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### **A Comparative Analysis of Monetary Policy in Central and Eastern European Countries**

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## Abstract

This work aims to compare the monetary policies of Central and Eastern European countries: the final objective of the monetary policy, monetary policy instruments, the harmony between these and those of the Central European Bank. There are several factors that influence the monetary policy mechanism: the structure and characteristics of the financial system, the level of monetization, the exchange rate. I took a comparative approach in my analysis of these factors. It is very important to understand the similarities and differences regarding the instruments of monetary policy and the differences of its transmission mechanism in the Central and Eastern European countries, due to the fact that their monetary policy will be subordinated to the European Central Bank. The existence of asymmetries could be expensive for new members and destructive for the functioning of the Euro area.

Several new member states have expressed a strong intention to join the EMU as soon as possible. For the adoption of Euro, candidate countries must meet the nominal convergence criteria – the Maastricht Criteria, which reflect the irreversible macroeconomic evolution required for participation in the EMU. The most difficult objective to achieve is the one called the „real convergence”. We have a comparative situation regarding the achievement of convergence criteria by Central and Eastern European countries before adopting the Euro as their currency.

## 1. Objectives and instruments of monetary policy

In this chapter I present the objectives of monetary policy of the ECB and the national central banks from CEEC. Also, I analyse comparatively the instruments of monetary policy.

### 1.1. ECB Objective

According to art.105 of the EU Treaty, the ECB's main objective is maintaining price stability in the Euro area. Price stability must be maintained in the medium term. Therefore the ECB is not expected to deal with price variations caused by temporary factors or other shocks. An institutional engagement to price stability is not enough to confer credibility to a central bank; this central objective should be translated for a quantitative reason. Thus, the Board of Directors defined price stability thus: „the annual increase of the Harmonised Index of Consumer Prices is below 2% for the Euro area. Price stability must be maintained on a medium term basis.” HICP is an aggregate average of consumer prices indices, collected in the same manner in the states belonging to the Euro area. Also, the ECB's Board of Directors clarified the definition of price stability: to reach this point „it is a must maintain the inflation rate close to 2% in the medium term.”

The same article (105) of the EU Treaty specifies that without prejudicing the objective of price stability, the ECB has to support the general economic policies in the European Community and act according to the principles of a market economy, free competition, and favouring an efficient allocation of resources.

### 1.2. ECB Instruments

The single monetary policy is applied in a decentralized manner, meaning that decisions are taken by the ECB, but most operations are carried out by the central national banks.

It is considered that the ECB has all the instruments and power to apply an efficient monetary policy.

The instruments used by the Eurosystem for implementing the single monetary policy are divided into open market operations, standing facilities and minimum reserves.

*Open market operations* play an important role in steering interest rates and managing the liquidity situation in the market and signalling the stance of monetary policy.

*Standing facilities* are aimed at providing and absorbing overnight liquidity, signal the general stance of monetary policy and bound overnight market interest rates. Two standing facilities are available:

- *The marginal lending facility* – through which counterparties can obtain overnight liquidity from the national banks against eligible assets;
- *The deposit facility* – through which counterparties can make overnight deposits with the national central banks.

*Minimum reserves* have the role of steering the primary monetary demand, allowing interest rate steering in money market and increasing the control of money supply.

### 1.3. Objectives of Monetary Policy in Central and Eastern European Countries (CEEC)

In May 2004 ten Central and Eastern European countries – the Czech Republic, Estonia, Poland, Latvia, Lithuania, Slovakia, Slovenia and Hungary – joined the European Union. Bulgaria and Romania followed in 2007. Following their admission to the EU, they have become countries with powers of derogation; adopting the euro will make them full members.

At this stage, their national central banks (independent) became members of the European System of Central Banks; economic, monetary and exchange policy became aspects of mutual interest; the states now had to meet the ECB objectives, participate in the Exchange Rate Mechanism II (ERM II) and present convergence programs.

The main objective possessed by all central banks from CEEC is price stability. Without jeopardizing the fundamental objective, central banks support their government's economic policy. Economic studies and the experience of several decades has proved that stable, low and easily predictable inflation rates ensure the most favourable conditions for economic development in the long term; an environment with stable prices allows companies and the population to make better investments in the long term, as well as ensuring an efficient allocation of resources.

