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Research on the Nominal Convergence of Romania to the Euro Area

All the European Union (EU) member states engaged to adopt, sooner or later, the euro. In order to do so, they must accomplish the convergence criteria concerning the inflation rate, the exchange rate, the interest rate, the public deficit and the public debt. The paper analyses the situation of Romania, based on the convergence criteria. Romania accomplishes only the criteria referring to public finances, while inflation still seems to be the worst problem.

Keywords: *European Union, euro, convergence criteria, nominal convergence*

1. Introduction

Since all the new member states of the European Union (EU) will have to become part of the European economic and monetary union (EMU), they have to reach a high degree of nominal convergence, as defined by the Maastricht Treaty [Călin, 2004].

Already some of the new member states (Slovenia, Cyprus and Malta) are part of the EMU. The criteria required by the Maastricht Treaty [Silasi, 1998] refer to:

- *a high degree of price stability* - an average rate of inflation that does not exceed by more than 1,5% that of the three best performing EU member states in terms of price stability;
- *a sustainable public finance position* – apparent from having achieved a government budgetary position respecting the reference values established in the Protocol on the excessive deficit procedure
  - 3% of GDP, for the public deficit, and
  - 60% of GDP, for the public debt;
- a level of the *long-term interest rate* reflecting „the durability of convergence achieved by the member state" – more precisely, an average nominal long-term interest rate (for long-term government bonds or comparable securities)

that does not exceed by more than 2% that of, at most, the three best performing Member States in terms of price stability;

- *exchange rate stability* – the European Central Bank (ECB) examines whether the country has participated in the exchange-rate mechanism of the European Monetary System (ERM II, which superseded the ERM in 1999), for a period of at least two years, without severe tensions (in particular without devaluing against the euro).

The ECB published its most recent Convergence Report in May 2008. It analyses 10 countries, from which 9 are CEEC (Bulgaria, Czech Republic, Estonia, Latvia, Lithuania, Hungary, Poland, Romania, Slovakia and Sweden). Since Slovenia already adopted the euro on the 1st of January 2007, it is no longer considered in terms of convergence criteria. Romania is considered for the first time.

In the following, we analyse the situation of Romania, from the nominal convergence point of view. First we analyse the inflation rate, than the public deficit and the public debt, afterwards the interest rate and finally the exchange rate. Then we present some conclusions reffering to the way Romania meets the convergence criteria.

2. Inflation rate (price stability)

After registering a hyperinflation in the first years of transition, in most CEEC, the inflation rate decreased in the following years [Vartolomei, 2004]. Gradually, some CEEC managed to accomplish the convergence criterion referring to inflation: Lithuania (since 1999), the Czech Republic (since 2002), Estonia (since 2003).

With regard to the inflation rate, in the Convergence Report published by the ECB in 2008, the period April 2007 – March 2008 was considered. The following three EU member states were considered for calculating the reference value: Malta (1.5%), the Netherlands (1.7%) and Denmark (2.0%). As a result, the average rate is 1.7% and therefore, by adding 1.5%, we obtain the reference value: 3.2%.

From the 9 CEEC considered, only Slovakia was below the reference value. Due to tha latest oil price evolution on the international market, but also due to other factors, the inflation rate increased in almost all Eastern and European countries in the last months.

For the period mentioned, Romania registered an average inflation rate of 5.9% - a value much higher than the reference value, while the 12-months inflation rate measured in March 2008 was higher than 8%, fueling the concerns regarding our country's capacity to meet the convergence criteria on price stability in the near future.

Romania's performances in the field of inflation were weak, inflation being one of the biggest and most persistent problems of Romanian economy after 1989. Still, starting with 2000, the inflation rate decreased significantly in Romania, reaching one-digit levels after 2004. The evolution continued until 2006 – as shown in Table 1 and Figure 1.

