
The Prospect of Euro Adoption in Romania

Făt Codruța Maria* Beju Daniela Georgeta**

Abstract:

Taking into account the schedule of Romania's monetary integration: the entrance into Exchange Rate Mechanism II in 2012 and the euro adoption in 2014, our authorities have become preoccupied in accelerating the convergence process. This paper aims to analyze Romania's progress in the convergence process, as well as, the current stage of the fulfilment of nominal and real convergence criteria required for euro adoption. In the same time we compare the results obtained by our country and those recorded in other Central and Eastern European states in the integration process.

We also debate on the main reasons responsible for delaying the convergence process in Romania and the prospect of speeding up this process without a negative impact on the economy.

Keywords: nominal convergence, real convergence, euro adoption

JEL Classification: E52, E58, F31, F33

1. Introduction

On the 1st January 2007, Romania became a new member of the EU together with Bulgaria. The next important step towards Romania's European integration will be implementation of single European currency. For adopting the euro an EU member state would have to meet the following criteria for nominal convergence, as stipulated in the Maastricht Treaty (Brociner, 1999, pp. 22-24):

- Inflation rate criterion: the inflation rate should not exceed more than 1.5% the average inflation rate of the three best-performing EU members in terms of price stability;
- Interest rate criterion: the interest rate on bonds issued with a 10 years maturity should not exceed more than 2% the average rate of the three best-performing EU countries in terms of price stability;

* Corresponding author: Assoc. Prof. Făt Codruța Maria PhD., "Babeș-Bolyai" University of Cluj-Napoca, Faculty of Economics and Business Administration, Romania, phone: 40 + 0264-41.86.52/3/4/5, fax: 40 + 0264-41.25.70, e-mail address: codruta.fat@econ.ubbcluj.ro or codrutafat@yahoo.com

** Lect. Beju Daniela Georgeta PhD., "Babeș-Bolyai" University of Cluj-Napoca, Faculty of Economics and Business Administration, Romania, phone: 40 + 0264-41.86.52/3/4/5, fax: 40 + 0264-41.25.70, e-mail address: daniela.beju@econ.ubbcluj.ro or danibeju@yahoo.com

- Budgetary deficit criterion: budgetary deficit should not exceed 3% of GDP;
- Government debt criterion: government debt should not exceed 60% of GDP;
- Exchange rate criterion: exchange rate should remain within the normal fluctuation margins (+/-15%) of the Exchange Rate Mechanism II (ERM II) without serious fluctuations for at least two years.

The Maastricht Treaty foresees as necessary and enough conditions for a country to adopt the euro only nominal convergence criteria. Given that the final objective is not just the euro adoption but also the benefiting from the advantages offered by the participation in Euro-zone, it is also necessary for a country adopting the single European currency to meet some criteria for real convergence. The Maastricht Treaty does not make references to the real convergence criteria to certify a height degree of similarity among the economic structures of the EU member states. Real convergence became a significant issue especially when the accession of the Central and Eastern European countries was taken into account. The real convergence is treated through the structural indicators which are divided on the next domains:

- General Economic Background (GDP per capita in PPS, Labour productivity);
- Employment (Employment rate, Employment rate of older workers);
- Innovation and Research (Youth Education Attainment);
- Economic Reform (Comparative Price Levels);
- Social Cohesion (Long Term Unemployment Rate, Dispersion of Regional Employment Rates by gender);
- Environment (Greenhouse Gas Emissions, Energy Intensity of the Economy).

In this paper we chose the first point of view because we have a better outlook on the degree in which the real convergence is attended by our country in respect to EU – 27.

The attainment of real convergence is also vital because, according to the Optimal Currency Area Theory, the states within a group cannot jointly gain from a common currency if not their economic structures are comparable and when there is no risk of asymmetric shocks to affect only some of these countries (Isărescu, 2004, pp. 3).

