2.3. Convergence processes

The Czech Republic came closer to the average economic level of the EU when in 2006 its rate of growth more than doubled compared to the EU15 and, in 2005, its growth rate was, compared to the average of 'old' member countries even four times faster. For the last years a relative success in convergence under the rules of Maastricht agreement was recorded when the only CR fulfilled in 2006 all criteria conditioning the introduction of single currency (EUR) (exchange rate criterion cannot be formally assessed due to non-participation in ERM II system, fiscal criterion was performed in compliance with the deficit and debt notification of March 2007). The emphasis placed on fulfilment of Maastricht criteria means better reported results in nominal convergence of the CR compared to other Central-European countries, however, from the long-term view, not yet in real convergence. This was attributed to economic decline recorded in the years 1997 and 1998 which other countries have not experienced. Thanks to this development the CR in the period 1996-2006 recorded less significant progress compared to those countries measured by the GDP position per head in purchase power parity as an aggregate indicator of economic maturity of the country, however, in the years 2005 and 2006 positive change was very significant.

Real convergence

While the last decade as a whole does not provide a picture of the Czech Republic as a country rapidly approaching the EU average – in the period 1997-2000 the Czech Republic compared to the GDP per capita in purchase power parity as an aggregate measure of economic maturity of the country even diverged from the EU average – the years 2005 and 2006 were extremely successful for the Czech economy.

- ***Following a robust growth of the Czech economy ...***

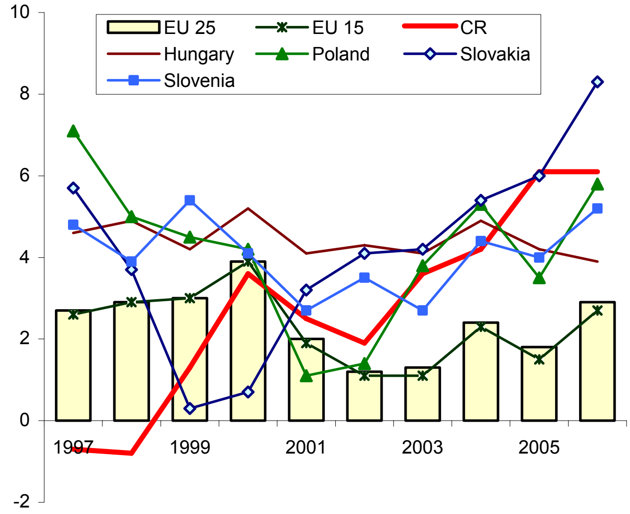
Over the years 2005 and 2006 a strong acceleration of the Czech economic growth took place. If in 1997 the decline of economy markedly contrasted with the growth rates of real GDP in the region (Hungary by 4.6%, Slovenia by 4.8%, Slovakia by 5.7% and Poland even by 7.1%) then, in 2000, certain balance was recorded (CR 3.6% and the reported countries ranged from 0.7 to 5.2%). In 2005, the Czech economy recorded the most rapid growth (6.1%), in 2006, showing the same rate of growth, the CR took the second place in the region behind Slovakia (more rapid growth rates in Europe were recorded only for the Baltic states.).

... in the years 2005 and 2006 the relative economic level of the CR increased by 4 p.p. to 76.1% of the EU25 average

If we admit that GDP per capita can be compared in purchasing power parity not only between the countries but also in the time span, then since 2001 the CR came closer to the EU25 economic level by 2.1 p.p. p.a. on average and to the EU15 by 2.3 p. p. Convergence in Slovakia was very rapid (by 3.3. and. 3.4 p. p. p.a., respectively) approximately as rapid as in the CR and Hungary (2.3. and 2.5 p. p., respectively). Convergence in Poland, in addition, coming from substantially lower basis, was in the period 2001-2006 slower (by 1.6. and 1.7 p. p., respectively).

