Anchor, float or abandon ship: exchange rate regimes for the accession countries *

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1. Introduction

This paper investigates the appropriate exchange rate regimes, both prior to and following European Union accession, for those former centrally planned Central and East European countries that are currently candidates for full membership in the European Union.[1] The exchange rate regime is a key determinant of a country's macroeconomic stability, which is in turn a key determinant of the investment climate. Thus, there is some complementarity between the choice of the monetary regime and the process of real convergence, which accession is ultimately aimed at. A suitable regime, that delivers macroeconomic stability, is a necessary although clearly not sufficient condition for economic activity in the candidate countries to catch up to levels similar to those in the existing European Union.

It now seems likely that as many as eight out of the ten candidate countries from the EBRD's region of operations will become EU

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[1] These are Bulgaria, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, the Slovak Republic and Slovenia.

members by early 2004, in time to participate in the EU Parliamentary elections of June 2004. Further delays beyond 2004 are, however, certainly possible. Although crucial chapters of the *acquis communautaire* have not been closed yet, the main stumbling block for accession might prove to be the need for internal reforms of the EU. Inadequate reforms of European institutions may also pose obstacles to successful EU candidates that wish to join the European and Monetary Union (EMU) at an early date. The body making monetary policy in the European Central Bank (ECB) is the Governing Council. It currently has 18 members – 6 Executive Board members and 12 national central bank governors, one for each of the 12 EMU member countries. Formally, all 18 members have equal weight in the decision-making process. Eighteen members are already too many from the point of view of effective discussion, deliberation and collective decision-making. Enlarging an unreformed European Central Bank to include 10 new members would turn the current 18 member ECB Governing Council into an unwieldy, indeed unmanageable group.[2]

EU membership does not imply immediate membership in the EMU or ERM II. It is true that for the current crop of accession candidates, any formal opt-out from EMU membership, of the kind obtained earlier by the UK and Denmark, will no longer be possible. The obligation to join EMU, *once the Maastricht criteria for membership are satisfied*,[3] will be part of the *acquis communautaire* that candi-

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[2] The eight Central European and Baltic countries of footnote 1, plus Cyprus and Malta.

[3] Recall that the full set of macroeconomic Maastricht criteria for membership in EMU is as follows. There is a pair of *financial criteria*, a ceiling on the general government deficit-to-GDP ratio of 3% and a ceiling on the gross general government debt-to-GDP ratio of 60%. There also is an *interest rate criterion*: long-term (ten year) nominal interest rates on the public debt are to be within 2% of the average in the three countries with the best inflation record. Next comes the *inflation criterion*: the annual inflation rate cannot exceed the average of the three best performing countries by more than 1.5%. Then there is the *exchange rate criterion*: the exchange rate has to respect the normal fluctuation margins provided for by the exchange-rate mechanism of the European Monetary System without severe tensions for at least the last two years before the examination (that is, the formal assessment as to whether a candidate has met the EMU membership criteria). In particular, the member state shall not have devalued its currency on its own initiative for the same period. The interpretation of the ECB and, until quite recently of the European Commission, of the exchange rate criterion has been that EMU candidates will have to join an ERM II arrangement, with ±15% fluctuation bands around a fixed central parity *vis-à-vis* the euro, for two years prior to joining EMU. There is also the institutional requirement that the *central bank* be independent.

date EU members will have to take on board. However, whether and when the Maastricht criteria are satisfied will be to a significant extent at the discretion of the candidate members. Sweden, for instance, does not have an EMU opt-out but has thus far evaded the obligation to join EMU by choosing not to satisfy the ECB's (and until recently the European Commission's) interpretation of the exchange rate criterion: successful membership in the Exchange Rate Arrangement, presumably the ERM II variant, for a period of at least two years.

