EXCHANGE-RATE REGIMES AND CAPITAL FLOWS

Special Editors of this Volume

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CONTENTS

PREFACE ......................................................... George S. Tavlas and Michael K. Ulan 9
INTERNATIONAL MONETARY OPTIONS FOR THE TWENTY-FIRST CENTURY .......... Barry Eichengreen 11
EXCHANGE RATE REGIMES FOR EMERGING MARKET ECONOMIES: LESSONS FROM ASIA . W. Max Corden 26
EXCHANGE RATES IN A WORLD OF CAPITAL MOBILITY ........................ Martin Wolf 38
THE COLLAPSE OF EXCHANGE RATE PEGS ................................ Harris Dellas, P.A.V.B. Swamy, and George S. Tavlas 53
THE EVOLUTION OF THOUGHT ON INTERMEDIATE EXCHANGE RATE REGIMES .......... John Williamson 73
CURRENCY BOARDS ...................................... Steve H. Hanke 87
ONE REGION, ONE MONEY? ............... George M. von Furstenberg 106
MONETARY UNIONS AND THE PROBLEM OF SOVEREIGNTY ....................... Robert A. Mundell 123
THE EURO, THE EUROPEAN CENTRAL BANK, AND THE INTERNATIONAL MONETARY SYSTEM Dominick Salvatore 153
THE ROAD TO THE EURO: EXCHANGE RATE ARRANGEMENTS IN EUROPEAN TRANSITION ECONOMIES Eduard Hochreiter and Helmut Wagner 168
INTERNATIONAL FINANCIAL ARCHITECTURE AND INTERNATIONAL FINANCIAL STANDARDS Michele Fratianni and John Pattison 183
LIMITING MORAL HAZARD AND REDUCING RISK IN INTERNATIONAL CAPITAL FLOWS: THE CHOICE OF AN EXCHANGE RATE REGIME Ronald I. McKinnon 200
CAPITAL MARKET LIBERALIZATION AND EXCHANGE RATE REGIMES: RISK WITHOUT REWARD .................. Joseph E. Stiglitz 219
SHOULD DEVELOPING COUNTRIES RESTRICT CAPITAL INFLOWS? ................... Michael K. Ulan 249
CAPITAL MOBILITY, CAPITAL CONTROLS, AND GLOBALIZATION IN THE TWENTY-FIRST CENTURY Sebastian Edwards 261
BOOK DEPARTMENT ............................................ 271
"The Road to the Euro - Exchange Rate Arrangements in European Transition Economies"

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and

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ABSTRACT

This paper examines the monetary policy road of the 10 candidate countries from central and Eastern Europe (CEE-10) on their way to EU accession and ultimately to adoption of the euro. We proceed in three steps. First, we describe the evolution of the monetary regime of the CEE-10 since the demise of the centrally planned economic system. Second, we deal with the currency crises of emerging market economies in the 1990s and develop potential lessons for the CEE-10. Third, we delineate the road map for the candidate countries by looking at both formal requirements and economic challenges that these countries have to meet before they can adopt the euro. Potential problem areas that may arise on the road to an enlarged Eurozone include a real growth loss in the core countries, discretionary redistribution associated with financial transfers which are necessary if countries forgo the exchange rate instrument, inflexible prices and wages, immobile capital, and financial instability which may arise if the exchange rate is pegged in candidate countries with weak banking and financial systems unsupported by consistent, stability-oriented macro policies.
Ten countries in central and eastern Europe as well as Cyprus and Malta ("the candidate countries") are presently negotiating their entry into the European Union (EU). A precondition for EU accession is the fulfillment of the so called Copenhagen criteria, which were decided upon at the European Council at the level of Heads of States or Government in Copenhagen in June 1993. The Copenhagen summit defined the following criteria for EU membership for the candidate countries: (i) the stability of institutions guaranteeing democracy, the rule of law, human rights and respect for the protection of minorities; (ii) the existence of a functioning market economy and market forces within the Union; and (iii) the ability to take on the obligations of membership, including adherence to the aims of political, economic and monetary union. This paper will deal with issues relevant for monetary policy only.

