Development of Nominal Convergence Indicators in New Member States of European Union under the Challenges of Economic and Financial Crisis

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Abstract. The importance of compliance with nominal convergence criteria is crucial for adopting the euro in New Member States (NMS). Although some of these countries have made remarkable efforts for complying with nominal criteria, structural and conjunctional macroeconomic imbalances have created big problems in this respect. Also, the global financial crisis revealed new challenges for the NSM which are not yet members of the euro area. Having imbalances widened further much more than the countries in the euro area, many of them have come to appreciate the protection of the euro area membership, especially at times of financial and economic crises. Though, some NMS would like to speed up euro adoption, they now face conditions that may make it more difficult for them to satisfy the requirements of the nominal convergence criteria. Thus, in this article we try to capture the effects of economic and financial crises on the nominal convergence indicators in NMS.

Keywords: inflation, long term government bond yields, exchange rate, fiscal and budgetary criteria, euro adoption, structural and conjunctional macroeconomic imbalances

Jel Classification: G01, H87

1 Introduction

The New Member States of the European Union are affected by the ongoing global financial crisis, and growth will be slower this year and next due to weak external demand and tight credit conditions. The global financial crisis created new challenges for the countries which have joined the European Union since 2004 and

are not yet members of the euro area. Having suffered stronger market disturbances than the countries in the euro area, many of them have come to appreciate the protection that euro area membership can provide at times of financial crises and would like to speed up euro adoption.

Being in the process of economic catching up, the new member states have to struggle to create economies similar in structure with those of the old members of European Union and to assure, in time, a steady growth of real GDP toward the levels of the most developed countries in the euro area. This situation can be challenging for NMS because they have to satisfy Maastricht criteria, especially the exchange rate and inflation criteria, which are harder to tackle. It is known that, under the fixed exchange rate arrangement, the convergence of prices during the catching up process can only take place through higher inflation and in the floating exchange rate, the price level convergence can take place by a nominal appreciation of the exchange rate or higher inflation, or by both. In crisis situation, it is a real provocation for all NMS to try to maintain the indicators of convergence under the reference values. In this article we will analyze each of them: inflation, long-term interest rate, exchange rate, governmental deficit and public debt.

2 The evolution of Nominal Convergence Indicators in NMS after the Economic and Financial Crisis

2.1 Inflation

Prior to the financial crisis, the criterion on price stability in NMS was the most problematic of the nominal convergence criteria, because of the catching–up process of these economies. Until 2008, except Poland and Slovakia, the NMS failed to accomplish admissible values for this criterion. The main drivers, which have contributed to this situation, were both the adjustments of real economy to the market dynamic and exogenous factors, which determined the increasing inflation.

Among the *domestic determinants* that have contributed to inflationary pressures in the NMS were the buoyant domestic demand (both private consumption and investments), the changes in administered prices and indirect taxes in many countries under review. The domestic demand was underpinned by the development of credit activity, a strong growth in disposable income and lower real interest rates. The increasing investment activity has also stimulated the domestic demand, the expanding of economies supply capacity. Rapid employment growth and labour outflows to other EU countries have led to a tightening of labour markets in many of the NMS. Therefore, the occurrence of labour shortages phenomenon has generated upward pressure on wages, which, in some countries, have been rising considerably above productivity growth, especially in the fastest growing economies.

Among the most important *external* determinants of inflation has been the increase in energy and food prices, which has had a strong impact in most NMS, because of the relatively large weight of these components in the consumption basket. In some countries with flexible exchange rates, however, these price increases were dampened by an appreciating currency. An exception in this regard is Romania, where a depreciating currency has added to inflation since mid-2007. Besides these factors, as determinants for inflation pressure, there are also the convergence factors, those corrective elements for emergent economies from the catching-up process, which drive the Balassa-Samuleson effect.

In those countries which have adopted inflation targeting as monetary strategy (Czech Republic, Poland, Romania and Hungary[1]) the inflation development was different. On the one side, the values of this indicator in Czech Republic, Romania and Hungary were well above the reference value stipulated by the Maastricht Treaty. On the other side, Poland has registered the best values for it, under or at the reference value. In the NMS which have adopted exchange rate targeting as monetary strategy, with euro as nominal anchor, (Baltic States and Bulgaria), inflation was higher than in the other countries.

