previous Report, particularly with priorities of the National Coordination Group. Those Reports of the European Commission provide no assessment of the Czech Republic's progress on its road to the euro.

10 *The European Commission's Report notes the preparations of the General Act on the Introduction of the Euro (the "umbrella law", published on 16 July 2008) and the release of the "Evaluation of budgetary costs related to the principle of not harming citizens during the euro introduction in the Czech Republic" and the "Guidelines on converting, rounding and smoothing of financial amounts during euro introduction."*

We will better understand European authorities' position on the postponement of the euro introduction in the Czech Republic if we realise that the Czech Republic is no exception among new Member States of the EU regarding its decision to postpone its originally planned date of introducing the euro:

- Estonia, whose original standpoint had been "2006, if possible" (the 2003 Pre-accession Economic Programme), initially postponed its target date of 1 January 2007 by a year, while later it stated that the nearest possible date was 2011 (due to unfavourable inflation prospects);
- Lithuania, after its unsuccessful attempt to introduce the euro as at 1 January 2007, only set the start of the period when the euro introduction would be the most favourable (starting from 2010);
- Latvia has postponed its original date of 1 January 2008 to an indefinite time;
- Hungary initially considered 1 January 2008 (the 2003 Pre-accession Economic Programme), then 1 January 2010. After the withdrawal from this date, a new date was not set. In addition, as of 26 February 2008, Hungary cancelled its quasi-participation in the ERM II, maintained since May 2001;
- Poland originally planned to adopt the euro within 2008 or 2009 (the 2003 Pre-accession Economic Programme), but this date was not declared officially. The new date, announced by the Polish Government in October 2008, is 1 January 2012;
- Romania has set its date at 2014;
- Bulgaria has not set any date so far, neither has Sweden;

The state of current membership of the euro area and planned accessions are described in Tab. 1 and Tab. 2.

**Table 1:** Current member states of the euro area

| Date of entry | Country |
|---|---|
| 1.1. 1999<br>cashless euro | Belgium, Germany, Ireland, Spain, France, Italy, Luxemburg, Netherlands, Austria, Portugal, Finland |
| 1.1. 2001<br>cashless euro | Greece |
| 1. 1. 2002<br>cash euro | Belgium, Germany, Ireland, Spain, France, Italy, Luxemburg, Netherlands, Austria, Portugal, Finland, Greece |
| 1. 1. 2007 | Slovenia (unsuccessful Lithuania) |
| 1. 1. 2008 | Cyprus, Malta |
| 1. 1. 2009 | Slovakia |

*Source: http://ec.europa.eu/economy_finance/the_euro/index_cs.htm?cs_mid=2946 [quotation 10. 1. 2009]*

The United Kingdom and Denmark have been granted an opt-out clause, meaning that they are not required to participate in the Economic and Monetary Union; these clauses

are part of Protocol 25 and Protocol 26 respectively, annexed to the Treaty establishing the European Community:

- "United Kingdom shall not be obliged or committed to move to the third stage of economic and monetary union without a separate decision to do by its government and parliament."
- "In the event of a notification that Denmark will not participate in the third stage [of economic and monetary union], Denmark shall have an exemption."

**Table 2:** The planed dates of the entry into the euro area

| Country | Original date | New date |
|---|---|---|
| Bulgaria | not set | |
| Czech Republic | 1. 1. 2010; cancelled 25. 10. 2006 | not set |
| Estonia | (2006), 1. 1. 2007; further date 1. 1. 2008 (set 27. 4. 2006, cancelled 31. 10. 2006) | not set |
| Latvia | 1. 1. 2008; cancelled in spring 2006 | not set |
| Lithuania | 1. 1. 2007; EU Commission had not recommend introduction of the euro (16. 5. 2006) | as soon as possible, after 2010 (the plan from 25. 4. 2007) |
| Hungary | 1. 1. 2010; cancelled 1. 12. 2006 | not set |
| Poland | (2008 – 2009), 1. 1. 1012 | |
| Romania | 2014 | |
| Sweden | not set (introduction of the euro rejected in the referendum 14. 9. 2003) | |

*Source: Commission of the EC, 2004 – 2008; European Commission 2003.*

## 3 State of preparations for the euro introduction

The existing progress in the organisational, legislative and technical preparations for the introduction of the euro in the Czech Republic are described by the following chronological overview of the milestones.

13. 10. 2003: The Government of the Czech Republic approved **The Czech Republic's Euro-area Accession Strategy.** According to this strategy "[….] the accession to the euro area can be expected within 2009 – 2010."

23. 11. 2005: The government issued a resolution by which it approved:

- **The institutional arrangements for the introduction of the euro in the Czech Republic** (the definition of the legislative framework, selection of a scenario and

of basic principles – see below, the indicative timetable[11], and the establishment of required institutions[12]).