2. The Stage of Fulfilment of Nominal Convergence Criteria

Regarding the nominal convergence, Romania fulfils only those criteria concerning the government budgetary position (budgetary deficit and government debt as share of GDP). In the same time, the exchange rate criterion cannot be exactly considered until the RON will enter in ERM II.

The stage of fulfilment of nominal convergence criteria by Romania, in comparison with other countries from Central and East Europe is presented in the table 1.

Table 1. Nominal convergence criteria at the end of 2007

	Maastricht Criteria	Romania	Czech Republic	Hungary	Poland
Inflation rate (percent, annual average)	<1.5 pp above the three best performing Member States (3 percent*)	4.84	2.8	8.0	2.5
Long /term interest rates (percent per annum)	<2 pp above the three best performing Member States in terms of price stability (6.4 percent*)	7.27 ¹	4.28	6.74	5.48
Exchange rate (versus euro) (maximum percentage change versus 2 year average**)	+/- 15 percent	+10.2/-6.9	+7.9/-3.4	+5.2/-9.0	+7.4/-6.6
General Government Deficit*** (percent of GDP)	bellow 3 percent	2.52	3.4	6.4	2.7
Government Debt*** (percent of GDP)	below 80 percent	12.95	30.2	66.1	46.8

¹ 19 November 2007 issue of government securities, *Reference level according to ECBs Convergence Report, May 2007, **The period 2006-2007 was considered, as the fulfilment of this criterion is assessed depending upon exchange rate stability over the past 2 years, *** According to the ESA 95 methodology.

Source: Isărescu M., *Romania: recent macroeconomic developments*, National Bank of Romania, April 2008, pp. 38

2.1. The Government Budgetary Criteria

The situation of budgetary deficit is positive seeing that in the last years it has been lower than 3%, the level laid down in the Maastricht Treaty. This criterion has been complied by Romania even since 2001. However, European Commission has forecasted a raise in budgetary deficit up to 2.9% of GDP in 2008.

As far as the government debt is concerned the performance is also encouraging, since the level of 13% recorded in 2007 (forecasted to increase to 13.6% in 2008) is far beneath the reference value stated in Maastricht Treaty, as we can see in the table 2.

Table 2. The government budgetary criteria* (% of GDP)

Years	2004	2005	2006	2007
General government deficit	1.5	1.4	1.9	2.5
Public debt	18.8	15.8	12.4	13.0

* measured consistent to the European standards (ESA 95 methodology)

Source: Isărescu M., Romania: recent macroeconomic developments, National Bank of Romania, April 2008, pp. 23-24

However, fiscal consolidation has to be consolidated in the next years with the aim of Romania be able to maintain the deficit ratio lower than the reference value and conform with the medium-term objective specified in the Stability and Growth Pact. Fulfilling the budgetary deficit and government debt criteria, Romania differs from the other countries from Central and Eastern Europe which meet problems precisely in this respect (see the table 2).

2.2. Inflation Rate Criterion

Contrary to the government budgetary position, Romania's situation in requisites of the inflation rate is unsatisfactory (see the table 3). Even though, the results attain in the previous years are notable, Romania is ranked outside the reference level stated in the Maastricht Treaty.

Table 3. Inflation rate (%)

Year	2004	2005	2006	2007
Average annual rate	11.9	9.0	6.56	4.84
Annual rate (end of year)	9.3	8.6	4.87	6.57

Source: National Bank of Romania

There are some circumstances that can explain this unfavourable situation, among which we mention the slow process of price liberalization and the aware implementation of the strategy for gradual decrease of inflation. The final considerable price liberalization was realized in Romania just in 1997, despite the fact that in other Central and Eastern European states similar measures were adopted

in the period of 1992 – 1994. Furthermore, Romanian's authorities choose the annual diminution of inflation by about a quarter of its level in the previous year to a drastic solution of the implementation of the Currency Board, solution which was preferred by other countries, such as Bulgaria, Lithuania and Estonia.

