Accession countries' choice of exchange rate system in preparation for EMU

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Ten countries in Central and Eastern Europe hope to become members of the EU within a few years, and later also to adopt the euro. These "accession countries" are now faced with a critical choice: what to do with their own currencies in the interim? Should they tie them rigidly to the euro or allow them to float freely? Are the EMU convergence requirements actually reasonable? In many emerging markets, the choice of exchange rate regime has been crucial to economic success or failure. The aim of this article is to ascertain, on the basis of the economic arguments, which exchange rate choice would be most beneficial to the accession countries.

Accession countries with widely differing exchange rate regimes

Ten years after the fall of communism, ten countries in Central and Eastern Europe are in negotiations with the European Union on future membership.

The choice of exchange rate system in the countries in Central and Eastern Europe has become an increasingly urgent topic in recent years. Ten years after the fall of communism, ten countries in Central and Eastern Europe are in negotiations with the European Union on future membership.[1] It is hoped that at least half of these accession countries will be given the green light for EU entry over the next few

Valuable comments on the various drafts of this article were received from, among others, Gustaf Adlercreutz, Jan Hansen, Eva Srejber and Staffan Viotti.

[1] The ten countries are Bulgaria, Estonia, Latvia, Lithuania, Poland, Romania, Slovakia, Slovenia, the Czech Republic and Hungary. To these will be added Cyprus and Malta, as well as Turkey, whose application has not yet been considered. Five of the Central and Eastern European countries, Estonia, Poland, Slovenia, the Czech Republic and Hungary, were previously regarded as being in a "first group". Now they are all regarded as negotiating on the same terms.

years. The requirements laid down for membership, the Copenhagen Criteria (after the Copenhagen summit of 1993), are that the accession countries must have a functioning market economy and the ability to compete in EU markets. Another way of expressing this is that the countries must demonstrate *real convergence*, the functioning of the economy and GDP per capita must converge with the EU's.[2] During the first ten years, the choice of exchange rate has been highly significant for progress or setbacks in this process of real convergence. The big question is what will happen when these countries are faced with the possibility – albeit remote – of membership in EMU.

Despite the fact that the requirements for EU membership cover many thousands of pages of legal text, they contain no formal requirements relating to the actual exchange rate system these countries should adopt. Since none of the accession countries have requested, or are expected to request, opt-out from EMU (which, so far, only the UK and Denmark have), they should, on accession, also formally become part of the Economic and Monetary Union, EMU, just as Sweden is today. But what is known in everyday language as EMU, that is entry into the euro zone, need not necessarily apply from the actual date of entry into the EU. The EU's finance ministers have in fact issued declarations stating that it is neither practicable nor desirable that countries should seek rapid and early entry into the euro zone.[3] The decision on exchange rate regimes will, therefore, remain with the accession countries for many years to come. The requirements laid down for euro entry relating to inflation, interest rate levels, budget balances, debt trends and exchange rate movements do *not* apply to EU entry.

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There is, however, in many of the accession countries a clear desire to become part of the euro zone relatively soon after EU entry. For this reason, the question has arisen of the best route from EU membership to entry into the euro zone. This choice of exchange rate regime has created an intense debate, both in the EU and academic circles.

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In this paper, the exchange rate question will be approached in two ways:

[2] De Grauwe and Lavrac (1999).
[3] Ecofin Council (2000).

- First, the most important: what exchange rate strategy is best for the accession countries to achieve *real convergence*, to catch up with the EU in economic development and living standards? This question is synonymous with the question of what exchange rate strategy is best to fulfil the economic criteria for EU entry.
- To this is added the question of what strategy will most surely lead to the accession countries fulfilling the formal requirements which apply to EMU entry, requirements which revolve around *nominal convergence*[4], convergence in nominal inflation and interest rates, as well as a stable nominal exchange rate against the euro.

In connection with EMU significant emphasis is often laid on the Maastricht Criteria, nominal convergence, not least participation in ERM2, but for the accession countries it will be much more important to focus on economic fundamentals. Nominal convergence is only one of several ways of achieving real convergence, i.e. a developed economy and a reduced welfare gap in comparison to the West.

The accession countries in Central and Eastern Europe are now exhibiting a widely differing spectrum of exchange rate regimes, from fully-floating exchange rates to currency boards in the euro.

The accession countries in Central and Eastern Europe currently exhibit a spectrum of widely differing exchange rate regimes, from freely floating exchange rates to currency boards in euro.[5] The alternative exchange rate regimes which will be examined here comprise all systems currently in use and those which have been discussed in Central and Eastern Europe: (1) relatively or fully floating exchange rates with inflation targets, (2) fixed (but adjustable) exchange rates, (3) currency boards and (4) full introduction of euro notes and coins, euroisation.[6]

The conclusion is that the most clear-cut exchange rate alternatives – either totally flexible or totally fixed – are probably those which lead to the most stable

[4] For a discussion of these concepts, see IMF (2000), the European Commission (1999), de Grauwe and Lavrac (1999), van der Haegen and Thimann (2000) as well as Gulde, Keller and Kähkönen (2000).

[5] The workings of a *currency board* will not be explained in detail in this article. Put simply, the principle of a currency board is that no notes and coins will be issued in the country's own currency unless a certain predetermined quantity of foreign currency has been exchanged and deposited in the currency board's reserves, so that anyone who has a note in the country's currency can, at any time, go to any bank and exchange it for the same predetermined amount in hard currency. The Central Bank or the authority which manages the currency board must, accordingly, have at least sufficient reserves of foreign currencies to cover the monetary base, so that notes and coins can be exchanged at all times. In the modern financial world, the boundary is somewhat fluid. Most currency boards have more foreign hard currency than necessary for covering just notes and coins, and the question is how broad a definition of money should be covered, and how to make a distinction between a currency board and a very fixed exchange rate peg backed up by large hard-currency reserves. The currency boards in the accession countries are written into law, even to some extent into their constitutions, but some countries, including Hong Kong, have currency boards which are maintained only by custom.

[6] The introduction of the euro before EMU entry, i.e. unilateral euroisation, was discussed by the Estonian Prime Minister, Mart Laar, at the beginning of 2000.

progress. It is best if the focus is either on inflation, similar to the approach taken in Sweden, the UK and other countries using inflation targeting, or on the exchange rate, and in that event with a far-reaching link to the euro, such as a currency board, so that it resembles the conditions under a future membership of EMU. The choice between these two solutions must depend on the specific conditions in the individual country. But having a clear objective for monetary policy makes it easier for the countries to achieve real convergence, which in turn is the most important condition for achieving nominal convergence. Direct or indirect requirements that all accession countries must join the exchange rate mechanism ERM2 at an early stage is very much the poorer alternative. In fact there is a risk that a very rigid strategy to fulfil the convergence requirements of the Maastricht Treaty may, paradoxically, delay the move towards the euro zone. A fixed exchange rate with a commitment to a very limited scope for variation within the framework of ERM2, or even a unilateral commitment to pegged exchange rates before EU entry, can create serious problems if the country is exposed to large short-term capital inflows in connection with EU entry. There may also be longer-term problems in reconciling the exchange rate target with low inflation if the country experiences a rapid growth in productivity.

Where do the accession countries stand today?

At present, the accession countries' exchange rate systems can be divided schematically into three main groups:

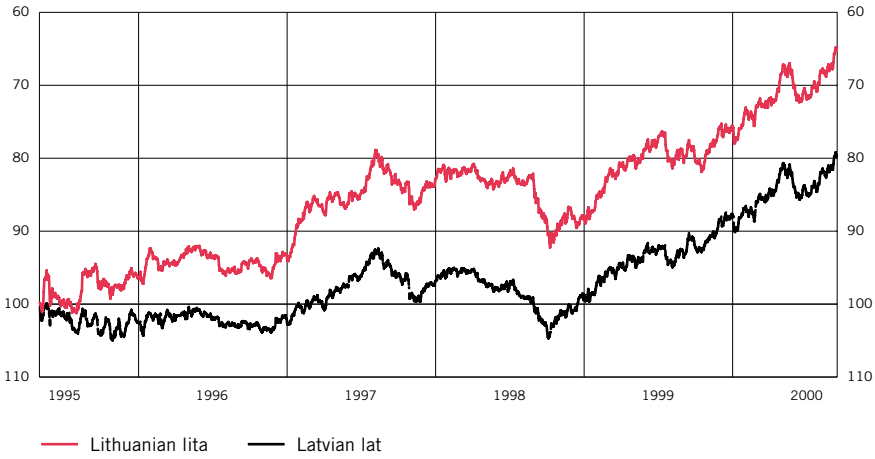
1. Currency board countries:

This group comprises the three Baltic States, which, after a brief period of temporary coupon currencies (to replace the Soviet rouble), pegged their currencies through currency board arrangements:

- Estonia has had its currency, the *kroon*, pegged (eight to one) to the D-mark, which is now the euro, since 1992.
- Lithuania has had its currency, the *lita*, pegged (four to one) to the US Dollar since 1994.
- Latvia does not have a formal currency board, but has since 1993 adopted an arrangement similar to a currency board, in which its currency, the *lat*, has been backed by reserves equivalent to those held in a currency board (see note 2), directly pegged to the International Monetary Fund's (IMF) unit of account, SDR (special drawing rights), the value of which is determined by a basket of leading international currencies, principally the US dollar and the euro.

Diagram 1. Lithuanian lita (currency board USD) and Latvian lat (pegged to SDR)

Exchange rate against the euro, index: 1995=100



Sources: Hanson & Partner and IMF.

One country in Southeast Europe also belongs to this group;

- Bulgaria, after a period of highly unstable monetary policy, pegged its currency, the *lev*, to a currency board in D-marks (one to one) in 1997, which have subsequently become euro.

2. Countries with fixed exchange rates (managed float):

- Hungary has, up to the present time, allowed its currency, the *forint*, to depreciate month by month against a basket of the euro and the US Dollar, in accordance with a crawling peg, around which the exchange rate is allowed to deviate only within narrow, pre-determined bands.
- Slovenia has attempted to stabilise its currency, the *tolar*, against the D-mark, now against the euro.
- Romania, ever since 1990, has been attempting, with little success, to stabilise its currency, the *leu*, against the US Dollar and the euro.

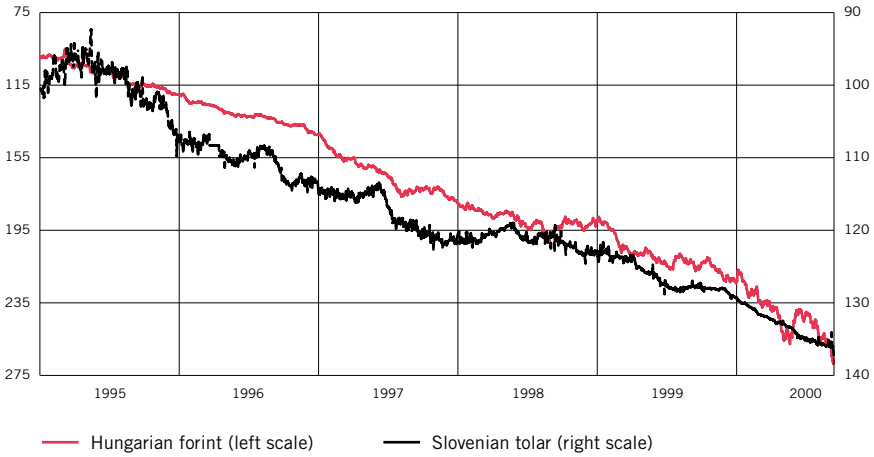
3. Countries with largely floating exchange rates and inflation targeting:

- The Czech Republic began with a fixed exchange rate against a basket of the D-mark and the US Dollar, but after a crisis of confidence in May 1997 (before the Asian crisis), the country was forced to allow the *koruna* to float. The Czech Republic now has an inflation target, but it tries to combine this with exchange rate variations limited to a band of ±15 per cent, similar to that which applies within ERM2.