National central banks run the monetary policy within a certain regime of monetary policy, in order to reach their final objective.

Poland, the Czech Republic, Hungary and Romania have an inflation targeting regime (their central banks publicly pre-announce inflation targets; taking decisions involves using a lot of information on the main economic variables and inflation forecasts). Bulgaria, Estonia, Latvia, Lithuania, Slovakia and Slovenia have an exchange rate targeting regime (their central banks try to ensure nominal exchange rate stability vis-à-vis the currency of a so-called „anchor country”; they must ensure a low inflation differential vis-à-vis the anchor country and a sufficient level of international reserves, and maintain the country's competitiveness and the central bank's credibility). Bulgaria, Estonia and Lithuania have currency boards.

The regime targeting inflation was adopted by the Czech Republic in 1998, by Poland in 1999, by Hungary in 2001 and by Romania in 2005. These states' central banks handle monetary policy instruments with the purpose of limiting inflation in the medium term.

Given the characteristics of a small open economy, where the foreign trade plays a very important role and the exchange rate band influences significantly consumer price dynamics, the central banks of the Baltic States, Slovenia and Slovakia have chosen the exchange rate strategy for implementing the monetary policy.

The strategy of price stability in Bulgaria, Estonia and Lithuania is connected to the currency board, based on a system of fixed exchange rates.

## 1.4. The Instruments of the National Central Banks from Central and Eastern European Countries

The monetary policy environment at the beginning of the 90's was the same in all CEEC: there were a limited number of banks; there were no financial markets; national currencies were not convertible and the inflation was high. The challenges faced by these countries were: price liberalization, the domestic and then foreign convertibility of their national currencies, foreign trade liberalization and the beginning of privatization. Monetary policy instruments had to be adapted in order to manage these continuously changing challenges.

National central banks also had to envisage the compatibility of their monetary policy instruments with those of the ECB. Generally, the national central banks from CEEC use the same instruments of monetary policy as the ECB, but with certain particularities due to different market structure – for example, over-liquidity structure.

Thus, the main instrument of monetary policy in the Czech Republic, Poland, Latvia, Romania and Slovakia are: open market operations, standing facilities and minimum reserves. In Hungary, these instruments are a two-week central bank deposit rate, standing facilities and minimum reserves.

Bulgaria, Estonia and Lithuania represent special cases because these countries have currency boards. Even though they are forced by law to keep reserves and maintain a fixed exchange rate, these countries have kept some of central bank's powers. The monetary system in Estonia is characterised by the absence of traditional monetary policy instruments. The only one which does exist is a minimum reserve rate.

Foreign exchange interventions are another monetary policy instrument used by certain national central banks, which would have to be eliminated after the country joins the ERM II, because one of the conditions for adopting the Euro is membership of the ERM II for at least two years with no serious tensions. This instrument is used by Poland. The National Bank of Romania and the National Bank of Hungary also interfered in the exchange market in order to prevent a strengthening of the exchange rate.

The table below presents the instruments and the level of monetary policy instruments rate of the national central banks from CEEC and the ECB.

Table 1: The instruments and the level of monetary policy instrument rate of the national central banks from CEEC and the ECB

	ECB	Czech Rep.	Poland	Hungary	Slovakia	Slovenia	Latvia	Lithuania	Estonia
Minimum bid rate	2.50%								
Deposit facility rate	1.50%	1%	2.50%	5%		2.25%			
Marginal lending facility rate	3.50%	3%	5.50%	7%		5%			
Minimum reserves rate	2.00%	2%	3.50%	6%	2.00%	2%	4%	6%	13%
Repo rate at 14 days		2%			3.50%				
Reference rate			4%	6%			4%		

(table continued on following page)

	ECB	Czech Rep.	Poland	Hungary	Slovakia	Slovenia	Latvia	Lithuania	Estonia
Deposit facility rate									
7 days							2.00%		
14 days							2.25%		
Lending facility rate									
> 10 zile							5.00%		
11–20 zile							6.00%		
>20 zile							7.00%		
O/N refinancing rate					4.50%				
O/N sterilisation rate					2.50%				
Refinancing rate						3.5%			

Source: www.ecb.int

## 2. The Monetary Policy Transmission Mechanism in CEEC

Understanding the monetary policy transmission mechanism is critical for elaborating and implementing monetary policy. However, it is hard to accomplish even in developed economies, where there is a certain degree of uncertainty regarding this concept. This situation is even more difficult for CEEC because the economy is continuously transforming structurally. These structural changes are designed to add an even greater degree of uncertainty regarding the understanding of the phenomenon of monetary policy transmission.