Table 1 – Inflation rate in Romania (%)

Inflation rate	(yearly average)	(end of the year)	*Inflation rate*	(yearly average)	(end of the year)
1992	210.4	199.2	*2000*	45.7	40.7
1993	256.1	295.5	*2001*	34.5	30.3
1994	136.7	61.7	*2002*	22.5	17.8
1995	32.3	27.8	*2003*	15.3	14.1
1996	38.8	56.9	*2004*	11.9	9.3
1997	154.8	151.4	*2005*	9.0	8.6
1998	59.1	40.6	*2006*	6.6	4.87
1999	45.8	54.8			

Source:NBR, national Institute of Statistics

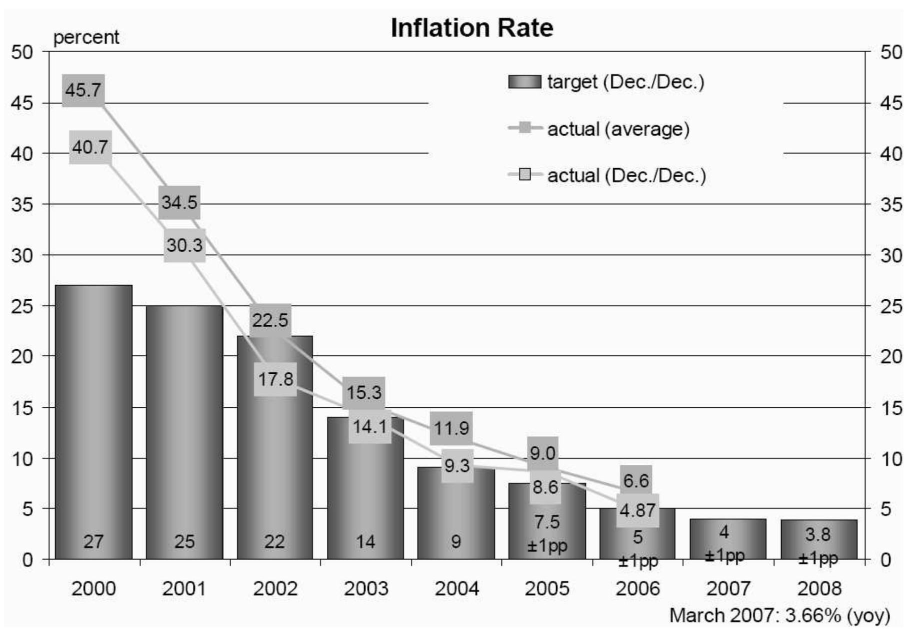

Figure 1. The evolution of inflation rate in Romania
Source: Isărescu, 2007

Starting with 2007, the inflation rate increased again. In March 2008, the annual inflation rate in Romania was over 8%. The same trend could be observed in many other European countries.

It was frequently said that the inflation rate was the most important obstacle in the way of Romania's accession to the EMU. With all the significant progress from the last few years, this still seems to be true.

3. Budgetary deficit

With regard to the budgetary situation, in the 2008 Convergence Report the situation from 2007 was examined. Four countries from the 9 CEEC considered (the Czech Republic, Hungary, Poland and Slovakia) were subject to an EU Council decision on the existence of an excessive deficit. However, in 2007 only Hungary had a deficit above 3% of GDP, while the other three countries managed to reduce it below 3% of GDP. In 2007, fiscal deficits were also recorded in Lithuania and Romania (-2.9% of GDP). In contrast, two CEEC (Bulgaria and Estonia) recorded fiscal surpluses in 2007, while Latvia posted a balanced budget.

We could say that from this point of view Romania is already accomplishing the convergence criteria, but it should pay attention not to increase its deficit over 3% of the GDP, because once the procedure on excessive deficit is started, it will be hard to come back to a normal situation and the country will still subject of a EU Council decesion on the existence of an excessive deficit years after the deficit has been reduced under the limit of 3% (for example, in Slovakia, the public deficit was -3.6% in 2006; the deficit was reduced to -2.2% in 2007 and the projections for 2008 indicate a level of only -2.0%; still, the Convergence report published in 2008 says that „Slovakia is at present subject to an EU Council decision on the existence of an exessive deficit" [ECB, 2008, p.51]. The European Central Bank does not seem pleased with these results, mentionaning that „further consolidation is required for Slovakia" [ECB, 2008, p.51].