- Slovakia, which also inherited the fixed exchange rate of the joint Czechoslovakian koruna, followed the Czech Republic in 1998, and allowed its currency, the *koruna*, to float. Slovakia has, however, confined itself to stabilising its exchange rate, without an explicit inflation target.
- Poland, which instituted its reforms with a totally fixed rate for the *zloty* against the US Dollar (to reduce inflation expectations), then went over to a crawling peg, and has now finally adopted an inflation target policy, though with a pledge to maintain the stability of the currency within the ±15 per cent which applies in the ERM.

Diagram 2. Hungarian forint and Slovenian tolar

Exchange rate against the euro, index: 1995=100



Source: Hanson & Partner.

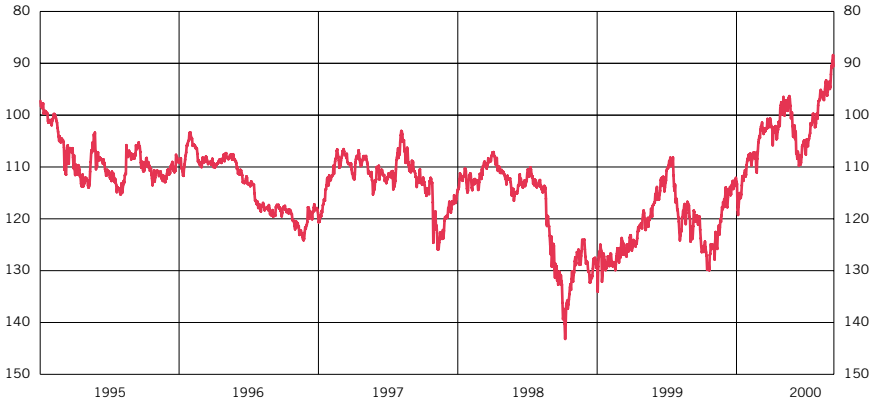
The exchange rate policies of the different countries are summarised in table 1. The table shows that the number of countries in the "intermediate position", fixed but adjustable exchange rates, has fallen since the reforms were introduced. During the course of the reforms, five accession countries have gone over to some form of corner solution, two countries to inflation targets and two to currency boards.

What results have the exchange rate regimes provided so far?

It is difficult to isolate the effects of the exchange rate regimes from the effects of the many other aspects of reforms during the accession countries' transition to rapidly-growing market economies. The progress of the accession countries so far does, however, give some support to the view that the currency board countries have had more success in *fighting inflation* than the countries with fixed exchange rates and

Diagram 3. Polish zloty

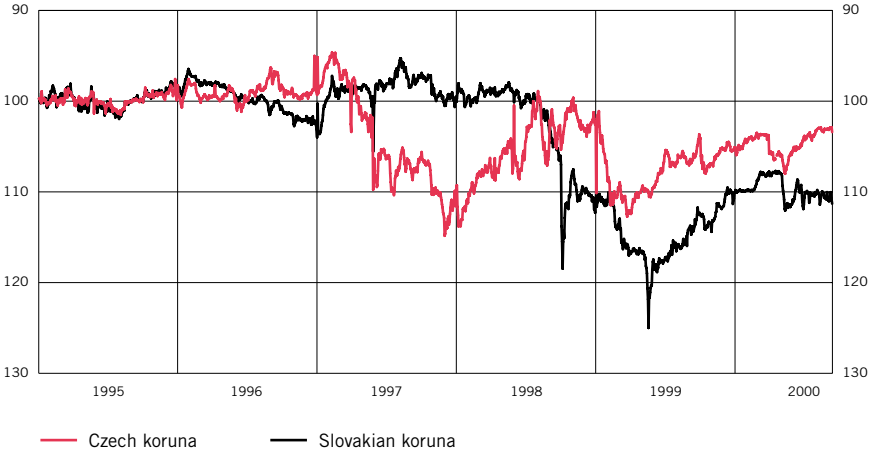
Exchange rate against the euro, index: 1995=100



Source: Hanson & Partner.

Diagram 4. Czech and Slovakian koruna

Exchange rate against the euro, index: 1995=100



Source: Hanson & Partner.

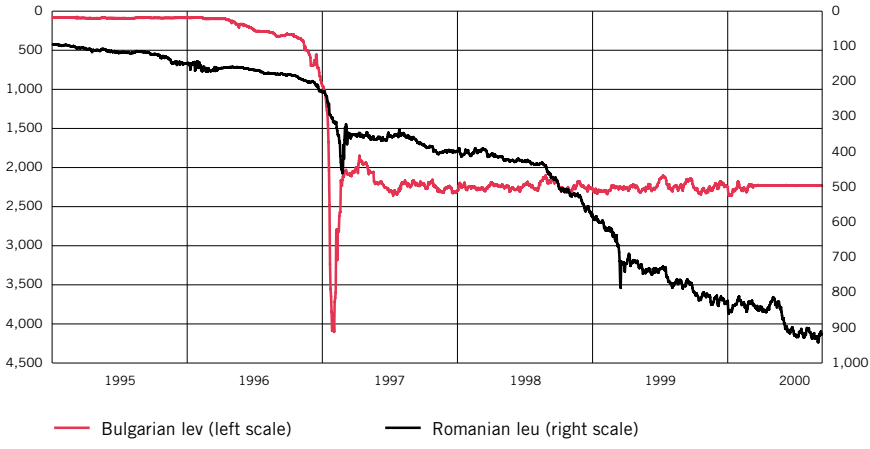
The currency board countries have had more success in *fighting inflation* than the countries with fixed exchange rates and crawling pegs.

crawling pegs. This tallies well with empirical studies of emerging markets in other countries in Eastern Europe, Asia and Latin America, which show that currency board countries have, on average, lower inflation than countries with other exchange rate regimes.[7]

[7] Rivera Batiz and Sy (2000).

Diagram 5. Bulgarian lev and Romanian leu

Exchange rate against the euro, index: 1995=100



Sources: Hanson & Partner and IMF.

Table 1. Exchange rate regimes in accession countries 1997–2000

Country	Exchange rate regime 1997	Exchange rate regime 2000	Future plans
Bulgaria	"Managed float" against DEM	Currency board 1 EUR = 1.95583 Bulgarian lev	No change
Estonia	Currency board 1 DEM = 8 Estonian kroon	Currency board 1 EUR = 15.6466 Estonian kroon	No change
Latvia	Fixed rate 1 SDR = 0.7997 Latvian lat ±1 %	Fixed rate 1 SDR = 0.7997 Latvian lat ±1 %	EUR new reference currency
Lithuania	Currency board 1 USD = 4 Lithuanian lita	Currency board 1 USD = 4 Lithuanian lita	EUR new currency board currency 2001
Poland	"Crawling peg" –1 % per month against basket[1] ±7 %	Inflation target in stages, ±15 % against EUR	Inflation target down to 4 %
Romania	"Managed float" against USD	"Managed float" against USD and EUR	Prospective peg to EUR
Slovakia	Fixed rate against basket[2] ±7 %	"Managed float" against EUR	–
Slovenia	"Managed float" against DEM	"Managed float" against EUR	–
Czech Republic	Fixed rate against basket[3] ±7.5 %	Inflation target in stages, "Managed float" against EUR	No change
Hungary	"Crawling peg" –1.1 % per month against basket[4] ±2.25 %	"Crawling peg" –0.4 % per month against basket[5] ±2.25 %	Prospective peg EUR 2001

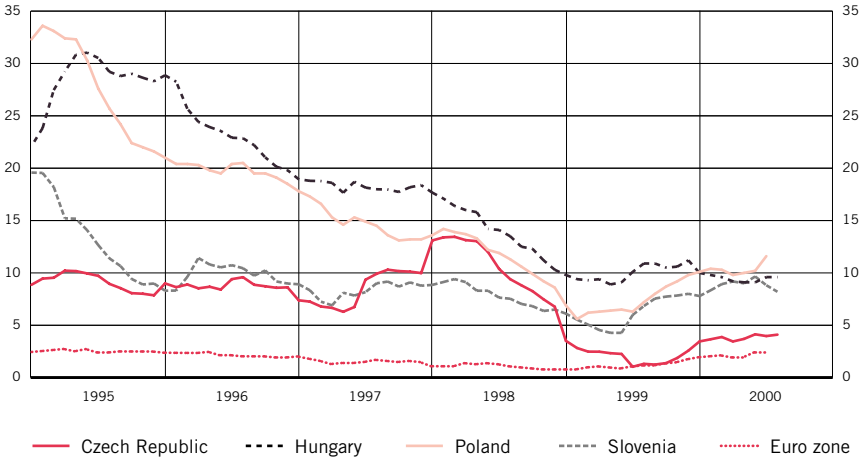
[1] Basket consisted of 45 % USD, 35 % DEM, 10 % GBP, 5 % FRF and 5 % CHF.
[2] Basket consisted of 60 % DEM and 40 % USD.
[3] Basket consisted of 65 % DEM and 35 % USD.
[4] Basket consisted of 70 % DEM and 30 % USD.
[5] Basket consisted of 70 % EUR and 30 % USD.

In all the accession countries (with the exception of Romania), however, inflation has fallen dramatically from the high figures, sometimes verging on hyperinflation, prevalent throughout Eastern Europe, apart from Czechoslovakia, at the beginning of the 1990s. Only the Czech Republic and the Baltic States have so

far been able to reduce inflation to below the 10 per cent mark – countries which used successive devaluations have had the greatest difficulty in lowering their inflation rate (see Diagrams 6, 7 and 8). Nominal and real interest rates have without exception been lower in the Czech Republic, which adopted inflation targets, and in the currency board countries, than in countries with fixed or managed exchange rates (see Diagrams 10 and 11).

Diagram 6. CPI inflation in Central Europe and the euro zone, 1995-2000

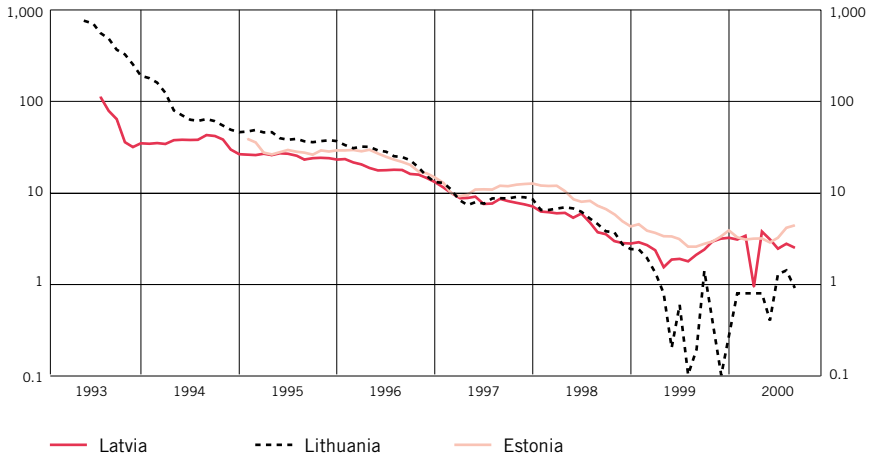
Annual percentage change



Sources: Eurostat, Government statistics agencies in Poland, Slovenia, Czech Republic and Hungary.