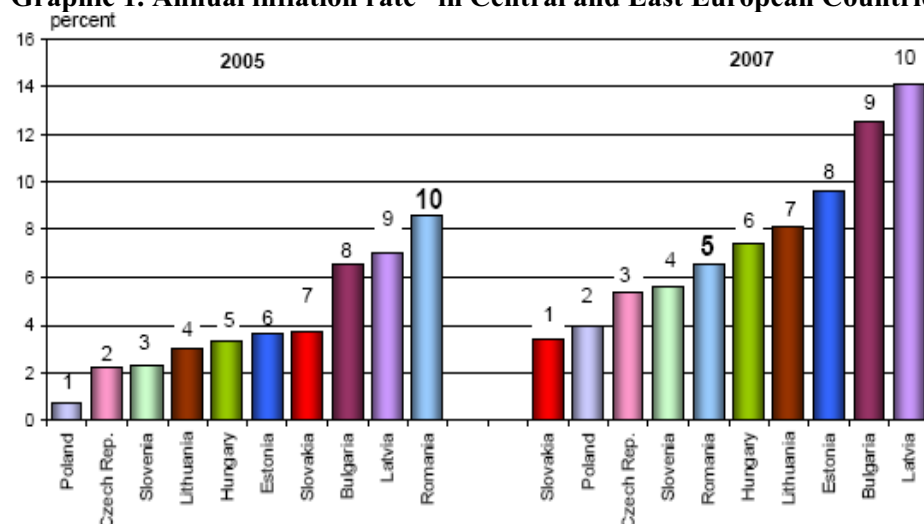
Table 4. Average annual inflation rate (%)

Country	2004	2005	2006	2007
Bulgaria	6.1	5.0	7.3	8.4
Czech Rep.	2.8	1.9	2.5	2.8
Estonia	3.0	4.1	4.4	6.6
Hungary	6.8	3.6	3.9	8.0
Latvia	6.2	6.7	6.6	10.1
Lithuania	1.2	2.7	3.7	5.7
Poland	3.5	2.1	1.0	2.5
Slovakia	7.5	2.7	4.5	2.8
Slovenia	3.6	2.5	2.5	3.6
Romania	11.9	9.0	6.6	4.8

Source: Isărescu M., *Romania: recent macroeconomic developments*, National Bank of Romania, April 2008, pp. 5

With the performance of the last years regarding the reduction of inflation, Romania is no longer the weakest countries in this respect among the new EU members. At the end of 2007, Romania recorded the fifth position in the term of inflation, in front of Bulgaria, Estonia, Latvia, Lithuania and Bulgaria, as it is presented in the graphic 1.

Graphic 1. Annual inflation rate* in Central and East European Countries



*) based on CPI

Source: Isărescu M., *Romania: recent macroeconomic developments*, National Bank of Romania, April 2008, pp. 10

Moreover, the majority of the emerging economies which apply a strategy of monetary policy based on inflation targeting recorded an overshooting of the superior limit of the target band in 2007 under the impact of global factors (NBR, 2007, pp. 12).

In Romania, the inflation targeting regime was adopted in 2005 by the central bank on the basis of the fulfilment of the preconditions required by this strategy (Masson et al., 1998, pp.35):

- A high degree of the central bank independence so that it will not be forced to finance the budgetary deficit: This is stated in the Law no.312 regarding the Statute of the National Bank of Romania;
- A strong institutional commitment to price stability and the avoidance of targeting the level of any other nominal variable: the National Bank of Romania's statute stipulates that the primary objective of our central bank is to maintain price stability;
- An effective market-determined monetary policy instrument: the central bank uses the short-term interest rate (monetary policy interest rate) as operational instrument;
- The central bank's transparency, accountability and communication with the public: it is realized through the publication of periodical reports, press releases and the periodical reports on inflation;
- The selection of the relevant price index to be targeted: the targeted price index is the consumer price index and the inflation target is set as a fixed number within a band of $\pm 1\%$.