- Appointment of the **National Coordinator** and establishment of the **National Coordination Group** (NCG) for the Introduction of the Euro (an inter-ministerial coordination group managed by the Ministry of Finance of the Czech Republic), under which six working groups are active, namely the groups for the financial and non-financial sector, for public administration, legislation, communication, and informatics. The NCG started work on 20 February 2006.

25. 10. 2006: In accordance with the proposal for **Selecting a scenario of the euro introduction in the Czech Republic** (the NCG material of June 2006), the government issued a resolution by which it approved the "big-bang" scenario, i.e. the concurrent introduction of the euro in both cash and non-cash form. Alternative scenarios include the one involving a transitional period, i.e. a two-wave changeover (what is known as the Madrid Scenario; used for the first group of euro area members), and the "phasing-out" scenario, with a single-wave euro introduction but involving temporary use of a national currency for certain instruments (such as paying-in slips, invoices of small businesses, taxes, etc.).

Another resolution of the Government of the Czech Republic of the same date (i.e. 25 October 2006) approved the third Assessment of the fulfilment of Maastricht convergence criteria, and concurrently the proposal for not joining the ERM II in 2007, which meant the **withdrawal from the date of accession to the euro area in 2010.**

11. 4. 2007: The government issued a resolution by which it approved **The National Euro Changeover Plan for the Czech Republic.** The National Plan is composed of three parts:

- I. "Basic Information", which describes the "big-bang" scenario, principles of the euro introduction (legal continuity, price neutrality, etc.), the euro introduction timetable (divided into four stages[13]), the process of preparations for the euro introduction (activities of the NCG, institutional arrangements, etc.), and the summary of basic tasks in individual sectors;
- II. "Specification of Tasks in Individual Sectors", structured by the six working groups of the NCG (banks and financial sector, public finance and public administration, non-financial sector and consumer protection, legislative needs, communication, information and statistical systems), always including general timetables of preparations;
- III. "Glossary of Basic Terms".
  The National Plan, inter alia, sets the period of dual circulation of the koruna and the euro at 14 days, the dual display of prices starting no later than a month after setting the conversion coefficient and ending at least one year after the introduction of the euro, the exchange of koruna cash at banks for six months after the euro introduction

*11 The indicative timetable was based on the euro adoption date of 1 January 2010, i.e. anticipated accession to ERM II in the middle of 2007.*

*12 i.e. the NCG, the National Coordinator and the working groups of the NCG (seven groups were originally planned, but the groups for non-financial sector and for consumer protection were later merged).*

*13 Of course, without any time specification.*

(and several years afterwards at the central bank), the principles of the General Act (see below), and more.

29. 8. 2007: The Government of the Czech Republic issued a resolution by which it approved **The Czech Republic's Updated Euro-area Accession Strategy.** The strategy mentions the postponement of the date of accession to the euro area beyond the original horizon of 2009-2010, without setting a new target date.

28. 2. 2008 Website of the Ministry of Finance about the euro, called "Introduction of the euro in the Czech Republic" (www.zavedenieura.cz), was launched.

9. 4. 2008 The government approved the **Report on the fulfilment of the National Plan** (NCG material of March 2008), which actually updates the National Plan. The main tasks accomplished include the General Act, preparations of the new law on the Czech National Bank, the rounding methods, the calculations of budgetary impacts, and the launch of the above website. The forthcoming priority tasks to be carried out include the creation of consumer protection instruments and a recommendation of the steps to facilitate the preparations of SMEs for the euro. The Report also includes detailed indicative timetables of the tasks of the individual six working groups of the NCG.

16. 7. 2008 The **"General Act on the Introduction of the Euro in the Czech Republic – basic principles"** was published. This brief document expresses the principles of legal continuity, neutrality, rounding, dual circulation of the koruna and the euro, dual display of prices, conversion of funds on accounts, and conversion of the nominal value of securities.

Numerous other documents, papers, analyses and materials were prepared as part of the preparations for the euro introduction, including in particular:

- **Convergence Programmes of the Czech Republic,** prepared by the Ministry of Finance of the Czech Republic (extraordinary in May 2004, then annually in 2004-2008), on the basis of Council Regulation (EC) on the surveillance of budgets and economic policy. The programmes include analyses of economic policies (of the fiscal, monetary and structural policies), government sector's financial position (such as deficit and debt), and public finance sustainability.
- **Assessment of the Fulfilment of the Maastricht Convergence Criteria and the Degree of Economic Alignment of the Czech Republic with the Euro Area,** prepared by the Ministry of Finance of the Czech Republic and the Czech National Bank (five reports in 2004-2008). This analytical material includes the assessment of the fulfilment of the above criteria as well as the degrees of real convergence in the form of the economic and structural alignment of the Czech economy with the economy of the euro area, including the function of adjustment mechanisms. The outcome of the analysis is a recommendation to the government regarding the setting of the date of accession to the euro area and accession to the ERM II.[14]

*14 Annexes to the "Assessment" include "Analyses of the Czech Republic's current economic alignment with the euro area" (2005 – 2008).*