Assuming that membership of EMU is a goal, it should still be kept in mind that the Maastricht criteria do not put very severe restrictions on the type of monetary and exchange rate regime that may be adopted beforehand, as long as the implications of real convergence for the behaviour of the equilibrium real exchange rate are disregarded. Floating within a band or symmetric target zone measuring no more than 15% from a euro central rate, with intervention at or within the margins of the band, is permissible. Definitely permissible under the Maastricht exchange rate criterion are a conventional fixed exchange rate regime and a currency board with the euro.[4]

The purpose of this paper is to review the options for accession countries taking into account the implications of real convergence. It is structured as follows. Section 2 reviews the current practice of monetary and exchange rate regimes in accession countries. Section 3 discusses the pros and cons of variants of the fixed exchange rate option, while Section 4 turns to a critique of flexible exchange rate arrangements. In Section 5, we review the impact of intersectoral productivity growth differentials in the accession countries on the real appreciation of their exchange rates, and the consequent implications for meeting the EMU inflation and exchange rate criteria. Section 6 concludes the paper with a practical suggestion for an efficient EMU entry procedure for successful EU accession countries. It is that each accession candidate be allowed to euroise at the earliest possible date, not unilaterally but at an exchange rate that is negotiated and agreed upon between the responsible parties in the existing EMU member states and the candidate country. Furthermore, candidate countries

[4] Any of the previous regimes could be combined with the adoption of the euro as a parallel, i.e. competing, currency. Under such a scheme the euro would be joint legal tender with the domestic currency providing additional monetary discipline – see Buiter and Grafe (2001a) for further discussion.

should become EMU members at the earliest possible date, possibly (and preferably) on the same date on which they become EU members. If certain technical waivers or derogations from the Maastricht exchange rate or inflation criteria may be judged to be necessary for early accession, it is our recommendation that these should be granted. Simply put, we view national monetary sovereignty for small economies, highly open to trade and financial flows – the case of each of the accession candidates – to be an expensive and unnecessary luxury.

2. Current practice

Among the 10 Central and East European accession candidates, three have a currency board (Bulgaria and Estonia with respect to the euro, Lithuania originally with respect to the USD, changed to the euro on February 2, 2002), Latvia has a conventional fixed exchange rate regime with a peg against the SDR, Hungary a target zone with a central rate fixed against the euro and a ±15% fluctuation band plus an inflation target. The remaining five countries have a managed float. Managed floats cover a wide spectrum of possibilities as regards the ultimate nominal anchor. Among the five managed floaters, the Slovak Republic has a core inflation target, Poland and the Czech Republic have headline inflation targets and Slovenia has an M3 growth target. The Romanian central bank has price stability as its primary mandate, but does not have an inflation target.

In addition to having differing exchange rate regimes, the ten accession candidates differ somewhat in their approaches to the international mobility of financial capital, although all have liberalised at least some types of capital account transactions.[5] The Czech Republic, Hungary and the Baltic States have effectively freed financial investment flows, but have kept some restrictions in categories like real estate transactions. Poland, the Slovak Republic and Slovenia have additionally kept a number of restrictions on financial flows at short maturities.

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[5] Note that all countries have adopted IMF Article VIII, which proscribes controls on current account transactions.

Motivations for imposing capital controls differ among countries and instruments. So does their effectiveness. Controls on short-term capital flows are often motivated by the desire to avoid sudden large shifts in capital inflows or outflows, which could threaten exchange rate stability and/or undermine the liquidity or solvency of domestic financial institutions. Restrictions on the purchase of land or real estate by foreigners tend to be motivated by non-economic considerations.

The 'short term' in 'short-term capital flows' refers to the remaining time to maturity (or sometimes to the original maturity) of the financial instrument, not to the expected holding period of the investor. If there are liquid secondary markets for long-dated financial instruments, high frequency reversals of capital flows do not require the presence of short-term internationally traded securities. Even FDI is, in principle, easily reversed, if there is a liquid and deep market for ownership claims (equity). Nor does the absence of a large stock of short-term foreign currency liabilities or the absence of significant non-resident ownership of domestic financial claims provide reasons for feeling relaxed about speculative attacks on the currency. What matters here is the capacity or ability (of resident and/or non-resident economic agents) to go short in the domestic currency and to go long in foreign exchange in any of a wide range of spot, forward or contingent claims markets.

The manner in which capital has, in the past, entered a country need bear no relationship to the manner in which capital can, at some later date, leave the country. Take, for instance a country like Poland, which has recently financed its external current account deficit mainly through foreign direct investment (FDI), including privatisation receipts (that is, the capital account in recent years showed net inflows of FDI of a magnitude similar to the current account deficit). Does the fact that past current account deficits were largely financed by inflows of FDI make a sudden capital flows reversal less likely? Not if the FDI importing country has removed virtually all administrative obstacles to international financial capital mobility. In that case, a speculative attack against the domestic currency need not involve a reversal of FDI flows. Instead it could occur through large scale outflows of short-term (or long-term) *portfolio* capital.