Over the last twenty years the framework of inflation targeting has adopted in several developed countries, as well as, in emerging markets and transition economies from Latin America, East Asia and Central and East Europe. Despite the controversies regarding the benefits of this approach of monetary policy, numerous studies indicate that inflation targeting is a viable framework in many emerging and transition economies, as it can improve the performance of inflation (Mishkin (2000), Debelle (2000), Yifan Hu (2003)).

We consider that the reduction of inflation in Romania towards actual level was possible due to the adoption of inflation targeting by the National Bank of Romania, even if the inflation target was attained only in one year, precisely 2006.

2.3. Interest Rate Criterion

The criterion of long-term interest rate on government securities is the other one which Romania does not fulfil it. This situation is relatively normal as this criterion is closely linked with the failure in achievement of the inflation rate criterion. The instruments of long-term debt are weakly developed in Romania. Government bonds in euro with 10-year maturity were issued on the foreign markets just in 2002. Taking into account the fact that first issuing of 10-year-maturity-

bonds, meant for the domestic market, took place in April 2005 it is expected that we encounter difficulties in fulfilling this criterion.

In August 2005, Romanian state issued government bonds with 7.49% interest rate, which was superior to the reference value of 6.2% (average rate of 4.2% plus 2%) of that period. Over the reference period from April 2007 to March 2008, the long-term interest rates averaged 7.1%, a rate higher than the reference value of 6.5% (ECB, 2008, pp. 13, 49), but the difference is smaller in comparison with the previous period of assessing.

Nevertheless, the evaluation of this criterion is complicated to realize given the following factors (NBR, 2007, pp. 14):

- Liquidity is insufficient on the long-term government securities market.
- Issues of long-term government securities are rarely launched.
- The appearance of a reasonable price is obstructed by the small number of transactions.

We consider that the reduction of the inflation, that is, the progressing of the disinflation process, will make possible the issuing of government securities at a lower interest rate so that this criterion will become easier to be achieved.

2.4. Exchange Rate Criterion

Since 1st January 2007, when our country has become a new EU member state, Romanian leu (RON) did not participate in ERM II, but it was traded under a flexible exchange rate regime and in conditions of full convertibility. The entrance of RON into ERM II is expected no earlier than 2012. Until now, Romanian authorities have not defined either a central parity against the euro, or +/-15% band for the exchange rate fluctuations. It is important to mention that the exchange rate flexibility is compatible with the inflation targeting framework. The nominal appreciation trend recorded by RON over the last three years supported the consolidation of disinflations process in our country. Over the two-year reference period of April 2006 – April 2008, the maximum appreciation/depreciation of RON exchange rate versus euro was of +10.8/-9.6% in comparison with the benchmark value that is the average exchange rate of the RON against the euro in April 2006 (ECB, 2008, pp. 170).

Although the maximum upward and downward deviations are ranked within the margins of ERM II, the RON exchange rate recorded strong fluctuations over this period: a weak depreciation until mid-June 2006, followed by a significant appreciation until August 2007, then a substantially depreciation until in the April of 2008. Consequently, the confident fulfilment of this criterion required a more stabile exchange rate.

From September 2006, the Romanian National Bank does no longer intervene on the exchange rate market, which functions normally, without restrictions. This policy of non-intervention confers more flexibility to the exchange rate. We consider that this exchange rate flexibility will allow the National Bank of

Romania to ensure the stability of internal prices, by an increase of monetary policy efficiency.

As a conclusion of our analysis, of the 5 nominal convergence criteria a state have to accomplish with the purpose to adopt the euro as a domestic currency, Romania presently fulfils only two (those regarding the public finances). Despite of this unfavourable situation, we consider that, by the end of 2012, our country will manage to achieve the other three criteria through a sustained global effort and a restrictive monetary policy, supported by the other components of the macroeconomic policy.

