Munich Personal RePEc Archive

Exchange Rate Arrangements in Central and Eastern European Countries – Evolutions and Characteristics

Toma, Ramona

Lucian Blaga University of Sibiu

1 March 2007

Online at https://mpra.ub.uni-muenchen.de/1967/
MPRA Paper No. 1967, posted 02 Mar 2007 UTC

Exchange Rate Arrangements in Central and Eastern European Countries – Evolutions and Characteristics

Ramona Toma,
"Lucian Blaga" University of Sibiu, Faculty of Economics, Romania

Abstract:

The process of choosing the exchange rate regime for the new EU member states has been influenced by other criteria than the traditional ones, which belong to macroeconomic criteria. This paper make a comparative analyze of the exchange rate arrangements in Central and Eastern European after 1990. These arrangements are dynamic on the one hand due to their permanent diversification and on the other hand because the values established this way are rapidly changing. In essence, they differ according to the degree of flexibility adopted when the exchange rate is established: from more rigid forms – currency board or pegging the currency to a foreign currency – to free floating.

Key words: exchange rate, arrangements, Central and Eastern European countries

JEL classification: E42, F31, F33

Exchange rate arrangements vary according to the degree of flexibility in establishing the exchange rate: from more rigid forms – currency board or pegging domestic currency to another unit – to free floating.

While the literature in the field of optimum currency area provides the framework for choosing a certain currency regime, at the present time a new concept is emerging in the specialized literature, namely that of "**fear of floating**" *(Calvo, G., Reinhart, C., 2002)*. Its definition starts from the presupposition that highly volatile exchange rates decrease trade output, increase the interest rate risk premium and reduce welfare. While "de jure" they are floating exchange rates, "de facto" these rates imply high risks, revealed by the financial crises emerging countries have had to face.

"The fear of floating" can be explained starting from the following facts:

- The variability of the exchange rate is one of the prominent features of an open economy and the tendency of the nominal exchange rate to move in a volatile and unpredictable way has been blamed for the decrease in trade output and welfare. The wish to moderate this volatility is the motivation for controlled or fixed currency regimes in certain countries. The question that rises is whether a certain currency arrangement has a significant impact upon trade or not. The answer is not very obvious, empirical evidence pointing to both directions. However, there is a unanimous opinion that a stable exchange rate promotes trade, especially that of the monetary union *(Rose, A. K., 2000)*. That is the reason why it is said that the fixed exchange rate helps emerging economies to promote the increase in investments and savings.
- Most developing countries cannot obtain loans in their own currency from abroad, their debt being denominated in a foreign currency. That is why the depreciation of the domestic currency entails huge pressure on the balance of payments.

The fixed and the flexible exchange rates are two alternatives that in fact are the extremes. There are several hybrid systems between them: controlled or *dirty floating*, when central banks sometimes intervene in the market; *wider band* floating, a compromise reached after 1971 when the members of the International Monetary Fund decided to enlarge the floating band to ±2.25% by the Smithsonian Agreement on the realignment of major currencies; temporary exchange rate stability, with changes imposed by market requirements (the *crawling peg*), case in which the fixed rate is adjusted periodically

according to the evolution of certain quantitative indicators monitored in a particular country.

After a certain period of considerable volatility of exchange rates, implying substantial US dollar appreciation in comparison to the 80s, a compromise was reached by the Louvre Agreement (1987), which set specific target zones for the major currencies, and marked the transition from flexible to controlled exchange rates. This followed the Plaza Agreement (1985) in which the US agreed on the necessity of intervening in currency markets during periods of instability, this intervention being possible only with the cooperation between monetary authorities *(Levi, M., 2005).*

The international monetary system shaped by the Louvre Agreement may be considered a flexible exchange rate system, within targets revised periodically, but in which the interference level is not clearly stated. The engagement of monetary authorities by setting a plausible target for all currency markets participants can help maintaining exchange rates within a stated target even without intervention on the market *(Krugman, P., 1991).*

Currency arrangements of the *free floating* type yield better results in **developed economies**, without creating inflationist pressure. The advantages of flexible exchange rates increase if that particular country integrates into the global capital market and develops a vigorous financial system *(Rogoff, K., Husain, A., Mody, A., Brooks, R., Oomes, N., 2003*). In economies such as that of the US, Japan or Western Europe, free floating is appropriate as financial markets are developed and the economic system is flexible *(Oesterreichische Nationalbank, 2004).*

Capital mobility is a prerequisite of exchange rate flexibility, as banks and companies need specific financial instruments to resist the volatility of international prices *(Eichengreen, B., Razo-Garcia, R., 2005).*

However, the liberalization of the capital account is possible only when institutional, legislative and macroeconomic reforms are instituted to support development of financial markets. The way to ensuring exchange rate flexibility must be parallel to that concerning the deregulation and liberalization of capital markets.

