Romania and the monetary union: An example for emerging countries

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The European and world economy have taken a serious downturn in recent years. The European Union and the Euro-area have been challenged by the enlargement process, by diversity as a central feature of the group, and also by the economic and financial crisis. Romania, the EU 7th largest member state, under the effects of the “no opt-out” clause, will be facing, rather soon, the Euro adoption as a new challenge along with all its implications. This has become an even greater challenge due to recent evolutions in Greece, Ireland, Portugal or Italy. Beyond the simple member status, or the enlargement of the Euro-Area, foreseeing the future of the European single currency – the Euro raises serious questions around the real convergence process and its interaction with the actual crises. The optimal currency area (OCA) convergence frequently emerges as the missing puzzle piece in a functional monetary union system. This paper wishes to accomplish a brief evaluation of Romania’s real convergence in respect to the Euro-zone. But this is not the only issue raised here. Apart from that, in accurately quantifying real convergence we must focus on the most enhancing, relevant and suitable set of indicators for the real convergence, as the literature has not yet imposed a single set as universal or at least as generally agreed upon. In assessing real convergence as a clear aim for Romania on a medium term perspective, this paper envisages applying the optimal currency area theory. Convergent evolution may be influenced by several factors showing the evolution of the main disparities in the compared economies. Taking this into account, we shall also compute the variation coefficient of the GDP per capita or the σ-convergence as an expression of the dispersion of this indicator.

Key words: Real-convergence, Euro, optimal currency area, Romania.

INTRODUCTION

Actual developments inside the Euro-area have determined an extensive debate concerning the real convergence criteria applied in assessing economic and monetary developments in Euro candidates and member states. A particular focus has been directed towards their relevance according to a certain economic structure or evolution. Even though, it is rather obvious that apart from the nominal convergence criteria – which are specific and significant in the short run; real convergence could provide more substance to the analysis on the functionality degree of an economy aiming to become a part of the Euro-zone (Tanasie, 2010).

The recent economic and financial crisis has changed the real perspectives of evolutions for the European economy and the Euro-zone in particular, especially after the Greek episode and currently, the Italian episode. All these have raised significant questions concerning both the evaluation criteria and the structural support instruments at the basis of the European Monetary Union. These two aspects must be considered in strict dependency, also in the context of the most severe economic and financial crisis after the Second World War. The Greek crisis seemed to be mainly generated by the inconsistency in fiscal policy, but there have also been political issues. The pre-election budget was not what it seemed to be, due to the desire to compensate for the lack of stable economic growth, which, paradoxically, did not reflect before 2009 in high levels of public debt financed by the capital inflows. In 2009, the Greek public debt doubled. Here we can depict the role of the Euro as
a single currency - by not having a currency of its own, Greece could not use the controlled devaluation in order to compensate for the gap in productivity. Greece could not benefit from the fiscal transfers in the rest of the Euro-area in order to compensate for the income decrease and the increase in public spending under the circumstance of the recession. The Euro architecture has got some corrective or disciplinary mechanisms, but they have definitely not been sufficient. In this context, the no-bail-out clause forbids monetary financing by the central bank, further strengthens these mechanisms, through which financial markets put pressure on the states registering deficits and high debts, by means of high interest rates. The stability and growth pact should have compelled national authorities to reduce deficits and debt, and the competitiveness issue assumed by the Lisbon process should have helped in avoiding major external disequilibrium. Further on, the Euro-area and EU authorities acted just like a fire brigade (de Grawe, 2010): it lacked regulation and prevention, but went ahead with punishing the sources of the fire (disequilibrium). Partial adjustment and support mechanisms, such as the European financial stability facility (EFSF) and the sovereign debt default mechanism (SDDM), have been put in place, only it was a little late, but Greece’s salvation is not sufficient. The lack of macroeconomic stability in combination with fiscal deficit, monetary issues and normative consideration to ‘risks’ of output and inflation (Greenspan, 2004), will never settle the crises rebound normative considerations, to ‘risks’ of output and inflation.