Diagram 7. CPI inflation in the Baltic States, 1993-2000

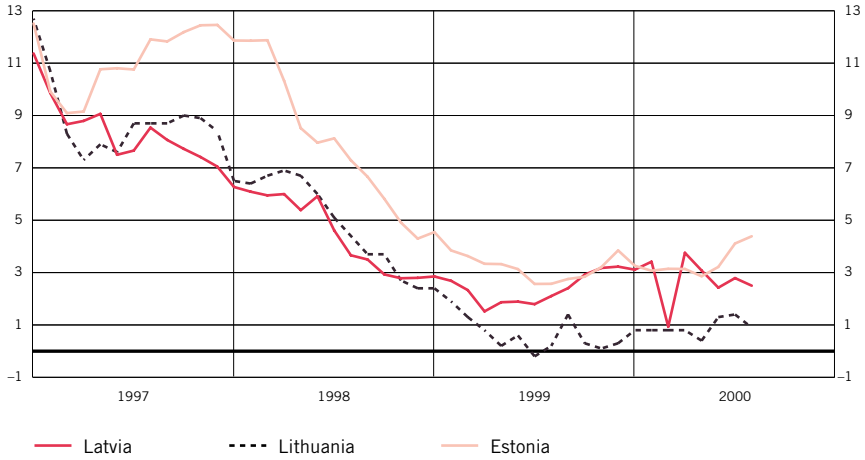
Annual percentage change. Logarithmic scale



Sources: Hanson & Partner and IMF.

Diagram 8. CPI inflation in the Baltic States, 1997-2000

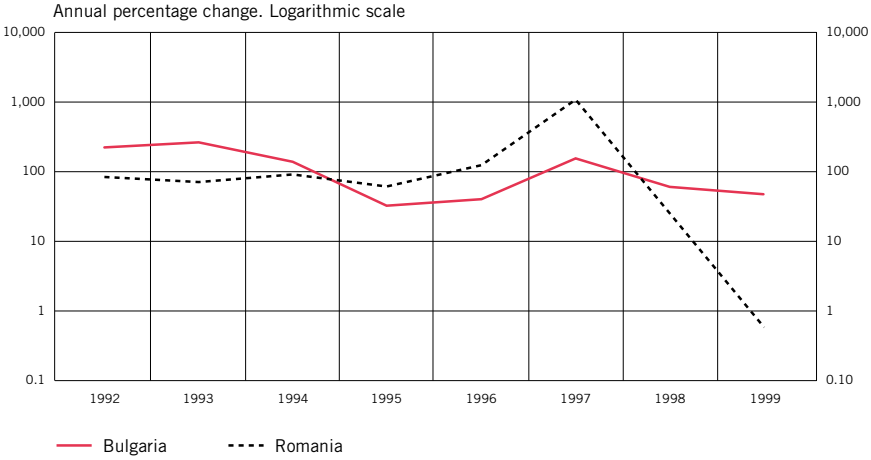
Annual percentage change



Sources: Government statistics agencies in Estonia, Latvia and Lithuania.

Diagram 9. CPI inflation in Bulgaria and Romania, 1992-1999

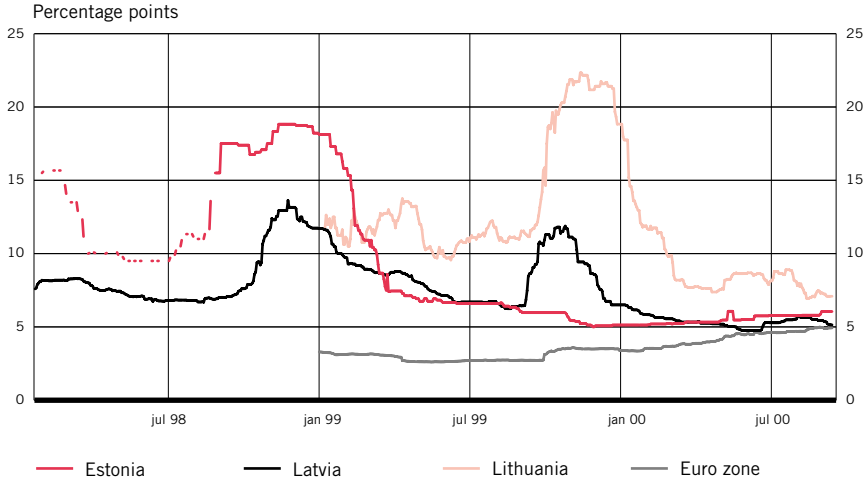
Annual percentage change. Logarithmic scale



Source: EBRD.

Diagram 10. Short-term interest rates in the Baltic States, 1998-2000

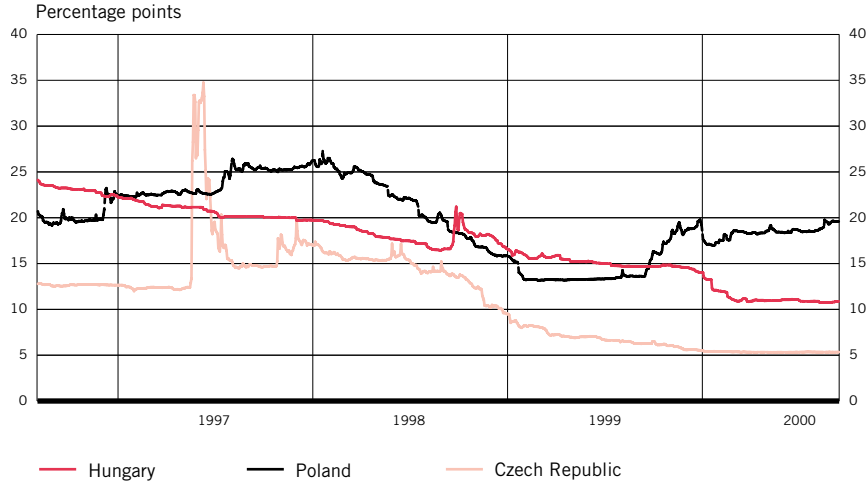
Percentage points



Source: Hanson & Partner.

Diagram 11. Short-term interest rates in Hungary, Poland and the Czech Republic, 1997-2000

Percentage points



Source: Hanson & Partner.

Growth trends have been fairly similar in all countries with strong, reform-oriented economic policies, irrespective of exchange rate regime.

Fiscal policy discipline seems generally to have been tightest in countries which adopted a clear fixed exchange rate arrangement, although the Czech Republic, with a floating exchange rate, has successfully reduced its public sector

deficit in recent years. The Baltic States, on the other hand, have been forced to relax their tight fiscal policies in response to the crisis in Russia. Budget discipline came late to Hungary, four years after the reforms started. The massive deficits in current account balances and budgets shown by the accession countries at the end of the 1990s (twin deficits) have been interpreted as a sign of lack of competitiveness and of overvalued currencies. Deficits of this type have emerged in most accession countries, but the current account deficits have been greatest in the Baltic States and Poland (see Diagrams 12 and 13).

The massive deficits in current account balances and budgets shown by the accession countries at the end of the 1990s have been interpreted as a sign of lack of competitiveness and overvalued currencies.

It should, however, be pointed out that the accession countries, during the reconstruction phase following the fall of communism, have had exceptionally high investment requirements, both resulting from the need to catch up and the high level of growth natural at their stage of development, and from the systematic underinvestment and misdirected investment of the planned economy, which left an antiquated and worn-out capital stock. A large net inflow of capital, with the attendant current account deficit, is, therefore, completely natural. A more detailed analysis shows also that a substantial part of the inflow consisted of long-term foreign direct investments (FDI) which are not expected to create any risk of rapid outflows.[8]

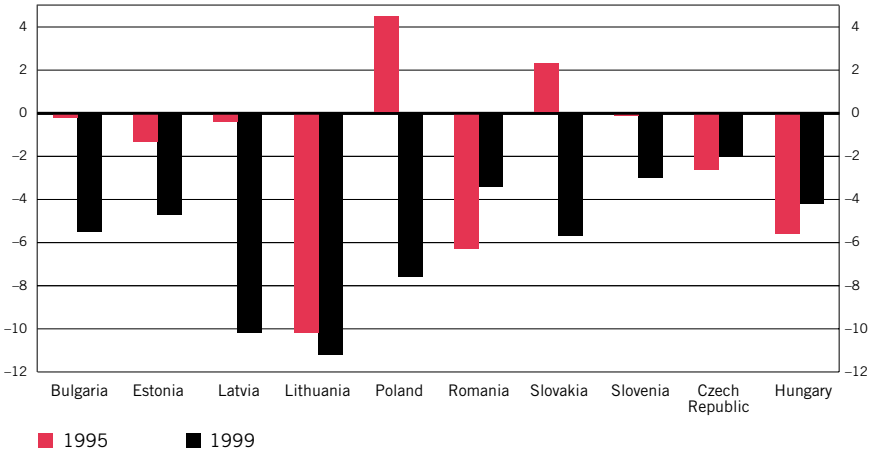
Real convergence – moving closer economically to the EU average

Today (1999 data), the ten accession countries are still far from the welfare levels of the current EU countries (although some of them are approaching those of the two countries with the lowest per capita income: Greece and Portugal). GDP per capita adjusted for price differences varies from just over 20 per cent (Bulgaria and Romania) of the EU average to over 70 per cent (Slovenia) (see Diagram 14). It should be noted, however, that the richer countries (Slovenia, the Czech Republic and Hungary) have about the same relationship to the EU average in their GDP per capita as did Portugal, Greece, Spain and Ireland when they

[8] It should also be borne in mind here that GDP in the countries involved has been undervalued when measured using ordinary exchange rates. Since the current account balance is measured in US Dollars, the deficit looks alarmingly high at first glance, before revaluation of the size of the GDP in Dollar terms and the real appreciation of the currency shows that the current account deficit as a proportion of GDP is, in fact, smaller than it first seemed.

Diagram 12. Current account balance in the accession countries in 1995 and 1999

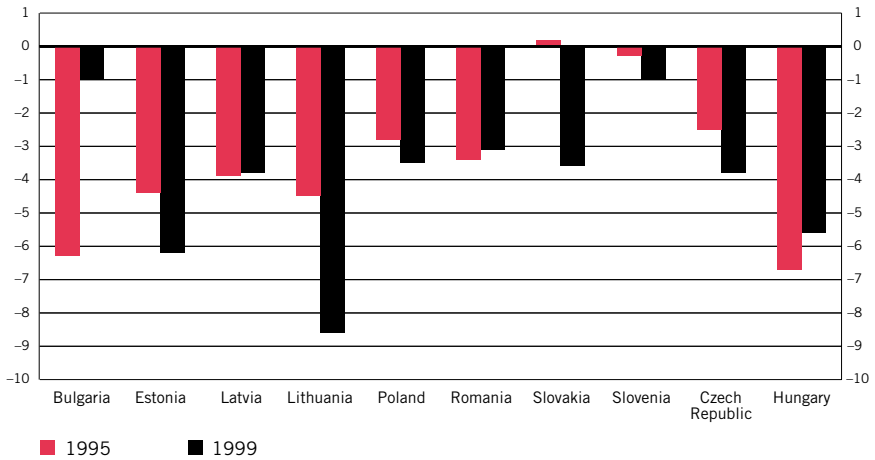
Per cent of GDP



Source: EBRD Transition Report, May 2000.