- Overview of the tasks within the competence of the Czech National Bank and the outline of other tasks in association with the euro introduction in the Czech Republic (CNB, 13 January 2005) and the Update of Czech National Bank's tasks in association with the euro introduction in the Czech Republic (CNB, 11 October 2007).
- Guidelines on converting, rounding and smoothing of financial amounts during euro introduction (NCG material, October 2007) and Evaluation of budgetary costs related to the principle of not harming citizens during the euro introduction in the Czech Republic (Annex to the NCG Report of March 2008).
- As part of the information campaign, the Ministry of Finance of the Czech Republic had a team of authors at the Mendel University of Agriculture and Forestry in Brno prepare the "Study of effects of the euro introduction on the economy of the Czech Republic"[15].

Even this enumeration of the main measures alone indicates the significant progress in the preparations for the introduction of the euro in the Czech Republic. Let us compare these preparations to other future members of the euro area, according to the Eighth Report of the Commission of the European Communities (2008):

- The Czech Republic, along with three Baltic States, is one of the best prepared countries. All of them have approved a National Plan including updates[16] and numerous detailed adjustments.
- Hungary also has a National Plan, but without certain more detailed requirements.
- Romania is going to prepare its National Plan in 2010.
- Sweden and Bulgaria show no preparations for the introduction of the euro, at least according to 'publicly available information,' used by the Commission.
- The Polish Government released what is known as the Road map for euro adoption on 28 October 2008. To adopt the euro at the beginning of 2012, it plans to prepare a National Plan during the first quarter of 2009 and incorporate the Polish zloty into ERM II in the middle of 2009.

This relatively advanced stage of preparations in the Czech Republic probably reflects the fact that the decision on the principal materials (approval of the Institutional arrangements, the task to select a scenario and prepare the National Plan) was made as long ago as in autumn 2005, i.e. when the domestic political circumstances in relation to accession to the euro area were more favourable.

## 4 Nominal convergence

We will identify the nominal convergence criteria with the Maastricht convergence criteria, which are set out in the Treaty establishing the European Community (Article 121 and Protocol 21). In addition to the numerical values of the relevant indicators, we should

*15 The second issue of this paper was released at www.mfcr.cz in 2008 after consultations. To provide information to the general public, the NCG created a simple leaflet called "Preparations of the Czech Republic for the euro adoption."*

*16 For the Czech Republic, this update is not included in the Commission Report but, in effect, it was carried out in the form of the NCG Report of March 2008.*

also bear in mind the requirement for "sustainable convergence" while evaluating their compliance, i.e. not just the current temporary fulfilment of the criteria.

The **price stability criterion** requires that the domestic inflation rate (measured as the 12-month HICP average), over the period of one year before the examination, is not more than 1.5 percentage points above the rate of the three best performing Member States of the EU in terms of inflation (this is interpreted as lowest positive inflation). See Tab. 3 for the figures.

**Table 3:** Price stability criterion

| | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|---|---|
| Average in 3 countries | 1.0 | 1.4 | 1.3 | 2.6 | 2.4 | 1.7 | 1.7 |
| Criterion | 2.5 | 2.9 | 2.8 | 4.1 | 3.9 | 3.2 | 3.2 |
| Czech Republic | 1.6 | 2.1 | 3.0 | 6.4 | 2.9 | 3.0 | 2.5 |

*Source: Assessment, 2008, p. 10 (according Eurostat, Convergence Programmes and Stability Programmes 2007).*
*Notes: 2008 – estimate, 2009 – 2011 forecast (for the CR from Convergence Programme 2008, for 3 countries from EC Spring 2008 Economic Forecast).*

The inflation criterion was not met in 2007 and 2008. However, the compliance with this criterion in the coming years is predicted to be without problems. This optimistic forecast is augmented by the fact that, from the beginning of 2010, the Czech National Bank will switch to an inflation target lowered by 1 percentage point compared to the present value (from 3% to 2%, in compliance with ECB's inflation target), with a tolerance of 1 percentage point in either direction.

The reasons for high inflation in 2008 were the high rise in energy prices (only partly counterbalanced by the appreciation trend of the exchange rate of the koruna), the high rise in regulated prices (an increase in energy prices for households, increase in regulated rents), the introduction of healthcare fees, the VAT increase from 5% to 9%, and the increase in cigarette excise duty.[17] The Czech Republic's Convergence Programme of December 2008 evaluates this inflation rise as "transient, one-time occurrence" (p. 16).

The **public finance criterion** is composed of two parts, which must be fulfilled at the same time:

- The government deficit, expressed as a share of GDP, must not exceed 3% (the government deficit includes the deficit pertaining to the central government including regional and local authorities and social-security funds, with the exception of commercial operations defined in the European System of Macroeconomic Accounts),

17 *Czech National Bank. Inflation Report IV – 2008, p. 28 – 29.*

- Government debt, expressed as a share of GDP, must not exceed 60% (the government debt means a gross sum of debts in their nominal values at the end of the year, consolidated inside and between the individual branches of the state sector).[18]

See Tab. 4 for the Czech public finance figures.