Traditionally, four main channels of monetary policy transmission have been identified. The first one is the direct effect on interest rates, which affects all other interest rates, such as deposit and loans interest. The second channel is that of credit. The third one is underlined by the impact on the prices of moveable values, such as equities and bonds and on real estate properties. The fourth channel represents the exchange rate influence. In all the above mentioned cases expectations play an important role.

In CEEC, the monetary policy transmission channels are continuously transforming. In this section the factors of CEEC's economies that play an important role in the monetary policy transmission mechanism are presented.

### 2.1. The Structure and the Characteristics of the Financial System

Financial system characteristics are important from the point of view of both interest rate channels and credit channels. This system structure and functioning determines the way the monetary policy impulses are incorporated in the liquidity and in the financial market prices, as well as the way they are subsequently transmitted to macroeconomic behaviour.

Table 2: The characteristics of banking systems in 2005

	<b>Czech Rep.</b>	<b>Estonia</b>	<b>Latvia</b>	<b>Lithuania</b>	<b>Slovenia</b>
Share of banking assets in the financial sector	74.6%	61%	88%	70%	73%
Share of banking assets in GDP	99.8%	76.8%	80.7%	37%	99.8%
Number of banks	11	7	22	14	11
Market concentration (top three banks)	61.6%	91.2%	-	78%	61.6
Foreign ownership	80%	85.66%	70%	98%	80%
Long term loans in total loans	74.86%	91.5%	83.5%	95.75%	74.86%
Non-performing loans in total loans	0.62%	0.38%	1%	0.70%	0.77%
Stock exchange capitalisation in GDP	0.47%	0.74%	0.17%	0.21%	0.55%

Source: www.ecb.int

The financial systems of CEEC are bank-oriented, with commercial banks owing over 70% of total assets held by financial institutions; in some countries the percentage is higher: in Slovakia it is 88.7%; in Hungary it is 81.18% and in Latvia it is 88%.

As an effect of the restructuring and privatisation of some state capital banks, the banking systems in CEEC are currently dominated by privately owned banks (for instance in Lithuania they are all private property) or by foreign-owned banks. This massive presence of foreign banks could benefit the banking system by improving its corporate governance and by enhancing competition in the system, with a potentially favourable impact on lending rates. For exchange, foreign banks can potentially deter the monetary policy transmission to a certain degree due to their relatively wider access to external finance, which might make them less keen on raising their funds on the domestic market.

Another particularity of the banking systems in CEEC are their relatively high concentration. This characteristic sometimes allows a few banking institutions to act as oligopolists: they influence both the banking system and money market liquidity, and their corresponding financial returns (interest rates and exchange rates). Market concentration has a relatively high level in all CEEC which means that monetary policy impact is received and transmitted unequally by banks.

A positive aspect of the present conditions for monetary policy implementation is represented by banking system consolidation and its functioning based on healthy principles. The share of non-performing loans in total loans decreased rapidly compared to the years from the beginning of transition and reached a value close to that of the Euro zone. By restructuring the financial system, strengthening its surveillance and perfection, the settlements make the monetary policy transmission process a lot more efficient and compatible to that of the Euro area.

Long term loans maturity (a high share in CEEC) and fixed interest rates negatively influence the monetary transmission process.

The bonds market does not actually exist in CEEC, while the securities market does not go too deeply. The capital market does not play a central role as a source of, being available for a relatively limited group of companies. Only a few companies have issued bonds, so banking loans represent a very important financing source. Only very large companies succeed in attracting resources from the international capital market; as stated above the national capital markets are less developed.

## 2.2. The Level of Monetisation

One of characteristics of CEEC is a more reduced level of monetisation compared to the Euro zone. The money supply  $M_2$  share in GDP has low levels in Lithuania (34.85%) and is close to that of the Euro zone in Slovenia (51.42%) and the Czech Republic (57.04%). Studies show that transmission (measured traditionally) is weaker in countries with reduced monetisation than in developed countries.