Generally speaking, prior to the financial crises, in most countries under review, the inflation pressure was growing. Poland and Slovakia were the only NMS which recently have recorded a better inflation level. The main drivers for inflation pressure were relatively the same in NMS, but its development is different, and each country has its own path of inflation, as a consequence of each economy's pattern. The most austere situation has been registered in NMS under fixed exchange rates arrangement, and the bursting of economic and financial crisis has also affected the forecast for inflation development in the near future.

Since September 2008, NMS of EU have experienced a deterioration of investors' sentiment. This was reflected by a decrease in the foreign currency financing, by stumbling of the interbank money markets, and also by the deterioration of bond spreads and credit default swaps (CDO's) on government debt. On the other side, it is remarked a disinflation process in most of the NMS, since September 2008, and the reference value have been declining, too. Such a tendency of the inflation phenomenon is due to the sharp economic downturn of these countries, and to the easing of global price pressures. In spite of the weakened national currencies against euro, inflation was not affected in the NMS, because their main commercial and financial partners (European countries) have been suffering a recession period.

[1] Until February 2008, Hungary had a mixed monetary policy strategy - inflation targeting with a fixed exchange rate regime against the euro. Since February 2008, the Hungarian central bank has allowed the forint to trade freely on foreign exchange markets.

Table 1. HICP and Long term government bond yields in 2008 (April, October, December) and in February 2009

April 2008			
Harmonized Indices of Consumer Prices		**Long term government bond yields**	
Malta	1,9	EU	4,28
Slovakia	2,4	Slovakia	4,46
EU	2,6	Slovenia	4,47
Euro area	2,8	Euro area	4,52
Cyprus	3,2	Lithuania	4,59
Poland	3,4	Cyprus	4,6
Czech Republic	*4,8*	Czech Republic	4,72
Slovenia	*5*	Malta	4,77
Romania	*6,4*	Bulgaria	4,8
Hungary	*7,3*	Latvia	5,93
Lithuania	*8*	Poland	5,99
Estonia	*8,8*	*Romania*	*7,35*
Bulgaria	*10,1*	*Hungary*	*8,02*
Latvia	*13*	*Estonia*	*8,34*
Reference value	**3,43**	**Reference value**	**6,39**

October 2008			
Harmonized Indices of Consumer Prices		**Long term government bond yields**	
EU	3,5	EU	4,3
Slovakia	3,7	Czech Republic	4,53
Euro area	3,8	Euro area	4,58
Poland	*4,3*	Cyprus	4,6
Malta	*4,4*	Slovenia	4,66
Cyprus	*4,6*	Malta	4,81
Slovenia	*6,1*	Slovakia	4,95
Czech Republic	*6,5*	Bulgaria	5,17
Hungary	*6,6*	Lithuania	5,4
Romania	*7,9*	*Poland*	*6,35*
Estonia	*10,9*	*Latvia*	*6,6*
Lithuania	*11*	*Romania*	*8,27*
Bulgaria	*12,6*	*Estonia*	*8,46*
Latvia	*15,8*	*Hungary*	*9,57*
Reference value	**4,23**	**Reference value**	**6,22**

December 2008			
Harmonized Indices of Consumer Prices		**Long term government bond yields**	
EU	3,3	EU	4,3
Euro area	3,7	Euro area	4,54
Slovakia	3,9	Cyprus	4,6
Poland	*4,2*	Slovenia	4,61
Cyprus	*4,4*	Czech Republic	4,63
Malta	*4,7*	Slovakia	4,72
Slovenia	*5,5*	Malta	4,81
Hungary	*6*	Lithuania	5,61
Czech Republic	*6,3*	Poland	6,07
Romania	*7,9*	*Latvia*	*6,43*
Estonia	*10,6*	*Bulgaria*	*7,76*
Lithuania	*11,1*	*Estonia*	*8,16*
Bulgaria	*12*	*Hungary*	*8,24*
Latvia	*15,3*	*Romania*	*8,38*
Reference value	**4,07**	**Reference value**	**6,24**

February 2009			
Harmonized Indices of Consumer Prices		**Long term government bond yields**	
EU	2,9	EU	4,26
Euro area	3,4	Cyprus	4,6
Cyprus	*3,8*	Czech Republic	4,62
Slovakia	*3,8*	Slovenia	4,68
Poland	*4*	Malta	4,78
Malta	*4,6*	Poland*	6,06
Slovenia	*4,8*	*Lithuania*	*7,21*
Czech Republic	*5,2*	*Latvia*	*7,38*
Hungary	*5,3*	*Hungary**	*8,63*
Romania	*7,8*	Bulgaria	:
Estonia	*9,4*	Estonia	:
Bulgaria	*10,8*	Euro area	:
Lithuania	*10,8*	Romania*	:
Latvia	*14,1*	Slovakia	:
Reference value	**3,77**	**Reference value**	**6,19**