Diagram 13. Budget balance in the accession countries in 1995 and 1999

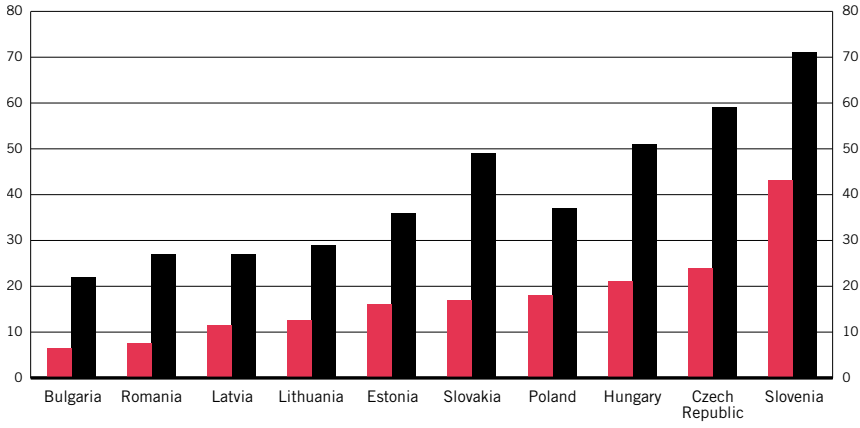
Per cent of GDP



Source: EBRD Transition Report, May 2000.

began negotiations for EU entry in the 1970s and 1980s. In this context, the relative rate of growth is crucial; a growth rate of 7 per cent over the next ten years would mean that GDP in these countries would double, but with a growth rate of

Diagram 14. Estimated GDP per capita in per cent of EU average, 1999



Sources: EBRD and the European Commission.

3 per cent, GDP would increase only by one-third, and the relationship to the EU average GDP per capita would change only marginally.

From the literature on exchange rate regimes, we have identified some criteria for evaluating whether an exchange rate regime can facilitate *real convergence* or *catching-up* for a formerly planned economy. The case of the accession countries is similar to that of other emerging markets, but with the additional burden of transition, with the concomitant restructuring and shocks.

Credibility of macroeconomic policy

Most accession countries have a past of high inflation or hyperinflation, weak public finances and "soft budget constraints" for state-controlled companies, where subsidies long kept loss-making workplaces in business. At that time it was not possible to finance budget deficits via the financial markets, and large deficits were often covered by credits from the central bank – printing money – and inflation was allowed to decimate the general public's cash balances. The recent history of the accession countries, therefore, makes the need for a credible anchor for monetary policy especially important, both in relation to often weak governments and split parliaments, and to the initially high inflation expectations of the general public.

The recent history of the accession countries makes the need for a credible standard for monetary policy especially important.

By binding itself to maintain a fixed exchange rate, the government establishes a limit for how expansionary monetary policy can be.

The most obvious option for the accession countries (where the US Dollar and the Deutsche mark were already common alternative currencies for savings and the black market) was to allow a fixed exchange rate to act as a confidence-creating standard, a nominal anchor for economic policy. By binding itself to maintain a fixed exchange rate, the government establishes a limit for how expansionary monetary policy can be, and, in the long term, price equalisation will create roughly the same price trend in the country's currency as the one selected for pegging. Poland was the first country in the former eastern bloc to peg its currency, the zloty, to the US Dollar until hyperinflation had abated. Subsequently, several countries adopted a crawling peg with programmed controlled devaluation, which also gives a degree of confidence. Inflation is higher than in the country the currency is pegged to, but it is still relatively predictable.

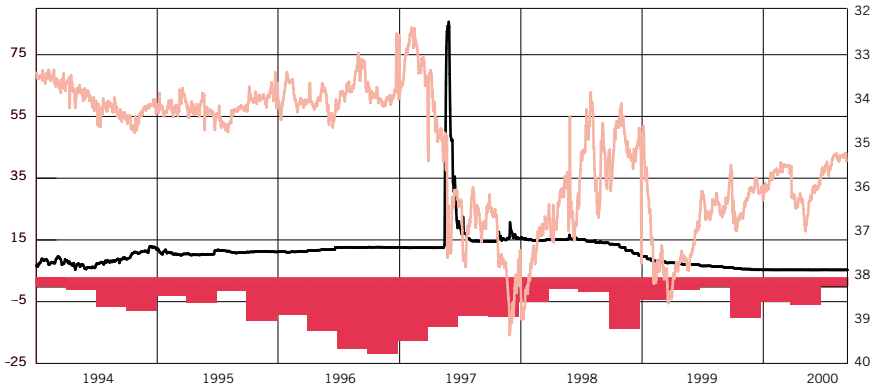
The advantage, but also the major disadvantage, of fixed exchange rates is that if the economy is hit by a major shock, it is always possible to surprise the public with a devaluation which depresses wage levels, eases monetary policy and generates temporarily higher growth. The downside of having this emergency exit is that the currency markets and the public are always conscious of the risk of devaluation. The country has to pay for this risk through an interest rate gap in relation to the country to which it has pegged its currency. In addition, expectations of an "emergency" devaluation are factored in by the parties in the labour market, and this has a detrimental effect on discipline in wage formation. The devaluation risk is seen as greater if the government is seen as weak. This is the case for many of the governments in the accession countries, which are still immature democracies with rapidly shifting party systems.

Among the accession countries, the Czech Republic was forced to devalue in 1997, even before the Asian crisis, when a crisis of confidence hit a weak and paralysed government (see Diagram 15). In 1998, Slovakia was obliged to follow suit, and Bulgaria went through a string of similar exchange rate crises before the currency board was introduced in 1998.

It can be easier to achieve credibility with a currency board, with its effective institutional provisions supporting the fixed exchange rate.

It can be easier to achieve credibility with a currency board, with its effective institutional provisions supporting the fixed exchange rate. Given that all outstanding cash is covered by hard currency, it is not possible to force the collapse of a currency board through speculation. It is possible at all times to ex-

Diagram 15. The Czech crisis



Sources: Czech National Bank and Hanson & Partner.

change the currency for hard currency to the last unit.[9] Abandoning a currency board must, therefore, be (by definition) a political decision, based on a national economic calculation. Such a decision is made even more difficult by the fact that the currency board is often backed up by statutory provision, or even in the constitution[10]. This reduces the risk premium both with respect to the general public and to players in the finance market – the currency board "straightjacket" creates a stronger incentive for adjustment. Studies show that currency boards in developing countries generally achieve lower interest rate levels.[11] As can be seen, this is also the case with the accession countries, where countries with currency boards have lower real interest rates than those with fixed exchange rates (see Diagrams 10 and 11).

The danger with the confidence created by the currency board is that if the

[9] The fact that the whole of the outstanding monetary base is covered by foreign currency does, however, have a price. It is the same price as for a normal note issuing monopoly, where the general public must give the note issuer an interest-free loan, seignorage, when they exchange real value for notes. Similarly, the purchase of foreign liquidity means that, in practice, the currency board pays seignorage abroad. The funds in the currency board can then be invested to provide a risk-free interest rate, provided that a seignorage is paid by the public to the currency board when the citizens accept the currency board's domestic notes. In contrast to normal note issuing, the net of the seignorage the general public pays to the currency board and the seignorage the currency board pays abroad should be almost zero (unless the reserves are unnecessarily large or managed with excessively high risk), while the foreign country receives a positive net. Precisely the same "interest-bearing loan of notes from abroad" takes place with euroisation, with the difference that the general public pays the seignorage directly abroad. With the euroisation of a currency board, however, there may be additional logistical problems with the supply of notes and bank liquidity, but the currency board should by definition already contain sufficient euro liquidity for the needs of the economy.

[10] Eesti Pank (1999 and 2000), Baliño and Enoch (1997).

[11] Gulde, Keller and Kähkönen (2000).

arrangement is ever abandoned, there is a risk of an even deeper crisis of confidence and interest rate rises, since the very symbol of stability will disappear. In principle, it is possible for "weak" currency boards to be hit with the same risk premium as ordinary fixed exchange rates. There is no recent example of such a "weak" currency board, but in Lithuania, where a debate has been in progress for a number of years on dissolving the currency board, interest rates have risen when uncertainty about economic policy has increased, and have remained for some time much higher than the corresponding interest rate in its currency board neighbour, Estonia (see Diagram 10). In recent years, Argentina's currency board has also been affected by high real interest rates. The role of the currency board in maintaining the credibility of monetary policy and the expectations of the general public would, consequently, make any dissolution of the currency board and a change of exchange rate regime during the period up until membership of the euro zone risky.

The introduction of the euro in the form of notes and coins, i.e. euroisation, would, on the other hand, create total credibility for exchange rate commitments.

The introduction of the euro in the form of notes and coins, i.e. euroisation, would, on the other hand, create total credibility for exchange rate commitments, and by definition remove the last currency risk premium (even in Estonia's case about 1 percentage point) which separates the currency boards from the euro zone (see Diagram 10).[12]

In the past decade, a totally different form of monetary policy model has been used successfully by an increasing number of OECD countries, and subsequently also by emerging markets: inflation targeting.

In the past decade, a totally different form of monetary policy model has been used successfully by an increasing number of OECD countries, and subsequently also by emerging markets: inflation targeting. In principle, the exchange rate has no direct role in this system, with monetary policy being managed with the goal of achieving price stability. Inflation targeting means that macroeconomic shocks can be reflected to some extent in the exchange rate, which can fall, for example, in the event of a negative shock. However other problems arise. An inflation target requires a good forecasting ability, since it can take up to two years for changes in the base lending rate, working through various channels, to take effect.[13] There also needs to be a

[12] The risks to which the banking system is exposed when its liquidity is determined by external factors could, perhaps, lead to a risk premium for the euroising country, but it should be equivalent to, or below, the risk premium with a currency board.

[13] At present, we know very little about the transmission mechanism in the accession countries, since relatively few studies have been carried out in this area.

high degree of credibility for the inflation target, through strong political and institutional support. It is also essential that the new goal is explained to the general public, so that their expectations will be modified to suit, and that the target is achieved within a reasonable time frame.

On all these points there are elements of uncertainty in many emerging markets: macroeconomic data may not be of sufficiently high quality to permit accurate forecasting, and weak political support may make it necessary to adopt more powerful institutional arrangements, such as currency boards, to insulate monetary policy from political pressures. Finally, rapid changes in the financial markets, as well as structural factors such as the deregulation of prices which were previously indirectly subsidised in the planned economy (energy, public transport, railways, rents, etc.), may make it difficult to achieve the inflation target in the short term.[14]

The most successful accession country appears to be the Czech Republic, where the inflation model is working well.

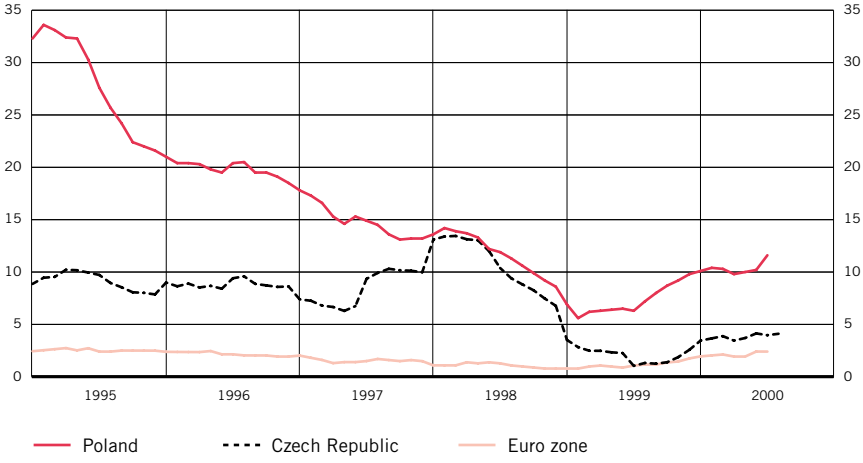
In the emerging markets where inflation targeting have been tried, however, the majority of these apprehensions have come to nothing. An example is Brazil, which has so far been successful in using inflation targeting to avoid a rise in inflation after the currency, the *real*, was decoupled from the US Dollar at the beginning of 1999. As has been mentioned above, there are two examples among the accession countries, and these point in different directions. The most successful accession country appears to be the Czech Republic, where the inflation model is working well, but where the fight against inflation has "benefited" to some extent from a weak economic situation. The second example, Poland, has had greater difficulty in achieving its inflation targets[15], partly as a result of weak fiscal policies and the deregulation of artificially low prices (see Diagram 16).[16]

On one important point, however, the credibility of monetary policy will be boosted in all countries which seek membership of the EU, irrespective of exchange rate regime: under the EU Treaty, the Central Bank must be granted effective independence.

