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**Working Paper**

## Pitfalls in the European Enlargement Process: Financial Instability and Real Divergence

Discussion Paper Series 1, No. 2002,06

**Provided in Cooperation with:**

Deutsche Bundesbank

*Suggested Citation:* Wagner, Helmut (2002) : Pitfalls in the European Enlargement Process: Financial Instability and Real Divergence, Discussion Paper Series 1, No. 2002,06, Deutsche Bundesbank, Frankfurt a. M.

This Version is available at:

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# Pitfalls in the European Enlargement Process – Financial Instability and Real Divergence

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Discussion paper 06/02  
Economic Research Centre  
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February 2002

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ISBN 3-935821-03-4

## **Abstract**

Many of the EU accession countries have announced that they will not only try to enter the EU as quickly as possible but also to adopt the euro at an early date. This is justified by the effort to avoid the danger of financial instability in the period prior to euro-introduction. However, by trying to avoid this danger, the CEECCs, at least the (economically, institutionally and technologically) less developed, may run into another danger or pitfall, namely of real divergence (or very slow real convergence). The paper investigates these dangers or pitfalls. It argues that for some accession countries the costs of entry at an early date may be very high, and that there may also be negative spillovers for the other accession countries and for the EU core countries.

**Keywords:** European Integration, Transition Economies, Monetary Policy, Financial Instability, Real Convergence, Anticipatory Recession

**JEL codes:** E5, F4, P2

## **Zusammenfassung**

Viele der EU-Beitrittsländer haben angekündigt, dass sie nicht nur der EU, sondern auch der EWU schnell beitreten wollen. Dies wird damit begründet, dass so die Gefahr finanzieller Instabilität in der Zeit vor der Euro-Einführung verringert wird. Dies kann allerdings die Beitrittsländer (zumindest die ökonomisch, institutionell und technologisch schwächer entwickelten) in eine andere Gefahr stürzen, nämlich die anhaltender realer Divergenz (oder nur sehr langsamer Konvergenz). Der Aufsatz analysiert diese Gefahren oder Fallstricke der E(W)U-Erweiterung. Es wird argumentiert, dass die Kosten eines (zu) frühen EWU-Beitritts für einige der Beitrittsländer sehr hoch sein können, und dass auch Spillover-Kosten für die anderen Beitrittsländer und für die EU-Kernländer auftreten.

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# Pitfalls in the European Enlargement Process – Financial Instability and Real Divergence\*

## I. Introduction

At present, the European Union (EU) is facing the biggest round of enlargement in its history. Ten countries in Central and Eastern Europe (CEE), together with Cyprus and Malta, ("the candidate countries") are presently negotiating their entry into the European Union (EU). According to the current schedule and the main (most likely) accession scenario, a first wave of candidate countries can be expected to enter the EU around 2005. The new entrants will, at the time of EU entry, also become members of Economic and Monetary Union (EMU).<sup>1</sup> However, as they will not be able to adopt the euro at that time (given the two-year qualifying period for satisfying the convergence criteria implied by the Maastricht Treaty<sup>2</sup>), they will become EMU members *with a derogation*. Upon fulfilment of the Maastricht convergence criteria (but not before the end of the two-year qualifying period), they can adopt the euro and thereby relinquish their own currencies. Consequently, counting from today (December 2001), the new member states could adopt the euro in about five years from now, i.e., around 2007, at the earliest<sup>3</sup>. At first sight, this seems to be plenty of time to make the necessary preparations in the EU and the applicant countries. However, for many of the CEE candidate countries this may be a too short period of time to manage the task of not only adopting and implementing the EU's *acquis communautaire* but also of fulfilling the Maastricht convergence criteria without great sustaining costs.

The enlargement of the European Union is *politically* wanted and intended. Nonetheless, one may ask whether there are *economic* pitfalls or risks, which politicians, in the candidate countries as well as in the core countries, should be prepared for. It would be

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\* An earlier version of this paper was presented at the conference on How to Pave the Road to E(M)U: The Monetary Side of the Enlargement Process (and its Fiscal Support), in Eltville, 26/27 October 2001, organized by the Deutsche Bundesbank, the National Bank of Hungary, and the Center for Financial Studies. I thank Florian Späte for research assistance and Gerhard Illing and Friedrich Kißmer for comments.

<sup>1</sup> An opt-out clause like the one granted to the UK and Denmark will not be available to them.

<sup>2</sup> 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 an inflation criterion, a long-term government bond yield criterion, a government budget deficit criterion, and participation in the Exchange Rate Mechanism (ERM-II).

<sup>3</sup> Baldwin et al. (2000) even suggest that enlargement of Euroland might come as early as mid-2005 if the exchange rate criterion is interpreted loosely (as was done for Italy and Finland) and if euro-ised countries skip the changeover period.



unwise (and could be regretted later) to refuse to discuss this for fear of violating alleged or misunderstood political correctness. Instead, precautions (similar to those set up in and after the Maastricht Treaty) have to be developed to minimise the risks and the costs of (likely) economic pitfalls.

The risks and the costs of E(M)U enlargement are dependent upon the starting position of the accession countries. They are the greater the larger is the gap in development between the accession countries and the core countries. How developed are the eastern European candidate countries now? The *Transition Indicators* of the European Bank for Reconstruction and Development (which have been published since 1994 and are listed in Table 1 of the appendix) give a first impression. They indicate that the Central and Eastern European candidate countries (CEECCs) have attained substantial progress in their transition process to market economies and that their economic relations to the European Union are well-developed. The share of the private economy has been raised to 60 percent or more of GDP. Inflation has been substantially reduced, and foreign indebtedness has decreased. On average, two thirds of exports are sold on EU markets, and two thirds of the foreign direct investment come from the EU. The prospect of EU entrance has certainly fostered and speeded the transition process in the CEECCs. Nevertheless, the development gap between some CEECCs and the average of the EU core countries is still significant in many areas. This has been demonstrated in various recent studies (e.g. EBRD 2000, 2001, IMF 2000, Deutsche Bank Research 2001; see also Tables 2 and 3 in the appendix). The CEECCs differ sharply from the EU core countries in terms of their economic structures and their per capita incomes. This can be used as an argument or warning against a ‘hasty’ and ‘broad’ (almost-all of the CEECC10-encompassing) accession strategy. (The current assessment of the ‘most likely’ EU-accession scenario assumes a large convoy in 2005 including all CEECCs with the exception of Bulgaria and Romania, and the attempt of some of these countries to adopt the euro as soon as possible after accession; see Deutsche Bank Research 2001.) Though there may be good political and administrative reasons for arguing for such a rapid and almost-all CEECCs encompassing accession solution (cf. Lackenbauer and Wenzel 2001)<sup>4</sup>, the economic consequences may be problematic.

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<sup>4</sup> The main arguments are:

- Use the opportunity (of enlargement) as long as there is one.
- Against the background of historical experiences, it may be appropriate to admit certain countries together as a group (for example the Czech Republic and Slovakia).
- If the CEECCs are admitted gradually, substantial frictions in the workflow of the EU-institutions and of the EU as a whole have to be taken into account.
- If enlargement comes gradually, political discrepancies may arise when countries which just have entered the E(M)U participate in deciding about the accession of succeeding accession countries.

This paper points to various pitfalls of such a hasty and/or broad (almost-all-encompassing) accession strategy. It argues that the structural requirements and challenges associated with E(M)U enlargement, which include (I) liberalisation of capital flows (for EU-enlargement), (II) fulfilment of the convergence criteria (for EMU-enlargement), and (III) compliance with the rules of the Stability and Growth Pact (after accession to EMU), lead to pitfalls and dangers for the candidate countries as well as for the core countries of E(M)U and are a great challenge for monetary policy (in the candidate countries and for the European Central Bank (ECB)).

In chapter II, two alternative problems are analysed against the background of the required rapid liberalisation of capital flows. First, as long as candidate countries (softly) peg their exchange rates<sup>5</sup>, the danger of financial instability arises. This will be briefly examined in the next section. Second, to prevent this pitfall (and prepare for ERM-II), candidate countries may switch (and have switched) to a flexible exchange rate arrangement. Then, however, they need an appropriate nominal anchor to stabilise inflation expectations. Frequently, inflation targeting is suggested. The paper illustrates that transitional countries are likely to have problems in practising inflation targeting successfully, thus creating credibility problems for monetary policy.

Chapter III analyses pitfalls that could arise if candidate countries try to fulfil the Maastricht convergence criteria within a very short period of time in order to adopt the euro as quickly as possible and then have to comply with the rules of the Stability and Growth Pact. This may overstrain the candidate countries as well as the core countries and eventually endanger the whole enlargement process as it leads to (1) structural problems, and to (2) cyclical problems. First, if EMU enlargement comes over-hastily, the objective of real convergence may be hurt; i.e., the danger of real divergence then may arise. This is based on the effects of restrictive fiscal policy (which is necessary to meet the Maastricht convergence criteria and to comply with the rules of the Stability and Growth Pact) on infrastructure in the candidate countries. The question arises of how this can be avoided and what monetary policy can contribute. If the danger of divergence can be avoided, another problem may still arise: against the background of the Balassa-Samuelson-effect, successful catching-up to EU per capita GDP levels adds to upward pressure on the real exchange rate and hence produces inflation pressure. After EMU enlargement, this may even trigger (at a given money supply associated with a common inflation target) a recessionary effect in the core countries. Should the ECB react to this? Second, when financial markets assess the scenario of the occurrence of real divergence (in the case of a

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<sup>5</sup> Hard pegs, however, are not likely to be implementable in most of the CEECCs in the run-up to accession to E(M)U because of formal and institutional reasons, as will be discussed in the text.

‘too broad’ and/or ‘over-hasty’ enlargement) as sufficiently likely, an anticipatory recession may arise in the EU. Real divergence may happen after an early adoption of the euro and then induce the EU to counteract and bail out the problem countries. The expectation on the financial markets of such bail-out-actions of the core countries would immediately lead to an increase in interest rate that would put the ECB under pressure.

Chapter IV concludes.

## **II. Pitfalls associated with the choice of an exchange rate regime in the run-up to E(M)U**

### **1. Previous exchange rate regimes**

In the 10 CEECCs (or CEECC-10), a wide range of exchange rate regimes has been used during the past 10 years. Not only have different arrangements been implemented, but they have also been changed, in some cases several times, in all countries except Estonia (which has kept its currency board regime since 1992) and Slovenia (which has used managed floating, also since 1992).<sup>6</sup> However, there has been a clear trend towards corner solutions of fixed and flexible exchange rate arrangements. In particular, there was a trend towards more flexible arrangements which resembles the same evolution pattern as in the emerging market economies as a whole (Fischer 2001; or Buiters and Grafe 2001). The interpretation of this trend towards a corner solution may, however, be a fallacy as emerging market and transition economies alike, especially the smaller ones, typically show “fear of floating” (Calvo and Reinhart 2000). That is, the majority of these types of countries manage the exchange rate quite heavily.

The range of exchange rate regimes currently (officially) followed still covers the whole range of options from free floating to currency board hard pegs (see Table 4 in the appendix). Against the diversity of the exchange rate arrangements chosen, and contrary to the policies of relatively slow, gradual liberalisation of capital flows followed in western European countries after the second World War, the CEECC-10 have moved rapidly and quite uniformly to liberalise capital account transactions. This, however, may prove to be a problem, as argued below.

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<sup>6</sup> For a more detailed description of the evolution of exchange rate regimes in the CEECCs see Tullio (1999).

## **2. Regimes in the run-up to accession to E(M)U**

### **2.1 General options**

In principle, the CEECCs have three options when they decide how to arrange their exchange rate systems in the run-up to EU. Besides polar regimes - hard pegs and pure floats - intermediate regimes (soft pegs, managed floating, crawling bands etc.) may be a feasible option under specific circumstances. The main conclusion of most recent discussions on exchange rate regimes is that optimal regimes vary across countries and through time as country circumstances change, whereas some years ago, following the Asian crisis, the dominant opinion was that only corner solutions are appropriate regimes for emerging market economies.