Table 3: Monetisation in CEEC in 2005

Country	Level of monetization
EMU	73.01%
Czech Rep.	57.04%
Slovakia	51.42%
Slovenia	45.09%
Estonia	41.12%
Poland	39.30%
Latvia	37.98%
Lithuania	34.85%

Author's calculations; data source: www.ecb.int

A reduced level of monetisation in some CEEC – Lithuania, Latvia, Poland, Estonia – shows that the monetary policy transmission mechanism is weaker and has considerable lags. For instance, according to an empirical simulation in Poland, the reaction of price dynamics to the interest rate impulse is two times weaker and the time period is twice as long as in Great Britain.

Other factors of a reduced level of monetisation are both major ineffectiveness in the banking system and private agents' lack of experience in using money as a coordinating device. For example, if private agents do not finance their investment projects by bank loans or bonds, the interest rate will have a lower impact on their economic activity. An important problem for central banks from these countries is to support the process of economy re-monetisation without increasing the inflation level. That can happen only if the money demand increases significantly – suggesting a powerful increase of economic activity and more confidence in the banking sector.

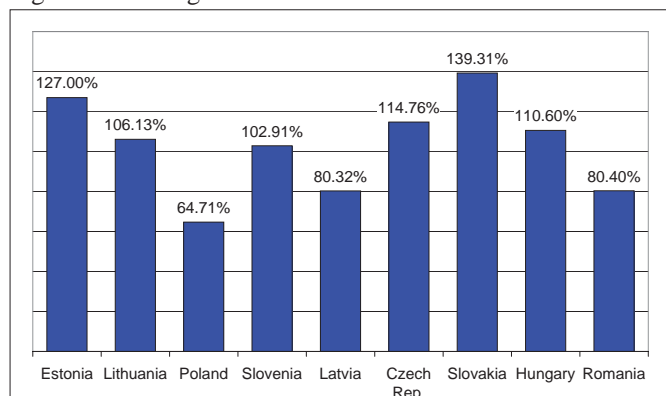
### 2.3. Exchange Rate

CEEC have open economies, so the exchange rate is an important transmission channel for monetary impulses, due to the influence both on aggregate demand and supply, compared to other channels. After adopting the Euro, this mechanism will disappear and the monetary policy impact will be transmitted through the channel of interest rate and loan.

The exchange rates of CEEC fulfil one of the following functions: to act as a nominal anchor for the economy (by suppressing inflation), to maintain competitiveness and to function as an instrument to counteract the negative impact of economic shocks. At the beginning of transition, the most important function was the nominal anchor in order to suppress inflation. Lately, exchange rate stability has been observed.

The opener an economy is, the greater the impact of the exchange rate variation on domestic prices. One of the indicators measuring the open degree is given by the percentage of commercial balance in GDP.

Figure 1: The degree to which the economies of the CEEC are open



Slovakia, Estonia, Czech Republic and Hungary are small open economies in which the exchange rate plays an important role. For exchange, Poland is a large economy, with the lowest open degree.

### 3. CEEC on their way to EMU

According to the Treaty of Amsterdam, which is part of the EU Treaty, all the countries that become members of the Union have to adopt the Euro as their national currency after a shorter or longer period.

According to the Treaty of Maastricht new candidates countries joining the EU will become member states with temporary derogation regarding the single currency. This means that at a given time after the accession to the EU the new member state will join the ERM II and then adopt the Euro on the condition it meets the nominal convergence criteria.

The table below illustrates the comparative situation of meeting the criteria of Maastricht by CEEC.

Table 4: Fulfilment of Maastricht criteria in 2006

	<b>Inflation rate</b>	<b>Budget deficit/ surplus</b>	<b>Public debt</b>	<b>Interest rate in the long term</b>	<b>Exchange rate stability</b>
<b>Limit</b>	2.8%	-3%	60%	6.2%	±15%
Bulgaria	7.4%	3.1%	29.9%	3.8%	
Czech Rep.	2.1%	-3.5%	30.9%	3.8%	12.1%/-2.8%
Estonia	4.4%	2.5%	4.0%	4.2%	0%
Latvia	6.6%	-1.0%	11.1%	3.9%	4.1%/-3.6%
Lithuania	3.8%	-0.5%	18.7%	4.0%	0%
Poland	1.3%	-2.2%	4.4%	5.2%	23.5%/-3.7%
Romania	6.6%	-2.4%	15.2%	7.5%	10.0%/-6.1%
Slovakia	4.3%	-3.4%	33.0%	4.3%	9.5%/0%
Slovenia	2.5%	-1.4%	28.0%	3.8%	0.1%/-1.3%
Hungary	4.0%	-10.1%	67.6%	7.1%	8.6%/-3.2%