According to the current schedule a first wave of candidate countries can be expected to enter the EU around 2005. However, it is often forgotten that the new entrants will, at the time of EU entry, also become members of Economic and Monetary Union (EMU) as phase Three of EMU commenced on January 1, 1999, and an opt-out clause like the one granted to the UK and Denmark will not be available to them. Yet, as they will not be able to adopt the euro at that time, they will become EMU members with a derogation until they fulfill the Maastricht convergence criteria. These criteria are contained in Article 109j of the Treaty establishing the European Community and defined in Protocol 6 of that Treaty (the "Maastricht Treaty") and comprise the

1. Inflation criterion (an inflation rate not more than 1 1/2% higher than those of the three best performing EU countries over the latest 12 months).

2. Fiscal convergence criteria: These criteria restrict the government budget deficit and the government debt to certain (politically accepted) levels. A country which wants to participate in the EMU may not have
-- a government budget deficit higher than 3% of GDP,

-- a government debt ratio of more than 60% of GDP or sufficiently fast approaching that level.

(3) Interest rate criterion (an average nominal long term interest rate that does not exceed by more than two percentage points that of the three best performing member states in terms of price stability).

(4) Exchange rate criterion (participation in the Exchange Rate Mechanism (ERM) of the European Monetary System (EMS) within the normal fluctuation margin without severe tensions for at least two years).

Upon fulfillment of these criteria they can adopt the euro and thereby relinquish their own currencies. The shortest possible period from EU membership to the adoption of the euro is two years. Consequently, counted from today (2001), the new member states could adopt the euro in some six years from now, i.e., around 2007/2008, at the earliest. Six years seems to be quite a short period of time in view of the real economic adjustments that are still necessary. Yet, from the perspective of financial markets, six years is a very long time that can be beset with vulnerabilities and risks.

In this paper we travel the (monetary policy) road of the 10 candidate countries from central and Eastern Europe (CEE-10) on their way to accede to the EU and ultimately to adopt the euro. In doing so we also point to any lessons that might be drawn from the monetary policy experience of emerging market economies in Asia and the Western Hemisphere during the last decade. Considering the very specific economic and political circumstances in which the CEE-10 have found themselves since the demise of the centrally planned economic system a number of distinct and unique features relative to other emerging market economies in the Western hemisphere and in Asia have to be borne in mind: First and foremost, the CEE-10 (and the other transition economies) needed to construct their economic and political system
from scratch. Second they desire to accede to the EU as soon as possible. Third, their trade with the EU accounts for more than 60% of their total foreign trade. Fourth, they need to complete capital account liberalization before EU entry, i.e., within three to four years.

The paper proceeds as follows: Section 2 sketches the evolution of the monetary regime of the CEE-10 since the demise of the centrally planned economic system. Section 3 deals with the currency crises in the 1990s and develops potential lessons for the candidate countries. Section 4 contains a road map to the adoption of the euro for the CEE-10. Section 5 concludes.

THE EVOLUTION OF EXCHANGE RATE ARRANGEMENTS IN THE CEE-10 IN THE 1990s

The design of the monetary framework and the decision on the exchange rate regime form an integral part of any macroeconomic policy set. The choice will, *inter alia*, be influenced by the country's size, the rate of inflation, the degree of capital account liberalization, and the state of development of the financial sector, the level of foreign exchange reserves and the country’s institutional structure. For the candidate countries under review the task has been especially daunting as each of them needed to build democratic and market-oriented structures while simultaneously implementing stability-oriented macroeconomic policies in a way that included the earning of monetary policy credibility quickly without increasing the real cost of stabilization.

Thus, given the high, but greatly varying, levels of inflation prevalent in all countries, their need to integrate quickly into the world economy (while rectifying their relative prices) and to earn credibility quickly, most of the CEE-10 initially opted for one form of a peg or another (see Table 1 in the annex).

A wide range of exchange rate regimes has been used in the 10 countries under consideration. Moreover, regimes have been changed, in some cases several times, in all
countries except Estonia (currency board since 1992) and Slovenia (managed float also since 1992).