3. The Stage of Fulfilment of Real Convergence Criteria

The real convergence criteria are not the object of the Maastricht Treaty, given the fact that initially, only developed countries with similar, comparable economic structures joined the EU. But the very moment the problem that Eastern and Central European countries join the EU came up, the problem of real convergence became of the utmost importance. The level of fulfilment of the real convergence criteria can be observed through the structural indicators computed by Eurostat. These indicators are used to underpin the European Commission's analysis made for the European Council. They cover up the next domains: general economic background, employment, innovation and research, economic reform, social cohesion and environment. From the fourteen indicators agreed by the European Commission we choose to reveal the level attended by Romania until now those for which we could get data. These are:

1. GDP per capita in PPS - GDP and Labour productivity - LP (General Economic Background);
2. Employment rate – ER (Employment);
3. Employment rate of older workers –EROW (Employment);
4. Youth Education Attainment - YEA (Innovation and Research);
5. Comparative Price Levels (Economic Reform);
6. Long Term Unemployment Rate – LTUR (Social Cohesion);
7. Dispersion of Regional Employment Rates by gender – DRER (Social Cohesion);
8. Greenhouse Gas Emissions – GGE (Environment);
9. Energy Intensity of the Economy – EIE (Environment).

In the table no. 5 we present the data on these indicators published by Eurostat at the chapter Structural Indicators. Some of them are used by the Romanian government staff to measure the level of real convergence fulfilment.

Table 5. Romania – Performance compared to EU – 27

	Romania	EU – 27
--	---------	---------

	2004	2005	2006	2007	2008 ^f	2004	2005	2006	2007	2008 ^f
General Economic Background										
GDP	34,1	35,4	38,8	40,7	42	100	100	100	100	100
LP	34,4	36,3	39,2	41	42	100	100	100	100	100
Employment										
ER	57,7	57,6	58,8	58,8	-	62,9	63,5	64,5	65,4	-
EROW	36,9	39,4	41,7	41,4	-	40,7	42,4	43,5	44,7	-
Innovation and Research										
YEAL	75,3	76	77,2	77,4	-	77,2	77,5	77,8	78,1	-
Economic Reform										
CPL	43,3	54,3	57	64,7	-	100	100	100	100	-
Social Cohesion										
LTUR	4,8	4	4,2	3,2	-	4,2	4,1	3,7	3,1	-
DRER	4,9	4,5	3,6	4,6		12,1	11,9	11,4	11,1	-
Environment										
GGE	57,1	54,6	56,3	92	-	93,2	92,5	92,3	...	-
EIE	122	1167,	11	...	-	212,0	20	202,	...	-