Source: Convergence Report 2006

The inflation criterion represents the most difficult task to fulfil by candidate countries to EMU. Seven of the ten states (including Slovenia) have rates bigger than the reference ones, for example Latvia, Bulgaria and Romania (by about 7%). Among the factors that make the disinflation process confront a sustainability problem in the future, the following are important: the current price differences compared to the EU (15), the continuation of the Balassa-Samuels effect, the increase in administrative prices, the application of communitarian *acquis* in fiscal and agricultural domains, and the rise in nominal wages.

Long term interest rate convergence is rather fast. This situation is explained mainly by the fall in risk premium induced by joining the EU. Only Romania and Hungary have problems concerning the fulfilment of this criterion. Another problem is represented by the fact that the efficiency is inferior to the reference level for the Euro zone (6.9%).

The public finance situation of candidate countries has deteriorated over the last few years, particularly in Hungary, Poland, the Czech Republic and Slovakia, where the budget deficit exceeded the reference value of 3% of GDP. The main problem is to stabilise and then decrease the budget deficit. These countries must cope with numerous challenges that raise doubts concerning their capacity to stabilise the financial situation. This is due to the fact that these countries are in deep financial straits following their joining the EU (connected to financing the modernisation process of the administrative system and the infrastructure and national co-financing of the supporting programs of structural community funds), as well as due to continuing the prices alignment process. Alternatively, a great part of these needs impose serious tasks for the budget. Consequently, the candidate countries should find sound and sustainable financial sources.

The public debt level which had an average value/level of 30% of GDP in 2006 is now increasing, but it does not exceed the limit of 60% of GDP. The modest volume is explained by the fact that, at the beginning

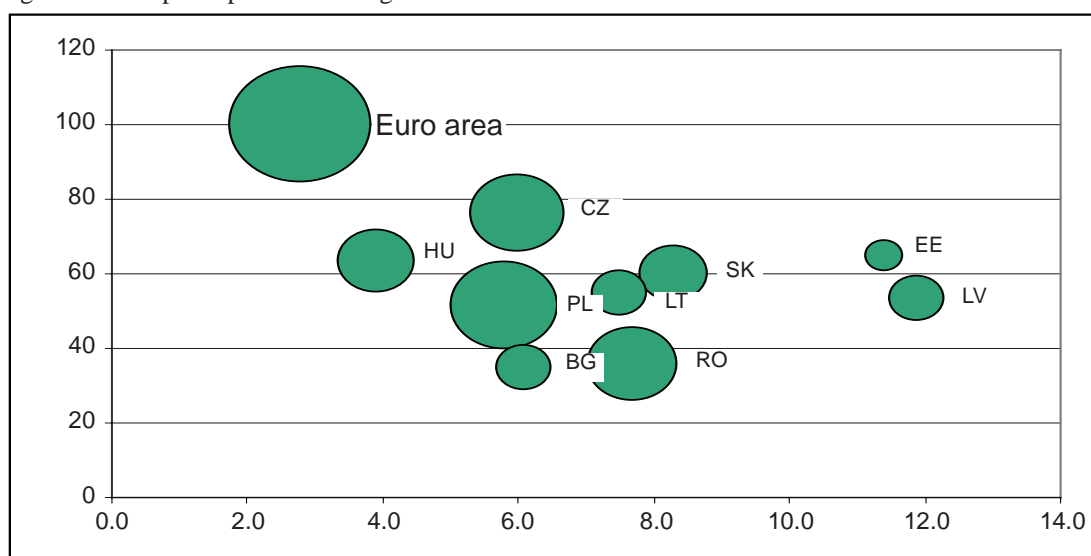
of transition, the former communist countries, excepting Poland and Hungary, did not make use of public loans in order to cover their budget deficit. There is the risk that due to the recent growth in the budget deficit this favourable situation could change.