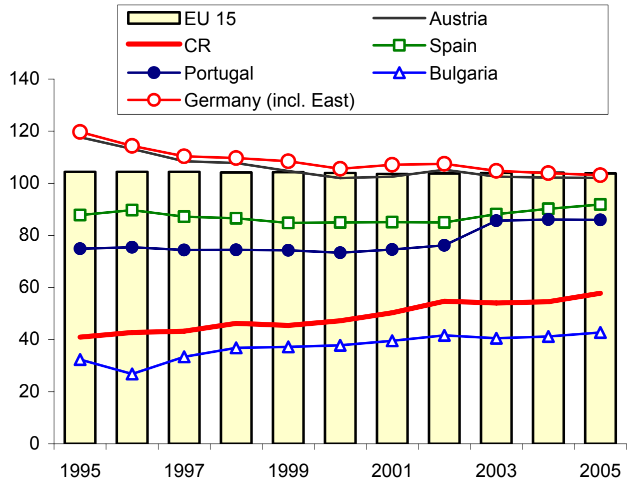
If we compare the GDP real growth in 2006 with the basis in 1995, the CR, despite economic boom recorded from 2003, made less progress compared to other countries of the last strong accession wave. Due to recession in the second half of 90's which these countries did not experience, the GDP increased in teal terms in the period 1995-2006 by 6.4% which was, save for Hungary and Malta, the smallest growth of all countries accessing the EU in 2004. However, in the aggregate indicator measuring economic maturity of the country which is GDP per capita in purchasing power parity, the CR made a significant progress – if in 1995 the GDP made 68.8% of the EU25 average then for the year 2006 the estimate of Eurostat is 76.1% of GDP. According to the same source, in 2008 the share of GDP should approach the level of 80% which is approximately the level reached e.g. by Greece in 2003.

Graph 49 **Rates of economic growth** (y-o-y change of GDP at constant prices in %)



Source: Eurostat

Graph 50 **Comparative price level** (EUR 25=100)



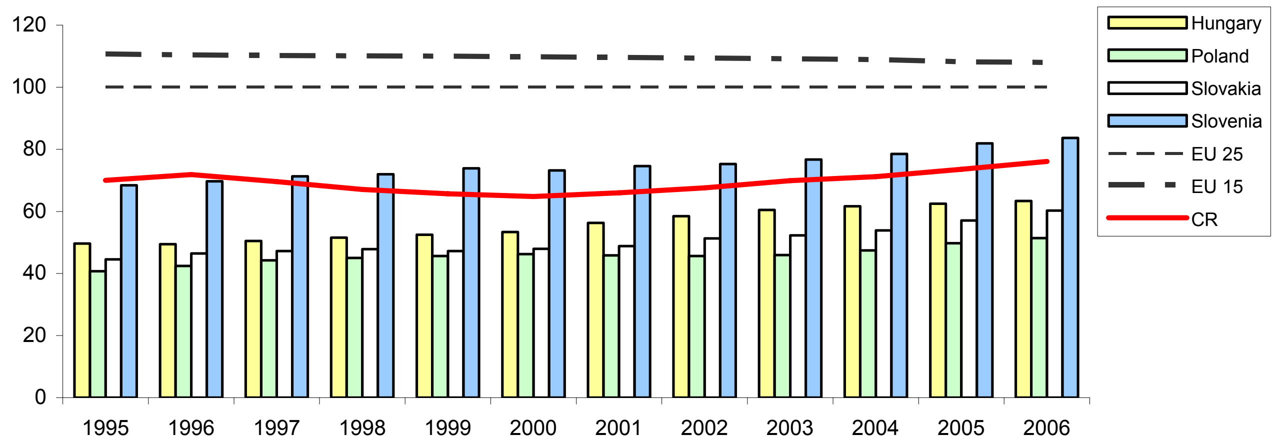
Source: Eurostat

- ***Considerable acceleration of convergence in the period 2000-2006***

In terms of speed of convergence which save for the above reservation can be measured only by a change of position in this indicator, the most rapid approach to the EU25 average was recorded in the period 1995-2005 for Slovakia and Slovenia (+15.6 p. p. and +15.3 p. p., respectively). A slightly slower rate of convergence was recorded for Hungary (+14.5 p. p.) and much slower rate for Poland (+10.4 p. b.). The CR during this period reduced the difference between its economic level and the EU average only by 7.3 p. p. However, the speed of convergence in shorter time perspective shows different results – in the period 2000-2006, Slovakia and the Czech Republic most approached the average economic level of the EU (+12.9 p. p. and +11.4 p. p., respectively) followed by Slovenia (+10.8 p. p.) and Hungary (+9.5 p. p.). The slowest convergence was recorded for Poland (+4.4 p. p.).

Not even an exceptional performance of the Czech economy in the past two years during which the CR in GDP per capita came closer to the EU average by 4 p. p. allowed to keep the step with the convergence dynamics of Slovakia (+5.9 p. p.). The economy of Poland over the years 2005 and 2006 improved its position by 2.4 p. p., Slovenia by 3.6 p. p. and Hungary by 2.1 p. p.