**Table 4:** Public finance criterion

| | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|---|---|
| General government balance (in % GDP) | | | | | | | |
| Criterion | - 3.0 | - 3.0 | - 3.0 | - 3.0 | - 3.0 | - 3.0 | - 3.0 |
| CR | - 3.6 | - 2.7 | - 1.0 | - 1.2 | - 1.6 | - 1.5 | - 1.2 |
| Government debt (in % GDP) | | | | | | | |
| Criterion | 60 | 60 | 60 | 60 | 60 | 60 | 60 |
| CR | 29.8 | 29.6 | 28.9 | 28.8 | 27.9 | 26.8 | 25.5 |

*Source: Assessment, 2008, p. 11 – 12 (according Czech Statistical Office and Convergence Programme 2008).*
*Notes: 2008 – estimate, 2009 – 2011 forecast.*

According to a late 2008 forecast, the public finance criteria should be most probably met within the next few years. Evidence of the positive developments in this area is the fact that the excessive deficit procedure, to which the Czech Republic had been subject since 2004, was terminated in June 2008. On the other hand, their fulfilment may be complicated by the GDP growth deceleration or rather by its decline and increased budget expenditure (as a result of the ongoing global financial crisis, which also affects the Czech economy).

**The exchange rate stability criterion** means that a Member State complied with what are known as normal fluctuation margins, set by the Exchange Rate Mechanism II (ERM II) of the Euroepan Monetary System, "without severe tensions" over at least last two years before the examination. The Member State avoided devaluing the central rate of its currency against the euro out of its own initiative during this period in particular.

The Czech koruna does not participate in the ERM II at the moment. Hence we will only simulate the fulfilment of the exchange rate criterion. To set the hypothetical central rate, we will use ECB's approach, i.e. the average monthly exchange rate of the first month of the monitored two-year period. We will consider 2007 – 2008 to be the hypothetical monitored two-year period of staying within ERM II. The central rate is the exchange rate of CZK

18 *The former criterion may be exceeded if the deficit significantly and steadily decreased and is close to the required value, or is only exceeded rarely and remains close to the required value; exceeding the latter criterion is allowed if it decreases sufficiently and is close to the required value.*

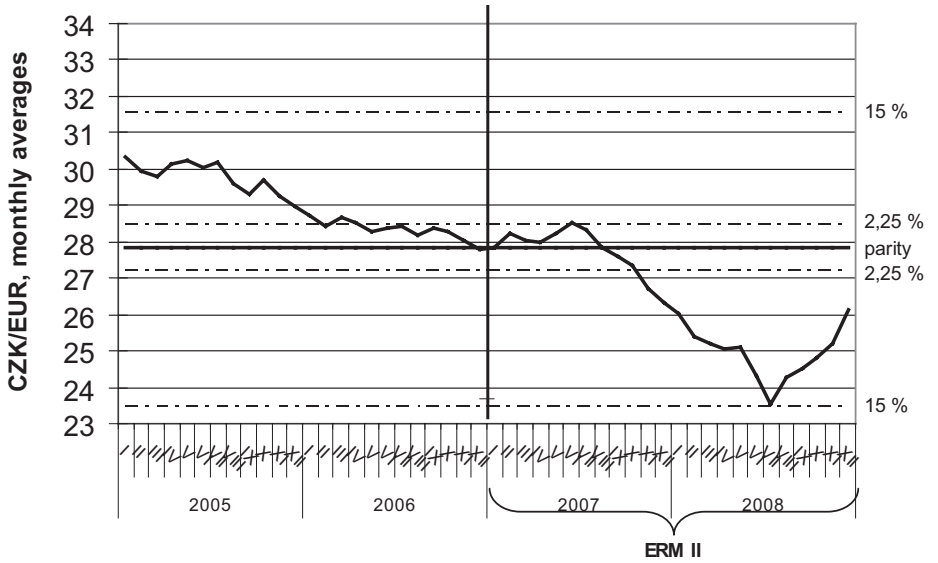
27.84 per EUR. We will interpret the fluctuation band asymmetrically, with 15% possible appreciation and 2.25% possible depreciation.[19]

The exchange rate was highly volatile over this period (see Fig. 1):

- Given the moderate depreciation over the first six months, the currency slightly exceeded its depreciation limit within the narrow fluctuation band in June 2007 (by CZK 0.1 per EUR),
- The subsequent significant appreciation made the koruna slightly exceed the appreciation limit within the wide band in July 2008 (by CZK 0.2 per EUR),
- Then, until the end of 2008, the currency depreciated, but remained far from the central rate.

In view of only slightly exceeded fluctuation margins, we can draw a conclusion that the exchange rate stability criterion would be probably met (in the first group of Member States of the euro area, the Commission tolerated much greater and longer deviations).