	6,1	35	28,01			6	8,56	45		
--	-----	----	-------	--	--	---	------	----	--	--

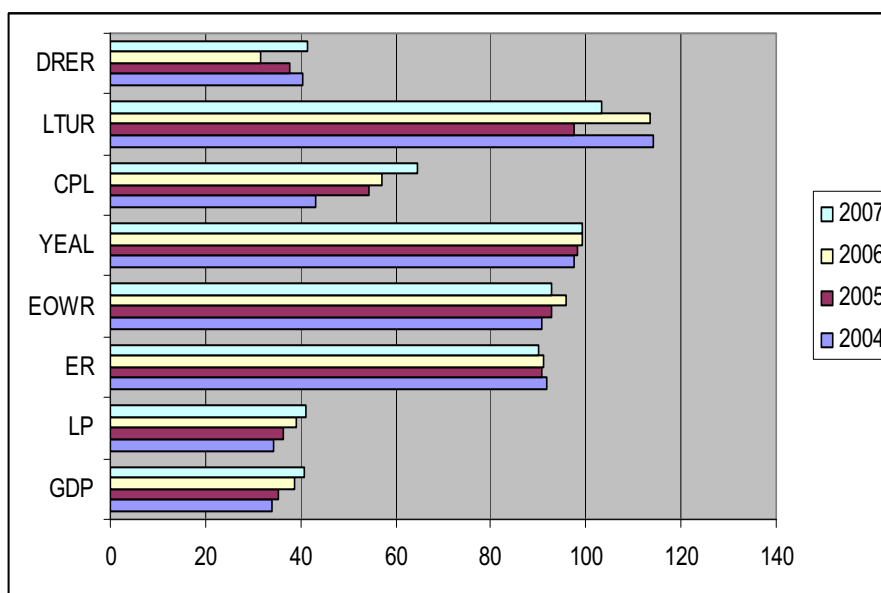
Source: www.epp.eurostat.ec.europa.eu

Table 6. Evolution of monetary policy interest rate

Time interval	Monetary policy interest rate
1 August 2008 -	10.25
27 June – 31 July 2008	10.00
7 May – 26 June 2008	9.75
27 March – 2 May 2008	9.50
4 February – 26 March 2008	9.00
8 January – 4 February 2008	8.00
1 November 2007 – 7 January 2008	7.50
26 June – 31 October 2007	7.00
3 May – 25 June 2007	7.25
27 March – 2 May 2007	7.50
12 February – 26 March	8.00

Source: National Bank of Romania

Grafic 2. The real convergence of Romania compared to EU - 27



Source: Authors' computation

The graphic 2 synthesise the situation of Romania in respect with EU – 27.

We can observe that Romania is still far away from the EU – 27 performance as far as the GDP and Labour productivity are concerned, the last one even if in time have been growing it attained very small levels comparative to the EU – 27 average.

In the field of Employment the situation in Romania is better nearing the average of EU – 27, but we consider as a negative aspect the fact that the ratios have decreased during 2000 – 2007.

Another aspect positive for Romania is that the price levels are lower comparative to EU – 27. We can say that Romania is still cheap, but we can notice that the level of the comparative prices is increasing in time, and that is not anymore a positive fact. The last two indicators LTUR and EIE confirm the fact that Romania still has much to recoup in order to reach the real convergence. EU aims to reduce the long term unemployment rate and to create an Energy Intensity of the Economy, which for Romania still are, as we can see objectives hard to reach.

4. Romania's Strategy Towards Euro Adoption

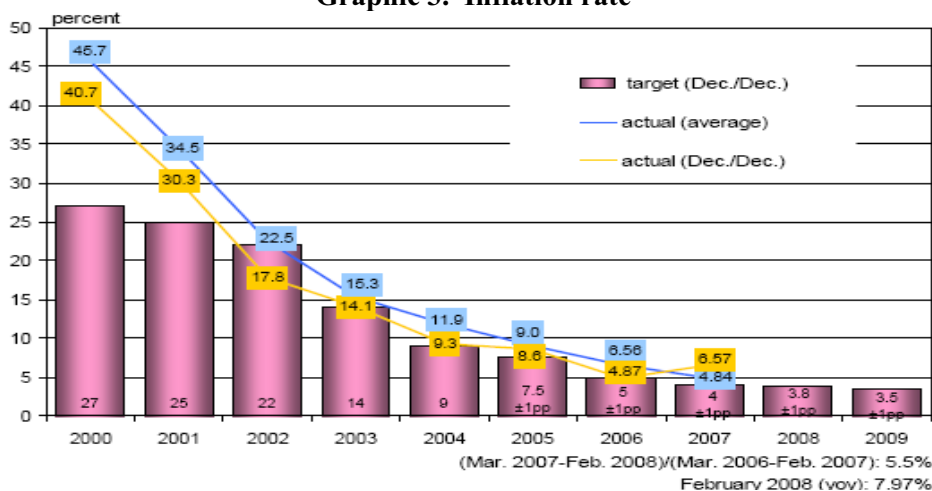
Romania's strategic goal for the following years is the attainment of the convergence with EU member states. Therefore, the Romanian authorities adopted the National Development Plan 2007 – 2014, aiming the acceleration of the economic and social convergence process. Its purpose is to bring Romania, as soon as possible, closer to the economic and social development of EU member states.