None of the previous tools worked, neither in the EU nor in the Euro-area and thus, the increasing need for private and public financing in Greece has not been depicted. Beyond the failures in terms of policy and conceptualization, there have been failures concerning concrete action, cooperation and quick response to market signals. The lack of political union added or, in fact generated all that. This lack has most certainly been the main cause for the incapacity to rule and guide certain parts of the economy. Here, solutions should have come from addressing both short and long term issues. In this respect, the concepts surrounding convergence should have changed towards a long-term perspective, sustainability and durability, if actual general conditions and structures are maintained at least for a medium term horizon. Once more, if current elements of structure and regulation are kept, then the indicators and the evaluation methods must be renewed.

LITERATURE REVIEW

The optimal currency area (OCA) criteria established by Mundell (1961) and McKinnon (1963) comprise elements such as: the openness degree, synchronization and business cycles, the increased mobility of the labour force, price and wages flexibility and the high degree of financial development. Why Optimal Currency Area assessment? Due to the fact that recent compliance with nominal convergence has proven its limits, and because, recent developments point directly towards these key issues as the initial source for imbalances. These are the main reasons for looking back at the original theory of monetary unions. Monetary union candidates should be directly interested in reaching these aims, beneficial for both the union and its existing members, but also for its future development. Secondly, this insight helps candidate countries to find the tools necessary in the catching-up process.

Part of that process, inflation becomes a generalized issue demanding specific and contextual approach (Bernake et al., 2001); especially from transitioning candidate countries faced with extreme developments in this respect (Blanchard, 2003). As evolutions have fostered and become rather unpredictable during recent years, apart from nominal convergence assessment we have gone back to old, classic real convergence assessment (Villaverde, 2004).

Theoretical approaches in the specialised literature range from the commercial view of Frankel and Rose (2002), who have suggested that the commercial area and trade openness together with the single currency are assumed to triple, thereby boosting real growth and welfare gains (Frankel and Rose, 2002), to the series of criteria provided by Hen and Leonard (2003), including GDP variation (2% variation compared to the average of the best performing 3 member states), the unemployment rate (3% variation compared to the average of the best performing 3 member states), the current account balance as GDP percentage (ranging 2% of GDP) and the competitiveness indicator compared to Germany (10% variation compared to the estimated level from the Euro adoption moment) (Hen, 2003). Other authors (Ilsarescu et al., 2003) propose a different set of real convergence criteria, such as: the openness degree (computed as share of imports and exports in GDP), the share of bilateral trade with EU members in total external trade, GDP per capita (mostly in purchase power parity but also in nominal exchange rate), economic structure (share of the gross added value, provided by essential economic sectors, in total GDP).

The author’s opinion regarding a successful accession to the Euro-zone for Romania resides in a double-source convergence progress and evaluation – nominal convergence criteria compliance together with a realistic, sustainable and long term real convergence process. Real convergence should be accurately evaluated and approached by authorities according to the existing economic structure. One key point, in our view, is that sequencing or rather simultaneity of the nominal and real convergence should be reached. This is due to the fact that, at some point, we may be confronted with the contradiction between achieving nominal convergence
and a decrease in productivity and welfare as the price paid for achieving the nominal convergence targets (Tanasie, 2010).

Aims

In respect of the main research objective, first, we undertake an analysis of major OCA criteria fulfillment for Romania, and second, based on statistical data provided by the National Bank of Romania (NBR), the National Statistics Institute and the Eurostat (INSSE), we also wish to assess σ-convergence.