Developing economies have a limited capacity of absorbing large exchange rate fluctuations due to poor development of markets for protecting the currency *(Reinhart, C., Rogoff, K., 2002).* These countries, with limited access to external capital markets have two options: either currency arrangements that *limit flexibility* (fixed exchange rates or managed floating), or *free floating accompanied by an inflation-targeting monetary strategy (Fischer, S., 2001 and Obstfeld, M., Rogoff, K., 1995)*. Fixed exchange rates are not feasible in emerging economies because, under such circumstances, regional monetary unions are impossible, and unilateral pegging of domestic currency causes losing control over the monetary policy.

The process of choosing the exchange rate regime for the new EU member states has been influenced by other criteria than the traditional ones, which belong to macroeconomic criteria. During the last few years, these countries have suffered significant economic and politic mutations, as the first stage of transition included liberalization of prices and trade, and in the second half of the 90s, remarkable progress was made with respect to disinflation. Economic growth and liberalization of the capital account have attracted foreign investments. Economic development has been accompanied by political and social pressure. Under such circumstances, many countries have had to resist speculative attacks against their domestic currencies (the Czech Republic in 1997 and Slovakia in 1998).

Exchange rates regimes in Central and Eastern European countries are analyzed according to their stages of development – stabilization, transition, preparation for the Eurozone –, namely:

1. In the early 90s, “pegging” the domestic currency to another one was the most common option, through conventional arrangements in which the exchange rate could fluctuate by ±1% of the established rate or be maintained within the limits of a wider fluctuation band. The choice was based on the wish to utilize the exchange rate as nominal anchor during the macroeconomic stabilization period. The Czech Republic and Slovakia continued even after 1993 to peg their domestic currencies to a basket of currencies consisting of the US dollar and the Deutsche mark. Hungary as well pegged its domestic currency to a basket of currencies consisting of a the US dollar and the Deutsche mark in order to maintain a stable exchange rate for a certain period, with changes imposed by market requirements. After a period of fixed rates, Poland officially introduced in 1991 the “pegging” regime, anchoring its domestic currency to a basket of currencies consisting of the US dollar and the Deutsche mark. Estonia introduced the currency board in 1992 on the Deutsche mark. Initially, Latvia and Lithuania adopted flexible regimes (managed floating) but after 1994, they took on “pegging” regimes, Lithuania adopting the US dollar currency board. Bulgaria, Slovenia and Romania adopted flexible regimes, despite their high inflation rates. This was due to their low foreign currency reserves in the early 90s, approximately 1/5 of the reserves of Poland and Hungary, fact that made “pegging” very difficult.
2. Starting with the late 90s, there was a new trend: countries moved towards either flexible regimes or the very rigid ones. General progress in economic stabilization, including economic growth, substantial deflation, and the liberalization of the capital account attracted significant capital flows. In some countries, especially in those with fixed exchange rates (the Czech Republic, Hungary and Slovakia), these capital inflows required wide-scale and expensive interventions. Consequently, some countries started to turn towards more flexible currency regimes, while others – such as the Baltic States and Poland – stuck to their fixed or intermediate regimes. Lithuania, Estonia and Bulgaria settled on a tight peg to euro through currency boards. Latvia pegged its currency to the DST until January 1, 2005 and then to the euro, Hungary adopted in 2001 a regime comparable to the ERM II and Poland, the Czech Republic, Slovenia, Slovakia and Romania use floating regimes.
3. Relatively recent changes in monetary policies in new EU member states have been induced by the need to align to institutional requirements imposed by the euro area.