[14] National Bank of Poland (2000).
[15] Formulated in several stages, of which the last is an inflation rate of 4 per cent.
[16] National Bank of Poland (2000), (1999) and (1998), Czech National Bank (1999) and (2000) as well as Backé and Radzinger (1999).

Diagram 16. CPI inflation in Poland and the Czech Republic compared with in the euro zone, 1995-2000

Annual percentage change



Sources: Eurostat, Government statistics agencies in Poland and the Czech Republic.

The ability to cope with real disruptions

At the same time as the exchange rate regime creates credibility, it must also permit the economy to respond flexibly to shocks to the country's productive capacity. With a floating exchange rate, this response can be either through exchange rate movements or through changes in wages and prices. The most interesting case, is that of fixed exchange rates, where the response can take place only through wages and prices. The arguments which will be put forward below will, in many cases, bear a striking resemblance to those offered in the debate on EMU.[17] This is no accident – very strong forms of currency pegging, such as currency boards, are, naturally, systems which are very close to EMU.

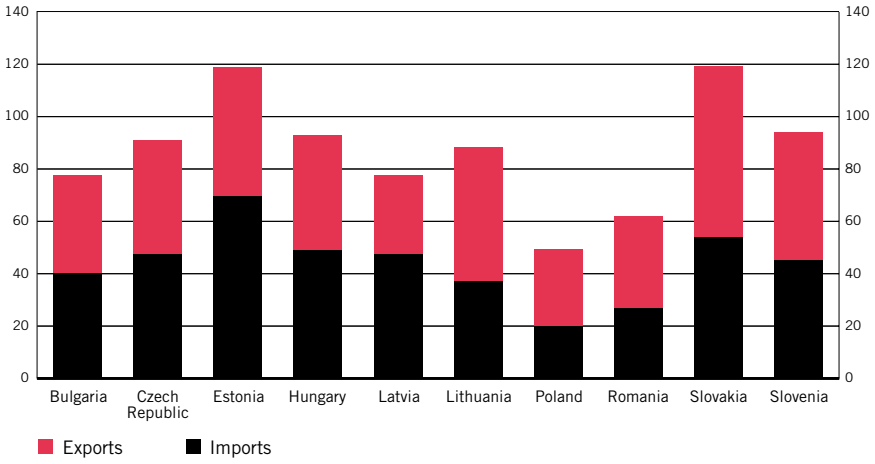
At the same time as the exchange rate regime creates credibility, it must also permit the economy to respond flexibly to fluctuations in the country's productive capacity.

The first question to ask is what the risks are that the accession countries will be exposed to an asymmetric shock, i.e. a shock which affects the accession country itself but not to the same extent the currency area to which the currency is pegged (if both are equally affected, a similar monetary policy can be adopted for both areas, without major difficulties).

[17] For an overview of the economic arguments in the EMU debate, see SOU 1996:158.

Diagram 17. Degree of openness among the accession countries, 1998

Exports and imports in relation to GDP. Per cent



Source: IMF.

The risk of an asymmetric shock depends on a number of factors:

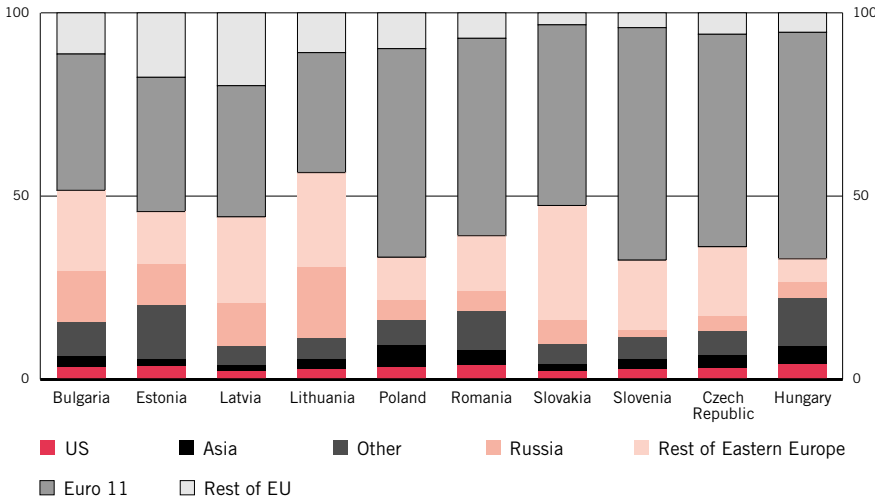
- If there is *extensive trade with* (and large investment flows to or from) *the country to which the currency is pegged*, there is a greater chance of remaining in synchronisation with the economic trends in this area, and of being affected by the same shocks – the risk of asymmetric shocks is smaller. It can be pointed out here that the accession countries, despite the fact that their economies were formerly relatively closed and trade directed towards the east (with the exception of Slovenia), are now among the most open economies in Europe, with exports equivalent to 20–70 per cent of GDP and equally large imports (see Diagram 17). In all these countries, the EU represents over half of their trade, in a number of cases over three-quarters, and the euro zone in turn is responsible for the bulk of EU trade. Second most important for trade (20–30 per cent) are other accession countries, countries which are themselves dependent on EU trade. Russia, on the other hand, currently represents a much smaller proportion – in general under 10 per cent (see Diagram 18).[18] Of the accession countries, Estonia, Latvia, Lithuania, Hungary and Slovenia are among the most open (the figures for the degree of openness in Slovakia and the Czech Republic are very much affected by the former intra-Czechoslovakian trade between the two countries). Poland and Romania, and maybe also the Czech Republic, Slovakia

[18] Even in the Baltic States, trade with Russia has fallen dramatically since the Russian crisis of 1998.

and Bulgaria can be regarded as rather less open. Slovenia, Hungary and the Czech Republic are open towards the euro zone in particular. With these there is, accordingly, considerable reason to expect their development to be very closely linked to the euro countries. According to some calculations, GDP trends in the accession countries show a higher correlation to Germany's GDP trends than many of the euro countries do.[19]

Diagram 18. Trade structure for the accession countries by region, 1999

Index: Q1 1999=100



Source: EBRD.

- Here, however, the comparison is only being made with the euro zone, but for *Lithuania*, for example, *the USA is the relevant comparison*, since the currency board, at present at any rate, is pegged to the US Dollar, and for Latvia it is the currencies in the SDR currency basket (with a major proportion of the US Dollar as well as the euro). In Lithuania's case, and to some extent in Latvia's, there is, therefore, greater risk of asymmetric shocks against the euro zone. Although trade is to a large extent in US Dollars, trade with the US as such is not particularly important, and the appreciation of the US Dollar against the euro was an important factor in Lithuania's deep crisis in 1998–99, after the Russian collapse. Likewise, Latvia was hit when the SDR appreciated against the euro.
- A shock often affects a certain part of the economy, and for this reason *the spread between industries and sectors* is important in determining how great is the risk of an

[19] IMF (2000), Boone and Maurel (1998) and (1999) as well as de Grauwe and Lavrac (1999).

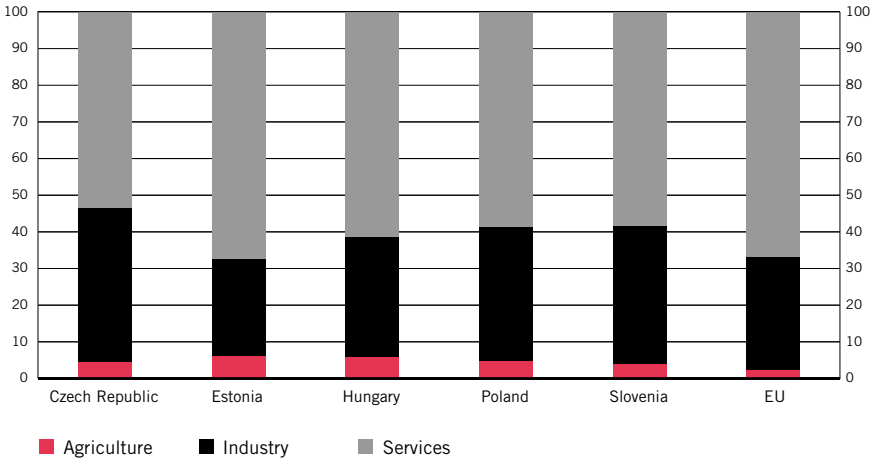
asymmetric shock. The more the economic structure of the accession countries resembles that in the euro countries, the less risk the accession countries run of being affected by shocks unlike those in the euro zone. Here, very large differences remain. All the accession countries have an agricultural sector significantly larger than the EU average; in Poland, agriculture's share of employment is several times greater than in any of the EU countries. The proportion of heavy and labour-intensive industries is also greater than in Western Europe, with steel and mining as lingering problems. But, at the same time, the general economic structure is converging rapidly with that of Western Europe. In all the accession countries, the service sector has grown rapidly and the agricultural sector has shrunk (especially in Poland) (see Diagram 19). A number of studies also indicate that the level of local specialisation has increased. At first sight this should suggest an increased risk of asymmetric shocks, but since it involves an increased specialisation among many individual companies, and not for the country as a whole, it means that, on the contrary, the industrial structure is becoming less uniform, more knowledge intensive and better at creating added value – and thus more like the euro zone. At present, the industrial structure in countries such as Hungary, the Czech Republic and Estonia is most like that in the euro zone, while Poland, Bulgaria and Romania exhibit relatively greater disparities. An example of the fact that the accession countries are not necessarily affected differently on the basis of their industrial structure is the Asian crisis. Although these countries would, perhaps, be expected to compete with other low-wage industries in Southeast Asia, the effects of the Asian crisis were felt rather through falling economic activity in the EU countries than through direct loss of market share to Southeast Asian companies which benefited from lower exchange rates. The effects of the Asian crisis were never particularly great in the accession countries. After a minor downturn, they recovered when the EU economies began to grow again.

- It was assumed above that the risk of an asymmetric shock primarily comes from factors beyond the control of those in power in the country. In actual fact, it has been alleged that countries such as Sweden have been hit on a number of occasions by shocks which originated in the country's own economic policies, for example a weak fiscal policy.[20] Such self-generated crises have also affected a number of the accession countries – Bulgaria's successive crises from 1994–97 are a clear example of this. As the accession countries have disciplined their economic policies, the risk of self-generated crises has however been reduced.

[20] Sveriges Riksbank (1997).