Generally, convergence can be depicted based on both indicators evolutions, but also by means of quantifying disparities. Convergence and catching-up must not be confused. First, from a dynamic point of view, catching-up is indicative of the distance or gap to be closed upon, while convergence is the expression of economic progress. Thus, a certain growth determines a wider extent of catching-up under the circumstances of lower residual distance, while the convergence extent would be accordingly lower. Both the catching-up process and the convergence processes for the new EU member states, including Romania, have registered high rhythms until the debut of the economic and financial crisis. Growth rhythms reached even higher levels for these new member states than for traditional EU members mostly based on trade openness and an increase in foreign direct investments. Still, the key issue here is the durability of this phenomenon. The boom and bubble at the end of 2007 forecasted the sharp economic and financial crisis to come. Here, we aim to provide a brief but accurate overview of Romania’s place on the real convergence map and also, a predictive evolution.

METHODOLOGY

In reaching the envisaged aims, methodology is based on the employment of OCA criteria for an analysis purpose regarding the convergence of the Romanian economy towards the Euro area and its progress. How do we perceive the need for convergence and the core of traditional notions in connection to this process? Essentially, convergence, from a logical point of view, refers to an economic growth evolving in a similar (usually ascendant) direction as the etalon element; in this case the EU and Euro-Area economies (Tanasie, 2010). From a methodological point of view, this assertion creates the basis for a broader assessment of real convergence. Apart from the analysis of economic developments based on the OCA criteria, we also compute σ-convergence according to Barro and Sala-i-Martin (1992) with the GDP per capita as the main variable. The analysis of convergence in Romania is not isolated. The connection between local developments and the EU and Euro-area situation is accomplished by means of computing spreads.

ANALYSIS

To start with, we have to clearly state the fact that Romania, and especially Romanians have perceived the accession into European structures as a guarantee towards a democratic system and values, and less as a definite option in favour of the market economy. This is the basic hypothesis for Romania’s EU and Euro adhesion. Recent developments of the global economic and financial crisis point out that what we have feared most is far from over. Neither the EU nor the Euro represents a guarantee of economic prosperity, and unless Romanian authorities commit to real and sustainable convergence, future will not be bright.

The search for convergence throughout Europe, and the recent economic crisis has turned back our attention to the OCA theory. Approaches concerning convergence have been numerous, and still, it remains an issue. As far as the OCA criteria did not verify for the EU member states, we tried to connect to a different evaluation, hopefully a closer one, but perhaps not an appropriate one. It seems though that Mundell’s criteria have finally foreseen a different future for the economic and monetary integration. This assumption is also verified by the neoclassic growth model where countries have different structural parameters concerning preferences, technology and the population growth rate.

Briefly, Romania’s economic and monetary evolution can be described as following (Table 1):

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inflation</td>
<td>5.5</td>
</tr>
<tr>
<td>Interest rate (Maastricht)</td>
<td>7.6</td>
</tr>
<tr>
<td>Exchange rate</td>
<td>+1.71 / -14.3</td>
</tr>
<tr>
<td>Budget deficit</td>
<td>7.2</td>
</tr>
<tr>
<td>Public debt</td>
<td>30.4</td>
</tr>
</tbody>
</table>

Source: National Bank of Romania.

Inflation evolutions

In august 2005, the National Bank of Romania adopted a new monetary strategy, that is, direct inflation targeting, with an essential role for the anchoring of inflationary anticipations to the target announced by the Central Bank.

This was aimed to achieve necessary steps towards EU and Euro accessions. As a consequence of crisis developments, the CPI for the last trimester of 2010 reached 7.96%, which is 3 percentage points above the superior limit of the interval established at ±1 percentage point around the target of 3.5%. The annual average of the CPI maintained an ascending trend towards 6.1% (data provided by the Romanian National Bank – Inflation Report).
Budget deficit

Evolutions are strongly influenced by the economy’s position compared to the economic cycle. In Romania, authorities are in search of determining the structural budget deficit, meaning a cyclic adjustment of budget income eliminating the component generated by the deficit/excess in demand. The result provides a measure of the sustainability extent of public expenditure (Romanian National Bank – Inflation Report, 2011). The budget deficit has been and will remain a key issue in Romania. It is also the case of public expenditure, which has severely been cut-off by at least 25% in terms of public sector wages. Still, such measures did not have the desired effect and do not manage to compensate for the lack of income sources. For 2010, the budget deficit dropped to 7.2 from 8.4% in 2009.