In the present, several empiric studies have proved that the evaluation of central parities adjustments and interventions on exchange markets could induce currency regimes that differ from official arrangements. First of all, a country can experience low fluctuations of the exchange rate although monetary authorities do not have an official commitment to maintain the parity between specific limits. This behavior is commonly compared to the fear of floating phenomenon *(Calvo, G., Reinhart, C., 2002)*. Secondly, a country can disclose its fear of pegging when, trying to maintain a pegged rate, experiences in fact parity changes *(Levy-Yeyati, E., Sturzenger, F., 2001).*

The (official) “de jure” classification is made by the IMF and the “de facto” classification is based upon procedures developed by Reinhart and Rogoff. The differences between “de facto” and “de jure” exchange rates appear at the beginning of transition period, when several countries announced more rigid exchange rates than the ones they used. The Czech Republic, Slovakia, and Hungary announced “pegging” regimes, but in effect, they used intermediate or floating regimes. After the “de jure” classification, Poland had an intermediate regime, but in reality, the Polish zloty was floating. This phenomenon appeared when by using fixed exchange rates, several countries had to face situations that required a high degree of flexibility. However, central banks did not enjoy then enough credibility so as to adopt flexible currency regimes. During the stabilization period, the floating regime was more frequent in reality suggesting a “fear of floating”. Slovenia had a different approach. Because of “fear of floating”,

Slovenia announced that the domestic currency was floating, while the monetary authority was recurrently intervening on the currency market. This approach was due to the fact that Slovenia did not have a sufficient foreign currency reserve.

Today's currency arrangements in Central and Eastern European countries are **dynamic** on the one hand due to their permanent diversification and on the other hand because the values established this way are rapidly changing.

Table 1. Currency Arrangements and Monetary Policy Strategies in new EU member states (2007)

Country	Exchange Rate Regime	Monetary Policy Strategy
Bulgaria	Currency board – the euro	Exchange rate targeting
Czech Republic	Managed floating with no predetermined path for the exchange rate, reference currency: the euro	Direct inflation targeting
Cyprus	Pegged exchange rates within fluctuation bands (±15%) – ERM II (May 2005)	Exchange rate targeting
Estonia	Currency board – the euro – ERM II (June 2004)	Exchange rate targeting
Hungary	Pegged exchange rates within fluctuation bands (±15%)	Direct inflation targeting + Exchange rate targeting
Latvia	Fixed pegging to the euro - ERM II (May 2005)	Exchange rate targeting
Lithuania	Currency board – the euro – ERM II (June 2004)	Exchange rate targeting
Malta	Fixed pegging to the euro - ERM II (May 2005)	Exchange rate targeting
Poland	Free floating	Direct inflation targeting
Romania	Managed floating with no predetermined path for the exchange rate, reference currency: the euro	Direct inflation targeting
Slovakia	Pegged exchange rates within fluctuation bands (±15%) – ERM II (November 2005)	Direct inflation targeting + Exchange rate targeting
Slovenia	Pegged exchange rates within unspecified fluctuation bands – ERM II (June 2004); euro (January 2007)	Exchange rate targeting

Source: IMF - *"Annual Report"*, April 2006; IMF - *"Exchange Arrangements and Exchange Restrict"*, 2006

The analysis of currency arrangements reveals the fact that a domestic currency has a "fixed exchange rate" "pegged" to another currency – the euro –, which, in its turn, has a free floating arrangement. The variation of the reference currency is added to the internal factors specific to the respective country, which influence the exchange rate of the domestic currency with reference to the foreign currency, through these "fixed", in fact "pegged", definitions.

Due to these facts, with respect to the exchange rate regimes, the component of the monetary policy promoted by a certain country has become more important than it used to

be in the past when there was a common denominator, such as gold for example. As a neutral or quasi-neutral monetary asset, gold did not belong to an "issuing" country from which to take up and store the economic, financial or political context, as it happens today through "pegging", "fixing" or "defining" with reference to a foreign currency.

From one stage to another, every country establishes its monetary policy objective in correlation to the variation of the domestic currency exchange rate. Primarily, **the monetary policy strategy** is established according to the targets or the anchor to which it is "pegged" in order to ensure stability:

- ***Exchange rate targeting.*** This phrase expresses the priority to maintain the level or to target a certain level of the exchange rate. The monetary authority intervenes in the market by selling/buying foreign currencies at a certain rate in order to maintain the exchange rate within the preannounced limits or at a certain level. In this latter case, the foreign exchange rate serves as a nominal anchor or intermediate target of the monetary policy. This strategy is present in those currency arrangements systems that do not have a distinct legal means of payment or in currency board arrangements, fixed peg arrangements, pegged exchange rates that fluctuate between bands.
- ***Monetary aggregates targeting.*** In this case, the monetary authority uses its instruments to achieve a target growth rate for a monetary aggregate (M1, M2, M3 and L), and the targeted aggregate becomes the nominal anchor or intermediate target of monetary policy; in addition, the monetary authority also aims at ensuring a stability of the exchange rate.
- ***Direct inflation targeting.*** It is usually employed in countries with high inflation rates, being associated with inflation reduction by setting certain numerically defined targets; in general, the target is to reduce a three-figure inflation rate to a two-figure and then one-figure inflation rate. This involves several steps to be taken with an institutional commitment by the monetary authority to achieve these targets. Monetary policy decisions are guided by the deviation of forecasts of future inflation from the announced target, with the inflation forecast acting (implicitly or explicitly) as the intermediate anchor of monetary policy. Direct inflation targeting was officially introduced in the Czech Republic (1998), Poland (1999), Hungary (2001), Slovenia (2002) and Romania (2005), moment that coincided with the official orientation towards flexible currency arrangements.