**Fig. 1:** Simulated membership CZK in ERM II




*Source: www.cnb.cz (foreign exchange rates). Calculations and figure: own amendment. [quotation 10. 1. 2009]*

19 *The Commission of the EC monitors the application of a narrower fluctuation band in its Convergence Reports, but rules out that the reason for failure to meet the criterion of exchange rate stability should be fluctuations above 2.25% (i.e. in excess of the appreciation threshold). The ECB (implicitly) tolerates fluctuations within a wider band of 15%. The Council (composed of Ministers of Finance – ECOFIN) decides on abrogating a derogation upon Commission's proposal. For details, see Helísek a kol., 2007, p. 11, 35.*

Regarding the formal (fictitious) assessment, we should add that the central rate was not devalued over the monitored period. The strong appreciation of the exchange rate might lead to a revaluation of the central rate, but this is not at variance with the interpretation of the fulfilment of the exchange rate criterion.

To assess the presence of "severe tensions", we also need to monitor (Tab. 5):

- Interest rate differential,
- Czech National Bank's foreign exchange reserves.

A low (or negative) interest rate differential, or just a moderate decline or a rise in foreign exchange reserves (always monitored on a quarterly basis) is evidence that the exchange rate of the CZK was not exposed to speculative depreciation pressures. Therefore the exchange rate criterion would also be met from this point of view, i.e. without "severe tensions".

**Table 5:** "Severe tensions" indicators in development of the CZK exchange rate

| Quarter | Interest rate differential (p. p.) | Change in foreign exchange reserve (%) |
|---|---|---|
| 2007 I | - 1.2 | - 3.3 |
| II | - 1.3 | - 2.9 |
| III | - 1.2 | - 4.5 |
| IV | - 0.9 | - 0.8 |
| 2008 I | - 0.5 | 0.8 |
| II | - 0.7 | 4.3 |
| III | - 1.1 | 9.5 |
| IV | | |

*Source: www.cnb.cz (financial markets; statistics of balance of payments); www.sdw.ecb.europa.eu (Statistical Data). Own calculations. [quotation 10. 1. 2009]*
*Note: The interest rate differential is the gap between 3 M PRIBOR and 3 M EURIBOR (in all cases, quarter average is shown); changes in foreign exchange reserves indicate year-on-year difference (December, in %). The reserves are given in EUR.*

**Long-term interest rate criterion** means that, during one year before the examination, the average long-term nominal interest rate of a Member State did not exceed, by more than 2 percentage points, the interest rate of the best performing Member States in terms of price stability. Interest rates are ascertained on the basis of long-term government bonds or comparable securities, with respect to different definitions in individual Member States.

The convergence of long-term interest yields should prove that the criteria of price stability and exchange rate stability are not just temporary (or accidental), but that they are

irreversible. This context is based on the assumption that financial markets reflect the anticipation of future inflation and the expectation of devaluation by adding premiums to long-term bond yields.[20]

Tab. 6 illustrates the fulfilment of this criterion using 10-year government bonds on the secondary market (12-month averages).

**Table 6:** Long-term interest rates

| | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|---|---|
| Average in 3 countries | 3.4 | 4.2 | 4.4 | 4.6 | 3.9 | 3.2 | 3.2 |
| Criterion | 5.4 | 6.2 | 6.4 | 6.6 | 5.9 | 5.2 | 5.2 |
| Czech Republic | 3.5 | 3.8 | 4.3 | 4.7 | 4.4 | 4.3 | 4.2 |

*Source: Assessment, 2008, p. 16 (according Eurostat, Convergence Programmes and Stability Programmes 2007).*
*Notes: 2008 – estimate, 2009 – 2011 forecast. The values for 2009 – 2011 are based on the assumption that interest rates will move in line with inflation.*

The Czech Republic easily fulfils the criterion of long-term interest rates, and the same conclusion can be drawn for the upcoming period.

By and large, we can summarise the assessment of the fulfilment of the nominal convergence criteria by the conclusion that the Czech Republic currently (in 2008) only fails to comply with the inflation criterion. Nonetheless, the country is expected to fulfil all criteria within the next three years, probably except for government deficit criterion.

The latest assessments of the fulfilment of Maastricht convergence criteria in the Commission and ECB's Convergence Reports are included in Tab. 7.

In addition to the four criteria included, the Treaty establishing the European Community (in Article 121 again) also specifies the requirements for the compatibility between the legislation of an acceding country and the legislation of the European Community. As far as the Czech Republic is concerned, the Act on CNB and the Act on Financial Arbitrator are not entirely compatible with Articles 108 and 109 of the Treaty and with statutes of the European System of Central Banks (ESCB) and the ECB.[21]

In addition, the same Article of the Treaty requires the following: "take account of [….] the results of the integration of markets, the situation and development of the balances of

20 *Dědek, 2008, p. 179.*

21 *Commission's Convergence Report of December 2008 specifies a total of six areas where these shortcomings occur.*

payments on current account and an examination of the development of unit labour costs and other price indices [as factors that influence competitiveness – note by M. H.]"[22].