With regards to exchange rate stability, all the accession countries have maintained their currencies within a fluctuation band of  $\pm 15\%$ . Increased fluctuations within the band were recorded for the currencies of the Czech Republic, Poland, Romania and Hungary.

The hardest objective to reach is what Europeans call „the real convergence”.

A significant criterion is the „GDP/inhabitant”, which is the main economic indicator used for making comparisons between different countries and periods of time.

Figure 2: GDP per capita and GDP growth

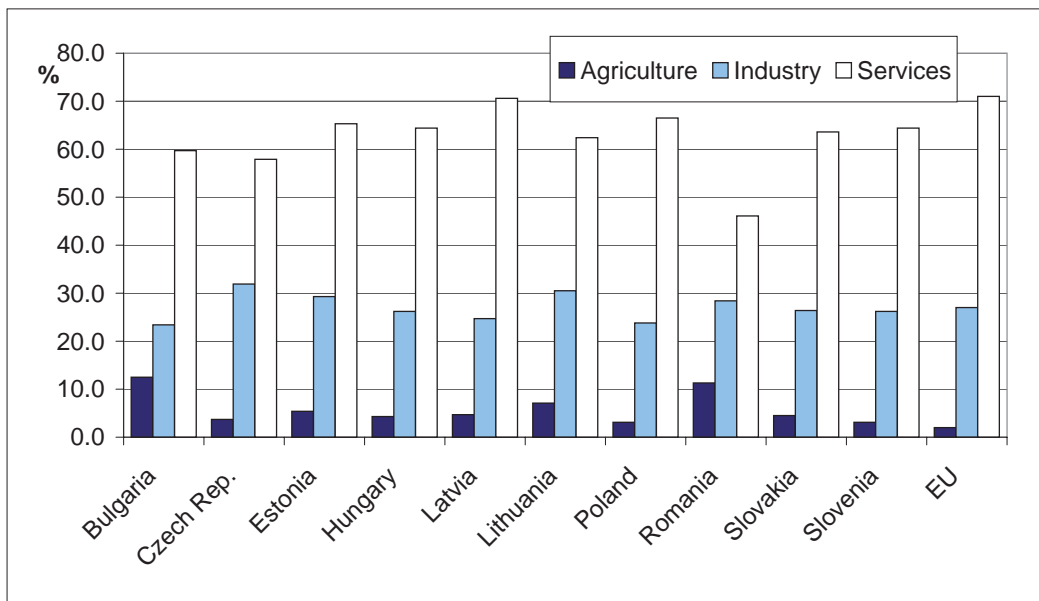


BG = Bulgaria, CZ = Czech Republic, EE = Estonia, HU = Hungary, LI = Lithuania, LV = Latvia, PL = Poland, RO = Romania, SK = Slovakia

The average growth of GDP per capita in “Purchasing Power Standards” was about 1.5% over the last few years. However, in 2006 GDP per capita represented only 70% of the EU average value in the Czech Republic, 60.9% in Hungary, 50.7% in Estonia etc. The disparity can be made up in a relatively short time, given the fact that the economic growth is higher than the EU average (5.2% in Slovenia and 6.0% in the Czech Republic). GDP per capita in the Baltic States is half the EU average; nevertheless these countries registered the highest economic growth (Estonia 11.4%, Latvia 11.9% and Lithuania 7.5%) in 2006.

The structure of the economy in CEEC is characterised by a low share of agriculture and a major contribution from the service industry to GDP, a similar structure to that of developed economies, but there are countries where the share of agriculture is more important (Bulgaria and Romania).