Many specialists consider that direct inflation targeting offers the EU new member countries a viable monetary policy choice that facilitates both economic transition and the monetary convergence to the Eurozone. The analysis implies that the monetary convergence begins with flexible inflation targeting and concludes with a full-fledged euroization *(Orlowski, L., 2005).*

The present-day **types of currency arrangements** existent in the region, according to the information each country has transmitted to the IMF, are presented below.

1. Currency board arrangements. This category comprises those countries whose domestic currency is defined by their monetary legislation, as a legal payment method, but the rate of exchange is regulated by a legal document that establishes the following:

- Exchanging the domestic currency to a certain foreign monetary unit is to be made by a fixed rate;
- The currency issue can be restricted depending on the degree to which the central bank meets the requirements of the arrangement. In essence, this is about controlling the monetary mass, reducing inflation and stabilizing the exchange rate of the domestic currency.

The provisions of such an arrangement require that the domestic currency issue be made only against foreign currency and the entire internal monetary mass be supported by external assets: for example, the currency issue can take place only when a particular country has a surplus of the balance of payments, which in monetary terms means foreign

currency inflows. Therefore, the central bank loses its "traditional" functions, such as monetary control and "lender-of-last-resort." These functions are entrusted to a currency board, which in fact can be an entity within the central bank and which takes on some of the central bank's functions provisionally, until monetary recovery.

The foreign currency to which the domestic currency is pegged is established by arrangement (as foreign currency inflows or external assets). In the case of the analyzed countries – **Bulgaria, Estonia,** and **Lithuania** – the reference foreign currency is the euro.

Beginning with 1999, Bulgaria has a currency board through which the Lev is pegged to the euro by a fixed rate of 1 EUR = 1.95583 BGN. Since June 2004, Estonia and Lithuania participate to the Exchange Rate Mechanism – ERM II, without modifying the currency board provisions on the euro: Estonian crown at 1 EUR = 15.6466 EEK and the Lithuanian litas at 1 EUR = 3.45280 LTL.

The fixed rate, the amount of foreign currency reserve and the size of the monetary mass, depending on the connection established, define the dominant currency in which the international payments and cashing are made in these countries; in the above examples, the dominant currency is the euro.

2. **Conventional Fixed Peg Arrangements.** This class comprises those countries whose domestic currency is formally pegged at a fixed rate to the euro: **Latvia** and **Malta**. In this type of currency arrangement, countries are not required to maintain irreversibly the established parity. The rate of exchange may fluctuate between certain limits from the established central rate (for example, by ±1%) or certain minimum or maximum variation limits are established as margins of, usually, ±2%. Irrespective of its option, the monetary authority intends to enforce the observation of a fixed parity through direct interventions on the money market, buying and selling domestic currency for the foreign currency to which it is pegged (intervention currency). Fixed parity may also be enforced through indirect interventions, through a firm policy of the rate of exchange, by restrictive currency regime regulations, or through interventions from other public institutions. The system is similar to a certain extent to the currency board arrangement, but it has greater flexibility within the given variation margins as the monetary authority can actually change them and it offers more freedom for exercising the monetary policy.

3. **Pegged exchange rates within fluctuation bands.** This category includes those countries that joined the Exchange Rate Mechanism – ERM II (**Slovenia** – June 2004, **Cyprus** – May 2005) or adopted an independent system based upon similar principles (**Hungary**). A characteristic of this arrangement is the fact that the rate of exchange is maintained within certain fluctuation margins (±15%) around a central rate, with reference made to the euro.