**Table 7:** Assessment of the fulfilment of the Maastricht convergence criteria

| Criterion (reference period) | Values | Commentary | |
|---|---|---|---|
| | | Commission | ECB |
| Inflation (IV 2007 – III 2008) | CR: 4.4 % Reference value: 3.2 % | Inflation is likely to remain elevated for much of 2008. CR does not fulfil the criterion. | Well above the reference value. Forecasts for 2008: 4.6 – 6.3 %. |
| Government finance (2007) | Deficit: -1.6 % Debt: 28.7 % | CR will fulfil criterion, if the Council abrogates the excessive deficit procedure. | As regards the sustainability of public finances, the CR appears to be at high risk. |
| Exchange rate (IV 2006 – IV 2008) | Non-participation in ERM II | Appreciation against the euro by 13%. CR does not fulfil the criterion. | High degree of volatility vis-à-vis the euro. |
| Long-term interest rate (IV 2007 – III 2008) | CR: 4.5 % Reference value: 6.5 % | CR fulfils the criterion. | Well below the reference value. |

*Source: Commission of the EC: Convergence Report 2008. European Central Bank: Convergence Report. May 2008. Own amendment.*

In this regard, the Czech Republic is mostly assessed as free of problems:

- The Czech economy is strongly interconnected with the EU and the euro area (in 2007, the exports and imports of goods and services to/from 13 countries of the euro area made up 57.0% of all exports and imports of the Czech Republic, while the FDI from euro area countries even reached 79.8%). With the high degree of foreign ownership in the financial sector, it could be incorporated into the financial sector of the EU.
- The 2007 current account deficit was only 1.8% of GDP, in spite of a relatively high price rise (the above-mentioned 3% HICP in 2007) and employee compensations (up 7% as opposed to labour productivity, which improved by 4.6%).

*22 Commission's Convergence Reports refer to them as "additional factors", while ECB reports rank them behind long-term interest rates.*

## 5 Real convergence

The introduction of the single currency will involve the loss of independent monetary and exchange rate policies. The economic development of a new member of the monetary union should therefore be similar to (aligned with) the overall economic development of the monetary union. Otherwise, the economic shocks, if any, hitting the union would have asymmetric effects, i.e. different impacts on countries with different developments.

The similarities (alignments) of the economic developments are achieved not only by nominal convergence but also be real convergence. This is particularly expressed as:[23]

- Convergence of the economic level (GDP per capita),
- Convergence of price levels,
- Alignment of economic cycles.

**The convergence of the economic level of** a given country contributes (through similarities in the spending behaviour of economic entities) to the alignment of economic cycles. Tab. 8 documents the quick convergence towards the economic level of the euro area. In addition, we can see (Tab. 9) that some of the current Member States the economic level of which was not on a par with the euro area average at the time of their accession[24] even failed to reach the current level of the Czech Republic. This is the case of Portugal and, when the Czech Republic joins the euro area (i.e. after a few years), this will, most probably, also be the case of Greece. Such differences, to a similar extent as in the case of the Czech Republic, were not identified as a source of insufficient synchronisation of cycles in any country.

Slovakia's economic level in 2007 was only 61.2% of the euro area average (13).

**Table 8:** Economic level of the Czech Republic and the euro area

| Country | 2004 | 2005 | 2006 | 2007 |
|---|---|---|---|---|
| Euro area (13) | 100 | 100 | 100 | 100 |
| Czech Republic | 67.9 | 68.6 | 70.2 | 73.2 |

*Source: http://epp.eurostat.ec.europa.eu (National accounts). Own calculation. [quotation 10. 1. 2009]*

*23 Vintrová (2007 b, p. 207 – 208) ranks the relative price level among nominal convergence criteria.*

*24 The level of France was exactly at the euro area average, while Italy and Finland were slightly above.*

**Table 9:** Selected countries – comparison of economic levels

| Country | 1999 | 2007 |
|---|---|---|
| Euro area (12) | 100 | 100 |
| Greece | 76.3 | 86.4 |
| Portugal | 68.1 | 70.0 |
| Spain | 84.3 | 96.0 |

*Note: in case of Greece is concerned the entry into euro area in 2001.*
*Source: http://epp.eurostat.ec.europa.eu (National accounts). Own calculations [quotation 10. 1. 2009]*

**Price level convergence** will mitigate the hypothetical rapid price rise when the euro is adopted. Tab. 10 shows the price level developments, measured as HICP. This difference is much greater than it was, for example, in Portugal when it joined the euro area (81.5% of the price level of 12 euro area countries) or Greece (80.4%). A lower price level also corresponds to a lower economic level but, in the Czech Republic, the difference is significant, indeed. Using the correlation with other acceding countries, we can draw a conclusion on the 'adequate' 2006 price level at around 80% of the EU 25, while the actual figure was 59%[25].