Graph 51 **GDP per capita in purchasing power parity (PPS, EU25=100)**



Source: Eurostat

- ***Labour productivity per employee stands at about two thirds of the EU25 average***

Either the change of the economy structure, policy of foreign owners of businesses in the CR aimed at cost effectiveness, or considerable increases of amounts allocated to company research and development have not yet managed to markedly narrow the gap between productivity of advanced European countries and the CR. In 2006, in compliance with the Eurostat estimate, the labour productivity in the CR made 68.5% of the EU25 average (measured by the GDP size in the PPP per an employed person). Compared with the year 2000 the labour productivity increased by more than 10 p. p. like in Hungary which even then showed higher productivity than the CR (in 2006 it reached 72.6% of the EU25 average). Slovakia slightly falls behind the CR (67.9%) and more does Poland (59.3%). According to the Eurostat estimates the CR would, given the last years trends, reach in 2008 in labour productivity per employee 72.3% of the EU25 average.

- ***Slow convergence of the CR in the area of prices and wages***

Despite satisfactory rate of approaching the EU level measured by GDP per capita the CR, in contract, is falling behind in terms of prices and wages. In compliance with the data for 2005 the CR compared to the EU25 level was qualified as a cheap country – comparable price level attained 57.8% of the EU average and except for the Baltic countries and Slovakia it was the lowest in the EU (comparable price level is the proportion between the purchasing power parity and the rage of exchange of each country). Among the most expensive European countries belonged Island (151.5%) and Norway (139.3%). After continuous decline the price level in Germany stands at 103.1% of the EU25 average. The EU15 grouping including old countries of the Union is relatively more expensive compared to the EU25 average (103.8%).

In general, within the EU the price levels are balanced as it is clear from the drop of variation coefficient from 39.3% in 1995 to 26.3% in 2005 (old EU countries caused the decrease from 17.8% to 12.6%) while the biggest convergence of national price levels showed Euro area (coefficient decreased from 16.8% to 11%).

- ***Compensation of employees reach only one third of the EU25 average***

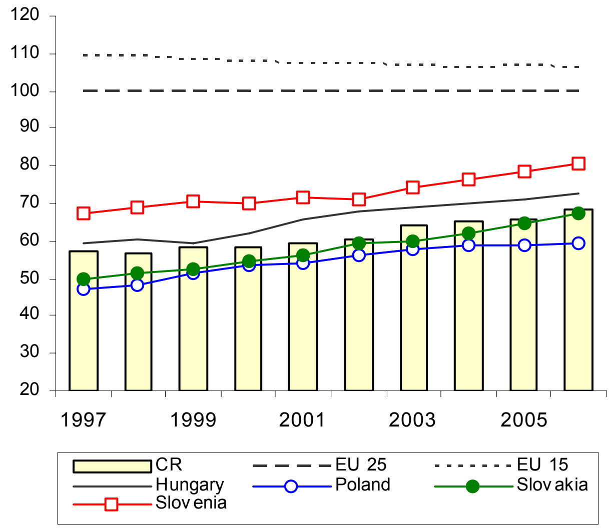
If in the GDP per capita in purchasing power parity the CR reached about three quarters of the EU25 average and 50% of price level, the compensations of employees in the CR represent only one third of the EU25 average. The Czech wages constitute, converted by the exchange rate, less than one fourth of wages in Austria (Slovakian wages only 17% and wages in Ukraine only 5% of wage level in Austria). This phenomenon brings about the above malestioned high competitiveness which, however, does not represent a constant condition. Converted by purchasing power parity wages in the above countries are slightly higher (in the CR 42% of wage level in Austria and Slovakia 31%) but the wage growth in is not rapid enough and is unable to deprive the CR of its cost competitiveness advantage.

- ***The CR is the most integrated country with the EU in trading of goods and services and with the most open economy***

Trade integration of the CR - a measure of integration of a country into international economy – is given by the contribution of average imports and exports of goods to GDP and increased over 10 years by 21.1 p. p. up to 63.3%. However, in 2006, the y-o-y growth was slower compared to 2004 and was affected by very strong dynamics of import and export of goods immediately upon accession to the EU even in the pre-accession period. Higher openness compared to the CR in sales of goods is recorded from among the EU countries only for Belgium (71.6% of GDP). approximately the same for Estonia (66.8%) and Slovakia (66.3% of GDP). Openness of the Czech economy measured by the sales of goods is almost double compared to openness of Polish economy. On the other hand, trade integration in exports and imports of services is decreasing in time (to 8.5% of GDP in 2005) compared to Hungary (11% of GDP) or Croatia (17.4% of GDP but tourist services apparently play a very important role).