While the range of financial instruments that can be traded internationally by the accession candidates remains fairly narrow, it is

wide enough to expose each one of the accession countries to the threat of sudden, large reversals in capital flows. This vulnerability will soon become even greater because accession to the EU will require a further opening of the capital account. According to Article 56 of the Treaty on European Union, member states are required to fully liberalise their capital accounts both with regard to other member countries and with regard to third countries. If formal participation in ERM II is a condition for entry into EMU, this opening of the capital account on accession may well come about at the same time that (some of) the accession countries might want to enter ERM II to qualify for EMU membership at the earliest possible date. The experience of ERM I under free capital mobility was not very encouraging. ERM II under free capital mobility might likewise turn out to be destabilising and risky.

3. Is there a credible fixed exchange rate regime?

What is the appropriate exchange rate for each of the accession countries? Box 1 explores the issue from the perspective of the Optimal Currency Area literature. It concludes that arguments against fixed exchange rate regimes in the accession countries based upon conventional OCA considerations are over-stated. Against this background, this section examines fixed exchange rate options, before turning to free floating in Section 4.

3.1. *Monetary union and political union*

No fixed exchange rate regime can be absolutely and unconditionally credible. Even a full monetary union or common currency area can break up. A minimal common, i.e. supranational set of political institutions (Parliament, Court, a proto-executive), covering all nations in the monetary union, appears to be a necessary condition for its long-term survival.[6] Thus, when considering monetary unions it is im-

[6] Examples of failed monetary unions whose members never achieved any significant degree of political union include the monetary union of colonial New Eng-

portant to distinguish between, on the one hand, (formally) symmetric monetary unions and, on the other hand, asymmetric or unilateral monetary unions. A symmetric monetary union has a monetary authority that satisfies the following conditions:

– Its mandate spans the entire monetary union (e.g price stability for the monetary union as a whole).

– It acts as lender of last resort on the same terms in every union member state.

– Seigniorage is shared fairly among all union member states.

– It is accountable to the legitimate political representatives of the citizens of the whole union.

BOX 1

AN OPTIMAL CURRENCY AREA PERSPECTIVE

Nominal cost and price rigidities. If there are no significant nominal cost and price rigidities, the exchange rate regime is a matter of supreme macroeconomic insignificance. Note that it is only *nominal* rigidities that matter. A country can be mired in real rigidities (rigid real wages, stagnating productivity, immobile factors of production) and its real economic performance will be miserable, without this having any implications for the choice of exchange rate regime. Unless these real rigidities can be addressed effectively through *nominal* exchange rate variations, the country's performance will be miserable with a credible fixed exchange rate, with a floating exchange rate, or with a system of universal bilateral barter.

The severity and persistence of nominal rigidities therefore becomes a key empirical and policy issue. Unfortunately, the available empirical evidence is extremely opaque and very hard to interpret. This leaves us in an uncomfortable position. We believe the *numéraire* matters, although we

land, the Latin Monetary Union, the Scandinavian Monetary Union and the East African Currency Area. There are also numerous examples of break ups of monetary unions once the political institutions that backed it were dissolved. When the South seceded from the Union, the Confederacy introduced its own currency. The successor states to the Austro-Hungarian empire could not sustain a currency union following the breakup of the empire after World War I. The same fate befell the CIS ruble zone following the demise of the Soviet Union, and the dinar zone following the breakup of the Federal Socialist Republic of Yugoslavia.

BOX 1 (*cont.*)

cannot explain why (using conventional economic tools). We believe that nominal wage and price rigidities are common and that they matter for real economic performance, but we do not know how to measure these rigidities, nor how stable they are likely to be under the kind of policy regime changes that are under discussion.

Size, openness and direction of trade. The relevant metric for 'size' in economics is market power. A large country has the ability to influence its external terms of trade (the relative price of exports and imports) or the world prices of the financial securities it deals in (the world rate of interest). From this perspective, even Poland, the largest of the ten accession countries is small. A country that is small as regards trade in goods and services (a price taker in the world markets for imports and exports) cannot use variations in its nominal exchange rate to affect its international terms of trade. Of course, not all final and intermediate goods and services are internationally traded. Labour services in particular are overwhelmingly non-traded. Nominal wage rigidities are therefore sufficient to give the nominal exchange rate a (temporary) handle on the real economy, through its ability to influence relative unit labour costs and profitability.