Slovakia's price level in 2007 was only 62.0% of the euro area level (13).

However, experiences of those of the current euro area members whose price levels were well below the euro area average when the joined the euro area[26], do not indicate the feared 'jump' in the price level as a result of the euro introduction (see Tab. 11). Vintrová predicts that, with the 4% price convergence rate, the Czech Republic might reach ¾ of the EU 25 level in 2012 – 2013[27]. This also mitigates the risk of the aforementioned rapid price rise.

**Table 10:** Price levels in the CR and the euro area

| Country | 2004 | 2005 | 2006 | 2007 |
|---|---|---|---|---|
| Euro area (13) | 100 | 100 | 100 | 100 |
| Czech Republic | 53.5 | 56.6 | 59.8 | 60.9 |

*Source: http://epp.eurostat.ec.europa.eu (Comparative price levels). Own calculations. [quotation 10. 1. 2009]*

*25 Žďárek, Šindel, 2007, p. 203 – 205.*

*26 Italy's level was also below average, but only slightly, at 95.7%.*

*27 Vintrová, 2007 a, p. 94. For this subject, see also Šaroch, Tomšík, Srholec, 2005, p. 9.*

**Table 11:** Selected countries – comparison of price levels

| Country | 1999 | 2007 |
|---|---|---|
| Euro area (12) | 100 | 100 |
| Greece | 80.4 | 86.8 |
| Portugal | 81.5 | 82.9 |
| Spain | 84.1 | 91.1 |

*Note: in case of Greece is concerned the entry into euro area in 2001.*
*Source: http://epp.eurostat.ec.europa.eu (Comparative price levels). Own calculations. [quotation 10. 1. 2009]*

Given the long-term similar inflation rates in the Czech Republic and the euro area (see Tab. 12), we can expect the convergence of their price levels mostly through the appreciation of the nominal (and consequently real) exchange rate of the local currency. The CNB predicts an annual appreciation of 1.3 – 2.4%[28].

**Table 12:** Inflation rate in the CR and the euro area
(HICP, annual average, composition of the euro area by actual stage of member countries)

| Country | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | Average |
|---|---|---|---|---|---|---|---|---|---|
| Euro area | 2.1 | 2.3 | 2.2 | 2.1 | 2.1 | 2.2 | 2.2 | 2.1 | 2.2 |
| CR | 3.9 | 4.5 | 1.4 | -0.1 | 2.6 | 1.6 | 2.1 | 3.0 | 2.4 |

*Source: http://epp.eurostat.ec.europa.eu (HICP). [quotation 10. 1. 2009]*

To assess the **alignment of economic cycles**, we will use a Czech National Bank's analysis, which states "that the overall economic activity during the business cycle in the Czech Republic is becoming more aligned with that in the euro area", with this particularly applying to the alignment of industrial activity and exports[29] (see Fig. 2).

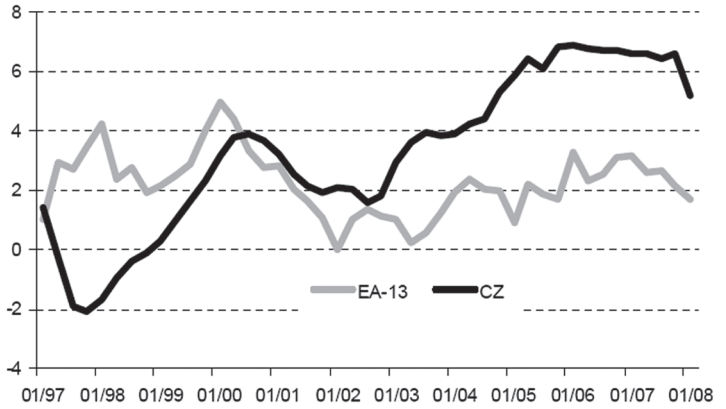
For both real convergence indicators examined, i.e. the GDP per capita and the price levels, we can draw a conclusion on their sufficiently high levels (even at present) to disperse worries that the accession to the euro area will be affected by a lower economic level or involve a rapid price rise. The development of economic cycle has also shown a high degree of alignment since the late 1990's.

*28 Assessment, 2008, p. 18.*

*29 Ibid. The report also states that the alignment was not proved by analysing the occurrence of demand and supply shocks.*

After the independent monetary and exchange rate policies cease to exist, the elimination of the impacts of possible asymmetric shocks[30] primarily depends on two circumstances, the possibilities of fiscal policy and the flexibility of labour markets. For example, for the economic recession in the Czech Republic, at which ECB's monetary policy would not have an expansive character (due to different developments in the euro area average or due to the developments in major euro area economies), expenditure should be encouraged by expansive fiscal policy while sectoral and international labour mobility should reduce unemployment.