A clear trend towards the corners of fixed and flexible options has occurred in the evolution of exchange-rate arrangements among the CEE-10. At the same time, as is shown in Table 2, this movement has been asymmetric. More flexible arrangements have become -- relatively speaking -- more popular than fixed hard pegs. Fischer (2001) and Buiter and Grafe (2001) arrive at the same conclusion for the emerging market economies as a whole. Yet, a high degree of flexibility might be quite elusive as transition countries and emerging market economies alike, especially the smaller ones, typically show "fear of floating" (Calvo and Reinhart, 2000) or Bailliu et al. (2000). Most of these countries manage the exchange rate quite heavily, as in the case in Slovenia. Moreover, for the CEE-10, the euro constitutes -- except for Lithuania, which, at the time of writing, continues to tie its currency to the USD but plans to switch its peg to the euro by 2002 and Latvia, which still pegs to the SDR -- at least an indirect anchor. This situation is not surprising given the close trade relationships with the Eurozone and their political aspirations.

Even so, the range of exchange rate regimes currently followed still covers the whole spectrum of possibilities from free floating to currency board hard pegs (cf. Table 2 in the annex). In contrast to the widely differing exchange rate arrangements, the CEE-10 have moved swiftly and quite uniformly (albeit with some remaining differences) to liberalize capital account transactions. This policy of liberalization stands in sharp contrast to the policies followed in western European countries after the second World War, where capital account liberalization was not completed until 1991.

Regardless of the present exchange rate arrangement, the CEE-10 have already decided that they want to replace their own currencies with the euro. Countries that currently implement free floating regimes, crawling pegs and conventional pegs against currencies other
than the euro, will, at some point before its adoption, have to change their current
arrangements. The questions therefore are: which way to go, where are the risks and is there
anything to be learned from the experience of emerging market economies in the 1990s?

SOME LESSONS FROM THE CURRENCY CRISES OF THE 1990s

In the previous section, we looked at the monetary regimes that the CEE-10
implemented and sketched their evolution. Recall that while most of them started out with
some form of a peg, some of them have moved away from this type of arrangement. This
latter tendency has been a general trend in the 1990s. While in 1991, 78% of all IMF
members in some way followed a fixed or pegged exchange rate regime (hard or soft peg),
this number dropped to 58% in 1998 (Fischer, 2001). Hence, countries appear to have moved
away from the middle ground of pegged but adjustable fixed exchange rates (soft pegs)
towards the two corner regimes of either flexible exchange rates or hard pegs.

The lesson of the 1990s seems to indicate that adhering to a pegged exchange rate
regime can be a useful strategy for controlling inflation. Yet, it may, at some point, contribute
to financial instability (cf. Mishkin, 2001). Indeed, emerging market economies that were
loaded with foreign-denominated debt experienced serious financial and currency crises.

It appears that increased financial market integration has lead the majority of emerging
market economies to view more-flexible exchange rate arrangements as more attractive. At
the same time the policy requirements for maintaining a pegged exchange rate have become
more demanding (Mussa et al., 2000).

Beyond the relatively few “emerging markets,” however, there are some 130
developing and transition economies. These economies, in particular the transition economies
that arose from the former Soviet Union with exception of the Baltics and those that emerged
from Yugoslavia except Slovenia, still have only embryonic domestic financial systems. In addition, they often resort to quite extensive controls on capital account transactions.

For such economies, pegged exchange rate regimes (in whatever form) can be viable for extended periods, provided monetary and fiscal policy can maintain reasonable discipline. Nonetheless, when these economies become more developed and financially more sophisticated, and when they are more integrated into global financial markets they may consider arrangements that offer greater exchange rate flexibility. Alternatively, they may adopt very hard pegs (euroization/dollarization and monetary union).

Moreover, the Asian crisis also taught us that good economic fundamentals alone are not enough to prevent contagion and currency crises (cf. Baig and Goldfajn 1999, Levy-Yeyati and Ubide 2000). A speculative attack may occur even if the fundamentals are consistent with the fixed parity, and speculation against a currency may be self-fulfilling (cf. Obstfeld 1996 and Jeanne 1997; with regard to the Asian crisis see Chang and Velasco 2000).

While the bipolar view drew widespread academic support in the aftermath of the Asian crisis and appeared to become a new consensus, it has lost attraction more recently.

On the one hand, several authors asserted that often intermediate solutions might be more appropriate than corner solutions. In this context Frankel (1999) argues that “...intermediate solutions are more likely to be appropriate for many countries than are corner solutions. This is true, for example, for some developing countries for which large-scale capital flows are not an issue.” Similar arguments are advanced by Williamson (2000).