### **2.2 Restrictions and pitfalls**

#### **2.2.1 Formal restrictions**

Although the CEECCs can choose among a variety of alternative regimes, they are not totally free in choosing their exchange rate systems in the period leading up to adoption of the euro. Formally, there are three steps which the CEECCs have to consider on their way to Euroland:<sup>7</sup>

1. Until entry into the EU, the exchange rate policies of the candidate countries remain their concern, implying freedom of choice of the monetary framework and exchange rate regime.
2. Upon accession, the exchange rate policies of the candidate countries become a common concern of the EU. The new Member States will participate in EMU with the status of Member States with a derogation of adoption of the euro. Nevertheless, they will have to treat their exchange rate policies as a matter of common concern and are expected to join the Exchange Rate Mechanism (ERM-II) at some point after accession, for at least two years.<sup>8</sup>

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<sup>7</sup> See European Commission (2000).

<sup>8</sup> The ECOFIN Council (the European Council of the Ministers of Economics and Finance of the fifteen Member States) 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 ERM-II. See Hochreiter and Wagner (2002).

3. Finally, after fulfilment of the Maastricht criteria (as a symbol of a high degree of sustainable nominal convergence), these countries will have to adopt the euro. This requires an unanimous decision by the European Council at the level of heads of states or government. Recall that the fulfilment of the Maastricht convergence criteria is not required for EU-entry but only for adoption of the euro.

## 2.2.2 Economic pitfalls

### (1) *Intermediate regimes and the danger of financial instability*

Article 56.1 of the EU Treaty stipulates that capital movements be already liberalised *before* EU accession<sup>9</sup>. At the same time, the adaptation of institutions - intended by the acceptance of the *acquis communautaire*<sup>10</sup> - remains imperfect as institutions such as the banking system and the financial system in general, as well as corporate governance and the legal system cannot be completely reformed and adjusted to the level of the EU core countries within a time period of 5 or 10 years (see Tables 1-3 in the appendix). Therefore, there will be a mixture of liberalised capital markets and imperfect institutional adjustment in the CEECCs,<sup>11</sup> which involves a problem for these countries, particularly if they choose soft pegging (in the context of ERM-II) as their exchange rate system. This can be derived as a main lesson from the Asian crisis (Baig and Goldfajn 1999; Levy-Yeyati and Ubide 2000). A softly pegged exchange rate regime, although it may be a successful strategy for controlling inflation, may increase financial instability.<sup>12</sup> This danger arises in particular in emerging markets with a weak banking and financial system.<sup>13</sup> An exchange rate peg that has been stable for a rather long period of time might lead market participants to

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<sup>9</sup> Article 56.1 says: "Within the framework of the provisions set out in this Chapter, all restrictions on the movement of capital between Member States and between Member States and third countries shall be prohibited."

<sup>10</sup> This includes the creation of conditions for sound banking systems and financial stability, which means that the accession countries will need to implement the EU Directives in the banking and financial area before EU accession. These involve, in particular, the need for appropriate legislation on capital adequacy, insolvency, the adoption of accounting standards, effective prudential supervision, settlement finality and the avoidance of moral hazard problems (cf. Bundesbank 2001).

<sup>11</sup> See Table 3 in the Appendix. For example, financial intermediation is still very shallow in the CEECC-10, i.e., the ability of the banking sector to channel the financial savings of households and enterprises into private investment is still limited and lags far behind the EU-average; however there are striking differences between individual countries. Moreover, there is a lack of experience in credit risk assessment and in building the appropriate regulatory framework. This carries the risk of over-lending cycles. These institutional imperfections will not be overcome within the next 3 years.

<sup>12</sup> See, for example, Berger and Wagner (2001a).

<sup>13</sup> In particular, there are two groups of factors that make CEECCs vulnerable to a financial crisis. First, structural deficiencies, i.e., low accounting standards or the lack of deep derivative markets, still hinder the proper functioning of the banking sector. Second, and even more importantly, new risks linked to the catching-up process have arisen, e.g., lending booms to SMEs and households under conditions of weak accounting and risk assessment.

underestimate, or even totally neglect, the exchange rate risk. Excessive capital inflows are the consequence.<sup>14</sup> This process is spurred on if the countries sterilise the massive capital inflows<sup>15</sup> thereby raising domestic interest rates far above the international rates. Thus, a large amount of foreign-denominated debt is accumulated, which makes a country vulnerable to sudden shifts in market sentiment.<sup>16</sup>

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<sup>17</sup>. 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 number 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 jeopardises the financial stability but also hampers economic growth.<sup>18</sup>

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. The tasks of greatest importance are considered to be: strengthening domestic banking and financial systems; providing better information and policy transparency; strengthening corporate finance, including bankruptcy laws and their implementation; taking precautions against potential capital flow reversals; and last but not least, building packages of sound macroeconomic and exchange rate policies.<sup>19</sup> Against this background, the adoption and implementation of the *acquis communautaire* is very important for a successful transition to Euroland for the candidate countries.

On the other hand, the experiences of the recent financial crises led many observers to ban intermediate regimes and advocate corner solutions as the appropriate menu of choice. This is also reflected in the practice of the last years which has shown a trend away from softly pegged exchanged rate regimes toward floating rates or hard pegs.<sup>20</sup> Since the institutional

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<sup>14</sup> The CEECCs are likely to attract capital inflows as investors anticipate the convergence of interest rates and the appreciation of their exchange rates. Furthermore, investment opportunities are large in the CEECCs. This attracts large capital inflows.

<sup>15</sup> If they do not sterilise the capital inflows, there will be downward pressure on interest rates and upward pressure on the money supply, thereby potentially conflicting with the inflation goals.

<sup>16</sup> A common feature of the recent emerging market crises was that the stock of foreign exchange reserves available in the short run was typically far lower than foreign debt.

<sup>17</sup> Cf. Mishkin (2001).

<sup>18</sup> Cf. World Bank (2001).

<sup>19</sup> For more on these requirements see, e.g., Fischer (1999).

<sup>20</sup> Cf. Fischer (2001) who notes that this trend seems to be well established, both for countries that are integrated into international capital markets and those that are not.

framework (including the financial system) cannot be overhauled and completely reformed within a short period of time, the choice of exchange rate regimes gains a special significance for avoiding financial instability in emerging and transition economies.

## **(2) *Polar regimes***

There are two polar regimes or corner solutions that help to avoid some of the severe consequences of financial instability associated with the intermediate regime, namely hard pegging and free floating.

### ***Hard pegs***

The term “hard peg” refers to exchange rate systems, such as currency boards or dollarisation (euroisation), where monetary policy autonomy is completely given up. Hard pegs have gained prominence in the debate about the right exchange rate system for emerging markets because severe currency crises, which often have devastating consequences for the economy as a whole, are not possible under hard peg regimes. Thus, it can be excluded that a financial crisis, because of an underdeveloped institutional framework, results in a currency crisis.<sup>21</sup>

But before a hard peg can be established, certain institutional preconditions must be fulfilled.<sup>22</sup> These include<sup>23</sup>:

- a developed, well-supervised, and regulated financial system;<sup>24</sup>
- access to a sufficient level of reserves;
- the rule of law;
- fiscal discipline
- wage and price flexibility.

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<sup>21</sup> Crises are then confined to the financial and banking sector of an economy. Cf. Chang and Velasco (2000a) who analyze financial instability under alternative exchange rate systems.

<sup>22</sup> In considering the desirability of establishing a hard peg (euroisation or currency board), the crucial factors are, on the one hand, the gains to credibility of tying the hands of monetary authorities and of abolition of the exchange rate risk against the currency (area) to which it is linked, versus, on the other hand, the possible costs of inflexibility. Possible costs that have to be contrasted with the gains arise if the country concerned is likely to face different shocks from those hitting the currency area to which it is linked.

<sup>23</sup> For more details see, for example, Wagner (2000a) and Gulde et al. (2000).

<sup>24</sup> This includes not only well-supervised and regulated banks but also equity and bond markets in order to gather enough venture capital and to reduce the problem of interdependencies between banks and firms.

One can supplement this list by some factors which may not be necessary but helpful for the success of a currency board, for example:

- a foregoing wide use of the foreign currency in the economy;<sup>25</sup>
- a desire for further close integration with the currency partner(s).<sup>26</sup>

### ***Flexible exchange rates (and inflation targeting)***

Another polar regime or corner solution (besides hard pegging), that could avoid the pitfall of financial instability associated with the intermediate regime, would be free floating. Again, currency crises as a result of financial instability, which is a key problem in intermediate regimes, cannot occur. However, we know that free floating includes a tendency toward volatility. This exchange rate volatility is not always based on macroeconomic fundamentals and includes occasional speculative bubbles and crashes. Hence, exchange rate flexibility tends to raise the exchange rate risk premium. There are other caveats, too. One caveat is that flexible exchange rates cannot protect banks against panic by external creditors who hold short-term claims denominated in foreign currency.<sup>27</sup> This was the case in Asia to a significant extent. Therefore, a flexible exchange rate system would have provided only limited protection.<sup>28</sup> Furthermore, emerging economies set policy in a world in which their own financial markets are underdeveloped, many structural rigidities exist, and corporate sectors have very limited opportunities to hedge. In these emerging market economies, stock markets are a relatively recent phenomenon and bank lending is the dominant form of financing. Exchange rate movements are costly in this environment, and hence, the fixed option may look very attractive<sup>29</sup>.

This may be a main economic reason why the CEECCs aspire to enter the European monetary union quickly. Before entering the EMU, however, the choice of a flexible exchange rate system may be useful for the CEECCs. This could make it easier to find the right real exchange rate before adopting the euro or entering ERM-II. Hence CEECCs should have an interest in allowing market forces to find the right exchange rate. The National Bank of Poland (NBP), for example, has substantiated its plan or proposal for changing to a flexible exchange rate regime with this argument: “The entry to the ERM-II

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<sup>25</sup> The reason is that in a country that is already partly euroised, devaluation is of little use.

<sup>26</sup> This has the advantage of increasing the political credibility of the commitment.

<sup>27</sup> They can only protect banks against the self-fulfilling pessimism of *domestic* depositors, i.e., of depositors whose claims are in local currency.

<sup>28</sup> Floating rates, however, would have altered behaviour on the part of private lenders and borrowers but presumably without being able to prevent the crises.

<sup>29</sup> See also G. Calvo, in IMF Survey, May 22, 2000.



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.“ (National Bank of Poland 1998, p. 9) The NBP’s position, however, testifies to great faith (perhaps too great) in the ability of 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<sup>30</sup>. Therefore, it would be a stroke of luck if the market rate, say on January 1, 2005, 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.<sup>31</sup>

On the other hand, one has to consider that recent studies (e.g., Calvo and Reinhart 2000 or Bailliu et al. 2000) have emphasised that many countries that claim to have floating exchange rates do not, in practice, allow the exchange rate to float freely, but use interest rate and intervention policies to affect its behaviour (“fear of floating”).<sup>32</sup> That is, even those countries which claim to fully float, de facto practise managed (“dirty”) floating. This can be turned into an argument in favour of hard pegging (e.g., Reinhart 2000): The low relative exchange-rate variability in countries that claim to have floating exchange rates is seen as the deliberate result of policy actions to stabilise the exchange rate. Since countries that are classified as having a managed float mostly resemble non-credible pegs, the only way to avoid the “floating and credibility problems” simultaneously may be a very hard peg, namely euroisation /dollarisation (ibid).