4. Public debt

As regards general government debt, in 2007 only Hungary had a debt ratio above the 60% of GDP (66.0% of GDP, slightly higher than in the previous year). In all other CEEC, debt ratios were lower: between 45% of GDP in Poland, around 30% of GDP in the Czech Republic and Slovakia and below that level in the other five countries.

Looking back at last ten years (the period from 1998 to 2007), we notice that government debt-to-GDP ratios increased substantially in the Czech Republic (by 13.7 percentage points) and to a considerably lesser extent in Poland, Hungary, Lithuania and Latvia. By contrast, in Bulgaria, Estonia, Romania, Slovakia and Sweden the 2007 debt ratio stood clearly below the value of 1998.

For 2008, the debt ratio is expected to rise in Latvia, Hungary and Romania. In the other countries, the debt ratio is projected to decline or remain stable.

Considering the debt ratio, we can see that Romania, with a public debt of 13.6% of GDP has reached a satisfactory level of nominal convergence (although we can notice a constant increase in the level of public debt of Romania in the last few years, some specialists considering this trend as an important reason for concern, even though the level of the public debt is still low).

5. Interest rate

For the 12-month reference period considered in the 2008 Convergence Report (April 2007 – March 2008), the reference value for long-term interest rates was 6.5%. It was calculated by adding 2% to the unweighted arithmetic average of the long-term interest rates of the same three countries considered for the inflation rate reference value: Malta (4.8%), the Netherlands (4.3%) and Denmark (4.3%).

Over the reference period, six out of nine CEEC (Bulgaria, the Czech Republic, Latvia, Lithuania, Poland and Slovakia) had average long-term interest rates below the reference value.

In Romania (7.1%) and Hungary (6.9%), long-term interest rates were above the reference value during the reference period.

In Estonia, due to the absence of a developed bond market in Estonian kroons and reflecting the low level of government debt, no harmonised long-term interest rate is available.

The analysis of CEEC showed a rapid convergence of the long-term interest rates. At the end of 2002, the differential between the CEEC and the EU, for a 10-years interest rate, was only 1.4%. Such a convergence is, partially, the result of „convergence play" (the anticipation of financial market that those countries would be in the EMU before the term.

In February 2003 the CEEC had a better situation, from the interest rates point of view, than Greece, Portugal or Spain 4 years prior to their entry in the EMU [Călin, 2004].

Romania is not accomplishing the convergence criteria referring to the interest rate, and it has the highest interest rate from all the EU Member States. Considering the inflation rate registered and the inflation differential between Romania and the EMU we can easy understand that Romania will not be able to meet this criterion in the near future.

Yet we must be carefull not to consider tat reducing the inflation rate will automatically reduce the level of the interest rate. We can easily see that in EU there are countries with an inflation rate higher than our country, but with lower interest rates (ex: Bulgaria, Lithaunia, Latvia – all these countries having inflation rate higher than Romania, but long-term interest rates lower than 5%).

6. Exchange rate

From the 10 CEEC members of the EU, one (Slovenia) is inside the EMU, and four (Estonia, Latvia, Lithuania and Slovakia) are participating to the ERM II since 2005. Within ERM II, none of the central rates of the currencies examined in the 2008 Convergence Report was devalued in the period under review. The Estonian kroon and the Lithuanian litas traded continuously at their respective central rates. The Latvian lats showed a very low degree of volatility vis-à-vis the euro.

Regarding Slovakia, for most of the two year reference period, exchange rate volatility of the Slovak koruna vis-à-vis the euro was relatively high.

For the other CEEC (Romania included) we cannot talk about exchange rate stability, since their currencies did not participate to the ERM II. Still, the evolution of their currencies against the euro was evaluated. It was seen that the Czech koruna and the Polish zloty strengthened against the euro in the period under review. The Hungarian forint was subject to wide fluctuations, which convinced the national authorities to abolish the unilateral established fluctuation band of $\pm$15% (on 25 February 2008).