Diagram 19. Economic structure in the accession countries and EU

Percentage of GDP

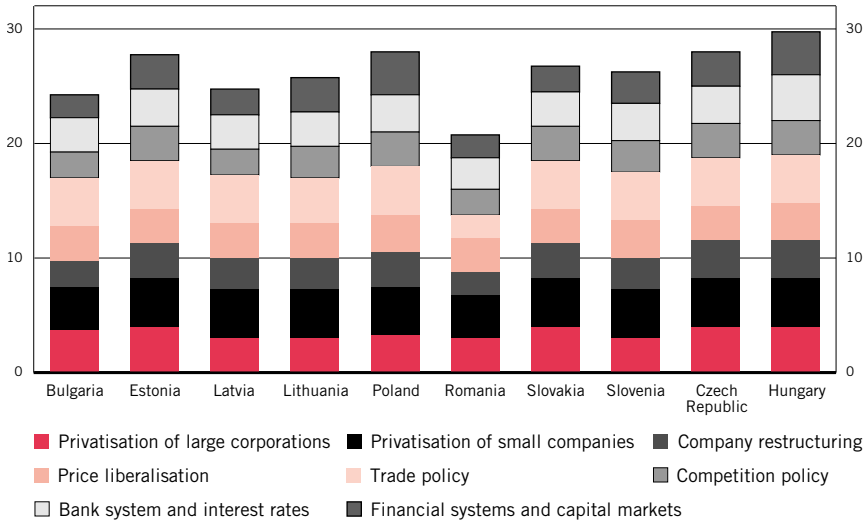


Source: IMF

- Perhaps the greatest risk of an asymmetric shock comes from the transition from a planned to a market economy in the accession countries. A fantastic transformation has already taken place since 1990, when virtually all the accession countries had a state-owned economy, regulated prices and a permanent shortage of the simplest basic goods. The process is not over. There are still heavy industries, including steel and mining, which continue to be supported by subsidies. As the last vestiges of price regulation and subsidies are phased out, the economies are hit by massive, often traumatic shocks. Although a fixed exchange rate or currency board does provide support for monetary policy in such a period of upheaval, it does not make the adaptation to the outside world easier. There have been discussions as to whether the actual process of trade integration with the EU can itself generate this kind of structural shock, when unprepared markets in the accession countries are exposed to competition from the euro zone. In reality, this risk is exaggerated. The adaptation to the EU's internal market has already been largely accomplished. Customs barriers have been phased out under the framework of the "Europe Agreements" which were concluded in 1993–94 with the accession countries, and, since the fall of the communist governments, countries such as Poland, Estonia and Latvia have had generally *lower* customs barriers towards the outside world than the EU has had. According to the European Bank for Reconstruction and Development, EBRD, which regularly makes rough estimates of the progress of these countries in the transition to a market economy, Poland, Hungary and Estonia have

Diagram 20. EBRD's index over the success of the reform work in transition countries, 2000

Index 1 to 4 in each category (8 to 32 in total)



Source: EBRD.

gone furthest in their efforts to reform, while Romania and Bulgaria are some way behind (see Diagram 20).[21]

The picture of the accession countries' vulnerability to asymmetric shocks is, accordingly, mixed. On the one hand, the countries are very open, and are closely linked to economic trends in the euro zone, particularly Germany. On the other hand, there are risks associated with the massive need for structural transformation on the road from the planned economy to the market.

The next question is how well countries in Central and Eastern Europe can *cope with an* asymmetric shock if one occurs. Examples of how accession countries have actually coped with such shocks are the Russian crisis of 1998 and the Balkan crisis of 1998–99.

The next question is how well countries in Central and Eastern Europe can *cope with an* asymmetric shock.

When Russia, in August 1998, allowed its currency to fall after a futile interest rate defence, and simultaneously suspended payments on the foreign public debt, the Baltic States were affected on several levels (by this stage, the other

[21] In the accession countries' negotiations with the European Commission, the need for reduced subsidies and greater structural transformation in heavy industry and agriculture was emphasised as a major residual problem.

The downturn and recession in connection with the Russian crisis were remarkably short-lived and weak.

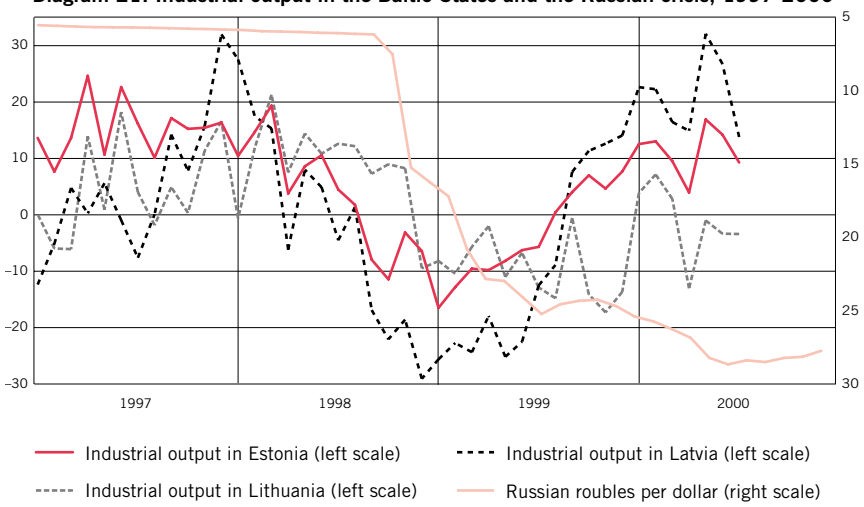
accession countries had few economic ties to Russia). The collapse of the Russian currency made their exports to Russia, particularly of foodstuffs, drastically more expensive for Russian consumers, and the exports were partially knocked out by Russian producers. At the same time, a number of smaller banks which speculated in Russian government bonds became insolvent, and there were worries of a "Russian epidemic". In addition, this coincided with a weak economic situation in the Baltic States' most important export markets in the EU. At about the same time, Bulgaria was also hit by a similar crisis, when a number of land and fluvial routes for the country's exports were closed as a result of the war in the Balkans (Kosovo). Since all three of the Baltic States and Bulgaria had currency boards or arrangements similar to currency boards, it was not possible to allow the response to take place through the currency, and wages and prices were forced to adjust instead. Nevertheless, the downturn and recession in the Baltic States (see Diagram 21) and in Bulgaria were remarkably short-lived and benign. As early as the end of 1999, a relatively rapid recovery had taken place, with the exception of Lithuania, which suffered from serious problems in domestic politics, with a weak fiscal policy, and did not recover until the beginning of 2000. This recovery partly coincided with an upswing in the EU countries, but it does seem that there were still factors in the Baltic States and Bulgaria which allowed an unexpectedly rapid adjustment.

In the main, there are two ways of fending off an asymmetric shock without resorting to the exchange rate. The first is the most obvious, that wages and prices in the economy adjust themselves to the new conditions. Wage trend statistics in the accession countries are fairly unreliable (a large proportion of wages are paid black), but the data which are available, along with anecdotal evidence, suggests that there has been a rather high degree of flexibility in both real and nominal wages – probably greater than in the euro countries. In both the Baltic States and Bulgaria, there were nominal wage cuts in certain sectors in the beginning of 1999 (see Diagram 22 for the example of Estonia). In other sectors, which experienced rapid improvements in productivity, nominal wage growth slowed down. In all the countries affected, *real* wages reacted immediately or some time after the shock.[22]

The reason for this greater flexibility could be the significantly lower level of

[22] In the background, a rapid restructuring of the business sector is also underway in the Baltic States and Bulgaria. There are indications that the Russian crisis and the Kosovo crisis increased mobility on the labour market, since many people looked for new jobs rather than accepting wage cuts. Unemployment rose in connection with the crises, but fell rapidly again in, for example, Latvia.

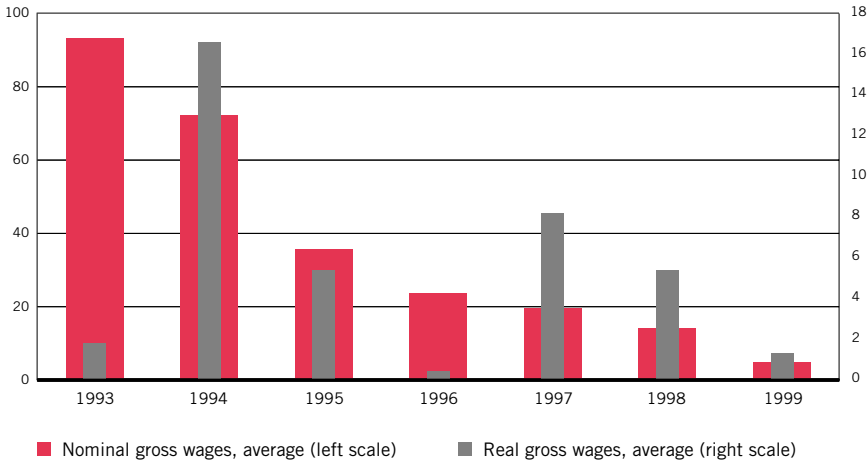
Diagram 21. Industrial output in the Baltic States and the Russian crisis, 1997-2000



Sources: Government statistics agencies in Estonia, Latvia and Lithuania, and Hanson & Partner.

Diagram 22. Nominal and real gross wages in manufacturing in Estonia, 1993-1999

Annual percentage change



Sources: Government statistics agency in Estonia, IMF and Riksbanken.

labour-market regulation than in the EU countries. According to the indexes used by the OECD and others, the level of labour-market regulation and unionisation in Central and Eastern Europe is considerably lower than in the euro zone – with less comprehensive rules and regulations for trade union affiliation and job security.[23]

[23] OECD (2000b).

Within the accession countries, however, there are large variations, from a relatively low level of labour-market regulation and unionisation in the Baltic countries, to a higher level in Poland and the Czech Republic. There are also indications that the labour market might not be as flexible after all in the accession countries. Unemployment figures in the majority of accession countries, including the Baltic States, have reached relatively high levels and then fallen only very slowly from these levels.

Alongside flexible wages, fiscal policy is the most obvious way of fending off an asymmetric shock with fixed exchange rates.

Alongside flexible wages, fiscal policy is the most obvious way of fending off an asymmetric shock with fixed exchange rates. The competitiveness of exporting companies can be strengthened by lowering payroll taxes, or domestic demand can be stimulated using tax cuts – depending on the type of shock which needs to be counteracted. The countries of Central and Eastern Europe in general have a rather limited ability to do this. The budget situation in most of the accession countries is precarious by the massive social adjustment costs of the transition to the market economy. On top of this, there are now new adjustment costs for essential and desirable, but still expensive, demands on infrastructure, the environment and health in preparation for EU membership. Even so, the Baltic States proved that relatively sound public finances can allow some degree of expansion in fiscal policy in a crisis situation – which contributed to the recovery after the Russian crisis.

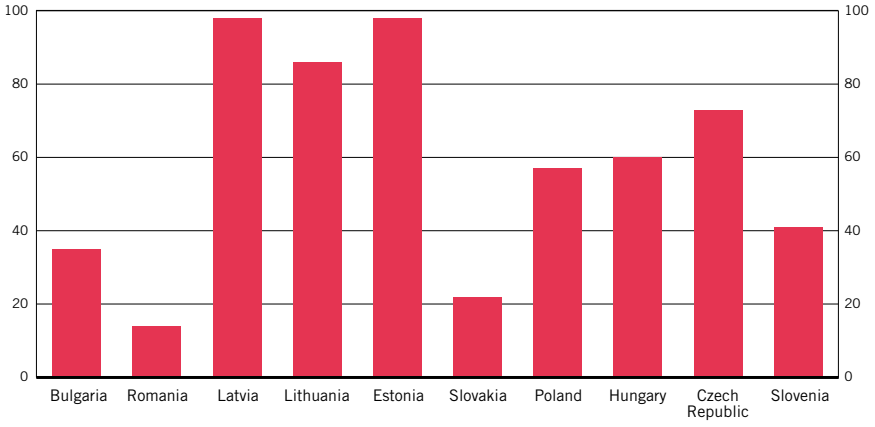
The ability to cope with financial shocks

An evaluation of the exchange rate regime must take account of the ability to cope with sudden changes on the financial markets.