*Source: Eurostat, authors' calculation; * the exchange rate over the +/- 15 % band in February 2009*

2.2 Long term government bond yields

When we consider the criterion of long term government bond yields, it can be seen that, except Hungary, Poland (only in 2004) and Romania, all new Member States met this convergence criterion since 2004, the year of joining the EU, until 2007. Year 2008 brings a change to this situation. Thus, countries that have not fulfilled this criterion in 2008 are Latvia, Estonia, Hungary and Romania. Taking into account the Eurostat data on the first months of 2009, it can be concluded that Lithuania could be added also to the countries that do not meet this criterion.

For the Baltic countries and Bulgaria, the trust offered by the fixed exchange rates and high inflation associated with the real convergence process have led to a level of the nominal interest rates on the market close to those of euro area, leading to negative real rates of interest (because the domestic inflation is well above that of the euro area). This resulted in macroeconomic overheating and credit boom, interest rates playing a pro-cyclical role, putting additional pressure on prices. In recent years, because they brought higher yields than the euro area, interest rates have attracted foreign capital, leading to the lowering of interest rates, inflaming again the (consumption) credit. Although most of the NMS recorded considerable current account deficits, they reduced interest rates on the market, situation which reflected also the increased confidence in the economy and sustainability of future trends, resulting in a decrease in long-term interest rates, thus fulfilling the Maastricht criterion until the first trimester of 2008.

Effects of the crises could be seen in growing difficulties in all NMS to keep the indicator under the reference value from the second trimester of 2008 until first trimester of 2009. Thus, in April 2008, Estonia does not meet the criterion, adding itself to Hungary and Romania. In October 2008, Poland and Latvia could be considered, too, out of range of the criterion and in December 2008, Bulgaria is in the same situation. We can see that, one by one, the Baltic States have violated the long term government interest rates criterion as Hungary and Romania and only the floating exchange rate countries (Poland, Slovakia) seems to be capable of getting out of the trap of non-conformity.

In the period April 2008 - February 2009 the reference value is decreasing as an effect of the current crisis. The motivation of this evolution is the reduction of the inflation in the states that were the best performers in fulfilling the price stability criterion. Thus, we can observe a divergence in evolution between NMS and euro area, the Maastricht criterion on long-term government interest rates may be now more difficult to achieve. If these countries had tried to achieve the criterion in a sustainable manner in "good times", now they would not have any difficulty in fulfilling it. In 2008, in the case of Slovakia, the Czech Republic and Poland, long-term interest rates have not felt strong disturbance due to the crisis. The prudent macroeconomic situation, with smaller fiscal and current account deficits and a more healthy structure of GDP growth, has put its fingerprints on balancing NMS

economies with inflation targeting in the moment of crisis appearance. This is especially the case of Czech Republic.

The evolution of interest rates on the market, inflationary expectations and the market perceptions about future developments are reflected in long-term interest rate. So, the recent trends of long term government bond yields are not surprising - the fulfilment of this criterion is a real challenge for all NMS.

2.3 Exchange rate

Between 2004 and 2008, all NSM have fulfilled the exchange rate convergence criterion. Romania was the only country from EU, which didn't satisfy this criterion between 2001 and 2003.

In Slovakia, a member of ERM2 until January 2009 and then in the euro area, the exchange rate had hardly suffered from the effects of the crisis in 2008. The Slovak currency enjoyed already the protective umbrella of the ECB and market confidence did not shake. So, the Slovak koruna was among the few currencies of NMS with floating exchange rates, which didn't depreciate in 2008, suffering even an appreciation.

The Czech koruna and the Polish zloty are the other currencies of NMS, which appreciated in 2008. But in the first two months of 2009, the Czech koruna suffered depreciation. The Polish zloty began to depreciate in November 2008.

The exchange rates of the countries having a currency board (Bulgaria, Estonia and Lithuania) have remained unchanged in 2008. The currencies of Latvia, Romania and Hungary have suffered depreciations in 2008; the most serious being affected the Romanian leu (RON). The severe depreciation of RON began in October 2008, as for the Hungarian forint, too.