As far as Romania is concerned, we can see that the modification of the reference currency basket had a positive impact on the stability of the exchange rate of the Romanian leu, against the euro. An analysis of the period 1997-2004 show a continuous depreciation of the nominal exchange rate (only from 2002 to March 2004, the depreciation exceeded 30% (from 29.000 ROL/EUR to 40.000 ROL/EUR), in a trend without significant fluctuations.

In October 2004, the NBR decided to reduce the frequency of its interventions on the exchange market. Its interventions became fewer, but more massive and less predictable. In only a few months, the nominal exchange rate of the Romanian leu against the euro passed from 41.127 lei/euro (October 2004) to 38.494 lei/euro (December 2004) – an appreciation of 6,84%. In March 2005, the exchange rate was 36.422 lei/euro – meaning a nominal appreciation of 13% for a five months period. If we consider also the inflation differential between Romania and the Euro or the USA – around 7% at that time) we can have a clearer image of the size of the real appreciation of the Romanian leu.

This evolution came as a shock to most Romanians (population and companies). After 15 years of depreciation, for the first time, the Romanian leu strongly appreciated in nominal terms against strong currencies as the euro and the US dollar. Apparently, the strong appreciation of the national currency was not desired by the NBR and may be, not even anticipated by it. Nevertheless, the NBR held to its decision, and after several months of strong appreciation, the exchange rate stabilised. Its level in January 2006 (3,6445 RON/EUR) was very close to the level from February 2005 (3,6765 RON/EUR). The market seemed to have found its equilibrium.

Starting with February 2006, the Romanian leu showed a clear tendency of appreciation, but in a completely different rhythm (passing to 3,1337 RON/EUR in July 2007 – an appreciation of 14,75% over a period of 18 months).

In the last few months, in the context of an increase in the level of the inflation rate (at over 8%), the nominal exchange rate started to depreciate (passing from 3,1337 RON/EUR in July 2007 to 3,7218 RON/EUR in March 2008). This seems to be a short-term deviation from the trend- as it can be seen in the figure 2, the trend did not change. Still, it represents a depreciation by 18,75% in only 9 months.

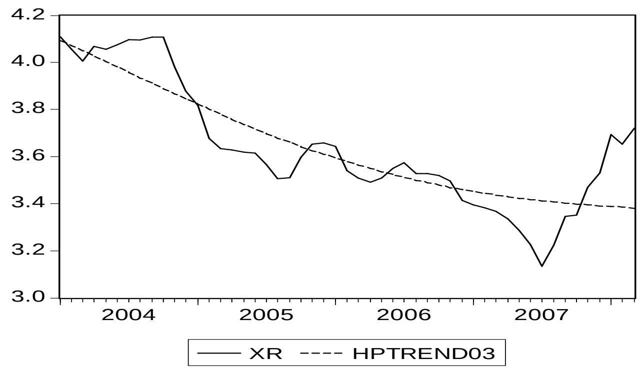

Figure 2. The trend of the evolution of the nominal exchange rate (January 2004 – March 2008)

We could say that the exchange rate between the leu and the euro is now stable. In the end, the level of the exchange rate nowadays (July 2008) is around 3,6 RON/EUR, very close to the level from January 2006 or February 2005. But is a depreciation of over 18% in just a few months compatible with the ERM II?

The ERM II allows fluctuations inside a band of ±15%, a band established around a central rate. If we should have chosen a central parity for the leu, it would have been, most probably, somewhere around 3,5 RON/EUR (most forecasts made in the last few years are estimating the exchange rate RON/EUR between 3,4 and 3,65 RON/EUR for the period 2007-2013).