Another alternative may be to supplement managed floating with a “credible” nominal anchor. When exchange rate flexibility increases, it is important for a country to determine the basis for its monetary policy, i.e., to choose an appropriate nominal anchor. The record

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<sup>30</sup> Moreover, the CEECCs are highly open economies. They are integrated into a global financial system in which the flow of capital is much less restricted than it was, for instance, when Greece, Spain and Portugal joined the EU. Because of their status as emerging economies, the accession countries remain exposed to volatile capital flows and hence to large real exchange rate variability and moreover, are vulnerable to shifts in market sentiment triggered by financial crises elsewhere.

<sup>31</sup> On the other end of the spectrum are the hard peggers, such as Estonia, which want to stick to the current exchange rate (8 kroon for 1 DM, i.e., about 16 kroon for 1 euro) and let the price level adjust to give the appropriate real exchange rate at the time of ERM-II 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*" (Eesti Pank (2000), para 12 p. 4; emphasis added).

<sup>32</sup> The interest-rate volatility (both real and nominal) as well as the reserve volatility have been found to be significantly higher in these countries than that of "true(r)" floaters (Calvo and Reinhart 2000).

of inflation targeting is often regarded to be a good one in this regard (see e.g., Bernanke et al. 1998, and Fischer 2001). Hence, supplementing managed floating with inflation targeting is sometimes regarded as the locally optimal solution for emerging countries (Chang and Velasco 2000b),<sup>33</sup> and for the CEECCs in particular (Masson 2000).

Inflation targeting here takes a significant role: it is expected to avoid the danger of financial instability associated with non-credible pegs (such as managed floating) and to overcome or fill the lack of institutional conditions that are responsible for credibility problems. However, it is difficult to see how inflation targeting can meet these expectations. It is overstrained with these tasks, in particular in emerging countries such as the CEECCs. In order to serve as a firm anchor for monetary policy in the context of a transparent and credible operating framework, inflation targeting needs to involve more than vague commitments to bring inflation down to EU levels. As argued in Masson et al. (1997) and Wagner (1998a, 1999a, 2000b), an effective and credible inflation targeting framework needs to satisfy certain prerequisites. They include a quantitative framework linking policy instruments to inflation, and the freedom to carry out an independent monetary policy. However, most developing countries and also many of the CEECCs do not satisfy these prerequisites. For example, as inflation is not controllable in the short term by monetary policy, and hence hitting a target requires forecasting the effects of policy instruments at a one- or two-year horizon, it is essential to have a reliable and generally accepted way of making those forecasts. It is doubtful whether (many of) the CEECCs are capable of meeting this requirement. In particular, one has to consider that, in general, the CEECCs do not satisfy a main requirement of inflation targeting, namely the existence of a stable and predictable relationship linking monetary policy instruments to future inflation. Structural changes, which are natural in emerging and transition countries, are bound to affect the stability of relationships for forecasting inflation. If, however, inflation targeters do not have reliable inflation forecasting tools, inflation targeting, instead of helping to consolidate central bank credibility, will have the opposite effect. Furthermore, there are doubts whether the CEECCs already exhibit a political consensus in favour of low inflation and fears that the central bank independence in some of the CEECCs is not solid (or only “legal”) so that it may eventually be ineffective and perhaps even counterproductive (Wagner 1999b). If a central bank is not believed to have the freedom to carry out an independent monetary policy, it can hardly gain enough credibility to sustain a price-stability oriented monetary policy. As a result, sometimes a “hybrid” system with some weight given to both inflation and the exchange rate is suggested (Masson 2000). This will

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<sup>33</sup> Chang and Velasco (2000, p. 75) state: “(T)he evaluation of exchange-rate policy should move away from the ‘fix versus flex’ dichotomy, and toward the characterisation of optimal monetary policy in well-specified analytical frameworks.” Inflation-targeting is regarded to be one such framework.

likely to be the alternative that most of the CEECCs will choose in the interim phase of ERM-II between EU admission and the adoption of the euro. Structural differences between the CEECCs and western Europe, however, may make adjustable pegs especially vulnerable to speculative attacks.<sup>34</sup>

### 3. Implications

In the case of liberalised capital flows, the choice of the exchange-rate regime predetermines whether there is a degree of freedom for other policies, in particular monetary policy. The choice of exchange-rate regime is primarily an issue for the candidate countries themselves, at least before EU-admission. Upon EU-entry, the exchange rate policy of the candidate countries becomes a common concern of the EU. At some stage after accession, the candidate countries are expected to formally participate in ERM-II for at least two years. Because of the danger of speculative attacks mentioned above, the candidate countries might be considering the need for an exit strategy from administered exchange rates. Sticking to the ERM-II may prove to be too costly for countries that are directly hit by a speculative attack as well as for neighbour countries hit by negative spillovers.<sup>35</sup> Adhering to capital controls, however, is not a real option for CEECCs. On the one hand, it would probably postpone the catching-up process as capital shortages would emerge. On the other hand, and more fundamentally, liberalised capital markets are a *sine qua non* of full participation in the single market and are part of the “*acquis communautaire*”.

Therefore, one may think that immediate adoption of euroisation by accession countries is an adequate solution to the financial instability problem (Dornbusch and Giavazzi 1999).

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<sup>34</sup> Experiences with “hybrid” regimes seem to confirm this fear. For example, Chile and Poland recognised that a dual nominal system (to target both the real exchange rate and inflation; in order to both maintain a competitive edge in the markets and to reduce inflationary pressures) is unsustainable in the medium-term. After Chile had operated a crawling band that targeted the real exchange rate, it introduced inflation targeting in 1997, but the increased financial integration and large capital inflows of the 1990s made it difficult to target both the real exchange rate and inflation. Consequently, the authorities adopted a free float in 1999.

Poland managed the nominal exchange rate in the early 1990s, to both maintain a competitive edge in the markets and to reduce inflationary pressures. After the conflict between these two objectives became evident, the authorities decided in favour of the first objective. This led to large capital inflows, a strong current account, and accumulation of reserves, and thus made the need to maintain a competitive real exchange rate less urgent. This allowed the authorities to adopt price stability as the primary objective. This was supported by the adoption of a crawling, but widening, exchange rate band in 1995. In 1998 inflation targeting was introduced, and in early 2000 a full float was adopted since it was recognised that a dual nominal system is unsustainable in the medium term.

<sup>35</sup> Berger and Wagner (2001b) show how the interdependencies of the private sector expectations in different countries may contribute to the spreading of foreign exchange market turmoil.

However, a unilateral introduction of the euro by individual accession countries or new members is not desirable from the Community's point of view, as was expressed by the ECOFIN council in November 2000 in a report it submitted to the European Council on the exchange-rate aspects of enlargement. The ECOFIN held that the euro should be introduced only by way of accession to monetary union and the convergence process, which is to be demonstrated in the course of the accession process. The exchange rate of the national currency plays an important role as an adjustment instrument during the convergence process, yet it may also serve as a yardstick of success in adjustment. (Bundesbank 2001) Moreover, euroisation without solid institutional fundamentals may prove dangerous.<sup>36</sup>

If, however, ERM-II is regarded as an indispensable precondition for introducing the euro (entering EMU), the question arises of whether it is rational for all of the candidate countries to join ERM-II immediately after EU-accession and to try to keep the period between joining ERM-II and introducing the euro as short as possible. By doing this, some may run into the danger not only of speculative attacks but also of real divergence as will be argued in the next chapter. It may be better for some candidate countries to maintain flexible exchange rates after EU-accession for a while and use the time to improve institutional fundamentals.

### **III. Pitfalls of premature adoption of the euro**

#### **1. Trade-off between real and nominal convergence**

A main (economic) motive for the accession countries to join the E(M)U is the hope that joining the E(M)U will foster their economic development and lead to a (quicker) convergence of their standards of living to that of the EMU core countries (Wagner 2001a). This is in line with the spirit of the European Treaties. These show that an alignment of standards of living at a high level in the participating states was a target of the process of integration from the beginning. For example, the preamble of the European Community Treaty talks of the aim of the contracting states "...to strengthen the unity of their economies and to ensure their harmonious developments by reducing the differences existing between the various regions and the backwardness of the less favoured regions". This idea can also be found in Article 2 of the European Community Treaty, which also

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<sup>36</sup> See the discussion on hard pegs in II.2.2.2(2) for the necessary institutional preconditions.

expresses the view that monetary union is seen as an instrument for achieving real convergence.

The E(M)U enlargement has to be compared with this objective. I shall argue in this chapter that there is a danger or pitfall for some accession countries that the enlargement process may result in real divergence, i.e. an increase in the backwardness of their standards of living compared to that of the EU core countries, instead of a quicker convergence process.

The basic idea is: premature E(M)U-enlargement/accession could delay real convergence and, at least for a while, lead to real divergence. (Such J-curve costs may not only have transitory effects but can also have long-term effects, if, for example, public opinion about the desirability of E(M)U-enlargement in various countries changes and, therefore, the enlargement process is stopped politically.) This is based on the effects of restrictive fiscal policy (that is necessary to meet the Maastricht convergence criteria and to comply with the rules of the Stability and Growth Pact) on infrastructure in the accession countries.

The envisaged enlargement will bring small open economies into the EU that are in a process of catching-up with the EU (see Tables 1 – 3 in the appendix). However, a trade-off may exist between successful catching-up (real convergence) and achieving the budgetary discipline implied by the Maastricht convergence criteria and the rules of the Stability and Growth Pact. Therefore, CEECCs may run into a problem when they try to reach real and nominal convergence at the same time.<sup>37</sup> The main reason for a trade-off between real and nominal convergence lies in the following: catching-up can be sustained only if there is an adequate public infrastructure. Provision of this infrastructure may require high rates of public investment. As the rate of return on this public investment would be high, deficit financing may be justified in the CEECCs. In these circumstances, a budget deficit above 3% and certainly above the “close to balance” rule of the Stability and Growth Pact may be optimal for these countries. Even a rate of inflation above the required convergence level may seem desirable to these countries as they can profit from seigniorage revenues (as long as they keep their own currency).<sup>38</sup> It has to be realised that

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<sup>37</sup> This means that ERM-II participation and the adoption of the euro may need to be postponed for some time after EU accession. This is the case if it is believed that even in the countries most advanced in transition, the reform agenda relating to accession and real convergence must have priority over policy moves inspired by full EMU participation (Stage III).

<sup>38</sup> However, it may be feared that accession countries will respond with what is sometimes called the “weighing-in” syndrome: they may maintain very tight macroeconomic policies and resort to various techniques to squeeze down inflation prior to accession, only to revise the course and ignore the criteria after they enter EMU. This would, however, result in economic and political problems and quarrels within the enlarged EMU. Moreover, the looser the commitment to pursue macroeconomic policies that will ensure internal and external stability, the less likely it is that a rigidly fixed system can survive the pressures of the market.

the CEECCs have to satisfy these convergence criteria and comply with the rules of the Stability and Growth Pact *after* admission to EMU *as well*. Insofar, they will permanently be restrained with respect to fiscal financing of budget deficits. Moreover, by acceding to EMU, they lose their control over monetary policy so that they cannot monetarily finance their budget deficits autonomously any more. This means, to finance a given amount of government expenditures, the accession countries would have to raise their tax rates. As empirical evidence shows, often this is not politically feasible. Hence, there may be no other choice but to reduce government expenditure to satisfy the Maastricht convergence criteria and to comply with the rules of the Stability and Growth Pact. Reducing only the consumption or welfare state parts of government expenditure will be politically difficult (in particular, accession countries where the welfare state is much less developed than in the rest of the E(M)U may feel they have the “right” to catch up with the rest of the community). Therefore, the public investment in infrastructure will have to be decreased, too. This will decrease the real growth rate in the accession countries.