A common theme in most Optimal Currency Area approaches is that an economy that is more open to trade in goods and services gains less from nominal exchange rate flexibility. It should be obvious that this proposition cannot be correct as stated. For an economy that is completely closed to trade in goods and services, the exchange rate regime is irrelevant, from the point of view of macroeconomic stabilisation. If there is a relationship between degree of openness and the cost of giving up exchange rate flexibility, the relationship cannot be monotone.

Most of the countries in Eastern Europe are much more open to trade today than Greece, Portugal and Spain were when they became members. While trade accounted for 62% of GDP on average among this latter group, the ratio is almost twice as high for five of the accession countries (Czech Republic, Estonia, Hungary, Poland and Slovenia) and hardly lower for the others.[1] For example, Poland is much more open than Spain was when it joined the EU. Moreover, all accession countries conduct a large share of their trade with countries in the euro-zone. Thus, the likelihood of these countries being hit hard by an external trade shock originating from a country or region outside the EU is rather small.

[1] The measure of trade openness is imports plus exports as a percentage of GDP.

BOX 1 (*cont.*)

Asymmetric shocks or transmission. The 'one-size fits all' monetary policy corset inflicted on the members of a monetary union is most costly if a member state is subject to severe asymmetric shocks or if its structure is such as to cause even symmetric or common shocks to have seriously asymmetric impacts on output and employment.

Identifying and measuring the shocks perturbing the accession countries in the past is an exercise undertaken only by the brave. The further assumption that the patterns revealed in the historical sample would remain valid in the future, pre- and post-accession, is difficult to justify.

However, there are three considerations that qualify the proposition that asymmetric shocks make the retention of nominal exchange rate flexibility desirable. Nominal exchange rate changes are the appropriate response only to asymmetric shocks to the markets for goods and services, that is, to IS shocks and aggregate supply shocks. In response to asymmetric monetary shocks (LM shocks), a constant nominal interest rate is appropriate. In a world with perfect international financial capital mobility, a constant nominal interest rate translates into a constant expected rate of exchange rate depreciation. A credible fixed exchange rate is the simplest way of delivering this optimal response to LM shocks.

Second, it is important not to be excessively impressed with the efficiency of financial markets in general, and with the efficiency of the foreign exchange market in particular. The foreign exchange market and the exchange rate can be a source of extraneous shocks as well as a mechanism for adjusting to fundamental shocks. One cannot have the one without the other. The potential advantages of nominal exchange rate flexibility as an effective adjustment mechanism or shock absorber are bundled with the undoubted disadvantages of a market-determined exchange rate as a source of excessive noise and unwarranted movements in the exchange rate, inflicting unnecessary real adjustments on the rest of the economy.

Third, if one takes the view that full international financial market integration requires a common currency, then the argument can be made that asymmetric (real) shocks strengthen the case for a common currency. The argument is that full diversification requires a credible fixed exchange rate, and that the ability to diversify internationally, and to share risk internationally is most valuable when shocks are asymmetric. With common shocks, there can be no risk sharing. Diversification is pointless.

BOX 1 (*cont.*)

Limited real resource mobility. It is clear that a high degree of real factor mobility can, in principle, be an effective substitute for nominal exchange rate adjustments in the face of asymmetric shocks. Indeed, factor mobility permits long-term, even permanent, real adjustments to asymmetric real shocks, something nominal exchange flexibility cannot deliver. The real factors whose mobility matter are labour and physical capital.

Physical capital mobility is limited, even when financial capital mobility is perfect. Once real capital (plant, machinery and other equipment, infrastructure etc.) is installed, it becomes costly to shift geographically. However, technological developments of the past few decades may make this argument progressively less applicable. While a blast furnace is likely to be prohibitively expensive to move, many modern assembly lines for high-tech products are extremely valuable in relation to the cost of moving them. They can be, and are, moved over large distances in response to changes in relative costs of production (or to changes in the other determinants of profitability). There are many obstacles to labour mobility between the accession countries and the current EU including linguistic, or legal and administrative barriers. Whatever these obstacles, the net migration flows between any two regions or countries are bound to be larger the larger the difference between their real wages. However, the difference in living standards only tells us something about the possible size of structural, long-term net migration between accession countries and the existing EU member states. It does not say anything about the size of net labour flows at business cycle frequencies. It is the latter kind of *cyclical* labour mobility that would have to take over the role of the exchange rate as a short-term shock absorber if nominal exchange rate flexibility is given up. There is no evidence, even in countries with a high degree of structural labour mobility, such as the USA, that net labour mobility has a significant cyclical component. This suggests that either cyclically sensitive labour mobility is not required for a successful monetary union, or that the USA should not be a monetary union.