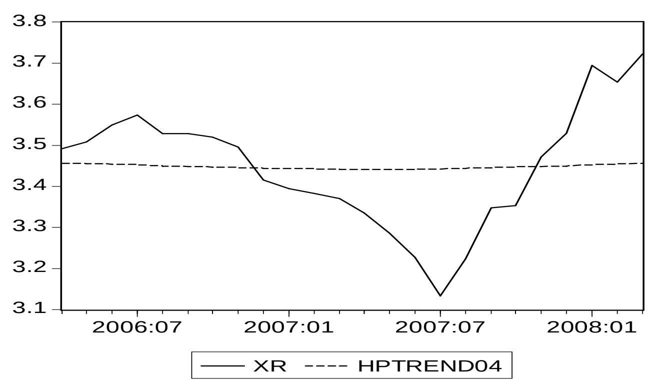

Figure 3. The trend of the evolution of the nominal exchange rate (April 2006 – March 2008)

Let us consider the last 2 years: April 2006-March 2008 (the period considered in the 2008 Convergence Report). The evolution of the exchange rate is presented in figure 3. If we look at the trend, the stability is obvious.

For our data sample, the mean is 3.446571, and the median is 3.4809. The maximum level reached by the exchange rate in the last 24 months is 3,7218 RON/EUR in March 2008, while the minimum value is 3,1337 RON/EUR in July 2007.

In table 2 we present the maximum deviation of the exchange rate between the Romanian leu and the euro, assuming various central parities.

Table 2. Compatibility of the exchange rate evolution with the ERM II

Central parity	Maximum depreciation	Maximum appreciation	Compatible with ERM II
3,2	**16.3%**	2%	NO
3,3	12,78%	5%	YES
3,4	9,46%	7,83%	YES
3,5	6,33%	10,46%	YES
3,6	3,38%	12,95%	YES
3,7	0,59%	**15,3%**	NO

Considering the fluctuation band accepted in the ERM II as ±15%, the evolution of the exchange rate between the leu and the euro can be considered as stable (and compatible to the ERM II) for any central parity between 3,2363 and 3,6867 RON/EUR.

The Romanian exchange rate market reached a high level of maturity. By the time the NBR decided to dramatically cut the frequency of its intervention, the market was already able to function well without many interventions.

For years it has been said that in Romania the main problem concerning the convergence criteria is the inflation rate and that once the inflation is under control, the criteria concerning the interest rate and the exchange rate would be easily accomplished. This seems to be true for the exchange rate – with annual inflation rates expressed with a single digit, the exchange rate is already stable enough as to fluctuate within a band of ±10% around a central parity of 3,4 RON/EUR.

7. Conclusions

In the table 3, we can see the situation of the EU member states from central and Eastern Europe, from the convergence criteria point of view.

We can see that Romania is accomplishing, so far, only the criteria referring to the public finances (public deficit and public debt). Most CEEC present a better situation, accomplishing at least three convergence criteria – exception being Hungary. In our country, the inflation rate and the interest rate ar still too high. The exchange rate seems to be stable and its recent evolution suggest that the

Romanian exchange market is mature enough, and our country is able to participate to the ERM II.