Romania's model of economic development is permanently adjusted, by encouraging the sectors with high added value and those with high technology. Our country intends to relate with EU countries which support the implementation of solid projects in the sectors such as: energy, research, and cooperation in the domain of higher education, migration, intervention in the case of natural disasters, border police etc. Moreover, Romania aims to create a clear, personalised country profile, based on the national cultural identity and the promotion of specific economic products which should be attractive for the European market. This strategy stipulates that Romania should continue the reforms in the legal and public administration systems and make efforts to eliminate the corruption. It is also essential that Romania to increase the competitiveness on macroeconomic scale by granting great importance to the tax and budget policies, respectively to agriculture and rural development, and on microeconomic scale, by supporting small and middle enterprises, mainly the innovative ones.

Romania's monetary integration depends on the fulfilment of the convergences criteria. Regarding the nominal convergence, we consider that the main preoccupation and, obviously, the efforts of our authorities should be focused on the achievement of inflation rate criterion. This is because the attainment of inflation rate criterion will facilitate the achievement of the interest and exchange rate criteria. The targets of inflation lay down for the next years are extremely demanding: 3.8% +/-1% for 2008 and 3.5% +/-1% for 2009 (see the graphic 3).

Their accomplishment requires a consistent anti-inflationist monetary policy, supported by the other component of the macroeconomic policies mix.

Graphic 3. Inflation rate



Source: Isărescu M., Romania: recent macroeconomic developments, National Bank of Romania, April 2008, pp. 7

For the implementation of the monetary policy the National Bank of Romania uses only market instruments: the open market operations (reverse transactions, outright transactions, foreign exchange swap and collection of fixed-term deposits from commercial banks), minimum reserve requirements, and standing facilities. Among these, an important role is conferred to minimum reserve requirements, whose current rate is 20% for deposits in RON and 40% for deposits in foreign currency. As for operational instrument, the NBR uses the monetary policy interest rate that is the rate on one week deposit-taking operations (two weeks – till 6 May 2008, one-month – before 1 August 2007).

The favourable evolution of inflation and the RON appreciation in the first part of 2007 determined the central bank to reduce the policy interest rate three times: to 8% in February 2007, 7.5% in March and 7.0% in August. Unfortunately, under the impact of the growth in food prices due to long-lasting drought and of the RON depreciation by 4% during the previous month, in August 2007 the inflation rate reached 4.96%. As a result, inflation rate reached 6.57% in December 2007. Depending on the evolution of inflation, the National Bank of Romania has adjusted its monetary policy interest rate.

The pressure on inflation continued to manifest in 2008, their main sources being (Isărescu 2008, pp. 9): supply-side shocks (fuel and food prices etc.), quick expansion of aggregate demand (which is amplified principally by income and lending growth) and exchange rate adjustment. Thus, the inflation rate recorded an unfavourable evolution in 2008. In February 2008, the average annual rate of

inflation was 5.5% (March 2007 – February 2008)/(March 2006 – February 2007) and the annual rate reached 7.97% (February 2008/February 2007).

In these conditions of inflationary pressures, the National Bank of Romania has raised the monetary policy interest rate seven times by 3.25% to 10.25% since October 2007 until now.

After 3 years when Romania's inflation hit its highest point in August, the situation changes this year. As a result of a substantial harvest, the gradual increases in monetary policies interest rate and the cheaper food prices the annual inflation rate decreases at 8.2% in August 2008 from July's peak of 9%. These evolutions could bring price growth down during the second part of 2008 and pursue the central bank to maintain the interest rate at the current level of 10.25%. However, economists consider that inflation rate will fall to 6.2% in December, so that National Bank of Romania will miss its year-end inflation target once again in 2008.