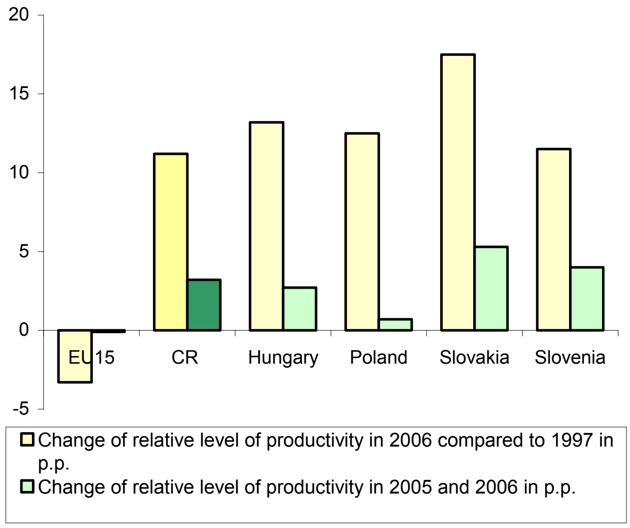
None of the European countries shows such a high share of the exchange of goods with the EU25 as the Czech Republic. From the Union come 81.1% of the Czech imports which is the highest share compared to all member countries. 84.2% of exports from CR go to the EU25. This is the third highest share after Luxembourg (89.4% of its total exports) a Slovakia (85.4%). Shares of the given country in the exchange of goods with the EU are conditioned by the size of economies – the CR participates in the total of Union imports by 2.4% and approximately the same share is attributed to the total exports of the EU (2.5%). It is more than in Hungary (1.7% and. 1.8%, respectively) and less than in Austria (3.9% and 3.2%, respectively).

Graph 52 **Labour productivity per employee** (EU25=100)



Source: Eurostat

Graph 53 **Change of relative level of productivity** (in p.p., from relations to the EU25 average)



Source: Eurostat

Nominal convergence

The Czech Republic was doing very well in the last three years in coming closer to the European economic and monetary union. In fulfilling the Maastricht criteria focused on stability in price, fiscal and rate of exchange areas including stability of long-term interest rates the CR belonged to countries, having no serious problems with fulfilling of there rules save for public finance sustainability. Despite the fact that other countries of the region belong to the European countries whose economies tend to internal imbalance, in the CR then, the least favourable demographic development combined with the structure of mainly state finance posed a problem resulting from the situation lacking necessary reforms.

Price stability criterion

- ***Price stability criterion fulfilled in 2006 with considerable reserve***

Harmonised consumer price index (determining average price level of the last 12 months compared to the average of previous 12 months) reached in the CR in 2006 was 2.1%. It was substantially less than required by the price stability criterion. [1]. This applies to the average of three countries reaching in 2006 the lowest rate of inflation – Finland, Poland and Sweden – increased by 1.5% p.p. made 2.9%.

Compared to 2005 the rate of inflation in the CR increased by 0.5 p. p. – in the above year it belonged along with the Northern countries and the Netherlands to the lowest in Europe. In 2003, the CR, in compliance with the level of consumer prices, was regarded as the country with deflation economy. The CR, as the only of the European countries, (even in time series from 1997) reported the y-o-y drop of the rate of inflation (-0.1%). The CR showed the lower rate of inflation in 2006 compared to Euro area (2.2%) or EU25 (2.2%). In 2005, the situation did not change.

- ***Non-inflationary economic growth of the CR continued***

The success reached in price stability in 2006 was so important since it was reached thanks to the significant economic growth which usually entails higher inflation. Similarly as in 2005, the Czech economic growth was proved as non-inflationary and the more so in the situation when the impacts on the consumer prices growth could be expected – turbulences in global oil markets did not significantly affect the production prices in the CR through which the inflation usually penetrated even to the area of consumer prices.

[1] The country shall maintain in long term perspective price stability and the average rate of inflation measured in the course of one year preceding the survey which does not exceed by more than 1.5 p. p. the inflation rate of three member countries reporting the best results.

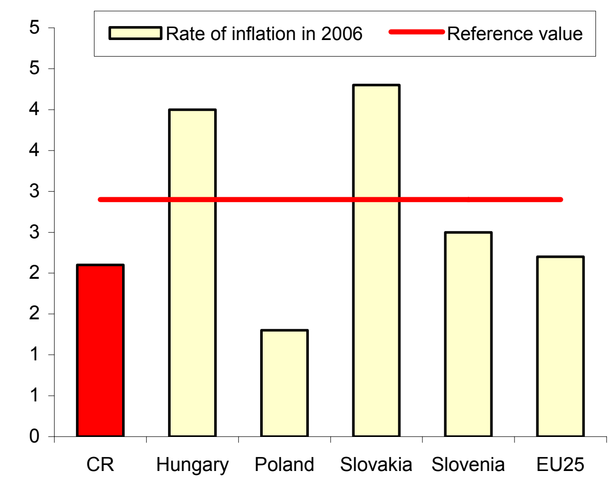
- ***50% of new EU member countries of the first accession wave in 2004 failed to meet the price stability criterion***

