

# *The Monetary Integration of the New Member States before the Euro Area Debt Crisis*

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This paper analyzes the process of monetary integration of the New Member States in the European Union till the beginning of the Euro Area debt crisis. The focus of investigation is on the nominal convergence (the fulfillment of the Maastricht criteria) and on the satisfaction of the Optimum Currency Area criteria by the New Member States. More specifically, the trade integration, the financial integration, the output structure and the labor markets of the New Member States are explored from the standpoints of the Optimum Currency Area theory and in the context of the future membership of the New Member States in the Euro Area. The experience of the NMS, which have already adopted the Euro, is also reviewed.

*Key Words:* New Member States, monetary integration, nominal convergence, Optimum Currency Area theory, macroeconomic policy

*JEL Classification:* F15, F41

## **Introduction**

Economic integration can be defined as an elimination of economic borders between two or more economies (Pelkmans 2001). In a European context economic integration is the successful inclusion and operation of a national economy in the EU Single Market with free movements of goods, services, capital and workforce and with common regulations in certain areas such as trade, competition, some fields of finance etc. Integration is not equalization because each member country keeps its comparative advantages and economic specialization, which produce the benefits of integration. Monetary integration means waiving the use of monetary and exchange rate policies for achieving only national goals. By signing the Maastricht treaty the New Member States (NMS) bound themselves to observe the European prescriptions about these policies. In the long run monetary integration represents an adoption of the single European currency. The challenge for the NMS is to combine economic and monetary integration with their national goals.

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Although the separate NMS substantially differ from each other, they share important similarities:

- All NMS are relatively small compared to the EU and the Euro area (EA). This presumes that effects of integration will be much stronger for the NMS than for the old member countries (EU-15);
- All NMS are less economically and financially developed than the EU-15, which implies that the NMS will pursue certain common goals and share some common trends in their development.

The goal of this paper is to analyze the monetary integration of the NMS on the basis of the Maastricht criteria of nominal convergence and on the basis of the Optimum currency area criteria. In order to achieve these goals the investigation is structured as follows. Section 2 deals with the nominal convergence of the NMS related to the fulfillment of the Maastricht criteria. Section 3 investigates the monetary integration of the NMS from the standpoints of the OCA theory. Section 4 analyzes the experience of the NMS, which have already joined the EA. Section 5 makes concluding comments.

The analysis is complicated because some optimum currency area (OCA) criteria are endogenous, that is, they can arise from the very process of monetary integration. For instance, the higher degree of trade openness makes the successful participation in a currency union more probable but in the same time the degree of trade openness can also be influenced by a currency union membership. This argument can be equally applied to the transmission mechanism because the functioning of financial markets is likely to be affected by joining a currency area.

It is crucial whether in a currency area there are asymmetric shocks and how they are transmitted. The more similar the shocks in aggregate supply and aggregate demand and the closer the rates of adjustment of separate economies to these shocks, the less the need for autonomous monetary policy and the bigger the net benefits of sharing a common currency.

According to the OCA theory, suitable for participation in a monetary union are countries, which meet certain criteria for real convergence of their economies such as high degree of openness, mobility of factors of production and diversification of production and exports. If there is a clear convergence between economic cycles of the candidate countries for a monetary union and the economic cycles inside the union, the candidates can be considered ready to join the currency area.

### **The Nominal Convergence of the NMS**

Upon the enlargements in 2004 and 2007, twelve new states joined the EU. Based on their advancement on the way to EA membership, the NMS can be divided in three groups:

- EA members – Cyprus, Malta, Slovenia, Slovakia and Estonia;
- Countries participating in the Exchange Rate Mechanism 2 (ERM 2) – Latvia and Lithuania;
- Countries outside the ERM 2 – Bulgaria, Czech Republic, Hungary, Poland and Romania.

The NMS, which joined the EU in 2004, received an assessment of their progress to an EA membership by the EC and the ECB Convergence reports 2004. In August 2004 only Estonia and Lithuania covered all convergence criteria except for the 2-year ERM 2 participation requirement.