Moreover, quick disinflation (within the one-digit-area) in the CEECCs is (because of nominal rigidities) hardly possible without restrictive fiscal policy, i.e. lower rates of public investment. Furthermore, even successful real catching-up involves problems in that it adds to upward pressure on the real exchange rate and hence produces inflationary pressure and thus aggravates nominal convergence (Balassa-Samuelson-effect)<sup>39</sup>. The Maastricht inflation criterion can then only be achieved either through an appreciation of the nominal exchange rate, or (if this is not desired or possible because of the limited range of permitted fluctuations within the EMR-II system which the CEECCs have to enter before adoption of the euro),<sup>40</sup> through more restrictive monetary and fiscal policies, which would jeopardise public investment, growth and employment. Moreover, if this productivity gap continues to exist after EMU-enlargement, not only the CEECCs but also the EU core countries may be hurt. As the average inflation rate in the core countries then has to decline (to compensate for the higher inflation rates in the new member countries in order to meet the common inflation target), they may be forced to run a more restrictive fiscal policy than otherwise.

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<sup>39</sup> The Balassa-Samuelson model for real appreciation implies that the stability of the price level is only possible if the exchange rate appreciates at a rate which equals the product of the share of non-traded goods in the price index and the difference in productivity growth in the two sectors of traded and non-traded goods. On the contrary, exchange rate stability will produce higher inflation than in foreign (i.e., EU) countries by that same amount.

<sup>40</sup> One solution might be to widen the range; another one would be to increase the entrance inflation criterion. However, either would violate the principle of equal treatment between the initial EMU members and those that join the monetary union later. Furthermore, this watering down of the Maastricht criteria could create credibility problems and therefore increase the risk premium in the interest rate (thus implying negative growth effects).

Summing up, attempts to follow a kind of “big-bang-strategy”<sup>41</sup> and quickly adopt the euro after EU-accession may involve real (growth) losses in the respective CEE countries. But not only the candidate countries themselves may be hurt, the EU-core countries may suffer also from premature adoption of the euro by the CEECCs (see section 3 below).

## **2. Danger of negative growth effects of an early accession to monetary union**

The discussion in the foregoing section refers to the loss of monetary and fiscal financing of budget deficits caused by accession to EMU against the background of the necessary fulfilment of the Maastricht convergence criteria and the compliance with the rules of the Stability and Growth Pact. Existing levels of government expenditures would therefore instead have to be financed by an increase in the tax rate. This, however, may be not feasible because of national-political opposition. Therefore, government expenditures have to decrease and the real growth rate may decline.

Now suppose that there is no national-political opposition to a rise in tax rates. Even then, there may be other, mainly international obstacles (related to globalization, policy coordination agreements or other endogenous integration aspects)<sup>42</sup> against a rise in tax rates which is necessary for financing a maximum growth rate and a real convergence process. The need for such a rise in tax rates need not be substantiated by the necessary fulfilment of the nominal convergence criteria and the rules of the Stability and Growth Pact, but can also be explained by a technology gap between accession countries and the incumbents of EMU. This will be shown in the following model.

We start with the assumption that a small country with a lower technological level enters E(M)U. The lower technological level forces it to use more public infrastructure (expenditures) to attain its maximal real growth rate. This requires a higher tax rate in this accession country compared to that in the incumbent countries which have a higher technology level. Now, when this (technologically) less developed country enters E(M)U and thus intensifies trade with the incumbents,<sup>43</sup> it, being an economically small country,

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<sup>41</sup> A “big bang” strategy tries to implement reforms as quickly as possible no matter how costly they are in the short run. See section IV below for a comparison with the discussion about big-bang- versus gradualistic strategies of transformation ten years ago.

<sup>42</sup> See, for example, Wagner (2001c). A major international obstacle is the increased tax competition. Other obstacles, in particular within an Economic and Monetary Union, are the requirement to coordinate economic policy, and political pressure or agreement to harmonize taxes.

<sup>43</sup> Cf. Rose (2000, 2001). In the model, we use the simplifying assumption that entering a currency union implies starting trade with the incumbents.

has to adjust its tax rate (at least partially) to that of the (average of the) incumbents.<sup>44</sup> Therefore, the fiscal autonomy of the accession country is reduced through accession to EMU. This will force it to reduce government expenditure, and hence its real growth rate will decline below its maximum level. This has to (and will) be contrasted with positive trade and technological spillovers from E(M)U accession. The main conclusion of this section is that the larger is the development (real convergence) gap between an accession country and the incumbents, the greater is the danger of ending up with negative net real growth effects of an accession to E(M)U, for at least some period of time.

The basic idea of this danger of ending up in real divergence instead of convergence for a small accession country can be sketched using a simple model.

We use a 2-country growth model with public goods and assume that a small country (country B) intends to accede to an existing (big) currency union (country A). Initially, both countries are assumed to be totally autarkic, i.e., there are no economic links. Countries A and B are assumed to be largely identical (except for their sizes). There are only two differences (besides of size): first, country A is technically more advanced than country B; second, the output effect of public investment in country B is larger than in country A (that is, we assume a higher output elasticity of public investment in country B than in country A). In the following model, the growth rate of country B can be affected by variations in public expenditure. Therefore, the accession to the currency union (country A) can lead to negative growth effects for country B. The reason is that the fiscal autonomy of country B is reduced through the accession to the currency union. We shall assume that the accession to the currency union will require a decline in the public (government) sector share in the gross national product. This will reduce public investment and thus the growth rate of country B.

Before accession, the growth-maximising government sector share in the GNP in country B is higher than in country A because of the higher output elasticity of public investment. After accession, therefore, country B has to reduce government expenditure, that is, it has to adapt its government sector share to that of the currency union. Since, initially, country B chooses the government expenditure to maximise the growth rate, an accession to the currency union implies a change in the expenditure level and thus a lower growth rate.

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<sup>44</sup> The reasons are the same as those indicated in footnote 42.



### *The Model*<sup>45</sup>

At first, we develop a model of a closed economy (country A). The model is an extension of the Barro (1990)-model. The model economy has two sectors: capital and consumer goods, and two production factors: labour and capital. In the capital goods sector, productivity can be increased by public investment (e.g., by establishing a stable legal framework and implementing institutional infrastructure). The firms consider the quantity of public services to be exogenous. To exclude scale effects, we assume that the state provides public services with congestion.<sup>46</sup> Public expenditure is financed by tax incomes. The production function of a producer,  $j$ , in the capital goods sector of country A is:

$$(1) \quad Y_j = B^A K_j [G/(1-h)K]^{1-\beta^A},$$

where  $Y$  is output,  $B$  is a productivity parameter which reflects the technological level,  $K_j$  is private capital input by producer  $j$ ,  $G$  is government expenditure,  $(1-h)$  is that part of the current capital stock ( $K$ ) which is used in the capital goods sector, and  $0 < 1 - \beta < 1$  denotes the output elasticity of the public goods with congestion. The superscript  $A$  is inserted only when there is a deviation from the values of country B (see below). For given  $G$  and  $K$ , the firm's production exhibits constant returns with respect to the private input  $K_j$ . The production process equals the AK model modified by the term that involves public services. An increase in  $G$  relative to  $(1-h)K$  expands  $Y_j$  for given  $K_j$ . Because of congestion, only an increase in  $G$ , relative to the capital input in the capital goods sector,  $(1-h)K$ , increases the marginal productivity of the private capital. An increase of  $(1-h)K$  for given  $G$  lowers the public services available to each producer and therefore reduces  $Y_j$ . As long as  $G/(1-h)K$  is constant, the marginal productivity of  $K_j$  is also constant, and steady endogenous growth results.

We suppose that the government runs a balanced budget financed by a proportional tax at rate  $\tau$  on  $Y$ :

$$(2) \quad G = \tau Y$$

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<sup>45</sup> Wagner (2001b) includes details with respect to calculations and interpretations.

<sup>46</sup> This means that we model a congestion effect: Many state activities such as water systems, highways, police and fire services, and courts are subject to congestion. For a given quantity of aggregate state services,  $G$ , the quantity available to an individual declines as other users congest the facilities.

The firms in the capital goods sector thus have to pay a part of their gross income to the government.

The producers in the consumer goods sector use the remaining capital stock ( $hK$ ) and labour to produce consumer goods. We assume the following production function for firm  $i$ :

$$(3) \quad X_i = (KL_i)^{1-\alpha} K_i^\alpha,$$

where  $0 < \alpha < 1$ .  $X$  denotes output of consumer goods and  $L$  describes the (constant) labour force. The production function implies that the stock of knowledge is linked to the stock of capital. The stock of knowledge is available to all producers, i.e. knowledge is a public good. The function is linearly homogenous in the private factor inputs. On the level of sectors, however, there are increasing returns to scale.

By aggregating (1) and inserting into (2), one gets:

$$(4) \quad G = (1-h)K(\tau B^A)^{\frac{1}{\beta^A}}.$$

The higher the tax rate and the higher the level of technology, the higher is the government expenditure. By inserting (4) into the FOC for profit maximisation in the capital goods sector, one gets the equilibrium rate of interest conditional upon the tax rate:

$$(5) \quad r + \delta = (1-\tau)\tau^{\frac{1-\beta^A}{\beta^A}} (B^A)^{\frac{1}{\beta^A}}$$

where  $r$  denotes the rate of interest, and  $\delta$  describes the rate of depreciation.

The interest rate is positively dependent upon the level of technology. There are no transitory dynamics and all variables exhibit the common growth rate  $\gamma$ .

Now we introduce the behaviour of households. The representative (infinite-lived) household maximises overall utility. Assuming the common functional form for the utility function, utility is given by

$$(6) \quad U = \int_0^{\infty} \frac{c^{1-\theta} - 1}{1-\theta} e^{-\rho t} dt$$

From this we get, after some algebra, the equilibrium rate of growth conditional upon the tax rate:

$$(7) \quad \gamma = \frac{1}{\theta} [(1-\tau)\tau^{\frac{1-\beta^A}{\beta^A}} (B^A)^{\frac{1}{\beta^A}} - \delta - \rho].$$

The effect of government on growth involves two channels. On the one hand, an increase in the tax rate lowers marginal productivity of capital after taxes and therefore reduces the rate of growth; on the other hand, an increase in the tax rate raises the provision of public goods and hence increases the growth rate.

Now we assume that the government selects a tax rate that maximises the growth rate. By setting the derivative of (7) to zero, we get

$$(8) \quad \tau^A = 1 - \beta^A.$$

By inserting (8) into (7), the maximal growth rate in country A is given by

$$(9) \quad \gamma^A = \frac{1}{\theta} [\beta^A (1 - \beta^A)^{\frac{1-\beta^A}{\beta^A}} (B^A)^{\frac{1}{\beta^A}} - \delta - \rho].$$

Now we come to model country B (the accession country). We assume that country A exhibits a higher level of technology. That is, we assume that the productivity of private capital in country A is higher than in country B:  $B^B < B^A$ . Furthermore, we assume that the output elasticity of public goods with congestion in country B is higher than in country A:  $\beta^B < \beta^A$ . This implies that country B profits from public investments to a greater extent than country A.<sup>47</sup> Otherwise, countries A and B are symmetric (except of size).

Hence, the aggregated production function in the capital goods sector of country B is given by:

$$(10) \quad Y = B^B (1-h)K[G/(1-h)K]^{1-\beta^B}.$$

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<sup>47</sup> The reason is that the provision of a functioning infrastructure induces a higher growth push than an improvement of an already available functioning infrastructure does.

Also in country B, the government runs a balanced budget financed by a proportional tax at rate  $\tau$  on  $Y$ :

$$(11) \quad G = \tau Y .$$

By doing the same calculation steps as above, we get the growth rate of country B conditional upon the tax rate as

$$(12) \quad \gamma = \frac{1}{\theta} [(1 - \tau) \tau^{\frac{1-\beta^B}{\beta^B}} (B^B)^{\frac{1}{\beta^B}} - \delta - \rho] .$$

The growth-rate maximising tax-rate is

$$(13) \quad \tau^B = 1 - \beta^B ,$$

where  $\tau^B > \tau^A$ .