On the other hand, the “fear of floating” school questions the feasibility of free floating arguing that, because of credibility problems, central banks do heavily sterilize to reduce movements in the exchange rate even though they are officially floating.

Yet, the argument that the pure floating corner solution is no real alternative since in practice there is always “dirty floating” (Calvo/Reinhart, 2000) can also be turned around and
into an argument in favor of a hard peg corner solution such as dollarization or euroization (see Reinhart, 2000). If countries are not willing to adopt a freely floating exchange rate, and if, as we have argued, a soft peg or managed floating might be a serious danger for the economic and financial stability because of a lack of credibility, the other corner solution (dollarization/euroization) may seem to be the best alternative.

However, to make such a corner solution successful or appropriate, it needs to be supplemented by further institutional measures or innovations to minimize risks of future currency and financial market crises. These include proper macropolitical behavior (financial soundness, in particular) and the implementation of a sound banking system, sound accounting practices, and appropriate standards of disclosure and the adoption of appropriate auditing and accounting standards, principles of good corporate governance, and efficient bankruptcy procedures (Fischer 1999).

As noted above, a pegged exchange rate regime, while being a successful strategy for controlling inflation, may also increase financial instability. Such a risk remains significant for the most advanced of the CEE-10. To minimize this danger, in particular a healthy banking system and tighter financial supervision have to be effected. These steps, together with a decrease in short-term debt denominated in foreign currencies and an increase in holdings of international reserves may insulate countries from financial crises.

THE ROAD MAP TO THE EURO FOR THE CEE-10

In this section we plot the road map to the euro for the candidate countries by looking at both formal requirements and economic challenges that lie ahead before these countries irrevocably fix their exchange rate and abolish their national currencies. We will also touch upon the thorny issue of which kind of exchange rate regime might contribute most to a smooth phasing out of the national currency.
Formally, there are three stops ahead to the introduction of the euro.

1. Until EU-entry the exchange rate policy of the candidate country remains its own concern, implying freedom of choice of the monetary framework/exchange rate regime.

2. Upon EU-entry the exchange rate policy becomes a common concern of the EU. New entrants are expected to enter at some stage, but not necessarily at EU-entry, the Exchange Rate Mechanism (ERM2) for at least two years.

3. Finally, after fulfillment of the Maastricht criteria, these countries will have to adopt the euro. This step requires a unanimous decision by the European Council at the level of heads of states or government. Recall that the fulfillment of the Maastricht convergence criteria is not required for EU-entry but only for the adoption of the euro.

Given these formal requirements, is there a need to change exchange-rate regimes between today (2001) and the adoption of the euro? The interest in this issue arises from not only possible lessons that emanate from the experience of emerging market economies with various exchange rate regimes during the last decade, but also – and directly relevant to policy makers in the CEE-10 – whether the inevitable risks of a temporary regime shift in terms of loss of policy credibility and increased market uncertainty can be avoided.

The argument has two components, a formal and an economic one. We will deal with them in turn. Formally, the ECOFIN Council already voiced its opinion that all exchange rate regimes except a free float, a crawling peg and a peg to a currency other than the euro are, in principle, compatible with the ERM2. Therefore, no intermediate regime switch is required for countries following other exchange rate practices at the present time. Depending on the exact interpretation of what constitutes a managed float (which is deemed to be compatible with the ERM2 -- yet the ECOFIN has not yet specified what constitutes a managed float) and considering that the compatibility of currency board arrangements will be considered on a case by case basis, it is clear at present only that Latvia (SDR peg), Lithuania (hard peg
against the USD) and Hungary (crawling peg, as of May 2001 with a broad fluctuation band) will have to have an intermediate switch.