4. **Managed floating with no predetermined path for the exchange rate.** In this case, the monetary authority attempts to influence the exchange rate without having a specific exchange rate path or target. Indicators for managing the rate are broadly judgmental (e.g., balance of payments position, international reserves, parallel market developments), and adjustments are not to be automatic. Intervention may be direct or indirect. Countries in this group do not use as an anchor the exchange rate with reference to another currency or composite currency, but they are grouped according to their monetary policy strategy, based upon a direct aim at inflation – the **Czech Republic** and **Romania**.

5. **Free floating**. In countries that have adopted this arrangement type, the exchange rate is market-determined, with any official foreign exchange market intervention aimed at moderating the rate of change and preventing undue fluctuations in the exchange rate (**Poland**).

Although in the description of exchange rate arrangements, we use phrases such as "fixed exchange rate" or "fixed parity" they are essentially based on the evolution of the

exchange rate on the market, and assessment is in fact a comparison to another exchange rate or currency at another given moment.

New member states have participated in the Economic and Monetary Union since accession, but they could not adopt the euro instantly because of the provisions of the Maastricht Treaty that require an evaluation of their potential to maintain their financial position and participation in the Exchange Rate Mechanism – ERM II for at least two years after accession. When a country meets the convergence criteria it can adopt the euro and the central bank becomes part of the Eurosystem.

Since June 28, 2004, Slovenia, Estonia and Lithuania – the last two without modifying their exchange rate arrangements of the currency board type – participate in the Exchange Rate Mechanism – ERM II with fluctuation margins of ±15%, their domestic currencies being pegged to the euro through a fixed ratio of 239.640 Slovenian tolars (SIT), 15.6466 Estonian crowns (EEK) and 3.45280 Lithuanian litas (LTL). From January 2007, Slovenia joined the Eurozone.

Since May 2, 2005 Latvia, Cyprus and Malta – by setting fix exchange rates vis-à-vis the euro to 0.702804 Latvian lats (LVL), 0.585274 Cyprus liras (CYP) and 0.429300 Maltese liras – and since November 28, 2005 Slovakia, too, the Slovakian crown being pegged to the euro at a fixed rate of 1 EUR = 38.4550 SKK.

Choosing robust monetary policy frameworks is also critical *(Schadler, S., Drummond, P., Kuijs, L., Murgasova, Z., Van Elkan, R., 2004)*. Until entry into ERM II, existing frameworks - in most cases, inflation targeting with flexible exchange rates – continued. After ERM II entry, frameworks need to be adapted to enhance the stabilizing effects of the central parity, maximize the chances of meeting the exchange rate stability and inflation criteria, and manage risks of capital flow volatility.

References:

- Calvo, G., Reinhart, C. - *"Fear of Floating"*, Quarterly Journal of Economics, Vol. 117:2, 2002, p. 379-408
- Eichengreen, B., Razo-Garcia, R. - *„The International Monetary System in the Last and Next 20 Years"*, Economic Policy Panel, October 2005
- Fischer, S. - *"Exchange Rate Regimes: Is the Bipolar View Correct?"*, Journal of Economic Perspectives, No. 15:2, 2001
- Levi, M. - *"International Finance"*, 4th Edition, Routledge, New York, 2005
- Levy-Yeyati, E., Sturzenger, F. - *„Exchange Rate Regimes and Economic Performances"*, IMF Staff Papers, Vol. 47, 2001
- Obstfeld, M., Rogoff, K. - *"The Mirage of Fixed Exchange Rates",* Journal of Economic Perspectives, No. 4, 1995
- Orlowski, L. - "*Monetary Convergence of the EU Accession Countries to the Eurozone: A Theoretical Framework and Policy Implications",* in Journal of Banking and Finance, Elsevier, vol. 29/2005, p. 203-225
- Reinhart, C., Rogoff, K. - *„The Modern History of Exchange Rate Arrangements: A Reinterpretation"*, NBER Working Paper, No. 8963, 2002
- Rogoff, K., Husain, A., Mody, A., Brooks, R., Oomes, N. - *"Evolution and Performance of Exchange Rate Regimes"*, IMF Working Paper, No. 243, 2003
- Rose, A. K. - *"One Money, One Market: Estimating the Effect of Common Currencies on Trade"*, Economic Policy, No. 30, 2000
- Schadler, S., Drummond, P., Kuijs, L., Murgasova, Z., Van Elkan, R. - "*Adopting the Euro in Central Europe - Challenges of the Next Step in European Integration"*, IMF staff study, 2004
- IMF - *"Annual Report"*, April 2006
- Oesterreichische Nationalbank - *"Exchange Rate Regimes: Past, Present and Future"*, Proceedings of OeNB Workshops, No. 92, 2004