By inserting (13) into (12) we get the maximal growth rate in country B as

$$(14) \quad \gamma^B = \frac{1}{\theta} [\beta^B (1 - \beta^B)^{\frac{1-\beta^B}{\beta^B}} (B^B)^{\frac{1}{\beta^B}} - \delta - \rho] .$$

We have supposed three differences between countries A and B: their sizes, the level of technology, and the level of output elasticity of public goods with congestion. The technological advantage of country A over country B leads to a higher growth rate in country A. However, the direction of the output elasticity effect is ambiguous. Therefore, we cannot say unambiguously, whether the growth rate in autarky of country A is higher or lower than that of country B.

Now we can analyse which growth effects are induced by the accession of a small country (country B) to the currency union (country A). The assumption of a small country implies that the enlargement of the monetary union has no influence on the endogenous variables of country A. The growth rate of country A will not change. We assume that accession to the monetary union requires that country B lowers its government expenditure (see above). In the above model structure, this is synonymous with a reduction of the tax rate in country

B. For simplicity (and without any consequences for our basic results), we assume that all countries of the monetary union have to implement a common tax rate. That is, we assume that country B has to implement the lower tax rate of country A ( $\tau = 1 - \beta^A$ ). The accession country thus cannot implement a fiscal policy according to its national preferences any more. It has to reduce public investments (below the level desired in autarky) so that it is confronted with a decrease of its growth rate.<sup>48</sup>

So far, we have only concentrated on potential *negative* effects of an accession to the monetary union for the accession country. However, there are also potential *positive* growth effects for the accession country. We can assume that the accession country B profits from the higher level of technology in the monetary union (country A) after admission to the monetary union. The resulting spillovers are positively dependent upon the difference in technology. That is, the higher the technology gap, the higher are the spillovers.<sup>49</sup> Furthermore, the spillovers are also determined by the extent of economic integration (proxied by trade flows)<sup>50</sup> as well as by further factors of influence (in particular, transfer payments and other integration programs, these factors could be modelled by variations of  $\lambda$ , see below). Depending on the strength of the positive and negative growth effects explained above, accession to monetary union leads to either an increase or a decrease of the growth rate of the accession country.

We model this by supposing the following production function in the capital goods sector of country B:

$$(15) \quad Y = [B^B + \lambda f(\frac{T}{Y}, (B^A - B^B))] (1-h) K [G / (1-h) K]^{1-\beta^B},$$

where  $\frac{\partial f}{\partial (T/Y)} > 0$  and  $\frac{\partial f}{\partial (B^A - B^B)} > 0$ .

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<sup>48</sup> If we change the assumption that B is a small country into B being a big country (interpreted as the group of admitted accession countries), then it may appear useful to assume that the common tax rate in the monetary union is a mean of the tax rates in autarky. In this case, it is possible (in the above model) that country A has to suffer from loss in growth as a consequence of the entrance of country B. (Because of the technology leadership, spillovers are lower for country A than for country B). Then it is possible that both countries have to suffer from a decline in their growth rates. However, this does not necessarily imply a loss in welfare. To prove this, the solution of the model would have to be calculated, and a welfare analysis would have to be carried out.

<sup>49</sup> This seems to be an adequate assumption as long as the technology gap is not too big. See, e.g., Xie (1999).

<sup>50</sup> See e.g., Bayoumi et al. (1999), Merikas et al. (2000), and Long and Wong (1997).

In order to exclude that the spillovers increase the level of technology in country B beyond the level in country A, we moreover assume that  $\lambda f \leq B^A - B^B$  where  $\lambda$  denotes the strength of the spillovers, and  $0 \leq \lambda \leq 1$ .  $T$  denotes trade flows, and  $B^A - B^B$  delineates the technology gap between countries A and B. It is obvious that for  $\lambda = 0$ , the production function remains unchanged, and there are no spillovers.

By considering the reduced tax rate and the changed production function, we can derive the growth rate in the (small) accession country after admission to the monetary union:

$$(16) \quad \gamma^B = \frac{1}{\theta} \left\{ \beta^A (1 - \beta^A)^{\frac{1-\beta^B}{\beta^B}} [B^B + \lambda f(\frac{T}{Y}, (B^A - B^B))]^{\frac{1}{\beta^B}} - \delta - \rho \right\}.$$

We see that the growth effect of an accession to the monetary union is not unambiguous: While the exogenously given tax rate  $\tau = 1 - \beta^A$  tends to lower the growth rate, the spillovers increase the growth rate. It depends upon the strength of the individual effects whether the growth rate increases or decreases. Only for  $\lambda = 0$  we can unambiguously state that there will be a decline in the growth rate in country B.<sup>51</sup> However, it makes sense to assume that directly after enlargement of the monetary union,  $\lambda$  tends to be low. This means that the accession to the monetary union tends to result in a decrease of the growth rate in country B, at least initially (see below). In order to be consistent in our argument we have to interpret  $\lambda$  as the strength of the spillovers of *monetary integration*. The spillovers of monetary integration, however, usually become significantly effective only after adoption of the euro by the accession countries.<sup>52</sup> Hence it makes sense to assume that  $\lambda$  will only gradually increase so that it is very likely that the positive growth effects of an accession to the monetary union will be low in the beginning. Therefore, the negative growth effects worked out above will tend to outweigh the positive effects during the first period of time after monetary union accession. That is, before and after the admission to the monetary union, the growth rate in country B may decline for a while.

In the model, we assumed that the higher the technology gap, the higher are the spillovers. However, in practice, we have to consider a factor which is usually associated with such a technology gap - that the higher the technology gap, the greater is the lack of institutions. A

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<sup>51</sup> We cannot generally determine whether the growth rate in country B will be higher or lower than in country A. If, however, the growth rate in country B is higher, the assumption that B is a small country would have to be revised in the long run. In general we can state that the higher the trade ratio and the higher  $\lambda$ , the more likely it is that the growth rate in country B will lie above that in country A.

<sup>52</sup> Actually, there may already be positive spillovers before EMU entry because accession countries may attract capital inflows as investors anticipate the convergence of interest rates and the appreciation of their exchange rates. Nonetheless, spillovers will gradually increase after EMU entry.

significant lack or low standard of institutions (schooling etc.), however, presents a hindrance to exploiting the technology input so that the positive growth effects in country B may not eventuate. If the experience of negative (or only slow positive) growth effects leads to political disappointment, it may result in turmoil and pressure for redistribution within the EMU that would destabilise and (at worst) eventually stop further integration processes (especially in the case when several such countries are admitted and run into such problems simultaneously). This may even occur earlier if the pitfall of an anticipatory recession, which will be discussed in the next section, is realised.

### **3. Danger of an anticipatory recession**

In the foregoing sections we have described the danger that restrictive macroeconomic policies, which may be necessary in CEECCs which want to enter not only EU but also EMU very early, produce negative growth effects. In addition, effects of anticipatory recessions may arise. These may be based on anticipated future expenditures of western EU countries for bailing out new member countries in trouble, in order to prevent economic decline and political disorder, which would have negative spillovers on the western EU countries and could jeopardise the whole project of European integration and its enlargement. The likelihood of bail-outs, despite of the “no bail-out” clause in Article 104b of the ECT, increases as soon as the CEECCs have adopted the euro and thus become “full” members of the union (increased political pressure within a union<sup>53</sup>). This likelihood also increases, the more problem cases arise (which is dependent upon the timing and the “broadness” of the accession strategy of the EU), because this would raise the extent of the negative spillovers on the western EU countries.

It shall be shown in this section that this pitfall can be modelled by deriving under/overshooting tendencies in interest rates within a traditional dynamic macroeconomic model. Based on these under/overshooting tendencies, an anticipatory recession in the context of the EMU enlargement process may arise. This anticipatory recession may produce a retardation or even a reversal of the enlargement process. The model, its implications and its restrictions can be discussed only briefly here.<sup>54</sup>

The logical structure of the kind of models referred to is as follows. For ease of graphical exposition, one starts with two endogenous variables, the financial market price and a goods market variable. The financial market price jumps discontinuously in anticipation of

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<sup>53</sup> See also the statements in section III.1 above.

<sup>54</sup> In the following, I shall draw heavily on an earlier publication (Wagner 1996).

future events. The goods market variable is "sticky"; i.e., it adjusts gradually over time. Adjustment following unanticipated exogenous disturbances to policy variables (representing the "fundamentals") follows a unique saddle path. This assumes that the speculative bubble paths eventually collapse to the relevant saddle path. Such models exhibit financial market overshooting in reaction to monetary disturbances and undershooting with respect to goods market disturbances. In the following only the simplest version of such models, which is an integrated world model, is discussed. Actually, it is a version of an Aoki average model (Aoki 1981) and a dynamic version of a world ISLM model discussed in Branson et al. (1986). The same model without equation (20) but with price dynamics is used in Wagner (1991) (see also in more detail, Branson 1992). Here the financial variables are bond prices and short-term and long-term interest rates, and the fundamentals are monetary and fiscal policy. The model illustrates the possibility that an anticipated fiscal expansion can cause a recession by driving up long-term interest rates.

### *A Simple Integrated World Model*

The following exposition is based on the simplest fixed-price ISLM model of a closed economy or here the 'European economy'. This, however, is sufficient to describe the link from fundamentals to expectation dynamics in financial markets. Price dynamics will be added at the end of this section. The basic model can be expressed in four equations:

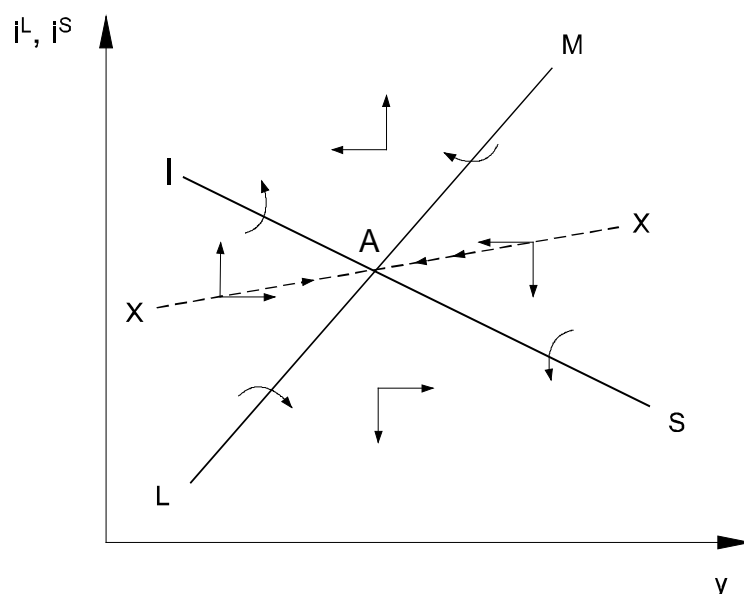
- |      |                                 |                                   |
|------|---------------------------------|-----------------------------------|
| (17) | $y^d = cy - a(i^L - \pi^e) + d$ | Aggregate Demand                  |
| (18) | $m - p = ky - bi^S$             | LM                                |
| (19) | $\dot{y} = f(y^d - y)$          | Gradual output adjustment         |
| (20) | $E\hat{i}^L = i^L - i^S$        | Terms structure of interest rates |

( $y^d$  = aggregate demand;  $y$  = output;  $i^L$  = long-term nominal interest rate;  $i^S$  = short-term nominal interest rate;  $d$  = budget deficit;  $\pi^e$  = expected inflation;  $m$  = nominal money balances;  $p$  = price level;  $E$  = rational expectations operator;  $c$ ,  $a$ ,  $k$ ,  $b$  and  $f$  are parameters; all variables except interest rates are in logarithms. Note: a hat (^) over a variable denotes its proportional rate of change and a dot, its time derivative.)