In compliance with the harmonised consumer price index, five of ten countries which joined the EU in 2004 failed to meet the price stability criterion. Besides all Baltic states whose strong economic growth takes place on the background of higher than required rate of inflation – on long-term basis – in 2006, also Hungary fell below the limit of price convergence criterion reporting a 4% inflation rate along with Slovakia (4.3%). Harmonised consumer price index in the Baltic states is, save for Lithuania (3.8%), generally higher (Estonia 4.4%. Latvia 6.6%).

In the Czech economy the ability to mitigate inflation trends coming from outside is supported, to a great extend, by the CZK appreciation while this effect is apparent, to a lesser extent, in the Slovak economy whose currency hugely strengthened (after joining the ERM II system it was even necessary for the Slovak koruna to move the deviation from central parity in the relevance zone).

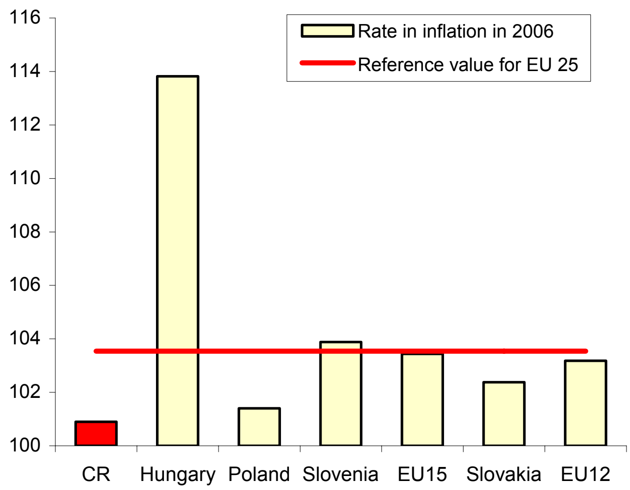
Of the old CU 25 member states above the limit required by the Maastrich criterion in the price area for 2006 was Greece (3.3%) and Spain (3.6%), slightly above was also Luxembourg and Portugal with the same 3% rate of inflation. Of the remaining European countries this applies also to Iceland (4.6%).

Graph 54 **Price stability criterion** (rate of inflation in compliance with the HCPI, y-o-y change in %)



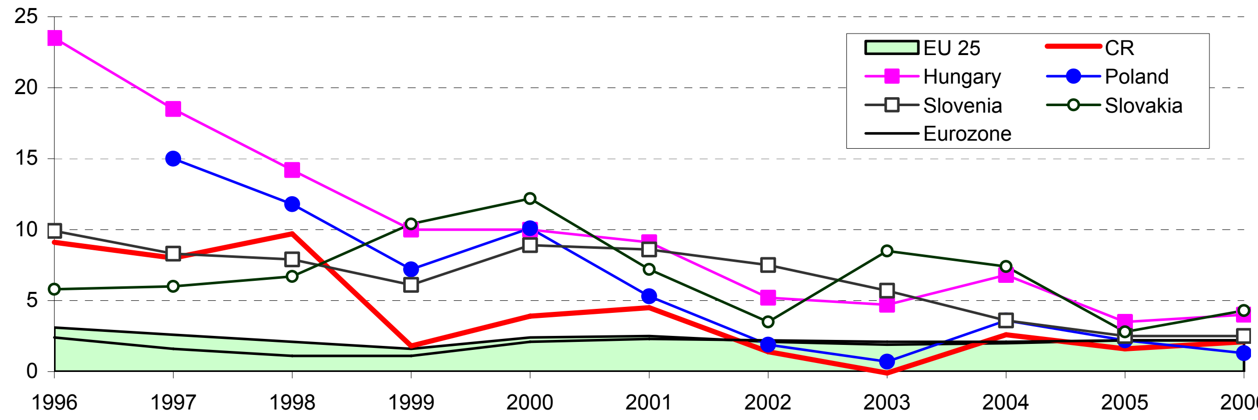
Source: Eurostat

Graph 55 **Rate of inflation for the Food item** (HCPI 2005=100. ref. value=rate of inflation in the EU25 for the item Food products)



Source: Eurostat

Graph 56 **Harmonised consumer price index** (average annual change in %, selected countries and groupings, 1996-2006)



Source: Eurostat

Development of the food prices was mitigating element with long-term effect

In the time period from 1997, the rate of inflation in 2006 measured by the harmonized consumer price index belonged in the CR to the years with moderate price growth – the highest value of the rate of inflation was reached in 1998 (9.7%), in 2003 it was in deflation zone (-0.1%). The low value of index including all items of the consumer basked was affected for the whole period mainly the low growth of food prices (average y-o-y change in% in y-o-y comparison - see graph 55).