Just as an evaluation of the exchange rate regime must take account of the ability to cope with real shocks, it must also take account of the ability to cope with sudden changes on the financial markets. In a number of accession countries (the Baltic States, the Czech Republic and Slovakia, as well as Bulgaria), the last currency restrictions have been phased out, and there is now full convertibility for trade and capital movements (see Diagram 23). For all accession countries, the regulations must disappear on entry into the EU, when the countries will become part of the EU's internal market with free movement of labour, goods, services and capital. There will be no remaining foreign exchange barriers to rapid inflows and outflows of large and more or less short term portfolio investments. We have already discussed the risk of speculative attack, and the significance of the exchange rate regime for the credibility of monetary policy.

Diagram 23. Degree of liberalisation of capital market

Index: Fully liberalised=100



Source: Feldman and Temprano-Arroyo (1999).

What remains is the risk of rapid inflows and outflows unconnected with speculation on the credibility of exchange rates.

Studies of earlier EU entry by countries with welfare levels clearly below the EU average have shown that countries with relatively good macroeconomic data (Ireland, Spain and Portugal) have been the recipients of strong and large-scale inflows of both direct investment and portfolio investment immediately before and after EU entry.[24] Added to this is the growth in foreign exchange trade which develops in response to expectations of future EMU entry and expectations about the conversion exchange rate to the euro. This "convergence trade" can lead to higher volatility in exchange rates if optimism of an early entry alternates with pessimism.

While this in itself is very positive for real convergence, the inflows are not without risk. For countries which have adopted a fixed exchange rate or currency board, and where, consequently, the exchange rate cannot moderate the inflow through appreciation and the outflow through depreciation, there is a risk that the inflow will, in the short term, add to the monetary mass and drive up inflation. This actually happened during the late 1990s in Estonia. Conversely, outflows can generate deflationary pressures in an economy which, if left unchecked, may lead to demands that the currency be allowed to fall. The Asian crisis of 1997–98 showed how quickly re-evaluations of economic potential can take place, with rapid outflows as a result. If, as is often the case, capital inflows have also been accompanied

[24] Baldwin, Francois & Portes (1997).

by over-optimism in incurring debts in foreign currency, the impact of the financial shock may be intensified. It appears that banks and companies in Southeast Asian countries, such as South Korea, Thailand and Indonesia, exploited the fixed exchange rates to borrow more cheaply in foreign currency, without taking account of the exchange rate risk, expecting that the state would step in in the apparently extreme case that the exchange rate peg should fall.

Fixed but adjustable exchange rates appear to be appreciably more sensitive to financial fluctuations than currency boards and floating exchange rates.

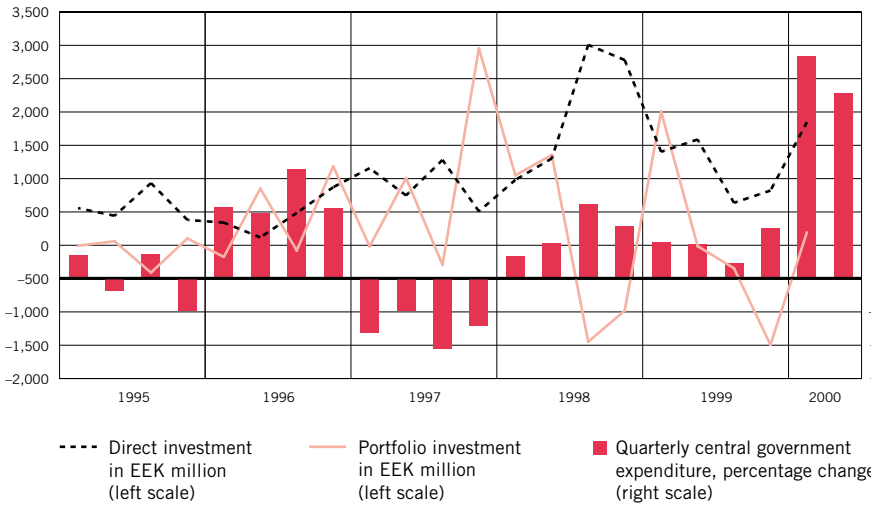
For these reasons, and for those mentioned above in the introductory section on credibility, fixed but adjustable exchange rates may be appreciably more sensitive to financial fluctuations than currency boards (and, obviously, floating exchange rates). This makes it easy to envisage a scenario in which an accession country, eager to make a political mark in preparation for EU entry, pegs its currency to ERM2 during a period of strong capital inflows generated by precisely these hopes of membership, and which have driven up the exchange rate sharply. The inflows are reinforced when the stabilised exchange rates encourage domestic players to borrow in foreign currency. Then optimism declines, the flows turn negative, and the ERM2 bands suddenly turn out to be too narrow to cope with the rapid fall in the currency.

Given that there is no simple way of handling financial fluctuations, there are two safety measures which can reduce the risks:

- **Using fiscal policy actively to counteract large inflows.** By tightening its fiscal policy, a country with a fixed exchange rate can neutralise some of the inflationary effects of capital inflows, and create scope to stimulate the economy in the event of rapid outflows. The example of Estonia demonstrates that it is not impossible to handle inflows with a fixed exchange rate. Massive inflows in 1996-97 were neutralised to some extent by a sharp tightening of fiscal policy, and some outflows of portfolio investment could then take place without significantly disrupting the fundamental flow of long-term investment (see Diagram 24).
- **Transparent banking systems and effective supervision of financial stability**. In this area, the current situation is relatively good. All of the accession countries have, on one or more occasions during the transition to a market economy, been through serious banking crises which led to consolidations. In the majority of countries, with the exception mainly of the Czech Republic, Slovenia and Romania, the largest banks are partly or wholly-owned by foreign banks, usually based in an EU country. This applies in particular to the Baltic States, where almost 90 per cent of the banking system is owned by

Diagram 24. Capital inflows and fiscal policy in Estonia, 1995-2000

EEK million and per cent



Sources: IMF and Estonian statistical agency.

Swedish banks. This means that the banks are subject to close scrutiny, both through the domestic authorities and in the EU countries in which their parent banks are based. Moreover it is – at least until the banks grow much larger – probably possible to recapitalise these banks through their parent banks. Both capital cover and bad loans in most of the accession countries, and again especially in the Baltic States, are now on considerably sounder levels than they were at the beginning of the 1990s.[25]

Transaction costs

A neglected aspect of the debate on exchange rates concerns the transaction costs which arise with different currencies.

One aspect of the debate on exchange rates which is, perhaps, rather neglected, concerns the transaction costs which arise with different currencies, and which are often put forward as weighty arguments for currency unions. In general, these gains are usually estimated to be relatively small, in the order of a few tenths of a per cent of GDP. In the accession countries' case, where the exchange rates can be more volatile than in the EU countries, a fixed, predictable exchange rate may be rather more important, but the effects are difficult to assess. Studies of currency boards show, however, that the currency markets in

[25] Eesti Pank (2000b) and (2000a), OECD (2000b) and EBRD (1999).

these countries function considerably better than in countries with fixed or movable exchange rates in the sense that the spread between buying and selling rates is lower.[26]

Highly fixed exchange rate arrangements, such as currency boards, reduce transaction costs and make a direct integration of the financial systems easier.

Confidence in exchange rates is, however, especially important given that the financial systems in the accession countries are still undeveloped. Very rigid exchange rate arrangements, such as currency boards, reduce transaction costs and make a direct integration of the financial systems easier. An example of such an integration is that Estonia (with its euro-based currency board) has half of its domestic loan stock issued in euros, at interest rates considerably lower than on purely domestic loans. In line with what was said above, in such a situation it is important that the functioning of the banking system inspires confidence. The largest transaction gains can be expected from a direct euroisation of the economy, where the currency frontier between the country involved and the euro zone completely disappears.

Conclusions on real convergence

It is likely that the accession countries with clear-cut exchange rate regimes will achieve the most rapid real convergence with the EU countries.

- The first alternative, a floating exchange rate with inflation target, gives scope both to cope with asymmetric shocks and financial shocks, at the same time as the inflation target can create credibility for monetary policy.
- The second alternative, a currency board, is more demanding on the ability to cope with shocks through flexibility in wages and prices, and provides scope for adjustment by means of fiscal policy. On the other hand, a currency board provides a simple and influential anchor for monetary policy, which it insulates institutionally from political pressures at the same time as it reduces transaction costs. In these respects, there is little difference between currency boards and pure euroisation, that is a unilateral introduction of the euro as coins and notes, apart from the fact that euroisation probably results in greater credibility and lower transaction costs.
- The intermediate position between floating exchange rates and currency boards, that is to say fixed but adjustable exchange rates, seems to be a more problematic alternative, since it gives lower credibility and higher risk premi-

[26] Rivera Batiz and Sy (2000).

ums – in other words an even greater risk of falling prey to currency speculation. Experience from the ERM in 1992-93, the Mexican crisis of 1995-96, the Czech Republic in 1997, the Asian crisis of 1997-98, the Russian crisis of 1998 and Brazil in 1998-99 indicates unequivocally that such exchange rate arrangements are sensitive both to real and financial shocks.

Taken together, factors such as flexibility in wages and prices, as well as degree of openness, give an indication of which accession countries would have the greatest interest in each type of exchange rate arrangement:

- There is a group of larger economies, which are expected to have greater difficulty in coping with real shocks. These have a lesser degree of flexibility in wages and prices and in certain cases a considerable section of their economies which is not exposed to competition. There is, in addition, some risk that they will be exposed to asymmetric shocks relative to the euro zone during the catching-up phase, due to the major residual restructuring requirements in, for example, agriculture and heavy industry. For these countries, an exchange rate which is as flexible as possible would probably be the optimum choice to assist in achieving real convergence. The credibility essential to a stable macroeconomic climate can then be built around a monetary policy governed by inflation targets, and a medium-term balance in the public finances, in line with the EU's Stability Pact. This group comprises *Poland*, the *Czech Republic* and *Romania*.
- There is also a group of small and medium-sized economies, with a relatively high degree of openness, but which are also characterised by rigidity in wages and prices. Despite the fact that the risk of an asymmetric shock is smaller for these countries, the rigidity in the labour market and in certain product markets means that these countries also benefit most from a floating exchange rate and a monetary policy based on inflation targeting. This group comprises *Hungary*, *Slovakia* and *Slovenia*.
- Finally, there is a group of small economies, with an extreme degree of openness (exports and imports are together equivalent to about or over 100 per cent of GDP, and a large proportion of trade is with EU countries or with neighbouring countries which are also applicants for EU membership), flexibility in wages and prices and a credibility for their macroeconomic stabilisation efforts, based on a nominal anchor, a currency pegged via a currency board, or an arrangement similar to a currency board. Due to their openness, these countries run less risk of being hit by asymmetric shocks, but are at a higher risk of

being hit by a crisis of confidence if the nominal anchor is abandoned. For these countries, continuing with a currency board arrangement is preferable throughout the catching-up phase, with a fiscal policy aimed at alleviating the effects of capital inflows. A problem arises for those currency boards consisting of a currency or combination of currencies other than the euro. The risk of asymmetric shocks in relation to the euro zone is greater for these currency boards, and the transaction gains in exchanges with the euro zone are smaller – and it may, consequently, make sense to replace the currency board currency with the euro. To the extent that a liquidation of the currency board is not a realistic alternative anyway, there are substantial potential transaction gains to be obtained from the direct use of the euro as a means of payment, "euroisation", instead of detouring through a currency backed by a currency board. This should also reduce increases in interest rates in connection with speculation against the currency board. This category of countries comprises *Estonia*, *Latvia* and *Lithuania*, and possibly also *Bulgaria* (rather lower degree of openness).