As the CEE-10 continue to adjust to free markets, it is to be expected that there will be related idiosyncratic real and nominal shocks. The policy response to such shocks and, possibly, also the choice of the exchange rate arrangements during the transition to the euro will depend on the effectiveness of the available instruments. That is to say: countries which already have working market structures, flexible prices and wages (downward as well as upward) will much more easily be able to forgo the exchange rate instrument during this period than others which do not. Thus, countries which suffer substantial price and wage inflexibility and, simultaneously, immobility of labor will likely to be hit by an increase in unemployment, if adverse country-specific real shocks arise and they have fixed exchange rates. Therefore, it might be rather costly for the latter group of countries to forgo the exchange rate as an adjustment instrument. If they did so, the loss in economic growth would slow down real convergence which, by itself, is a goal of European integration.20

The prime economic rationale for the CEE-10 (and other developing countries) to join the EU is the hope of approaching the material standard of living of the member states more quickly than they could if they remain outside the EU. For real convergence to happen, faster overall productivity growth than in the current EU is required. Since productivity advances are higher in the tradable sector of the economy which is exposed to international competition than in the domestic sector, under conventional assumptions, the "catching up countries" will experience a higher inflation rate than countries with lower real growth rates (the "Balassa-Samuelson effect"). Therefore, the (equilibrium) real exchange rate has to appreciate. A real appreciation can also be brought about if the exchange rate appreciates or if there are explicit revaluations. The choice of route to a higher real exchange rate will be influenced not only by
formal criteria (see above) but also by institutional conditions in the country concerned. The choice of exchange rate at which the country should enter the ERM2 is a separate issue.

It is in the interest of all parties concerned that the candidate countries enter EMU with an appropriate real exchange rate to avoid economic costs. By “appropriate” we understand a rate that is near to its (unknown) equilibrium level at the time. In this context the arguments brought forward by Poland to explain its switch to a flexible exchange rate and inflation targeting are of interest. The National Bank of Poland (NBP) explicitly argued that “The entry to the ERM2 should take place at the equilibrium rate, difficult to determine without resorting to market forces. A fixed rate would offer little guarantee of attaining this goal” (emphasis added).” Thus, in the view of the NBP, participation in the ERM2 requires an intermediate regime shift to prevent an exchange rate misalignment. The NBP’s position testifies to great (perhaps too great) faith in market forces to produce the equilibrium exchange rate at the right moment. Experience with floating exchange rates up to now does point to long lasting misalignments and inherent high short-term volatility. Therefore, it would be a stroke of luck if the market rate, say on January 1, 2006, coincides with the equilibrium rate.

In any event, the NBP argument is an argument against a too-early fixing of the exchange rates of candidate countries. On the other end of the spectrum are the hard peggers like Estonia which want to stick to the current exchange rate (8 kroon for 1 DM) and let the price level adjust to give the appropriate real exchange rate at the time of ERM2 entry. In this context the statement contained in the letter of intent of February 2000 is relevant and should be read together with the statement of the NBP above: "Our economic objectives will be pursued in the context of our long-standing currency board arrangement, which continues to provide a stable, transparent, and consistent policy framework. As demonstrated by the sharp improvement in our current account position and solid export growth to western markets, the current exchange rate peg remains appropriate. We intend to maintain the current fixed
relationship between the kroon and the DM and euro until Estonia becomes a full participant in the EMU, at which point the euro will become Estonia’s currency (emphasis added).

In this section we will focus on the challenges posed by the requirement to fulfill the Maastricht convergence criteria. When the Maastricht criteria were agreed, their levels were set with only the then-participating EU members in mind. Possible eastern enlargement played no role. The inflation criterion was determined in a way that should ensure convergence at the level of the three most stable countries, politically to alleviate inflation fears mostly in Germany and economically to bring about a high degree of price stability to foster economic growth. The ECB Council in 1998 quantified price stability for the Eurozone as an increase of the harmonized consumer price index below 2% over the medium term. The fiscal criteria (and subsequently the Stability and Growth Pact) were deemed necessary to prevent potential free riding of formerly fiscally prodigal states.

There is political agreement that there will be no additional convergence criteria for the current candidates to adopt the euro. In this context a number of difficult challenges arise for the candidate countries.

First, we above addressed the Balassa-Samuelson (BS) effect that explains the higher inflation rate prevalent in “catching-up” countries which experience higher productivity and real growth rates than the core. The need to satisfy the inflation criterion could require the candidate countries to dampen demand to reduce inflation to the required level. Yet, the existence of the BS effect hinges on the assumption that there are nominal wage and price rigidities. If prices were fully flexible (in both directions) in the candidate countries the problem would disappear; however, prices and wages are quite sticky in these countries.