Equation (17) gives aggregate demand as a function of output, the real long-term (actually consol) interest rate, and budget deficit (i.e. the exogenous component of fiscal policy). Expenditure is, in Keynesian fashion, assumed to be a function of current income. The expected inflation rate  $\pi^e$  is given exogenously in equation (17), and set at zero for the time being. It will be endogenised later. Equation (18) is the traditional LM curve equating real money supply and demand. The short-term interest rate is assumed to clear the money



market at all times. Equation (19) gives the change in output over time as a gradual adjustment to the excess of demand over output. Equation (20) specifies the term structure of interest rates.<sup>55</sup> It provides one link with the future and thus brings expectation dynamics into the model. For the bond market to be in equilibrium, the long-term interest rate must be expected to rise (i.e., the consol price to fall), if the long-short differential ( $i^L - i^S$ ) is positive, to generate a capital loss that offsets the rate differential.<sup>56</sup> The dynamics of the model are described in the ISLM diagram of Figure 1.



**Figure 1. Expectation dynamics**

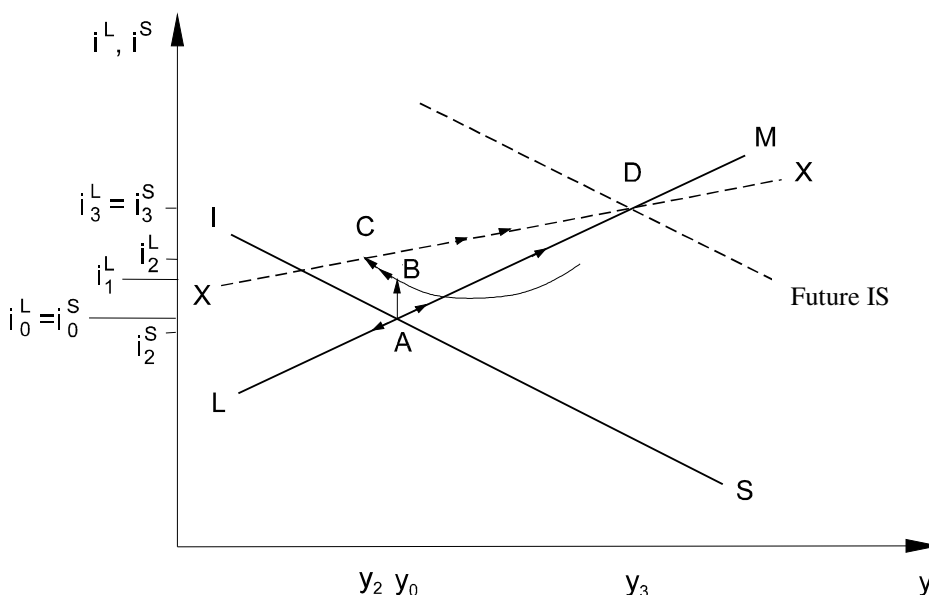
The stationary equilibrium is at point A, where  $y^d = y$  and  $i^L = i^S$ . Away from equilibrium,  $y$  and  $i^L$  move along the saddle path XX, whereas  $i^S$  moves along the LM curve. The XX saddle path comes from the combination of equation (20) and the assumption of rational expectations in financial markets. (In this nonstochastic model, rational expectations equals perfect foresight.) The XX path has two essential properties: first, it leads to the equilibrium and, second, along this path the expected movement of long-term rates is realised. All other paths explode away from the equilibrium. They are so-called "bubble" paths. Assuming that the market seeks out the stable XX path, is equivalent to supposing that speculative bubbles are unsustainable, i.e., they eventually collapse. Later in this section this assumption will be questioned.

<sup>55</sup> See Miller (1980).

<sup>56</sup> By assuming that any long-short differential must be equal to the expected rate of change of the long rate, we ignore the risk premium, which we set to zero.

The effects of anticipated future expenditures of western EU countries for bailing out new member countries in trouble can now be interpreted as an announcement of a future outward shift in the IS curve of the world economy. This is illustrated in Figure 2.

With the economy at point A, a future autonomous demand expansion is announced. The financial markets will understand that the future equilibrium is at point D, with higher interest rates. That is, the long-term rate  $i^L$  will jump immediately. It will jump to  $i^L_1$  in Figure 2 with output at  $y_0$ . This depresses investment and pushes the economy into recession along the unstable branch from point B to point C. Output and the short-term interest rate fall to  $y_2$  and



**Figure 2. Anticipated fiscal expansion**

$i^S_2$  respectively, while the long-term interest rate rises to  $i^L_2$ . When the actual demand expansion occurs, the recovery begins. Output will increase from  $y_2$  to  $y_3$ , with the short-term and long-term rates rising to converge to D. What is important here, is that the financial market's anticipation of the future demand expansion raises the present long-term interest rate and thus pushes the economy into an anticipatory recession.

*Possible structural problems when not ruling out bubbles*

The equilibrium path in the above model is a saddle path that has the two mentioned properties: it goes into the equilibrium, and along this path expectations are realised. The first property rules out speculative bubble paths that go off to infinity. There are at least two problems with this common line of reasoning. The first is the existence of heterogeneous agents in the financial markets, and the second is the potential existence of policy bounds on price movements.

To the first point: if agents are heterogeneous, i.e., differ in their knowledge or beliefs about the system, and know that they differ, the question of who acts first arises. This makes the timing of the collapse uncertain, and eliminates the presumption that a bubble cannot even begin. (If all market participants were the same, then, when one participant sees that the price is on a bubble path, all would act simultaneously so that the bubble collapses. If the agents' knowledge is complete, a bubble could never start.)

To the second point: another problem with the no-bubble assumption arises if the market believes that the government will intervene to prevent the financial market price from moving too far. The clearest example is a credible target zone for the interest rate. Then the market has no reason to prefer the saddle path over any bubble path that goes to the edge of the zone. (In the context of exchange rate volatility, see Choe (1987), and for the stochastic case see Buiter and Pesenti (1990).)

Thus we cannot rule out the existence of bubbles and the implied indeterminacy. Thus, the J-curve enlargement costs derived in the above model are types of minimum costs to which the possibility of bubbles and an accompanying aggravation of the anticipatory recession must be added. This means J-curve effects can well extend to structural crises that may endanger the whole enlargement process as well as the objective of real convergence in the EU.

#### **4. Discussion**

The main thesis of this chapter is that an over-hasty attempt to accede to the European monetary union as quickly as possible, can be very costly for some (namely the technologically and institutionally least developed) of the candidate countries but indirectly also for the other candidate countries and the EU core countries. The core argument is that, by trying to enter EMU at a low real convergence level (with a high technology or institutional gap), the goal of real convergence may be missed. This argument was supplemented by a simple endogenous growth model. The model used in this chapter, however, should only be regarded as a first approach to support the general argument developed above. Further research should stress the government's intertemporal budget

constraint. Thereby one could derive a decrease in government expenditure and a simultaneous increase in the tax rate as a consequence of, or compensation for, the loss of monetary and debt financing of budget deficits. Both measures would decrease output and therefore tend to lead to real divergence.<sup>57</sup>

However, the core argument can also be substantiated and it can also be criticised without the model. Which counter-arguments could be used? The main counter-argument would be that the danger of real divergence derived above may be only a phoney danger, as the accession to E(M)U may induce endogenous adjustment processes that suppress this potential danger. Furthermore, it could be argued that, even if the endogenous forces did not suffice, the governments would have enough simple economic policy measures to counteract the described danger. Both aspects will be briefly discussed in an argument versus counterargument-style in this section.

### *Hope for endogenous solutions?*

First, it is sometimes contended that the flow of **foreign direct investment** into the accession countries will increase after the accession to E(M)U. This flow of foreign direct investment would imply technology spillovers and thus affect learning by doing and induce institutional reforms. This would produce positive productivity and growth effects.

However, if the initial infrastructure conditions in the accession countries are weak<sup>58</sup>, the potential for learning effects (via technology spillovers) induced by foreign direct investment, and thus for growth effects in the accession countries, is low. Moreover, there is the danger that the flow of foreign direct investment fails to materialise or even decreases when the economic development does not develop as positively as expected.<sup>59</sup>

Second, it can be expected that, by transferring monetary policy to the ECB and thereby giving up the possibility of seigniorage financing, the accession countries can hope for an improvement of **political stability** and a reduction of the risk premium in the interest rate of government bonds. This, together with the competition arising from increased price and

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<sup>57</sup> See, for example, Wagner (1998c).

<sup>58</sup> As argued, an improvement of the infrastructure conditions may be prevented by the restrictive fiscal policy that may be necessary for fulfilling the nominal convergence criteria and for complying with the rules of the Stability and Growth Pact.

<sup>59</sup> One could also argue that the “goal conflict“ between real and nominal convergence is defused if public infrastructure is financed by foreign direct investment.  
Counterargument: Financing of public infrastructure by foreign direct investment is likely to be dependent upon the expectation of real convergence. If real convergence is not expected (any more), an outflow, not only of portfolio capital, but (with some time lag) also of foreign direct investment, is likely, as the Asian crisis has shown.

cost transparency, could induce an endogenous impetus for institutional reform and positive growth effects. This expectation is usually substantiated by referring to the experiences of the southern member countries of the EU and Ireland after their accession to EMU.

However, again, the extent of this reform and growth impetus depends upon the initial infrastructure conditions. Moreover, the comparison with the southern EU countries does not work since the former accession countries had longer time periods to adjust, and real convergence was further developed there compared to that in the present accession countries.

Third, against the background of increasing competition after accession to E(M)U, rigidities and inflexibilities on the **labour market** are expected to decline so that the costs of disinflation may also decline. In principle, this is possible; however, it appears to be equally likely that there will be institutional incrustation: There is a real danger that, after accession to EMU, the demand for a quick(er) adjustment to the living standards of the EU-core countries will increase in the new member countries. This may occur in the form of (a) higher wage demands (the demand for wage adjustment will be stronger when the wages are directly comparable in the same currency and when labour flexibility increases within the EU, inducing threats to exit), and (b) demands to adjust the welfare legislation to that of the richer member countries. These demands will be substantiated by expected club solidarity expressed in transfer payments and bail out actions in economic crises (despite contrary agreements in the Maastricht Treaty). This solidarity may be enforced (c) through political pressure, i.e. threatening to use blocking power (exercising veto rights and blocking decisions which are in the interest of the core countries), (d) through permanent dominance of EU-summits with distribution debates,<sup>60</sup> (e) possibly also through increased union power based on centralisation of the unions beyond country borders, enforcing adjustment to the more inflexible labour legislation in the EU core countries.

If this danger of institutional incrustation materialises, the real convergence process would be slowed down if not stopped.<sup>61</sup> The development in East Germany (the new

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<sup>60</sup> Both will weaken the political decision capability of the EU-organisations and will destabilise the EU.

<sup>61</sup> The hope that the unions in the accession countries would be content with lower wage demands, since they are smaller relative to the monetary area and therefore have no chance of influencing the ECB, is naive, as such demands can be transferred and emphasised through political pressure. Moreover, one can argue that the unions have already taken into account the effects on the international competitiveness of the firms that have already been exposed to the international competition process. Therefore, union behaviour should not change too much after accession to EMU. Instead of resulting in lower wage demands, the fact that the unions in the accession countries become smaller relative to the monetary area is even more likely to decrease their perception of the inflationary repercussions of their individual wages, thus inducing them to more aggressive wage demands (Cukierman and Lippi 2001).

bundesländer) after the currency union with West Germany can be used as a warning example.