As the risk appetite waned, capital was withdrawing from the emerging markets across the globe and EU membership alone did not prove to be a strong enough protection against the flight of capital from the NMS. The most dramatic turn of events took place in Hungary in October 2008, when the government securities market came to a full stop and the central bank of Hungary had to intervene to breathe life into this market. The financial support from the IMF and the EU within the framework of a stand-by arrangement helped to prevent a collapse of the Hungarian financial markets, thereby helping to avoid a dangerous contagion of other markets in the region. The Latvian lats began depreciating sharply in June 2008.

In 2009, some of the NMS failed to fulfil the exchange rate criterion. From January, Poland and Romania have been in this situation, followed by Hungary in February (see Tables no. 1 and 2).

The forecast for 2009 of the European Parliament Economic Department shows that the currencies of all NMS (excepting those having currency boards) will depreciate, the sharpest depreciation being suffered by the Polish zloty. Also, it is mentioned that Romania, Poland and Hungary will not fulfil the exchange rate convergence criterion in 2009. According to the same forecasts, in 2010 all NMS will satisfy this criterion.

Recent events on the global financial markets have convincingly demonstrated that membership in the euro area provides protection against exchange rate risks and the associated shocks at times of financial crisis. This is particularly true considering that a very large part of the credit granted to corporations and households in the NMS has been in foreign currencies.

Table 2. Exchange Rate development in 2008 *(April, October, December)* and in February 2009 compared with December 2007

Country	Apr. 08	Oct. 08	Dec. 08	Feb. 09
Bulgaria	0	0	0	0
Czech Republic	-4,76118	-5,88593	-0,74857	8,146825
Estonia	0	0	0	0
Latvia	-0,01434	1,691756	1,562724	1,16129
Lithuania	0	0	0	0
Poland	-4,42593	-0,6886	11,18701	29,02124
Romania	3,04659	6,019632	10,96433	21,25258
Hungary	0,225136	2,752982	4,676515	17,82131

Source: Eurostat, authors' calculation

2.4 Fiscal and budgetary criteria

Public finances are also being hit hard by the slowdown. As economic growth will remain below potential, a further deterioration in the budgetary outlook is expected for 2009 and 2010.

Unlike other indicators, in the case of public finances, the euro membership is no more protecting. As regards *governmental deficits*, several Member States (new and old) are projected to breach or stay over the 3% of GDP reference value in 2009. For euro area and EU, these values would represent the highest general government

deficit in almost fifteen years.

Looking at the prognosis for 2009 (see Table no. 3), despite the big number of countries falling under the line, Malta and Hungary are recovering and pass above the line. In Hungary, the deficit is projected to have fallen to 3,3% of GDP in 2008, mainly due to expenditure restraint and it is expected to decline further to 2,8% of GDP in 2009 as a result of budgeted expenditure cuts. In Estonia, the scale of the downturn of the economy is set to severely affect public finances and even though the government plans significant fiscal restraint, there is a risk that the deficit to GDP ratio will breach the 3% reference value in 2009. In Poland, in 2009, the general government deficit is likely to increase to about 3,6% of GDP; this reflects a much gloomier outlook for consumption, imports and wage growth, but also the personal income tax reduction and the intended acceleration of public investment aimed at moderating the effects of the global financial crisis. In Latvia, the deficit is growing as the revenue shortfall due to the recession is expected to be only partly counterbalanced by the package of expenditure restraint and tax increases adopted in December. The highest deficit is expected to be registered in Romania, as tax revenues will be affected by the economic slowdown as well as by various tax changes.

Table 3. General government surplus (+) or deficit (-) and General government gross debt 2007 - 2009