Indicative of the way the EC applies the Maastricht criteria, are the cases of Slovenia and Lithuania. In March 2006 Slovenia and Lithuania officially applied for an EA membership. In May 2006 the EC assessed the readiness of the two countries to join the EA in Convergence reports. Slovenia and Lithuania convincingly met all convergence criteria. The sole exception was the inflation criteria, where Lithuania was 0.1 percent above the reference value. Lithuania fulfilled all other convergence criteria better than Slovenia. Slovenia joined the EA in 2007 but Lithuania did not.

The cases of Slovenia and Lithuania imply that:

- European institutions are uncompromising when applying the convergence criteria – the good fulfillment of four criteria may not be enough to enter the EA, if there is even one criterion not covered.
- The satisfaction of criteria should be sustainable over the short and middle period.

In October 2006 no NMS from Central and Eastern Europe covered the Maastricht criteria.

In 2007 Cyprus and Malta applied for an EA membership and their readiness was assessed in convergence reports by the EC and the ECB. Over the reference period April 2006–March 2007 Cyprus and Malta covered all Maastricht criteria except for the one of the public debt. Since the public debt levels of the two countries were near the reference values and

were expected to decline in the future, Cyprus and Malta joined the EA in early 2008.

In March 2008 Bulgaria, Czech Republic, Estonia, Latvia and Lithuania met all convergence criteria except for the inflationary one. Hungary covered only the exchange rate requirement for fluctuations within the band of  $\pm 15\%$ , but had not participated for two years in *ERM 2*. Poland was the only country to meet all criteria, but, like Hungary, had not stayed for two years in *ERM 2*. Romania did not fulfill the requirements for price stability and for dynamics of the long-term interest rates. Slovakia covered all convergence criteria and entered the EA in early 2009.

The countries in a currency board arrangement (CBA) face difficulties in meeting the inflation criteria. The simultaneous fulfillment of the price stability and exchange rate requirements is impeded by the real appreciation of the national currency arising from structural changes in the transition to a market-oriented economy and from the real convergence of national price and income levels to the levels of developed EU economies. Under a CBA the nominal exchange rate is fixed, which guarantees the fulfillment of the exchange rate criterion. All real appreciation of the national currency results in rising inflation and hampers the fulfillment of price stability criteria.

The global crisis has favored the fulfillment of the price stability criterion because of the decrease in inflationary pressures, but has impeded the fulfillment of the requirements for budget deficit and long-term interest rates.

### **The Monetary Integration of the NMS from the Standpoint of the OCA Theory**

#### TRADE INTEGRATION

Trade openness is essential for estimating the degree of international integration of a national economy and for choosing an exchange rate regime or a monetary union membership. Trade openness is calculated by dividing the average of exports and imports by GDP. The higher the trade openness, the bigger the influence of international prices of tradables on domestic prices and cost of living and the less useful the autonomous exchange rate policy as a shock-absorbing tool is. Increased trade openness is likely to amplify business cycle similarity and decrease the necessity of national stabilization policies, as argued by Frankel and Rose (1998; 2000).

The New Member States are open economies and meet the trade openness criterion for monetary union membership. The trade openness of the New Member States in goods and in services is much above EU-average. The New Member States have higher trade openness in goods and lower trade openness in services than the Euro area.

The New Member States are highly integrated in the European Union in terms of trade – above 70 percent of their foreign trade (for both exports and imports) is within EU. These shares are comparable in size with the respective shares of the Euro area.

The Czech Republic, Hungary, Poland and Romania are among the Euro area twenty main trading partners for both exports and imports. The total percentage of the four states in the EA imports grew from 7 in 1999 to 12 in 2009, whereas the total percentage of the four states in the EA exports rose from 8.3 in 1999 to 12.6 in 2009. These numbers show increased trade activity between the NMS and the EA.

The impact of trade integration on business cycle synchronization has been broadly discussed in literature (Commission of the European Communities 1990; Fidrmuc 2004; Frankel and Rose 1998; Krugman 1993). The small open economies of the New Member States are highly integrated with each other and with the Euro area in terms of trade. A lot of investigations have been made in how synchronized the New Member States are with each other and with the Euro area as a result of increased trade. Synchronization caused by trade varies by countries (as shown by Kocenda 2001; De Haan, Inklaar, and Jong-a-Pin 2008; Fidrmuc and Korhonen 2003; Korhonen 2003) and depends on the type of shock, which hits the economy (as discussed by Babetskii 2005; Horvath and Ratfai 2004; Babetskii, Boone, and Maurel 2004). Fidrmuc and Korhonen (2004) summarize lots of publications on the business cycle similarity between the New Member States and the Euro area. Their findings are that the Central European countries are better correlated with the Euro area than Balkan and the Baltic states (except for Estonia).