Even if the hopes for endogenous upgrading and greater flexibility on the labour markets eventuate, the implementation of better structure and institutions would take time. However, given sufficient time, the scenario of real divergence could then become a reality.

### ***Political ingenuity***

One could further argue that, even if there is no endogenous solution to the problem, governments could easily master the problem by conducting appropriate economic policy measures. Two political solutions are obvious: “easing“ the entrance criteria for the new accession countries, and “creative“ bookkeeping or financing.

#### ***(1) Easing of the entrance criteria for the new accession countries?***

There are well-founded economic reasons for arguing that the nominal convergence criteria set up in the Maastricht Treaty and the stipulations in the Stability Pact are too restrictive for the CEECCs. First, as argued above, the demand for public infrastructure investment and its marginal productivity is high in the CEECCs, so that less restrictive fiscal accession criteria appear to be appropriate for those countries. Second, the Balassa-Samuelson-effect, that substantiates higher inflation in emerging economies, apparently justifies a less restrictive inflation accession criterion for the faster growing CEECCs.

However, an easing of the accession criteria for the new accession countries would violate the principle of equal treatment between the initial EMU members and those that join the monetary union later. Moreover, it would lead to credibility problems on the financial markets with the consequence that the risk premium in the interest rate of government bonds increases and the external value of the euro weakens.

#### ***(2) “Creative“ bookkeeping and financing***

The above justification for higher optimal rates of inflation and budget deficits in the transition process may be understood as an attempt to legitimise the characterisation of the Maastricht convergence criteria as “artificial constraints“ and therefore to try to circumvent them in a “creative” way. Sometimes “creative“ bookkeeping or financing, such as expenditure switching to shadow budgets, is suggested. However, any such strategies would lead to a loss of confidence on the financial and foreign exchange markets and thus increase the risk premium in the interest rate of government bonds of these countries and hurt the external value of the euro.

In contrast, privatisation could be regarded as the “correct” way to master the problem. However, it has to be considered that privatisation can often only be implemented slowly and with public opposition. Furthermore, it may be doubted that, after privatisation, all so-called public goods are still supplied in sufficient quantities; it may result in a deficient supply of public infrastructure and institutions, which are important for the catching-up process in the candidate countries.

In summary, it may be dangerous for CEECCs to accede to EMU with all possible speed and rely on endogenous or simple and quick political solutions of the problems described above. The candidate countries should recognise that they face a decision dilemma between two evils or dangers, namely between the danger of financial instability in the period prior to euro-introduction, and the danger of real divergence (or slow real convergence) in the period after euro-introduction in the case of an over-hasty attempt to accede to the EMU as quickly as possible. The extent of either danger is negatively correlated with the state or level of real and nominal convergence already attained by the single candidate countries at the point of time of EU-accession. The problem, particularly for those candidate countries that lag behind in terms of real and nominal convergence, is that the fear of financial instability in the period prior to euro-introduction is likely to cause them to be eager to keep the period between EU- and EMU-accession very short. However, it is exactly these countries that have the most to fear from the danger of slipping into real divergence if they try to make the period between EU- and EMU-accession too short.

From an economic point of view, it would be better to conduct E(M)U-enlargement in small convoys or on a single country basis instead of accepting the accession of a large convoy consisting of countries with different conditions of real and nominal convergence. In contrast, an immediate unilateral euroisation of all CEECCs, which is sometimes proposed (Dornbusch and Giavazzi 1999), would solve the first of the above evils or dangers but would aggravate the second evil or danger, at least for the least developed CEECCs.

## IV. Conclusions and Challenges for Monetary Policy

### *General aspects*

Our analysis assumes that the CEECCs will not only try to enter the EU as quickly as possible but also to adopt the euro at an early date.<sup>62</sup> This is justified by the effort to avoid the danger of financial instability in the period prior to euro-introduction. However, by trying to avoid this danger, the CEECCs, at least the (economically, institutionally and technologically) less developed, may run into another danger or pitfall, namely of real divergence (or slow real convergence). The paper investigates these dangers or pitfalls. It argues that for some accession countries the costs of an entry at an early date may be very high, and that there may also be negative spillovers for the other accession countries and for the EU core countries.

The probability of this scenario arising is higher, the greater are the political pressures to adopt the euro as quickly as possible after the EU entrance in those (less developed) accession countries. However, entry into the EU does not guarantee acceptance into the monetary union. The question is whether the EU, given the warnings of the dangers or pitfalls of such a speedy procedure, will and can slow down this process of adoption of the euro by immature candidate countries after their admission to the EU. The answer tends to be negative since the new EU member states will have blocking power in the Ecofin Council over a variety of matters requiring unanimous consent. They can use this power to block progress on other matters if the incumbents try to delay the enlargement of EMU. A special problem exists in that the earlier the EU-enlargement is implemented and the broader the EU-enlargement process, the earlier the danger of real divergence may become virulent. That is, a political decision or compromise to let many CEECCs into the EU at a very early point of time increases the probability of being confronted with countries which, because of economic or political reasons or pressures (or national prestige), speed up fulfilment of the Maastricht convergence criteria in a very short period of time to be able to adopt the euro as quickly as possible. The main danger is that this results in a real divergence process where some of the CEECCs will lag behind more and more, so that the other EU core countries will politically be forced to bail these countries out. As soon as the financial markets assign a high enough probability to this scenario, this may result in a significant EU-wide increase in interest rates and thus, at the worst, lead to an anticipatory recession. This danger has to be weighted against the main argument for a rapid EU-

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<sup>62</sup> See Eichengreen and Ghironi (2001) for a discussion of the reasons why the CEECCs will seek *and gain* entry at an early date.



enlargement: that countries that have a prospect of joining the EU seem to have (had) more focus to their reform efforts.

The above discussion resembles the debate about the right timing and sequencing of the reforms in the transformation process a decade ago. The two main strategies of entering the EMU that the CEECCs can choose are: a “big bang” strategy, and a “gradualistic” way. A “big bang” strategy tries to implement reforms as fast as possible no matter how costly they are in the short run. (An extreme case example of a “big bang” strategy is the transition process in East Germany (Sinn and Sinn 1991; Wagner 1993).) Such a strategy is not very promising when it implies a drastic temporary decrease in living standards for most people and big redistributions in wealth that are regarded as unjust by the population. (This has largely been avoided in East Germany by huge transfer payments from West to East Germany. None of the CEECCs can, not even approximately, expect such big transfer payments.) Moreover, a big bang approach is hindered by the unavoidable time it takes to change fundamental societal institutions, the implementation of which is a precondition for other necessary institutional changes. (Here, East Germany has had the big advantage in that it could take over almost the whole institutional infrastructure from West Germany. Nonetheless, the transition process in East Germany today is often characterised to have been a failure or disaster, measured on a cost-benefit-scale.<sup>63</sup>)

By contrast, a “gradualistic” strategy tries to spread the transition costs over a longer period of time. As this strategy gives the CEECCs more time needed to establish necessary institutions in the beginning for efficiently managing the transition challenge, the transition costs associated with a gradualistic approach may even be lower. However, a gradualistic strategy is often regarded as hesitant behaviour. This can lead to a loss in credibility of the reform policy or the reform will of the government. Consequently, the private initiatives started by governmental measures slow down. The implementation of reform measures can, therefore, fail. Furthermore, it is often a matter of national prestige to insist on not lagging behind neighbour CEECCs in their speed of accession, regardless of the fact that the readiness to accede depends critically on the initial conditions faced by the respective countries which are different between the individual CEECCs. This is sufficient reason to believe that most of the CEECCs will choose a big bang strategy on their way to Euroland. The EU Commission and the Council can control this process only imperfectly since they will only assess the attainment of the nominal Maastricht convergence criteria and not the current and future costs associated with the strategy chosen in the respective country.

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<sup>63</sup> The reason is that not all of the institutional infrastructure that then was taken over has been appropriate for a transition country such as East Germany.

Summing up, the larger the development gap between a CEECC and the average EU country, the more favourable is a more flexible exchange rate regime for the CEECC to accommodate potential inflationary shocks. The requirement to meet the convergence criteria not only before but also after EMU-entrance as well, may (for some less mature candidate countries) argue against entering into a rigidly fixed exchange rate system because it would not leave room for a nominal appreciation of the currency to help bring down inflation. The burden would then fall entirely on other policies at a cost which may be unjustified.

### ***What are the main challenges for ECB monetary policy?***

The main challenges of an early EMU enlargement for monetary policy are as follows.

As the candidate countries join the EU, the incumbents, concerned about low-wage competition from the east, are likely to insist on the provision in the Maastricht Treaty that requires countries that have joined the EU but are not yet part of the monetary union to participate in an ERM-II, which will constrain the flexibility of their exchange rates. But exchange rate bands are fragile and crisis prone. The main risk to their qualifying is a currency crisis leading to their forceable ejection from the ERM-II, precipitated by problems in the banking sector<sup>64</sup>. Therefore (and because of political or national prestige reasons), the accession economies will want to exit the exchange rate bands of ERM-II as quickly as possible by entering the monetary union.

However, enlargement to the east will imply a more heterogeneous monetary union. The new member countries will lag behind the incumbents in terms of development stage, and, in particular, their standards of living. The question is whether that heterogeneity will be only transitional or will persist. On the one hand, the accession countries will try to catch up to EU per capita GDP levels. This will put continuous pressure on spending and downward pressure on central bank rates. This harbours risks, especially before important elections. On the other hand, if an accession country, which lags behind the incumbents economically, institutionally and technologically, sticks to quickly adopting the euro, the risk scenario of a divergent development with a widening gap in the standards of living among the member countries within the E(M)U may be realised.

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<sup>64</sup> A banking crisis occurring before the decision was taken to admit an accession country would have major budgetary costs, and could jeopardise the ability of the country to satisfy preconditions of participation in the ERM-II without involuntary devaluations. As currency speculators know that the authorities would have to inject liquidity to prop up the banking system, they have an incentive to attack the currency. Therefore, a banking crisis could force an ERM-II member to devalue involuntarily, providing the EU with a rationale for denying it early admission to EMU.

In the absence of sufficient institutional upgrading (which takes time), there will be the danger of continued real divergence between the EU incumbents and new members (as explained above). After EMU enlargement, this will force the incumbents to bail out new members that continue to lag behind<sup>65</sup> and also put the ECB under pressure to participate in such bail out actions and thus places considerable strain on the common monetary policy.<sup>66</sup> Knowing or anticipating this will lead to reactions on the international financial markets that may even create an anticipatory recession. This again would put pressure onto the ECB's monetary policy. However, this risk scenario is only relevant if institutional upgrading to EU levels continues to lag. At least for the medium run, there is hope that the upgrading of institutions is endogenous in that integration into the Single Market and the Monetary Union will intensify the pressure on the accession economies to upgrade their institutions as otherwise labour will flow out and capital will have no incentive to flow in. Moreover, enlargement will enhance labour mobility within the EMU and thereby ease its members' adjustment to shocks. The key question, however, is whether the peer pressure and mutual surveillance that E(M)U membership entails will sufficiently accelerate the process of institutional reform, or whether institutional incrustation and demands to adjust wages and the welfare legislation to that of the richer incumbents materialise.

In contrast, if institutions are upgraded to levels representative of the EU incumbents, the CEECCs will grow considerably faster than the present EMU members, thus producing a tendency toward real convergence. However, greater dispersion of growth rates will imply greater dispersion of national inflation rates due to the operation of the Balassa-Samuelson effect. This again intensifies the strains on monetary policy. Monetary policy will be pulled in competing directions, increasing the difficulties created by a "one-size-fits-all" policy and placing additional political pressures on the ECB.