The exchange rate

RON/EUR has had a continuous ascending trend until the end of 2010, until stabilizing later on or even decreasing. The pattern continued to differ from other currencies in the area. This time as well, the exchange rate of the Romanian Leu has been less responsive to global risk preference and more to the conditions associated to the EU and international monetary fund (IMF) borrowing agreement in respect of fiscal and structural measures. Under these circumstances, the NBR assumed its evolution to have been majorly influenced by local risk assumptions concerning: the progress in respect of the stand-by agreement; the evolution of published economic indicators in comparison to prognosis; or the signal given by Fitch in confirming the rating for five large Romanian banks with foreign capital.

The public debt

Evolutions under this chapter have been dominated by the stand-by agreement with the IMF and the EU.

Labour productivity, labour cost and wage policy

The theory concerning real convergence also involves the evolution and implications of labour productivity (Socol, 2009). Thus, wages may increase, the economic growth rhythm may accelerate and living standards may rise. An average labour productivity growth around 10% (as has been the case till 2008) may become a steady argument in favour of real convergence and of the catching-up process. For 2009, there has been a negative rhythm, a decrease in labour productivity per capita, which has interrupted the positive previous process. Unfortunately, Romania holds one of the last places in the EU according to labour productivity, with 47.1% of the EU-27 average, followed only by Bulgaria, with 37.2% of the EU-27 average. Even though productivity in itself is a substantial and revealing indicator, it must be connected to investments in order to accurately reveal the real convergence process (Tanasie, 2010).

The shares of economic sectors, according to their gross added value, point out to the fact that there have not been major structural changes during the envisaged period 2005 to 2010. According to studies developed by the National Prognosis Commission, the share will remain relatively stable, and structural divergence may increase if the share of services in the EU-27 economy will increase. Of similar significance is the contribution of the services sector to the annual GDP increase. For 2008, for example, the 6.5% GDP increase has been due to an increase in final consumption by 8.2% and of investment by 13%. The gross added value has registered increases of 5.6% for industry, 5.7% in agriculture, constructions by 13.2% and services 6.1% (Tanasie, 2010).

Due to the fact that the Romanian economy is still evolving, transitioning, and is continuously involved in the catching-up and development process, investments have lately, after 2002, exceeded the average EU-27 and have steadily decreased in 2009 compared to 2008 (most probably because of the world economic crises). Thus, many of the current issues confronting the Romanian economy could be solved by foreign direct investments, but also by means of European structural funds absorption.

The increase in physical capital stocks for Romania would have generated a higher growth rate, even during crises times, would have increased productivity and employment rate and would have achieved the final economic goal consisting in a structural change of the economy. Even more, technical progress provided by investment means, could have increased the real convergence speed and could have also provided financing for the current account deficit. That perspective is unfortunately not possible under the current economic conditions in Romania, as the government has increased the taxation level and widened the taxation basin to entities which had been under a more permissive taxation regulation before.

Past advantages provided by the Romanian market to foreign investors such as low taxation, the market dimension and the absorption or privatization enhancement are now gone and actually pushing abroad even existing foreign investments such as Nokia. The lack of investment and of modern technologies determine the low productivity levels previously analyzed, thus eroding the advantage provided by the low labour costs, only around 13% of the EU-27 average. Under these circumstances, the most challenging vicious circle is being created and maintained (Tanasie, 2010).
The trade openness degree has always been an advantage for the Romanian economy, in terms of integration, but perhaps not in terms of the markets’ contagion effect as a consequence of the world economic crisis. Higher intra-trade indicates potential gain from trade and the establishment of the common currency is possible (Sheik et al., 2011). Trade shares have been rather high, even if decreasing by ratios around 3% during the few recent years. 2009 is again different, due to the effects of the crises on exporters with a share below 70%. Nevertheless, the average remains high (Tanasie, 2010) (Table 2).