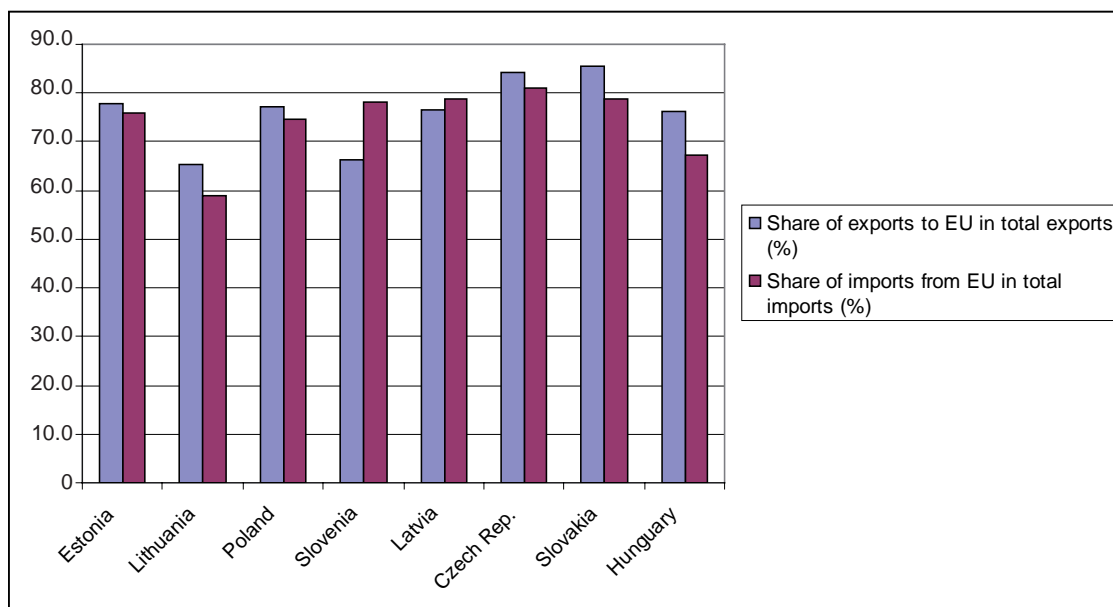
Figure 3: The contribution of the main economic sectors to GDP (%)



The open economy degree of CEEC has been analysed in an earlier chapter. A high open degree for all CEEC, excepting Poland (64.71%), can be observed.

The share of EU commerce in total foreign commerce is important in all CEEC. The EU has slowly become the main commercial partner of CEEC. .

Figure 4: The share of trade with the EU in 2005



As for CEEC, „the real convergence” has not constituted a condition for joining the EU, but they have to envisage a closer approach to developed EU countries.

Regarding the difficulties that a lot of states meet in fulfilling at least one convergence criterion, it is obvious that candidate countries should give up the initial date proposed.

Table 5: Forecasts concerning CEEC participation in ERM II and joining the EMU.

Country	Objectives concerning the participation in ERM II	Objective date for joining EMU
Estonia	ERM II member from June 2, 2004, fluctuation band 0	2010/2011
Latvia	ERM II member from May 2, 2005, narrow fluctuation band $\pm 1\%$	2011
Lithuania	ERM II member from June 2, 2004, fluctuation band 0	2010/2011
Poland	Forecast entrance in ERM II in 2011, with a standard fluctuation band ( $\pm 15\%$ )	2014
Czech Republic	Forecast entrance in ERM II in 2009/2010, with a standard fluctuation band ( $\pm 15\%$ )	2012
Slovakia	ERM II member from November 2, 2005, with a standard fluctuation band ( $\pm 15\%$ )	2009
Hungary	Forecast entrance in ERM II in 2011, with a standard fluctuation band ( $\pm 15\%$ )	2015
Romania	Forecast entrance in ERM II in 2009/2010	2012/2014
Bulgaria	Forecast entrance in ERM II 2008/2009	2012

Source: Credit Suisse Economic Research

For Estonia and Lithuania, the currency board regime was adopted within ERM II, but as a unilateral arrangement of these countries that would not imply an additional obligation for ECB. The decision of maintaining the currency board during the participation in ERM II before joining the EMU can create some problems for these countries. The main challenge refers to building the economic policies that could be adapted to the currency board for a period longer than two years because joining the EMU will take time. This means the financial policies must be kept very strict to cope with increasing foreign influx. Economic structural reform must continue to increase economy flexibility, thus being capable both of replying to asymmetric shocks, and achieving an increase in productivity in order to ensure economic growth.

We can say that the route to the Euro zone of the different candidate countries remains quite different. On January the 1st 2007 Slovenia became the only country to adopt the European currency and it is possible that 2 countries (Malta and Cyprus) will join in 2008, and Slovakia will follow in 2009. The Baltic States, Poland, Czech Republic and Hungary and also the new comers, Bulgaria and Romania, will most likely not join the ERM II in this decade.