In contrast, the higher speed the consumer price growth is reported compared to the EU25 for the Czech Republic in housing area (HCPI 107.7 compared to 105.5 for EU25), in telecommunication services expenditure (absolutely highest growth with the index of 104.9 compared to 2005 when the index for EU25 was 96.8). Considerably lower price growth was reported in this comparison for the CR in Tobacco and alcoholic beverages, Clothing, Transport and Recreation and culture.

Further strengthening of CZK will enable to mitigate the inflation and thus to meet the price criterion

For the benefit of performing the Maastricht inflation criterion speaks in the future also the development of the rate of exchange – CZK to EUR, which is, in long-term trend, significantly strengthening. Since 2002, this factor has been an important "self-controlling" element from the aspect of necessary affecting the inflation by the central bank. Also, in the next years, the expected appreciation of the Czech currency to EUR, as expected by the national bank, will reduce the rate of inflation. The appreciation trend will be induced either by strengthened foundations of the Czech economy, or will result from the attractiveness of currency entering the EMU.

Fiscal stability criterion

Deficit of public budgets closely below the Maastricht criterion level

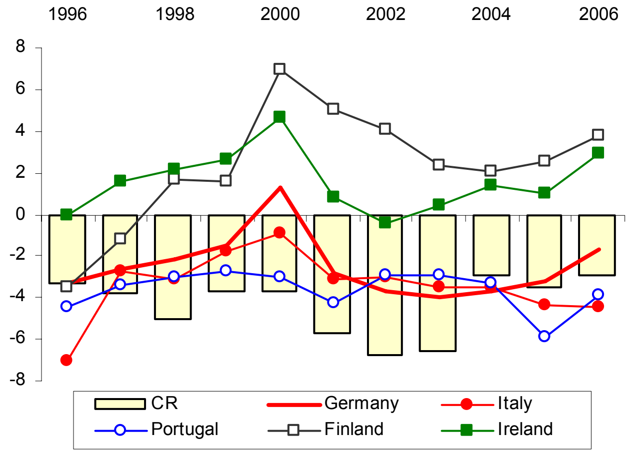
In compliance with the government deficit and debt notification from the beginning of April 2007, the Czech Republic performed for 2006 the convergence criterion of fiscal stability when the deficit of the government sector budget reached 2.9% of GDP (detail in chapter Macroeconomic balance).

The public finance deficit was affected by the central government deficit reaching 3.1% of GDP. The economic activity of local self-governments was in 2006 negative, in the amount of 0.3% of GDP and to squeeze the deficit below the Maastricht criterion limit for the whole government sector was managed thanks to surplus at social security accounts (+0.5% of GDP). Despite the successful fulfilment of this criterion the risk of public finance sustainability still poses a problem.

Government debts amounts to 30.4% of GDP

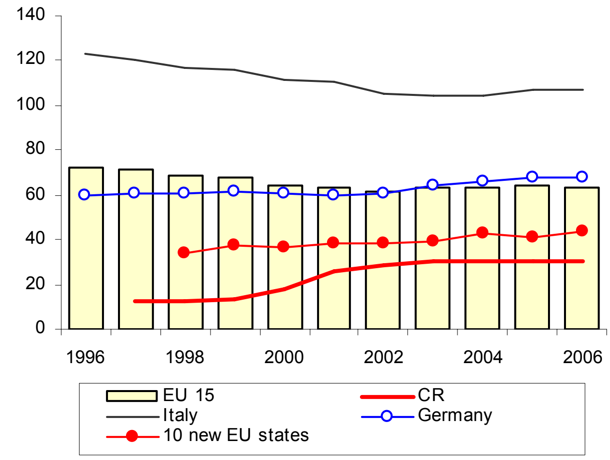
The government sector debt in 2006 amounted to CZK 973.0 billion when the net loans of the government (the public finance deficit) increased this debt reported for 2005 by CZK 94.5 billion (details in chapter Macroeconomic balance). Also in this case the CR fulfils the Maastricht criterion outlining the ratio of the government deficit to GDP in the amount of 60%. Other Central European countries as well as the EU15 and EU25 showed worse indebtedness than the CR.