#### FINANCIAL INTEGRATION

The process of globalization and the expected future membership in the European monetary union has intensified the financial integration of the New Member States. The influence of financial integration of the New Member States on their business similarity with the Euro area has not been fully investigated in economic literature. Real business cycle models predict that increased financial integration will lead to higher syn-

chronization in consumption and lower synchronization in investment and output (Backus, Keho, and Kydland 1992). Financial integration can cause industrial specialization and thus decrease synchronization.

Financial integration may contribute to business cycle convergence by demand-side effects. If consumers possess assets in foreign stock markets (indication of financial integration) then a decline in these markets lowers domestic wealth and demand. When there is a crisis abroad foreign banks' bonds decrease in value thus causing a fall in the domestic market too. Banks transfer these losses onto their clients by higher interest rates thus hampering economic growth and increasing business cycle similarity.

Empirical results refute the forecasts of real business cycle models. Empirical investigations find evidence of higher correlation in output than in consumption (Imbs 2004).

The contradiction between empirical results and theory expectations could be due to the type of financial integration. Financial market integration may be divided into stock market integration and debt market integration (Davis 2009). Stock market integration can cause negative output correlation because capital flows maximize marginal rate of return as predicted by real business cycle models. Debt market integration may raise synchronization because of the demand-side effects already described.

Estimating the effects of financial integration of the new member countries is important because of their eventual accession to the European monetary union. For a common monetary policy to be effective the New Member States must have similar business cycles. A monetary union amplifies financial integration of participating countries (De Grauwe and Mongelli 2005). If financial integration causes higher synchronization, this ought to help the New Member States meet the optimum currency area criteria. If financial integration brings about lower synchronization, this might decrease common monetary policy's effectiveness. Economic theory and empirical investigations disagree on the impact of financial integration on business cycle convergence.

In literature, there are two assumptions about the level of financial integration of the New Member States. The first assumption is that financial markets of the New Member States are less integrated than these in the Euro area but the integration process has sped up after their accession to the European Union (Baltzer et al. 2008). The second assumption is that the new member countries have reached a level of financial integration comparable to the level of the Euro area (García-Herrero and Wooldridge

2007). The first assumption is supported by the fast development of financial sector in the New Member States and the massive presence of other Member States' banks in this sector. Arguments in favor of the second assumption are the goal to join the Euro area and the common institutional and regulatory framework provided by the European Union (European Bank for Reconstruction and Developments 2006).

In a monetary union, the integration of financial markets is crucial to the effective transmission of the common monetary policy. The higher the financial integration is, the more effective the common monetary policy is. Joining the Euro area without a sufficient level of financial integration could intensify idiosyncratic shocks and lower the effectiveness of the common monetary policy (Cappiello and Manganeli 2007).

The relationship between financial structures and monetary policy transmission has been extensively discussed in literature. The differences in financial and bank markets of European monetary union's members can cause asymmetric effect of common monetary policy. These differences are legal and economic. National legislations change slowly, therefore legal differences are constant in the short run (Cecchetti 2001). Economic factors vary more rapidly. The responses to monetary shocks in the New Member States and the Euro area are quite different (Jarociński 2004). Short-term output and price responses are stronger in the Euro area, while midterm responses are comparable in size. Interest rate shocks are bigger and more resistant in the New Member States whereas exchange rate responses are identical. Financial markets in the New Member States have a slow response to strong and/or prolonged fluctuations in interest rates and exchange rates. This delayed reaction might be due to insufficient depth of financial markets, which in the short run impedes the effective transmission of monetary policy changes to financial markets.

Financial depth and the level of financial intermediation in the New Member States are low compared to European Union average (Anzuini and Aviram 2004). This could explain the longer lag of monetary transmission in the New Member States in comparison with the Euro area.