The real issue here is not the share of international trade, but its composition. While our central and eastern European neighbours export goods intensive in high technology, Romania exports mainly textile products, furniture and metallurgic products; mainly low value added products. That point rather towards a developing economy, and by analyzing the causes, we go back again to the bad effect circle and to the lack of foreign investments.

As far as the other OCA criteria are concerned, we can briefly point out the following (Tanasie, 2010):

1. The weak business cycle synchronization due to the asymmetric shock absorption. This is also an important aspect when considering the impact of the monetary policy autonomy loss after the Euro accession. A better synchronization would ease this transition and its costs.
2. The labour force mobility and price and wages flexibility. According to the ILO, Romanians are inclined towards finding a job abroad, and this has spread even more during recession. Thus, we can speak of high labour force mobility. As far as price and wages flexibility is concerned, this has always been a source of inflation in Romania, due to an increase in wages unparalleled by a similar increase in productivity;
3. The financial structure development is essential in achieving real convergence. Progress has been achieved, but still Romania is ranked last in the EU ranking system for financial system development (Socol, 2009). In order to achieve a stable convergence, Romania must adapt continuously and decisively to the Lisbon Agenda 2000, which has been further strengthened in 2005, which radically changes the central elements of the European growth model, that is, the switch from capital accumulation models to human capital investment.

What is next for Romania? As the perspective of the ERMII should be rather close, the main targets envisaged by the Romanian National Bank are the consolidation of low inflation levels, long term domestic capital formation, a relative stability of the exchange rate, and from a governmental point of view, structural reforms. The time horizon for the Euro adoption has been postponed until 2014, or even 2015 due to recent unfavourable economic developments during the crisis period.

After having stated all these elements, let us go back to one of the initial points: is there an illusion of convergence for Romania? Could we be faced with a deceiving reality that would eventually transform into a new Greek episode? In our opinion, all the arguments above point out to an illusion sustained by just a few years of growth for the Romanian economy, together with the lack of sustainability consequently proven. Growth has not lasted. The main problems of the Romanian economy are durable and can be briefly stated as the lack of a sustainable real economy and of long term growth. Simple monetary adjustments skillfully managed by the national bank can never replace the real side of the economy. Recent crisis developments pointed out this argument in an even more acute manner.

The connection between these local evolutions in terms of convergence and the EU and Euro-area situation is established subsequently by means of computing spreads. The spread of convergence indicators, approached from the point of view of the deviation from an average central value, can be measured for a group of countries (the EU) using synthetic indicators such as the dispersion \(\sigma^2\), the square average diversion \(\sigma\), the variation coefficient \(CV\) or the linear average deviation \(d\) (Pecican 2006). All these indicators depict the extent to which EU member states’ variables (in this case the GDP/capita) deviate from the average. In dynamics, as the spread decreases, we are able to say that convergence increases. The dispersion \(\sigma^2\) results from the following expression:

\[
\sigma^2 = \frac{1}{n} \sum_{i=1}^{n} (x_i - \bar{x})^2 \tag{1}
\]

Where \(x_i\) is the analyzed variable – GDP per capita, \(i\) - 1,...,\(n\) is the country and \(\bar{x}\) represents the average.

The indicator square average diversion

\[
\sigma = \sqrt{\sigma^2} \tag{2}
\]
represents the square average of the values’ diversion from the arithmetic average. A decrease along time in the values obtained for the square average diversion for a certain variable (GDP per capita) points towards an increased convergence of that certain variable. This is called $\sigma$ convergence (Dalgaard, 2001). The variation coefficient

$$CV = \frac{\sigma}{x}$$

expresses, in a comparable manner, the spread according to the average. The fact that its level is non-dependent on the measure unit and on the measure order of the indicators recommends such an indicator in analysing and evaluating convergence (Castro, 2004).