Graph 57 Public budget deficits in selected countries (in % of GDP)



Source: Eurostat

Graph 58 Government deficit of selected countries (in % of GDP)



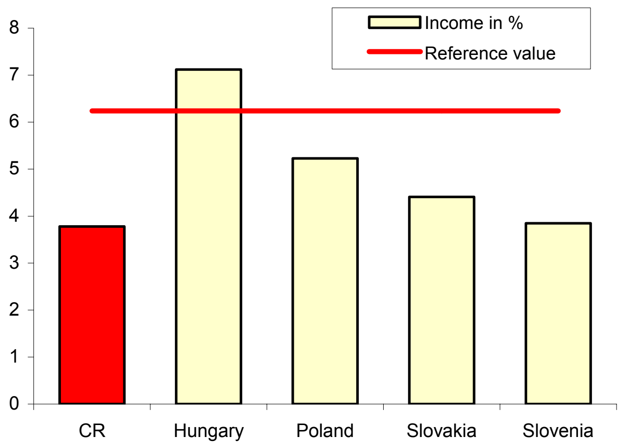
Source: Eurostat

Rate of exchange convergence criterion

- ***Level of long-term interest rates should converge to levels in low-inflation countries***

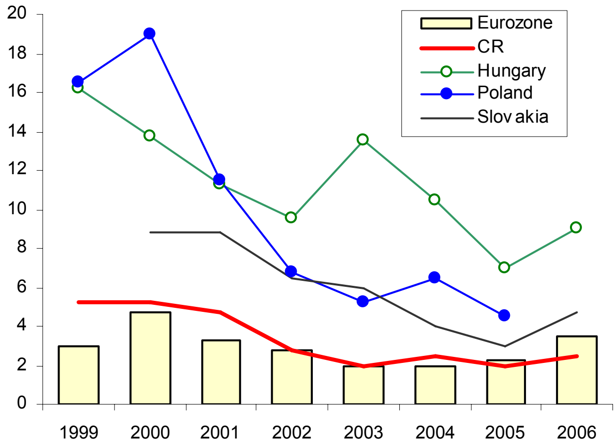
Generally, the stability of convergence reached by a member state of the Union can be derived from the level of long-term interest rates. Average long-term nominal interest rates should not exceed, in compliance with the Maastricht criterion, (one year before the survey) by more than 2 p.p. the average rate calculated for three countries which showed the best results in price stability. Reference value is based on interest rates of long term state bonds or comparable securities with view of different definitions of terms in individual member countries.

Graph 59 **Interest rates criterion**
(income in %, bonds under the criterion converted to EMU, 2006)



Source: Eurostat

Graph 60 **Interest rates of central banks**
(official contango operations in %)



Source: Eurostat

- ***Problem-free fulfilment of stability criterion of long-term interest rates in the CR***

Criterion of stability of convergence in compliance with long-term interest rates is fulfilled by the CR thanks to long-term low inflation rate and its expectations due to which the interest rates do not grow significantly. As opposed to the calculated reference value of long-term interest rates for 2006 in the amount of 6.24% (it is relatively high due to higher rates in Poland as one of the countries with the lowest rate of inflation) these rates in the CR amount only to 3.78% which is the lowest figure of all counties joining the EU in 2004. Compared to the CR, lower income from bonds relevant for determination of convergence in compliance with the interest rate stability in 2006 in Europe was registered only for Germany (3.76%) and Sweden (3.70%).

As it is clear from graph 60, interest rates in the Czech economy dropped significantly after the monetary crisis at the beginning of the second half of the 90's. Their decreasing trend is obvious in regions and is related to price development affected by the Central European currencies appreciation.

- ***Significant approximation of interest rates in Europe takes place***

Generally, the approximation of interest rates in the EU in 1996-2006 is very important both for the groupings EU25, EU15 and Euro area. Comparing interest rate of credits granted to non-financial enterprises with maturity longer than 12 months the decisive deviation fell in EU25 from 6.816 in 1996 to 1.148 in 2006. In the calculation for old EU countries the fluctuation of rates decreased – decisive deviation recorded for 2006 (0.779) was only one fifth of the value for 1996 (3.809).

Expressed in variation coefficient the dispersion of the rates in the EU25 was reduced from 62% in 1996 to 24.3% in 2006. Compared to this development the space fluctuation of rates within the EU15 decreased slightly less although even in this case a considerable decrease of fluctuation was recorded (from 48.1% in 1996 to 18.2% in 2006).