Table 3. Economic indicators of convergence

Overview table Economic indicators of convergence

		Price stability	Government budgetary position			Exchange rate		Long-term interest rate
		HICP inflation [1]	Country in excessive deficit [2]	General government surplus (+) or deficit (-) [3]	General government gross debt [3]	Currency participating in ERM II [2]	Exchange rate vis-à-vis euro [4,5]	Long-term interest rate [1]
Bulgaria	2006	7.4	-	3.0	22.7	No	0.0	4.2
	2007	7.6	No	3.4	18.2	No	0.0	4.5
	2008	9.4 [1]	No [2]	3.2	14.1	No [2]	0.0 [4]	4.7 [1]
Czech Republic	2006	2.1	Yes	-2.7	29.4	No	4.8	3.8
	2007	3.0	Yes	-1.6	28.7	No	2.0	4.3
	2008	4.4 [1]	Yes [2]	-1.4	28.1	No [2]	8.4 [4]	4.5 [1]
Estonia	2006	4.4	No	3.4	4.2	Yes	0.0	... [7]
	2007	6.7	No	2.8	3.4	Yes	0.0	... [7]
	2008	8.3 [1]	No [2]	0.4	3.4	Yes [2]	0.0 [4]	... [7]
Latvia	2006	6.6	No	-0.2	10.7	Yes	0.0	4.1
	2007	10.1	No	0.0	9.7	Yes	-0.5	5.3
	2008	12.3 [1]	No [2]	-1.1	10.0	Yes [2]	0.4 [4]	5.4 [1]
Lithuania	2006	3.8	No	-0.5	18.2	Yes	0.0	4.1
	2007	5.8	No	-1.2	17.3	Yes	0.0	4.5
	2008	7.4 [1]	No [2]	-1.7	17.0	Yes [2]	0.0 [4]	4.6 [1]
Hungary	2006	4.0	Yes	-9.2	65.6	No	-6.5	7.1
	2007	7.9	Yes	-5.5	66.0	No	4.9	6.7
	2008	7.5 [1]	Yes [2]	-4.0	66.5	No [2]	-2.7 [4]	6.9 [1]
Poland	2006	1.3	Yes	-3.8	47.6	No	3.2	5.2
	2007	2.6	Yes	-2.0	45.2	No	2.9	5.5
	2008	3.2 [1]	Yes [2]	-2.5	44.5	No [2]	6.3 [4]	5.7 [1]
Romania	2006	6.6	-	-2.2	12.4	No	2.6	7.2
	2007	4.9	No	-2.5	13.0	No	5.4	7.1
	2008	5.9 [1]	No [2]	-2.9	13.6	No [2]	-10.3 [4]	7.1 [1]
Slovakia	2006	4.3	Yes	-3.6	30.4	Yes	3.5	4.4
	2007	1.9	Yes	-2.2	29.4	Yes	9.3 [6]	4.5
	2008	2.2 [1]	Yes [2]	-2.0	29.2	Yes [2]	2.5 [4]	4.5 [1]
Sweden	2006	1.5	No	2.3	45.9	No	0.3	3.7
	2007	1.7	No	3.5	40.6	No	0.0	4.2
	2008	2.0 [1]	No [2]	2.7	35.5	No [2]	-1.6 [4]	4.2 [1]
Reference value [8]		3.2%		-3%	60%			6.5%

Sources: European Commission (Eurostat) and ECB.
1) Average annual percentage change. 2008 data refer to the period April 2007 to March 2008.
2) End-of-period data. The information for 2008 refers to the period until the cut-off date for statistics in the report (18 April 2008).
3) As a percentage of GDP. European Commission spring 2008 forecast for 2008.
4) Average annual percentage change. Data for 2008 are calculated as a percentage change of the average over the period 1 January 2008 to 18 April 2008 compared with the average of 2007.
5) A positive number denotes an appreciation vis-à-vis the euro and a negative number a depreciation vis-à-vis the euro.
6) With effect from 19 March 2007 the central rate of the Slovak koruna in ERM II was revalued by 8.5%.
7) For Estonia no long-term interest rate is available.
8) The reference value refers to the period April 2007 to March 2008 for HICP inflation and for long-term interest rates, and to the year 2007 for general government balance and general government debt.

Source: ECB (2008), Convergence Report, May 2008, p.30

Certainly, this does not mean that the participation to the ERM II is risk-free (on the contrary – so far, since the NBR was not forced to defend a certain level of the exchange rate, the incentives to speculative was lower; after joining the ERM II, that incentive will increase). But it proves that Romania will soon be able to participate to the ERM II and to accomplish the convergence criteria concerning the exchange rate, if that participation is handled with competence and caution.

The national authorities plan on waiting until most structural vulnerabilities are overcome – somewhere around 2012 – before entering the ERM II. The main idea is to remain inside the ERM II as little as possible – preferably only 2 years, and to adopt the euro in 2014.

But beside our economic problems already mentioned in the paper, 2008 is an electoral year, and the Romanian Government seems weak faced with mass-protest. Based on the decisions taken by this Government, at the end of its mandate, Romania will be able to accomplish the convergence criteria sooner or later. If the plans made by our authorities will turn into reality, Romania might adopt the euro in 2014. Otherwise, it will be have to change and postpone this objectives – as many other CEEC already did (Estonia, Latvia, Lithuania, Hungary).

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