The integration of equity markets among the New Member States and with the Euro area has increased in the European Union accession process (Cappiello and Manganeli 2006).

Financial integration is related to certain costs and benefits (Agenor 2003). Benefits are considered to exceed costs if control mechanisms for financial stability are implemented. Joining the Euro area without suf-

TABLE 1 Gross value added at basic prices (percentage of total)

Country	Agriculture		Industry		Construction		Services	
	1997	2007	1997	2007	1997	2007	1997	2007
Euro area	2.8	1.9	22.7	20.4	5.7	6.5	68.7	71.1
New Member States	8.1	3.9	25.8	23.0	6.0	7.4	60.1	65.7
Difference	-5.3	-2.0	-3.1	-2.6	-0.3	-0.9	8.7	5.4

NOTES Adapted from Eurostat (2009).

ficient financial integration could cause problems with transmission of common monetary policy and common shocks.

### OUTPUT COMPOSITION

The composition of output (the structure of gross value added by sectors of economy) is important for assessing the degree of structural convergence. If this structure differs substantially by countries, sector disorders may grow into asymmetric country shocks. Kenen (1969) and Dedola and Lippi (2000) show that differences in the composition of output may create idiosyncratic national business cycle because sectors vary in cyclical properties and even in responses to monetary measures.

Structures of gross value added and employment are in a close relationship with the phase of economic development. The higher level of development is characterized by a bigger share of services and smaller share of agriculture in gross value added and employment, while the relationship between industry share and per capita output is U-shaped (Chenery and Taylor 1968).

Table 1 displays the shares of four sectors (agriculture, industry, construction and services) in gross value added of the New Member States and the Euro area for 1997 and 2007. In all sectors, the differences between the Euro area and the new member countries have shrunk for ten years. By a process of structural convergence, the New Member States have shortened the distance in economic development vis-à-vis the Euro area.

### LABOR MARKETS

From the viewpoint of the OCA theory, the functioning of labor markets is important for two reasons.

First, flexible labor markets (characterized by a competitive wage-setting mechanism, geographic and sectorial mobility of workforce, effective information, and transparent regulatory framework) diminish the

cost of shocks in demand and supply, measured in employment and output. A flexible labor market decreases the need to use active monetary and exchange rate policies to mitigate the effects of these shocks at national level and favors the participation of a country in a currency area.

Second, labor markets are important channels for transmission of economic disturbances to prices and real sector, thus influencing the cyclical properties of an economy. A currency union can operate smoothly if labor market structures of its member countries are relatively similar and adaptable. This diminishes the risks of domestic pressures when the currency area is hit by common shocks.

The review of literature implies that the labor markets of the NMS are at least as flexible as the labor markets in the EA member countries.

### **The Experience of the NMS, Which Have Already Adopted the Euro**

Slovenia was the first NMS to meet the Maastricht criteria and enter the EA. The process of nominal convergence of Slovenia to the EA occurred on the background of a stable economic growth, current account deficit and budget deficit. Slovenian deficits were moderate unlike those in other NMS and did not jeopardize the macroeconomic stability of the country.

Several months after the adoption of the Euro the inflation in Slovenia started rising and reached 5,5% in December 2008 due to domestic factors (lack of competition and speculative operations with the new currency) and international factors (increase in prices of energy resources). The lag inflation, the GDP gap and the insufficient flexibility of labor markets may have also contributed to increasing inflationary pressures in Slovenia.

The global crisis and the recession it caused diminished inflationary pressures in Slovenia but the inflation differential between Slovenia and the other EA member countries remain unchanged. The main structural problems for Slovenia are related to the insufficiently flexible labor markets, which adversely affect the cost of labor and economic growth.

For Slovakia the main challenges on the way to a EA membership were the impossibility to simultaneously control the exchange rate and inflation under free cross-border capital movements, the need to shorten as much as possible the stay in ERM 2 (because the reference value of price stability criterion is difficult to be prognosticated) and the Balasa-Samuelson effect (the higher increase in prices of non-tradables resulting in rising the general price level). The introduction of the Euro by Slovakia

under such heavy challenges is an undeniable achievement, which can be ascribed to the good cooperation and coordination between the central bank and the government of Slovakia. During its stay in *ERM 2* Slovakia pursued policy of moderate growth in wages being always lower than the growth in labor productivity. This policy helped Slovakia to harness inflation and to cover the convergence criterion of price stability.