Nominal convergence

The formal convergence criteria

If the accession countries could select their exchange rates purely on the basis of what would be most favourable for the transition to the market economy and to higher living standards in the long term, the conclusions mentioned above would apply. But for the accession countries there is a complicating factor; in the future it is possible that they will become part of the euro zone, with the potential economic and political gains this implies. It is not possible here to discuss the advantages and disadvantages of actual entry into the euro zone, other than the principles relating to fixed exchange rates mentioned above. But if we assume that the introduction of the euro is a goal for the accession countries, it is no longer possible to look solely at *real* convergence, we must also investigate the nominal requirements for entry into the euro zone as they were formulated in the Maastricht Treaty. This is usually called *nominal* convergence, since the nominal figures for inflation, interest rates, budget balance and so on listed in the requirements must converge with the corresponding nominal figures for the euro zone.

The requirements for *nominal* convergence for euro entry, the convergence criteria, as formulated in the Maastricht Treaty are four: (1) stable exchange rates corresponding to the bands laid down in ERM2, (2) low inflation, (3) low interest rates and (4) stable government finances in the sense that the deficit in public sec-

tor finances must not exceed 3 per cent of GDP, and government debt must be below 60 per cent of GDP, or be clearly heading in that direction.[27]

There is no guarantee that these nominal criteria actually contribute to real convergence.

In the light of what has been said earlier in this article, and what has emerged in the EMU debate, it is fairly obvious that there is no guarantee that these nominal criteria actually contribute to real convergence, quite the reverse, they may, in fact, lead away from real convergence. This becomes particularly clear when the convergence requirements are applied to rapidly-growing economies with large requirements for structural transformation, such as those in Central and Eastern Europe.

The criteria to participate in ERM2

ERM2 is based on pegging floating exchange rates to the exchange rate mechanism at a central rate decided during the negotiations. Several of the accession countries, however, already have a considerably more fixed form of currency pegging, a currency board.

The EU's exchange rate mechanism ERM, and its successor ERM2, is an exchange rate arrangement which is regarded as fixed, but which, since the currency crisis of 1992–93 has had broad bands, ±15 per cent. Fixed but adjustable exchange rates, and the risks associated with these have already been discussed above, but some formal questions remain. ERM2 is based on pegging floating exchange rates to the exchange rate mechanism at a central rate decided during the negotiations. Several of the accession countries, however, already have a considerably more fixed form of currency pegging, a currency board.[28] The European Commission, the ECB and the EU's finance ministers have, however, given the go-ahead for currency boards denominated in the euro, but have said that entry to ERM2 must be negotiated "on a case by case basis".[29] This lack of clarity on the requirements specifically placed on the currency boards can contribute

[27] It should be mentioned in this connection that the majority of accession countries are now approaching or fulfilling the requirement for stable government finances, which has often been a problem for countries in the EU circle. Due to their limited access to international capital markets, few of these countries have been able to build up any substantial public debt. On the other hand, few of the countries have, at the time of writing, fulfilled the inflation criteria.

[28] During a period in 1999, a proposal circulated in the EU under which the accession countries' currencies in ERM2 must first be "market tested", that is the exchange rate must be tested under floating conditions within ERM2. This would have involved liquidating currency boards to find the "correct" level within ERM2. It soon emerged during the discussions, however, that currency boards by definition generate a "market test", since the fixed exchange rate governs the development of the economy over a number of years. Any liquidation of the currency board would at the same time be extremely risky for credibility. The proposal is no longer put forward as a serious alternative in the debate within the EU institutions.

[29] Noyer (2000).

to uncertainty. In addition, the currency board countries can only hope that the central rate negotiated together with the EU countries is the rate they have already chosen to peg to the euro at. The two countries which have pegged their currencies to the euro, Estonia and Bulgaria, have already subjected their economies to a much higher degree of real convergence towards a nominal anchor than that constituted by ERM2. To the extent that such convergence has taken place, and wages and prices have adjusted, as has been the case in Estonia and Bulgaria, this is a more extensive test than is ERM2. The currency board's pegged rate is, accordingly, the most natural central rate for ERM2, and the most natural conversion rate to the euro, in the event of negotiations with the EU countries on ERM2 entry. In fact, a currency board can be regarded as an exceptionally good substitute for full membership of EMU. This has led some commentators to the daring conclusion that all accession countries should introduce currency boards before EU entry.[30]

Nominal convergence in accordance with ERM2 also requires that countries which have chosen the US Dollar or SDR as their target must switch over to the euro – something which the EU's Council of Finance Ministers and the ECB have declared clearly and openly.[31]

For countries which have gone to the other extreme in their exchange rate strategy, free floating exchange rates with inflation targets, an excessively rigid interpretation of ERM2 would create problems for the reasons enunciated below.

The catch 22 of the convergence criteria

It is not possible to combine the convergence criteria of stable exchange rates and low inflation with the rapid increase in productivity in export industries in rapidly-growing countries on low income levels.

For countries which are expected to grow faster than the EU countries, such as those in Central and Eastern Europe, there is something of a dilemma built into the nominal convergence criteria themselves. It is not actually possible to combine the two convergence requirements of stable exchange rates and the same low level of inflation as in the EU with the rapid increase in productivity in export industries, relative to the rest of the economy, which is expected in rapidly-growing countries on low income levels. This dilemma is expressed in the Balassa-Samuelson hypothesis, which is also similar to the Swedish EFO model.[32]

[30] Dornbusch (2000) and Coricelli (2000).
[31] Ecofin Council (2000).
[32] For a brief definition of and introduction to the EFO model, see Dickson et al (1986).

The principle is fairly simple, and it also has a bearing on rapidly-growing countries in the euro zone, such as Ireland and Portugal.

- The price level for those goods and services which are traded internationally (tradables) is determined to a great extent by the international price level, and is given for smaller countries – otherwise consumers would import tradables from abroad. With fixed exchange rates, therefore, the price trend for tradables is roughly the same as in the outside world.
- Simultaneously, productivity is increasing rapidly in the tradables part of the economy, more rapidly than in the surrounding world, when the country is trying to reach the welfare levels of the surrounding world. Incomes rise in the tradables companies, which pushes up wages faster than in the surrounding world, while the price level for tradables continues to follow the trend in other countries.
- The tradables sector competes for labour with the rest of the economy (non tradables), and the higher wage increases push up wage levels in the non tradables sector well. Unless productivity in non tradables (goods for the home market and services such as car washes and restaurant meals) rises equally fast, the price of these items must increase more rapidly than in the surrounding world to offset the wage pressure. The higher productivity in the tradables sector compared with externally then causes inflation in the country to be higher, when inflation rises for the relatively less abundant non tradable goods.

The overall effect on consumer prices of the two sectors is higher inflation. Given that the inflation rate is higher than in the surrounding world at the same time as the exchange rate remains fixed, there is a "natural" *real appreciation* even though no nominal appreciation takes place.

This Balassa-Samuelson Effect is considered by many people to be the main reason why the Baltic States, despite high productivity and fixed exchange rates, have experienced relatively high inflation, and why almost all accession countries with fixed exchange rates or currency boards have seen sharp real appreciation since 1992. Estimates by IMF economists show that the Balassa-Samuelson Effect can produce an inflation rate in countries with fixed exchange rates, as in the Baltic States, about 1 1/2 percentage point higher than the divergence in inflation against the euro countries permitted under the convergence criteria.[33] Balassa-Samuelson, consequently, generates an obvious conflict between two nominal

[33] IMF (2000a).

convergence criteria – the exchange rate requirement and the inflation requirement. Either the exchange rate is locked, which means that a totally "natural" inflation increase and real appreciation must be permitted, or the exchange rate must float to cope with the real appreciation.

For countries with floating exchange rates, there is an obvious conclusion. It should be possible to accommodate the natural appreciation within the framework of the 15 per cent exchange rate variation permitted within ERM2 – but only on condition that the countries are *not* forced to remain in ERM2 for an excessively long period of time.

For countries with fixed exchange rates, the dilemma may be solved by focussing the *inflation assessment* on one specific year, during which the naturally higher inflation rate can be forced down without excessive cost to the real economy. A number of countries which subsequently became members of the euro zone demonstrated that tightening fiscal policy and reducing indirect taxes can temporarily lower the inflation level to the desired figure. This should be acceptable as long as those appointed to carry out the assessment realise that Balassa-Samuelson generates a small but "healthy", productivity-driven inflationary impulse.

With respect to the accession countries, there are in addition some reservations attached to the effects normally expected from Balassa-Samuelson.

- A major part of the higher inflation figures and the real appreciation which have been characteristic of the Baltic States has been associated with the deregulation of prices, especially in such areas as energy and housing, which were formerly highly subsidised. Consequently, they do not in part reflect a genuine Balassa-Samuelson Effect, nor "unhealthy" underlying inflationary impulses.
- Due to the socialist planned economy's disparagement of "unproductive services", the service sector was considerably smaller and less developed than in the majority of market economies. In the accession countries, therefore, a relatively strong increase in productivity can also be expected within the service sectors, which to some extent may create a balance in productivity increase between tradables and non tradables, and neutralise the Balassa-Samuelson Effect.

A possible sign that both these factors have come into play is that the sharpest real appreciation in the Baltic States came right at the beginning of the reform process in 1992–96, and the real appreciation tailed off in later years.

Limitations to fiscal policy

The strict requirements on public sector deficits in the convergence criteria constitute a powerful limitation.

As has been mentioned several times above, fiscal policy provides, in many cases, the degree of freedom necessary to cope with fluctuations, given that the exchange rate is already locked or restricted by possible participation in ERM2. The strict requirements on public sector deficits in the convergence criteria constitute, therefore, a powerful limitation, and almost certainly mean that many of the accession countries, if they are to cope with the transition, must run a fiscal policy with structural surpluses. At the same time, the governments in these countries, which very likely have massive investment requirements, not least in preparation for EU entry, are expected to have structural deficits. It may be possible to solve this dilemma with additional resources from the EU's structural funds. Under the plan adopted in Berlin in June 1999, 46 billion euros have been allocated for the accession countries for the period 2002–06.[34]

General conclusions

- In the accession countries' case, there are signs of a clear conflict of goals between, on the one hand, real convergence, the ability to catch up with the EU countries economically, and nominal convergence, with the nominal requirements laid down for participation in the euro zone. If conflicts do arise between the convergence criteria and the need for rapid growth in the accession countries, it is essential that the EU from its side signals a high degree of flexibility. This applies especially to the exchange rate criterion.
- Particularly for rapidly-growing countries, a definite goal for exchange rate policy is an advantage, either with exchange rates floating as freely as possible with inflation targets as norms, or arrangements which are as fixed as possible. In the latter case, currency boards seem to be a highly effective option, but from a purely economic viewpoint, the unilateral introduction of the euro in the form of notes and coins is clearly preferable, with lower transaction costs and lower interest rates. The intermediate option, fixed but adjustable exchange rates in various forms, appears to be vulnerable to expectations of devaluation in both the labour market and the financial markets.

[34] Only a minor part of this sum, slightly more than 13 billion euros, is for agricultural subsidies, while the greater part consists of support from the structural funds and a range of support programmes. The agriculture component is, however, regarded as massively underestimated, and depends on discussions about the future of the Common Agricultural Policy.

- Just as with EMU, the advantages and disadvantages of various exchange rate systems depend on the conditions prevailing in each country. Quite simply, small, open and flexible countries are more suited to fixed exchange rates than are large, closed countries with widespread rigidity in prices and wages. Fortunately, it seems that those countries which chose fixed systems were small, open and flexible, while those which adopted floating exchange rates were larger and rather less flexible, even though they had fairly high levels of openness. Almost half of the accession countries, however, have adopted fixed but adjustable exchange rates. Although these have worked well so far, entry into the EU may involve some strains on their exchange rate systems. A policy aimed at increased labour market flexibility and a stable fiscal policy may, in that event, be one way to cope with the challenges which these economies will face.

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