**Fig 2:** GDP growth in the CR and the euro area (13) (in %, quarterly, year on year)




*Source: Assessment, 2008, p. 19 (according Eurostat, CNB calculations).*

Evidence of sufficient possibilities of the fiscal expansion includes:

- Sufficiently low government deficit and low government debt (see Tab. 4);
- The fact that the structural balance of public budgets is being stabilised (estimated at approximately -1.5 % of GDP in 2008-2009) and the outlook for its decline (the forecast for 2010 and 2011 is -1.4% and -1.1% of GDP).[31] The low structural deficit will thus provide enough latitude for the effect of built-in stabilisers that would increase the overall budget deficit during a GDP growth deceleration.

However these optimistic prospects can be complicated by economic recession.

Developments in labour market flexibility also show a progress:

- The long-term unemployment rate has been decreasing for a long time (with certain deviations), from 4.1% in 2000 to 2.8% in 2007, with its long-term share of the overall unemployment remaining approximately a 50% and a rising trend[32];

30 *These asymmetric shocks may occur irrespectively of the degree of economic cycle alignment, if the shocks are internal, stemming from the Czech economy, and hitting the Czech economy only.*

31 *Convergence Programme of the Czech Republic, December 2008, p. 20.*

32 *47% in 2000, 53% in 2007 (http://www.czso.cz, Macroeconomic Data).*

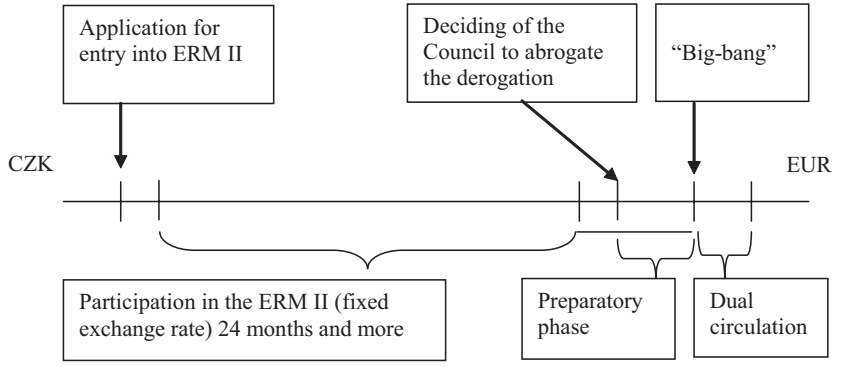
- The difference in the regional unemployment rates in the regions with the highest and lowest unemployment shrank slightly year on year in 2007–2008 (third quarter), from a difference of 6.7 percentage points to 5.5 percentage points. [33]

## 6 Conclusion

Fig. 3 shows the standard model of changeover from a national currency to the euro under the "big-bang" scenario. If we filled this model with data for the intended accession to the euro area as at 1 January 2012, the timetable would be as follows:

- Spring 2009: filing the application for accession to ERM II,
- Entry into ERM II as at 1 July 2009 (at least 2-year participation until 30 June 2011),
- Council decision on abrogating a derogation in the autumn of 2011,
- Approximately a three-month "preparation stage" to complete technical and legislative preparations,
- Switch to the euro as at 1 January 2012,
- Two weeks of dual circulation of the koruna and the euro.

**Fig. 3:** Transition to euro




*Source: own creation*

However, 2012 is just a fictitious date; the model is only designed to illustrate the feasibility of this intention.


## Abstract

According to documents of the Government of the Czech Republic and the Czech National Bank, the obligation to join the euro area should be met "as soon as possible". However, the original date of 1 January 2010 has been cancelled, without setting a new date, even though the Czech Republic will comply with all Maastricht convergence criteria in the forthcoming years. The degree of real convergence is also sufficient, including adjustment


*33 The lowest unemployment is, as usual, in the Capital of Prague, while the highest unemployment was registered in the Ústí nad Labem and Karlovy Vary Regions (www.czso.cz, Labour and Social Statistics).*

mechanisms against asymmetric shocks. The state of organisational and legislative preparations for the introduction of the euro is also well under way. Thus the postponement of the adoption of the euro has become a political rather than economic issue.

**Keywords**
euro, euro area enlargement, nominal convergence, real convergence, asymmetric shocks, alignment of business cycles

**JEL classification / JEL klasifikace**
E 52, F 36

**Abstrakt**
V dokumentech vlády ČR a ČNB je povinnost vstupu do eurozóny interpretována stylem „co nejdříve". Původní termín 1. 1. 2010 však byl zrušen bez stanovení nového data. ČR přitom bude v nejbližších letech plnit všechna maastrichtská konvergenční kritéria. Také stupeň reálné konvergence je dostatečný, včetně přizpůsobovacích mechanismů vůči asymetrickým šokům. Pokročilý je také stav organizačních a legislativních příprav zavedení eura. Odkládání zavedení eura se tak stává politickou, nikoliv ekonomickou, záležitostí.

**Klíčová slova**
euro, rozšíření eurozóny, nominální konvergence, reálná konvergence, asymetrické šoky, sladěnost hospodářských cyklů

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