The international economic situation and global inflation trends facilitated the process of accession of Slovakia to the *EA*. The period of assessing Slovakia's readiness for an *EA* membership coincided with a period of stability and even decline in international prices owing to cheap imports from Asia.

From the Slovak experience in adopting the Euro two important conclusions can be drawn. *First*, a broad national consensus is needed in the applicant countries on the time and way to introduce the Euro. A realistic strategy based on cooperation between the Ministry of Finance and the National Bank should be developed. *Second*, the stay in *ERM 2* is successful if it is accompanied with a steady inflow of capital from abroad. Under crisis conditions it is difficult to achieve, therefore it is advisable that the accession to the *EA* occur after the effects of the crisis are overcome.

Slovakia was the first country with a floating exchange rate to join the *EA*; therefore the Slovak experience is important to other *NMS* with a floating exchange rate, which apply for an *EA* membership.

In May 2010 the *EC* assessed positively the readiness of Estonia to enter the *EA* and in July 2011 the Council of *EU* approved Estonia's accession to the *EA* on 1 January 2011.

The main obstacle for Estonia to introducing the Euro was the fulfillment of price stability criteria because of the specificity of the Estonian exchange rate regime – a *CBA*. Under a global financial crisis the external and domestic pressures on Estonian price level diminished and the country managed to meet the inflation criteria in November 2009. The crisis complicated the fulfillment of the budget deficit criteria, therefore implemented fiscal austerity measures, which in 2009 solely accounted for 9% of *GDP*. The decline in prices and wages allowed the Estonian economy to increase its productivity even in crisis conditions. Relating wage growth to growth in labor productivity played a vital role in preserving the stability of Estonian economy during the crisis.

Some peculiarities of the Estonian business cycle favored the fulfillment of convergence criteria in crisis conditions. The first signs of economic slowdown in Estonia appeared in late 2006 and early 2007, and

at the beginning of 2008 Estonian economy started to shrink. In Estonia the economic crisis occurred earlier and had less detrimental effects compared to other small open economies. A possible explanation of this fact is that Estonia took early actions to harness the credit boom in the pre-crisis years and avoided overheating of the economy.

Estonia's success in meeting the Maastricht criteria can be attributed to several factors:

1. Good timing in applying for an EA membership. On one side, Estonia selected a reference period when international prices of food and energy sources declined in order to decrease external inflationary pressures. On the other side, the economic slowdown and the decrease in domestic consumption diminished the internal pressure on prices. The decrease in external and internal inflationary pressures helped Estonia cover the price stability criterion under crisis conditions;
2. Prudent macroeconomic policy: Before the crisis, Estonia took steps to restrain the credit boom in order to avoid an overheating of the economy. Under crisis condition, Estonia implemented fiscal consolidation to cover the budget deficit criteria and related growth in wages to growth in labor productivity. Estonia became the first country to meet all convergence criteria in crisis conditions.

### **Conclusions**

Five of the twelve NMS, which joined the EU in 2004 and 2007, have already adopted the Euro – Slovenia, Cyprus, Malta, Slovakia and Estonia. There is a considerable progress in the integration of the NMS but there is still much to do. At present a full monetary integration of all NMS together, as a group cannot be achieved. An individual approach considering the specificity of each country is needed for adopting the Euro.

The economic integration is not merely a convergence (a decrease in the differences in basic macroeconomic indicators of a group of countries) but a much more complex process of real inclusion of national economies in a single market. Integrating economies specialize, cooperate and complement each other; their business cycle similarity increases but national competitive advantages still play a vital role.

The integration does not mean just adopting the Euro but combining the sectors of a national economy in the sectorial structures of an integration community. The degree of integration is not determined by the

EA membership but by trade and sectorial structures and interactions. A country should not enter the EA before it is integrated in trade and sectorial structures of the Single market of the EU. The monetary integration is a culmination of the integration process and ought to be implemented after the national economy is structurally integrated in the EU. Proof of this are the PIIGS (Portugal, Italy, Ireland, Greece and Spain) which experience economic difficulties some of which may be attributed to their inability to withstand the pressures of sharing a common currency.