General government surplus (+) or deficit (-)						General government gross debt					
2007		2008		2009		2007		2008		2009	
Reference value: - 3% of GDP						Reference value: 60% of GDP					
Cyprus	3,4	Bulgaria	3,2	Bulgaria	2	Estonia	3,5	Estonia	4,3	Estonia	6,1
Estonia	2,7	Cyprus	1	Cyprus	-0,6	Latvia	9,5	Bulgaria	13,8	Bulgaria	12,2
Slovenia	0,5	Slovenia	-0,9	Czech Republic	-2,5	Romania	12,7	Romania	15,2	Lithuania	20
Bulgaria	0,1	Czech Republic	-1,2	Malta	-2,6	Lithuania	17	Latvia	16	Romania	21,1
Latvia	0,1	Euro area	-1,7	Slovakia	-2,8	Bulgaria	18,2	Lithuania	17,1	Slovenia	24,8
Euro area	-0,6	EU	-2	Hungary	-2,8	Slovenia	23,4	Slovenia	22,1	Czech Republic	29,4
EU	-0,9	Estonia	-2	Lithuania	-3	Czech Republic	28,9	Czech Republic	27,9	Slovakia	30
Czech Republic	-1	Slovakia	-2,2	*Estonia*	*-3,2*	Slovakia	29,4	Slovakia	28,6	Latvia	30,4
Lithuania	-1,2	Poland	-2,5	*Slovenia*	*-3,2*	Poland	44,9	Poland	45,5	Cyprus	46,7
Malta	-1,8	Lithuania	-2,9	*Poland*	*-3,6*	EU	58,7	Cyprus	48,1	Poland	47,7
Slovakia	-1,9	*Hungary*	*-3,3*	*Euro area*	*-4*	Cyprus	59,4	*EU*	*60,6*	*Malta*	*64*
Poland	-2	*Latvia*	*-3,5*	*EU*	*-4,4*	*Malta*	*61,9*	*Malta*	*63,3*	*EU*	*67,4*
Romania	-2,5	*Malta*	*-3,5*	*Latvia*	*-6,3*	*Hungary*	*65,8*	*Euro area*	*68,7*	*Euro area*	*72,7*
Hungary	*-5*	*Romania*	*-5,2*	*Romania*	*-7,5*	*Euro area*	*66,1*	*Hungary*	*71,9*	*Hungary*	*73,8*

Source: Eurostat, authors' calculation; EC forecast for 2009

The increase in budget deficits in 2009 is due to both cyclical and structural factors. The sharp downturn in GDP growth implies a significant increase in government deficits via the cyclical component of the government balance. In addition, the reversal of past revenue windfalls (from high corporate profits and asset prices) and a generally less tax-rich growth composition are expected to lead to additional revenue shortfalls in 2009. Finally, governments have announced or already adopted significant discretionary fiscal stimulus measures in response to the downturn.

Regarding the *public debt*, except Hungary that is representing NMS, the euro area and EU are below the reference value for 2007-2009, and their values are increasing from one year to another.

3 Conclusion

In NMS, after the recovery of the economy and regaining the market confidence, inflows of portfolio and foreign direct investments, which stopped in the moment of crisis appearance, should determine the interest rates return on theirs path and also the fulfilment of long-term government bond yields criterion. However, a too rapid decline (both in terms of time and proportion) of interest rates, without a structural macroeconomic balancing, could reinstall "boom & bust" cycle and therefore, once again, inflame the inflation. As a result, the situation would lead to a prudent policy of central banks (increasing key interest rates) and a reluctance of commercial banks to offer more attractive and competitive interest rates. Thus, interest rates, placed on the upward trend, might act according to its pro-cyclical nature and become a factor of perturbation and not a fender for shocks, as it is design for the convergence process.

The sharp depreciations of the floating exchange rates and the associated increases in risk premia and domestic interest rates in the wake of the crisis proved once more the validity of the findings reported in the economic literature that for small open economies, an independent exchange rate is more a source of shock than a shock absorber (Darvas-Szapáry 2008, pp. 18-20) For the NMS, which pegged the exchange rate to the euro, the crisis-caused shock translated into substantial increases in domestic interest rates and sharp downturns in the rates of economic growth, as these countries struggle to reduce their outsized current account deficits

In the countries with floating rates, the economic downturn has been less sharp, as these countries had experienced less overheating fuelled by excessive credit growth prior to the crisis and have been better able to maintain competitiveness.

Although for some NMS, which are not in the euro area, the crisis has raised the attractiveness of euro area membership, it should be emphasized that the euro is not a cure against all risks. Experience has shown that the greatest risk for countries in the euro area is loss of competitiveness due to excessive price and wage inflation.

Once the independence of monetary and exchange rate policy has been relinquished, the burden of avoiding overheating and maintaining competitiveness falls on fiscal policy and on policies which improve productivity. The task of improving productivity most often involves structural reforms in areas and of importance that can vary from one country to the other. The types of reforms that will enhance competitiveness have been spelled out in the Lisbon agenda, the implementation of which should be as high on the list of priorities of the new Member States as satisfying the Maastricht nominal criteria.

It is recommended that the NMS also prepare for the time when financial conditions return to normal. This would require deepening structural reforms to reduce vulnerabilities, improve the investment climate and increase total factor productivity, and closely follow future developments in monetary conditions as volatility declines, intensifying banking supervision.

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