Monetary policy alone cannot do much to avoid the pitfalls highlighted above, because first, the choice of the exchange rate regime is not usually up to the central bank, and second, monetary policy alone will not be able to affect real convergence or divergence paths in a significant way.<sup>67</sup> However, monetary authorities should try to be prepared for the challenges that would come if the crisis situations described above eventuate. The main task of the central banks in CEECCs that do not have a hard peg is to adopt a monetary policy strategy which serves as an appropriate nominal anchor. Furthermore, central

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<sup>65</sup> One can imagine that all EU-summits would then be dominated by distribution policy matters.

<sup>66</sup> There will be strong political pressure, not only on the other member countries to fiscally bail these problem countries out, but also on the European Central Bank to lower interest rates. In this case, there would be a real danger that, despite the precautions set up in the Maastricht Treaty and the Stability and Growth Pact, politicians (including those in the ECB) would eventually give in to this pressure.

<sup>67</sup> Rather one would guess that monetary policy tends to be neutral with respect to long-term growth.

bankers of Western member states can (at best) try to convince their colleagues in the candidate countries not to support in public the popular, however dangerous, route of an ASAP-accession-strategy,<sup>68</sup> at least not as long as they are not sure whether the adaptation or transition costs can be politically mastered. (In principal, one may hope that the above considerations also shape decision-making by the candidate countries (rational-expectations hypothesis), so that these countries deliberately renounce pressing for an early admission to the EMU. However, there are also political pressures (national prestige etc) which have to be considered, and they play a role and can force a government into the dangerous goal of a too early EMU entrance.)

Monetary authorities could also (if they choose) try to make the dangers of a ‘hasty’ accession transparent and warn other political authorities and the public about the costs of a big bang enlargement strategy. This, however, will only be useful if the main reason for following or accepting such a strategy is a lack of knowledge or information. If, however, the reason is different views or interpretations of the reality or transmission mechanism (model uncertainty) or political pressures (different values or preferences), the influence of central banks is very limited. Then the only implication may be: wait and see, hope for the endogeneity of institutional upgrading, and be prepared with the solutions should the risk scenarios be realised.

A further and last pitfall that shall be mentioned here only briefly is the implications of EMU enlargement for ECB policy formulation, i.e. for the ability of the ECB decision-making process to handle larger numbers of participants<sup>69</sup>. Without a major reform prior to enlargement of the monetary union, the Governing Council will consist of six Executive Board members plus anywhere from 17 to 28 national central bank governors. A risk scenario sometimes talked of is that countries accounting for less than, say, a third of euro-zone economic activity, where the conditions were quite different from those in the rest of the monetary union, could dictate the common monetary policy. This could be the case if the six Executive Board members were outvoted by a coalition of national representatives of the large accession group and a group of smaller member incumbent countries who prefer a different policy, suitable for only a small part of the EMU economy. A more important problem, however, is that the EMU enlargement will slow the ECB decision-making process. However, an ECB that is slow to react to shocks would enjoy neither policy credibility nor political support.

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<sup>68</sup> ASAP here stands for “as soon as possible”.

<sup>69</sup> See, for example, Eichengreen and Ghironi (2001).

## Appendix

**Table 1: The Transition Indicators of the European Bank for Reconstruction and Development**

Countries	Population (millions, mid-2001)	Private sector share of GDP in %, mid-2001 (EBRD estimate) <sup>1</sup>	Enterprises			Markets and trade			Financial institutions		
			Large-scale privatisation	Small-scale privatisation	Governance & enterprise restructuring	Price liberalisation	Trade & foreign exchange system	Competition policy	Banking reform & interest rate liberalisation	Securities markets & non-bank financial institutions	
Estonia	1,4	75	4	4+	3+	3	4+	3-	4-	3	
Latvia	2,4	65	3	4+	3-	3	4+	2+	3+	2+	
Lithuania	3,7	70	3+	4+	3-	3	4+	3	3	3	
Poland	38,7	75	3+	4+	3+	3+	4+	3	3+	4-	
Slovak Republic	5,4	80	4	4+	3	3	4+	3	3+	2+	
Slovenia	2,0	65	3	4+	3-	3+	4+	3-	3+	3-	
Czech Republic	10,3	80	4	4+	3+	3	4+	3	4-	3	
Hungary	10,0	80	4	4+	3+	3+	4+	3	4	4-	
Bulgaria	8,1	70	4-	4-	2+	3	4+	2+	3	2	
Romania	22,3	65	3+	4-	2	3+	4	2+	3-	2	

<sup>1</sup> The "private sector shares" of GDP represents rough EBRD estimates, based on available statistics from both official (government) sources and unofficial sources. The underlying concept of private sector value added includes income generated by the activity of private registered companies as well as by private entities engaged in informal activity in those cases where reliable information on informal activity is available. Here the term "private companies" refers to all enterprises in which a majority of the shares are owned by private individuals or entities. The roughness of the EBRD estimates reflects data imitations, particularly with respect to the scale of informal activity. The EBRD estimates may in some cases differ markedly from available data from official sources on the contribution to GDP made by the "private sector" or by the "non-state sector". This is in most cases because the definition of the EBRD concept differs from that of the official estimates. Specifically for the CIS countries, official data in most cases refer to value added in the "non-state sector", a broad concept which incorporates collective farms as well as companies in which only a minority stake has been privatised.

The measurement scale for the indicators ranges from 1 to 4+, where 1 represents little or no change from the previous regime and 4+ represents a standard that would not look out of place in an industrialised market economy.

Source: European Bank for Reconstruction and Development, 2001, pp. 12, 14

**Table 2. Real Convergence Indicators**

		EU-15	Czech Rep.	Estonia	Hungary	Slovenia	Poland	Slovak. Rep.	Lithuania	Latvia	Bulgaria	Romania
GDP Growth Rate	2000	3.3%	2.9%	6.4%	5.2%	4.6%	4.1%		3.3%	6.6%	5.8%	1.6%
	2001	1.5%	3.2%	4.5%	4.3%	3.4%	2.0%		4.5%	5.0%	4.5%	3.0%
GDP per Capita in Euro	2000	22517	5411	3766	5071	9890	4514		3287	3194	1592	1718
	2001	23454	6038	4079	5867	10571	5311		3554	3475	1806	1774
GDP per Capita in % of EU-15	2000		24%	17%	23%	44%	20%		15%	14%	7%	8%
	2001		26%	17%	25%	45%	23%		15%	15%	8%	8%
GDP per Capita in PPP in % of EU-15 <sup>1</sup>	2000		60%	38%	52%	71%	39%	48%	29%	29%	24%	27%
Private sector/GDP in %	2000	80.0%	80.0%	77.0%	80.0%	60.0%	70.0%		70.0%	72.0%	61.0%	62.0%
	2001	80.0%	83.0%	80.0%	80.0%	65.0%	75.0%		72.0%	75.0%	64.0%	65.0%
Unemployment Rate	2000	8.2%	8.9%	13.7%	9.2%	11.9%	14.3%		11.5%	7.8%	17.9%	10.5%
	2001	7.6%	8.5%	12.2%	8.5%	11.0%	15.0%		11.6%	7.5%	16.7%	12.5%
Current account balance/GDP in %	2000	-0.7%	-4.6%	-6.3%	-3.2%	-3.2%	-6.2%		-6.0%	-8.3%	-5.8%	-3.8%
	2001	-0.4%	-4.9%	-7.6%	-3.9%	-1.9%	-4.5%		-7.0%	-7.5%	-5.6%	-5.0%

Source: EMU Monitor 14 December 2001 No. 6 DB Research

<sup>1</sup>Source: Deutsche Bundesbank Monthly Report October 2001

**Table 3: Structural Convergence Indicator**

	<b>DB Research convergence indicator (2001)</b>	<b>Political economy (2000)</b>					
		<b>Private sector/GDP, %</b>	<b>Legal system (EBRD)</b>	<b>Governance (EBRD)</b>	<b>Banking sector (EBRD)</b>	<b>Trade and fx liberalisation (EBRD)</b>	
EU-15	<b>100,0</b>	80	10,0	10,0	10,0	10,0	
Czech Republic	<b>72,2</b>	80	5,6	5,3	7,8	10,0	
Estonia	<b>66,6</b>	77	6,1	6,7	8,1	10,0	
Hungary	<b>71,7</b>	80	8,1	7,3	7,8	10,0	
Latvia	<b>65,7</b>	72	5,3	5,3	6,2	10,0	
Lithuania	<b>61,4</b>	70	7,2	5,3	7,3	9,3	
Poland	<b>65,1</b>	70	8,1	6,3	8,1	10,0	
Slovakia	<b>66,6</b>	87	6,4	6,6	6,3	10,0	
Slovenia	<b>72,8</b>	60	8,1	7,0	6,9	10,0	
Bulgaria	<b>60,0</b>	61	7,2	5,0	5,8	10,0	
Romania	<b>53,0</b>	62	6,1	3,7	6,1	9,3	

Source: EMU Monitor, 14 December 2001, No. 6, DB Research

**Table 4. Exchange Rate Arrangements in the Candidate Countries  
as of December 2001**

<b>COUNTRY</b>	<b>EXCHANGE RATE ARRANGEMENTS</b>
Bulgaria	Currency board (EUR)
Czech Republic	Managed float (EUR reference) <sup>1</sup>
Estonia	Currency board (EUR)
Hungary	Crawling peg (EUR) <sup>2</sup>
Latvia	Peg (SDR)
Lithuania	Currency board (USD) <sup>3</sup>
Poland	Float
Romania	Managed float (USD reference)
Slovakia	Managed float (EUR reference)
Slovenia	Managed float (EUR reference)

1) Relatively free

2) With +/- 15% fluctuation band

3) EUR re-peg to take place in February 2002

Source: EMU Monitor, 14 December 2001, No. 6, DB Research



**Table 5. Maastricht Convergence Criteria**

	EMU	Candidate Countries																		
		Czech Rep.	Estonia	Hungary	Slovenia	Poland	Slovak Rep.	Lithuania	Latvia	Bulgaria	Romania									
Inflation	Criteria																			
	1999	2,1%	3,3%	10,0%	6,2%	7,0%	10,6%	0,8%	2,4%	0,3%	45,8%									
	2000	3,9%	4,0%	9,9%	8,9%	10,0%	12,0%	1,0%	2,7%	10,1%	45,7%									
	2001	4,9%	6,1%	9,6%	8,6%	6,0%	7,6%	1,5%	2,9%	7,7%	35,0%									
Long-term Interest Rates	2000	5,5%	6,8%	7,3%	9,71%(a)	9,1%	7,7%	6,3%	10,2%	5,0%	44,5%									
Exchange rate stability	Max(2Y)																			
Deviation from parity 1)		4,2%	0,0%	-4,2%	-7,6%	-13,6%	-1,9%	9,3%	5,5%	-1,5%	-40,7%									
Deficit or	1999	-3,3%	-4,7%	-3,8%	-6,0%	-3,7%	-3,6%	-7,0%	-3,3%	-0,9%	-4,0%									
Surplus as a	2000	-4,4%	-0,7%	-3,4%	-1,4%	-2,5%	-3,4%	-2,7%	-3,0%	-0,2%	-3,7%									
Share of GDP	2001	-5,3%	-0,8%	-3,7%	-1,1%	-4,3%	-5,2%	-1,4%	-2,2%	-1,7%	-4,0%									
Public Debt	1999	29,0%	7,0%	80,7%	24,3%	43,0%	30,2%	28,3%	10,0%	93,6%	30,3%									
as a Share of	2000	29,2%	6,6%	76,3%	25,0%	43,6%	32,9%	28,3%	10,2%	95,5%	29,4%									
GDP	2001	28,9%	6,1%	64,4%	25,5%	42,8%	42,7%	25,0%	10,2%	97,5%	30,7%									

1) Parity here: last 3-year average exchange rate against Euro

Source: EMU Monitor, 14 December 2001, No. 6, DB Research

(a) Source: World Economic Outlook

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