The main priorities of monetary policy for the period prior to ERM II entry are the following (Isărescu, 2008, pp. 41):

- consolidation of low inflation (sustainable disinflation);
- creation of long-term capital domestic markets and interest rates convergence;
- relative stability of the exchange rate of RON on the market (in conditions of full convertibility) around its long-term equilibrium level (sustainable exchange rate);
- realisation of structural reforms.

Regarding the exchange rate policy promoted by National Bank of Romania, we consider that it has to aim the increase of exchange rate stability. Also, it should not perturb the Balassa – Samuelson effect, but it has to permit the appreciation of the national currency in real terms. As a result of the greater increase of work productivity in the sectors of tradable goods, the appreciation of the national currency will be sustained without losing competitiveness on the external level.

As for real convergence is concerned, we notice a positive evolution of GDP. Over the period of 2006 – 2007, Romania's economy has progressively grown, the GDP dynamics being maintained at a high level, on average of 5.6%. In the first part of 2008, the expansion of GDP was of 8.8%. According to the projections of the central bank's officials, the Romania will continue to attain a significant economic growth in the following years of about 5-6% per year, a level comparable to the potential growth.

We consider that the economic policy mix for the next years, aiming Romania's monetary integration, should be oriented towards:

- continuance of structural reform in order to improve the productivity growth and external competitiveness of domestic products;
- promotion of a restrictive monetary policy, sustained by the other components of the macroeconomic mix
- implementation of a firm fiscal policy, capable to diminish the macroeconomic discrepancies by sustaining those public investments which are expected to stimulate the production potential of the country

- adoption of an income policy which should take into account the productivity growth.

5. Conclusion

The adoption of euro in Romania represents a serious test for our economy and society, requiring the fulfilment of convergence criteria. Of five nominal convergence criteria a state should accomplish with the purpose to adopt the euro, at the present time Romania fulfils only those regarding the budgetary deficit and government debt. Additionally, the exchange rate criterion can not be taken in consideration until the RON will enter in ERM II. The achievement of the interest rate criterion depends, in a large extent, on the attainment of inflation rate criterion. Unfortunately, the inflation continues to remain a big problem for Romania.

Concerning the real convergence, the stage of fulfilment is much weaker, given the fact that the discrepancies between Romania and EU standards are very serious. And we can say that in this moment Romania has a lot of work to do to reach the level attained by EU 27 for the structural indicators

Only through the implementation of a coherent mix of economic policies, Romanian authorities will manage to diminish the gap between Romania's economic and social development and those of EU member states.

The attainment of nominal and real convergence criteria represents a big challenge for the following period. The switch to the euro must be undertaken carefully, for the reason that the forced achievement of convergence criteria could cause significant costs in real economy. Both nominal and real convergence criteria could be reached only by the long-term consistent efforts. Even if the nominal convergence criteria can be met in a shorter period, their sustainability is given by the fulfilment of real convergence.

6. Reference

1. Brociner A., 1999, "Monetary Europe" (Institutul European, Iași).
2. Isărescu M., 2004, "Romania's transition to the Euro", unpublished, "Babeș-Bolyai" University, Cluj-Napoca.
3. Isărescu M., 2008, "Romania: recent macroeconomic developments", *National Bank of Romania*, www.bnro.ro.
4. Debelle G., 2000, "The viability of inflation targeting for emerging market economies", Conference on Finance markets and policies in East Asia, *Asia Pacific School of Economics and Management, Australian National University*, 4-5 September 2000.
5. Masson P., Savastano M., Sharma S., 1998, "Can Inflation Targeting Be a Framework for Monetary Policy in Developing Countries?", *Finance & Development*, 34-37.
6. Mishkin, F., 2000, "Inflation Targeting in Emerging Market Countries", *NBER Working Paper* No.7618. Cambridge, MA: National Bureau of Economic Research.
7. Yifan Hu., "Empirical investigations of inflation targeting", *Institute for International Economics*, Working Paper no.6, July 2003.