Stability of the exchange rate criterion

- ***ČR has not yet joined the ERM II mechanism ...***

Fulfilment of the rate of exchange stability criterion requires joining the ERM II mechanism and maintaining the rate of exchange stability. From the above it is clear that the assessment of monetary stability criterion for the CR is not possible since the country has not joined the ERM II. Current as well as estimated CZK development to EUR, the asymmetry of this criterion (which allows the currency to strengthen by 15% and weaken only by 2.25%) and also the possibility of central parity revaluation (which accommodates the trend of CZK strengthening) indicate that for the Czech economy this criterion would not be difficult to meet upon joining the ERM II.

- ***... although the CR would be able to maintain already for longer period of time already its fluctuation zone in compliance with low volatility to the average CZK/EUR rate of exchange***

The Czech currency continued in 2006 to further appreciate. To USD its appreciation was more significant than to EU. Since 1999, when EUR was introduced, the Czech currency strengthened by more than a third. Continuously strengthening CZK then represented the most effective channel through which the Czech Republic converted to the EU economic level. CZK followed, in the last three years, the same trend as other Central European countries. From the beginning of 2004 to the end of 2006 it strengthened against USD (according to weekly data) by 17% which was slightly less than Polish zlotý (19%) or Slovak koruna (20%) but more than Hungarian forint (7%). In the very 2006 according to the average rate of exchange eliminating volatility, CZK appreciated by 4.8% against EUR to CZK/EUR 28.34 and by 5.6% against USD to 22.609 CZK/USD, however, comparison of values from the beginning and the end of the year indicated the growth against EUR by 5.3% and against USD by 15% p.a.

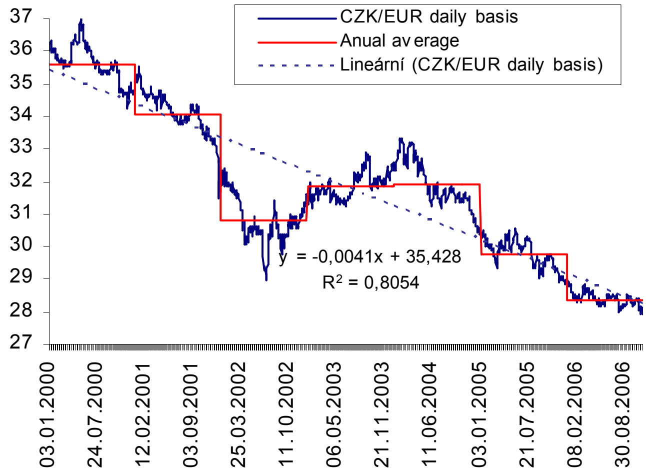
While in the period following the year 2000 CZK continued to strengthen mainly thanks to the demand in the foreign exchange market given massive privatisation of the state ownership interests in big companies, in the last years good foundations of the Czech economy were established attracting interest of investors in the Czech currency. The share of market influence became weaker.

- ***Maintaining of the rate of exchange in the fluctuation band of ERM II simulated by annual average of CZK/EUR is "without a considerable strain“***

Given the absence of participation in the ERM II mechanism, the fluctuation of currency is measured to the average exchange rate of CZK/EUR. In 2006 the lowest value of CZK against EUR was recorded at the beginning of January (29.05 CZK/EUR) and the highest by the end of December (27.42). These values wobble from the average foreign exchange rate of the year 2006 by +3.26% and -2.48%, respectively.

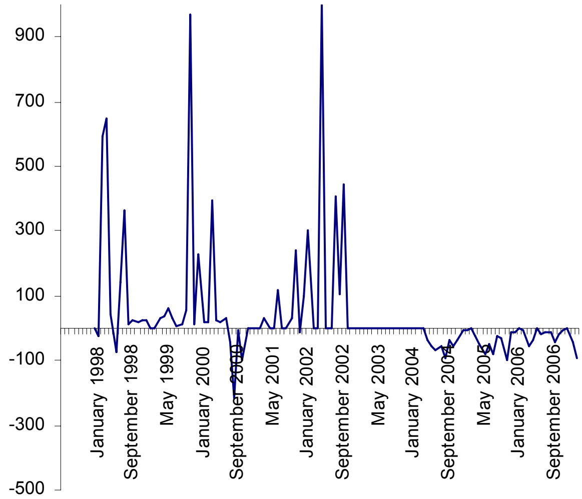
Graph 62 proves minimum interventions of the CNB in the foreign exchange market – thus another condition of this convergence criterion is performed, i.e. the country shall maintain its rate of exchange "without a considerable stain“, i.e. without excessive interventions or non-market measures.

Graph 61 **Daily values CZK/EUR and average rate of exchange**



Source: CNB

Graph 62 **Foreign exchange deals made by ČNB – concluded spot operations** (in EUR millions)



Source: CNB