The NMS have achieved a high degree of nominal convergence with the EA. As to real convergence, the situation of the separate NMS is quite different. The trade integration of the NMS with the EA is very strong. The structural integration (for example measured as the composition of the gross value added) has progressed more slowly than the trade integration, which may slow the process of real convergence.

Some NMS have achieved a higher business cycle similarity with the EA than other. The labor markets of the NMS are as flexible at least as the labor markets of the EA member countries. In terms of financial integration, the NMS are far behind the EA.

Poland, Hungary and the Czech Republic still use the exchange rate to counteract external economic shocks. Though these countries cover the optimum currency area criteria, they face difficulties in meeting the Maastricht criteria.

The legal convergence of the NMS to the EA has advanced considerably. As to the legal independence of the Central banks, the convergence process is almost complete. In the area of monetary policy, the NMS still have work in setting their Central banks in operative and technical compliance with the European system of central banks.

In order to satisfy the convergence criteria in crisis condition, the NMS need to reformulate their macroeconomic policies in accordance with the macroeconomic specificity of each country.

The fulfillment of the Maastricht criteria requires deep structural reforms. A fiscal deficit of up to 3% of GDP presumes self-financing of the public pension system, while the exchange rate stability suggests maintaining the correlation between the growth of productivity and the growth of real wages. The process of meeting the nominal convergence criteria should be accompanied by actions to adjust the real economy by a process of real convergence.

The NMS should adapt their macroeconomic policies to crisis conditions. Transparent, consecutive and foreseeable macroeconomic policies

are needed to smoothly adjust the economy and regain the trust of foreign investors. Such policy ought to be directed at decreasing the external and internal macroeconomic imbalances (for instance, the budget deficits and the current account deficits).

The macroeconomic (fiscal and monetary) policies of the NMS under crisis conditions are characterized by heterogeneity and asymmetry of the measures taken. The macroeconomic imbalances vary by countries under the influence of different factors – size of excessive demand at the onset of the crisis, structure of foreign trade, size of foreign debt, share of separate economic sectors in gross value added etc.

The type of the exchange rate regime has specific impact on the macroeconomic policies of the NMS. In the countries with fixed exchange rates fiscal and monetary measures are restricted by the necessity to maintain the stability of national currencies. In the inflation-targeting NMS such as Hungary and Romania, the fall in interest rates during the crisis was limited by the liquidity problems in the inter-bank market and by the high inflation rates in these countries at the beginning of the crisis.

The adoption of the Euro should not become an end in itself for the NMS. The EA membership makes sense for the NMS only if they have quality state intuitions and good reputation among foreign investors and creditors. Poland, the Czech Republic and Hungary cleverly take advantage of the autonomous exchange rate policy and do not hurry to enter the ERM 2, but have the trust of international financial circles.

From the standpoint of the OCA theory Bulgaria is ready to enter the EA. Bulgaria meets the OCA criteria, therefore the benefits should outweigh the costs of adopting the Euro. The high degree of business cycle similarity between Bulgaria and the EAMS suggests the common monetary policy will not cause additional inflation or unemployment in Bulgaria. The Bulgarian lev is pegged to the Euro in a CBA; therefore, Bulgarian monetary policy is almost entirely dependent on the monetary policy of the ECB. To Bulgaria the adoption of the Euro would not mean a loss monetary sovereignty but only an elimination of transaction costs.

Although Bulgaria meets the OCA criteria, it is not very likely to achieve a sustainable fulfillment of the Maastricht criteria in the years to come. The price stability criterion should be met not only over the one-year reference period but also steadily over the medium term, which is difficult to achieve under a CBA. As to real convergence, Bulgaria lags behind and remains one the poorest states in the EU with low per-capita income and low labor productivity.

Under crisis conditions, it is advisable that the NMS concentrate their efforts on increasing the absorption of EU funds and on attracting foreign capital. This demands zero corruption tolerance policy, improving the work of state institutions and building quality infrastructure.

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