As seen in the above expression, the essential element here is the difference. It can be assessed using the share of GDP per capita of the EU-27 = 100. This allows us to make a dynamic analysis and further on to establish Romania’s position, in a certain year compared to the EU average. Thus,

$$z_{it} = \frac{x_{it}}{x_t}$$

will be the share registered by the country i in the year t from the average level. Now, the dispersion becomes

$$\sigma^2_{zt} = \frac{\sum(z_{it}-1)^2}{n}$$

If, during the studied period, the dispersion level registers a decrease, then we may assess the convergence as progressing (Table 3).

Dispersion levels provide the clear image that the situation has been improving for the EU convergence process even for the new member states’ accession period. Until the economic and financial crisis, they seem to have performed rather well in terms of convergence. Situation has deteriorated for them during this crisis, but according to simulation results both the EU and the Euro-area have progressed in terms of convergence of the GDP per capita indicator.

### Table 3. Computing results.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\sigma$</td>
<td>0.570575</td>
<td>0.568298</td>
<td>0.561084</td>
<td>0.547046</td>
<td>0.518545</td>
</tr>
<tr>
<td>$\sigma^2$</td>
<td>0.325556</td>
<td>0.322963</td>
<td>0.314815</td>
<td>0.299259</td>
<td>0.268889</td>
</tr>
<tr>
<td>CV</td>
<td>0.570575</td>
<td>0.568298</td>
<td>0.561084</td>
<td>0.547046</td>
<td>0.518545</td>
</tr>
<tr>
<td>$\sigma$</td>
<td>0.498948</td>
<td>0.503141</td>
<td>0.5</td>
<td>0.489919</td>
<td>0.480721</td>
</tr>
<tr>
<td>$\sigma^2$</td>
<td>0.24895</td>
<td>0.253151</td>
<td>0.25</td>
<td>0.240021</td>
<td>0.231092</td>
</tr>
<tr>
<td>CV</td>
<td>0.498948</td>
<td>0.503141</td>
<td>0.5</td>
<td>0.489919</td>
<td>0.480721</td>
</tr>
</tbody>
</table>

Source: Author’s computations.

### Conclusions

The analysis concerning Romania’s convergence process has pointed out the following conclusions: (a) The general economic situation has deteriorated since 2008 and thus, the horizon of the Euro adoption has become even more distant; (b) the consistency of Romanian policies in connection to cyclic evolutions and to the economic and financial crisis has not been adequate in respect of prevention and anti-cyclic behavior. Thus, leaving from the need of ensuring sustainable development aiming at convergence, Romania requires an efficient policy mix with a correct and coherent dosage of each component. Seeking correlation between economic policies and the economic cycle, the following elements have to be considered: (a) the real economy must be supported by an impulse generated by the fiscal policy, contrary to the sign of the GDP deviation and of its potential level; (b) the monetary policy needs to be rather restrictive during demand expansion, and, for the current moment, interest rate relaxation could provide a positive signal for the economy; (d) systemic vulnerability must be counter-attacked by means of prudential policies oriented towards capital reserves consolidation and liquidity; (d) competitiveness is the key issue for progress and growth by means of keeping the unit cost of labor and a sub-unit report of wages and productivity.

Data analysis provided the identification of four essential domestic factors influencing the Romanian economy evolution: convergence of income levels with supplementary pressures on prices and/or nominal exchange rates; measures aiming at the prevention of further economic disequilibrium; the need to transfer resources towards the tradable area of the economy aiming at convergence and extending the contribution of the exporting sector; influences from demographic elements – the labor force migration.

Envisaging to avoid a new Greek episode, both Romania and the Euro – area should be focused on a more thorough real convergence process, coherently instrumented and sustained. In response to present economic pressures, macroeconomic conduct should be dominated by strict compliance to regulation, fiscal
discipline, accurate and realistic estimates of future developments.

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