In addition, once these countries have joined and the catching up continues, some observers fear that a problem might arise for the core countries. As the ECB sets the inflation rate in the euro area as a whole, monetary policy tends to have more-restrictive effects in the
core countries than in the accession countries. Hence the economic growth in the core
countries will likely to be dampened. The faster the economies of the new members converge
with those of the existing EU states, the higher will be the real growth loss in the core
countries -- unless prices and wages are flexible in both directions in the new EU members.

Such arguments help to understand the fears voiced in some quarters regarding quick
adoption of the euro. In our reading, such fears tend to overstate the issue. First, EU entry
requires the candidates to show that their economies can withstand the competitive pressures
of the Single Market. Second, at present, price and wage flexibility tends to be greater in the
candidate countries than in the current member states. Third, the economic impact in the
acceding states is so small that the effect on the EU inflation rate is no more than 0.2 - 0.3%
(Sinn and Reutter 2001).

Second, we addressed adjustment to asymmetric shocks above. As long as there are no
constitutional provisions with respect to regional redistribution such as the German system of
Finanzausgleich (according to the Maastricht Treaty such a centralization of the budgetary
process is not planned in EMU), political conflicts may arise. These will pertain to the
discretionary redistribution associated with financial transfers which are necessary if countries
forgo the exchange rate instrument and prices and wages are inflexible and labor immobile,
but an EMU that tends to produce political conflicts about permanent discretionary
redistribution will destabilize itself.

This scare scenario, however, overlooks the fact that the introduction of EMU may
create greater price flexibility and labor mobility, possibly offsetting the abolition of the
exchange rate as an absorption mechanism of country-specific shocks: under the EMU there
will be only one currency, hence there will be more price transparency. This greater price
transparency will lead to more intense competition within the EMU and yield not only lower
product prices but also higher price flexibility.
Third, we argued above that a pegged exchange rate regime, although it may be a successful strategy for controlling inflation, may increase financial instability. This danger arises in particular in emerging markets with a weak banking and financial system. An exchange rate peg which has been stable for a rather long period of time might lead market participants to underestimate -- or even totally neglect -- the exchange rate risk, inducing excessive capital inflows. The danger is heightened if countries sterilize the capital inflows, thereby raising domestic interest rates far above the international rates. Thus, a large amount of foreign-denominated debt that makes a country vulnerable to sudden shifts in market sentiment is accumulated. (A common feature of the recent emerging market crises was that the stock of foreign exchange reserves available in the short run typically was far lower than the volume of foreign debt.)

Furthermore, if bank supervision does not meet international standards as is often the case in emerging markets the likelihood of a financial crisis rises significantly. The capital inflows typically lead to a lending boom and a financial or real estate bubble. If these bubbles burst, banks are left with a huge amount of bad loans and exploding foreign debt if the financial crisis is accompanied by a successful speculative attack. The severe deterioration of banks’ and domestic firms’ balance sheets not only jeopardizes financial stability but also hampers economic growth.

This recurrent pattern of emerging market crises led the IMF and most observers to advise countries to take care of a sound and stable financial system before fully opening the capital account.

SUMMARY

This paper examined the monetary policy path of the 10 candidate countries from central and Eastern Europe (CEE-10) on their way to EU accession and, ultimately, adoption of the euro. It proceeded in three steps. First, it described the evolution of the monetary regime of
the CEE-10 since the demise of the centrally planned economic system. Second, it dealt with the currency crises of emerging market economies in the 1990s and developed potential lessons for the CEE-10. Third, it delineated the road map for the candidate countries by looking at both formal requirements and economic challenges that these countries have to meet before they can adopt the euro.

The paper showed that the range of exchange rate regimes followed by the candidate countries has covered the whole spectrum of possibilities from free floating to currency board hard peg; however, some candidate countries appear to have moved away from the middle ground of pegged but adjustable fixed exchange rates (soft pegs) towards the two corner regimes of either flexible exchange rates or hard pegs. The latter tendency has been a general trend in the 1990s that results from the disappointing experiences of emerging market economies with soft pegging during the decade.

When analyzing the formal requirements and economic challenges for the adoption of the euro, the paper focused on the challenges for the candidate countries of adjusting to asymmetric shocks, appreciating the real exchange rate at least cost, and selecting the “correct” real exchange rate before adopting the euro. Potential problem areas that may arise on the road to an enlarged Eurozone and may delay the process were highlighted in the last section of the paper: a real growth loss in the core countries (because of the Balassa-Samuelson-effect); discretionary redistribution associated with financial transfers which are necessary if countries forgo the exchange rate instrument and prices and wages are inflexible and capital immobile; and financial instability which may arise if the exchange rate is pegged in candidate countries with a weak banking and financial system and which is not supported by consistent, stability-oriented macro policies.
References


Table 1:
Exchange Rate Arrangements in CEECs

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<th>COUNTRY</th>
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<td>FIXED</td>
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<tr>
<td></td>
<td>CURRENCY BOARD Arrangement</td>
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<td>Czech Republic</td>
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<tr>
<td>Hungary</td>
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<td>Poland</td>
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<td>Lithuania</td>
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<tr>
<td>Romania</td>
<td>•------------------------------→X</td>
</tr>
<tr>
<td>Slovakia</td>
<td>•------------------------------•----------→X</td>
</tr>
</tbody>
</table>

Note: An x indicates the current exchange rate regime, a • denotes a previous regime, and an → indicates a regime change, cut off date: May 10, 2001.

Source: Adapted from Keller (2000), Figure 7; national sources.
## TABLE 2

### Exchange Rate Arrangements in the Candidate Countries
as of May 2001

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>EXCHANGE RATE ARRANGEMENTS</th>
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<td>Managed floating</td>
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<td>Currency Board</td>
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<td>SLOVENIA</td>
<td>Managed Floating</td>
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</tbody>
</table>

Endnotes

1 The process of enlargement of the European Union was launched on 30 March 1998. Negotiations are currently being held with the following twelve applicants: Bulgaria, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia as well as Cyprus and Malta. See also Oesterreichische Nationalbank (1999), 11ff. Since the meeting of the European Council at the level of Heads of States or Government in December 1999 Turkey has also been a candidate for EU accession. Negotiations have not yet started because the conditions for their commencement are not yet met.

2 For a discussion of potential lessons to be drawn from the Austrian exchange rate experience for the CEE-10 cf. Glück and Hochreiter (2001).

3 For a more detailed description of the evolution of exchange rate regimes in the early years of transition, see Hochreiter (1995) and for the 1990s as a whole, Tullio (1999).

4 Calvo and Reinhart "find that countries that say they allow their exchange rate to float mostly do not - there seems to be an epidemic case of 'fear of floating'" (p 4). Bailliu et al. find that "measurement error in the classification of exchange rate arrangements is an important issue" (p 25).

5 See also Buiter and Grafe (2001).

6 For a comparative overview of capital account sequencing in Austria and Finland see Hochreiter (2000).

7 This occurred most recently in May 2001, when Hungary - as a first step to discontinue the crawling peg altogether - widened the fluctuation band from +/- 2 1/4% to +/- 15%.

8 A main element of these crises was the weakness of the bank supervisory process which often is prevalent in emerging market and transition countries. Cf. Berg (1999), Alba et al (1998), and Furman/Stiglitz (1998).


11 We shall not deal with these countries here in this paper as our focus is the CEE-10.

12 Cf. EBRD (2000).


14 Fischer (2001) states: “It is reasonable to believe, as EMU expands, and as other economies reconsider the costs and benefits of maintaining a national currency ... that more countries will adopt very hard pegs, and that there will in the future be fewer national currencies” (p. 10).

15 The informal Malmö ECOFIN in April 2001 specifically pointed to the economic vulnerabilities the candidate countries are exposed to due to their weak financial systems.

17 Recall that the candidate countries have no right to opt-out.

18 The European Council brings together the Heads of State or Government of the fifteen Member States of the European Union and the President of the European Commission. It should not be confused with the Council of Europe (which is an international organization) or with the Council of the European Union (which consists of Ministers of the fifteen Member States).

19 ECOFIN is the European Council at the level of ministers of Economics and Finance of the fifteen Member States. The Council is the EU’s legislative body. The work of the Council is led by the Member State holding the Presidency. The Council is situated in Brussels, but a number of Council meetings take place in Luxembourg.

20 Note that the preamble of the European Community Treaty emphasizes real convergence as a central goal of European integration.