Supranational fiscal stabilisation. Is a supranational budgetary authority with serious redistributive powers, spanning the existing EMU members and the accession countries, necessary to make up for the loss of the exchange rate instrument if the accession countries were to adopt a currency board *vis-à-vis* the euro or, in due course, were to join EMU? The brief *technical* answer is 'no'. Fiscal stabilisation policy works if and to

BOX 1 (*cont.*)

the extent that postponing taxes and borrowing to finance the resulting revenue shortfall boost aggregate demand. This will be the case either if there is myopia among consumers, who fail to realise that the present value of current and future taxes need not be affected by the timing of taxes, or if postponing taxes redistributes resources between households with different propensities to consume.

Unless the supranational federal fiscal authority in a currency union has access to the global financial markets on terms that are superior to those enjoyed by the national fiscal authorities, there is nothing the federal authorities can achieve by way of fiscal stabilisation that cannot be achieved equally well by national or even lower-tier fiscal authorities. National government financial deficits and surpluses, probably mirrored to some extent in national current account imbalances, are a perfect substitute for supranational fiscal stabilisation.

We conclude that

– many of the optimal currency area arguments are overstated and the traditional analysis focuses too much on trade linkages rather than capital account linkages;

– it is quite difficult to argue that the accession countries are a less good candidate for membership in the common currency area of EMU than many of the existing member countries.

Under these criteria we can see that EMU is a (formally) symmetric monetary union. Conversely, the recent dollarisations of Ecuador and El Salvador, the long-standing dollarisation of Panama and the euroisations of Kosovo and Montenegro are examples of asymmetric or unilateral monetary unions.

It is easier for a country that has unilaterally adopted another currency to give up its unilateral commitment to the monetary union, than it is for a country that belongs to a formally symmetric monetary union to leave the monetary union. Furthermore the potential gains to remaining in the union are larger for a member of a formally symmetric monetary union. A member country of a formally symmetric currency union can to a certain extent influence monetary policy in the union while a country that has adopted the currency unilaterally has to live with whatever is decided somewhere else. Thus introducing a national currency entails a larger gain for the latter. The

formally symmetric monetary union therefore represents the most credible fixed exchange rate arrangement.

3.2. *Currency boards: no entry without exit*

After the symmetric and the unilateral monetary unions, the next most credible fixed exchange rate regime is a currency board. A currency board is defined by two rules: an exchange rate rule and a budgetary or fiscal rule. The exchange rate rule is a commitment to a fixed peg in terms of some currency or basket of currencies. The fiscal rule is the requirements that there can be no domestic credit expansion by the central bank, that is, there must be (at least) 100% international reserve backing of the monetary base. In the simplest case, foreign exchange reserves are the only financial asset of the monetary authority, with the monetary base (currency in circulation plus commercial bank reserves held at the central bank) the only financial liability. Unless stated otherwise, we consider only a single currency peg *vis-à-vis* the euro. The euro could, but need not, be legal tender in the country operating the currency board. Unilateral euroisation is the limiting case of a currency board that has the euro as joint legal tender, when the use of the local currency, as a unit of account, a means of payment and a store of value, has shrunk to nothing.

Many variations on the pure currency board model have been implemented in practice (see for example Ghosh, Gulde and Wolf 2000). Most involve adding financial instruments to the asset and/or liability menu of the monetary authority or adding off-budget and off-balance sheet contingent claims. For instance, domestic commercial banks could have contingent credit lines with the monetary authority; the monetary authority could have contingent credit lines with foreign financial institutions, private or public; and the monetary authority could have limited authority to extend credit to the government and/or the private sector. Each relaxation of the strict currency board model moves it closer to the traditional central bank managing the oxymoron of a 'fixed-but-adjustable' peg.

The credibility of a currency board depends on the difficulty and cost of abandoning it. The costs are probably mainly reputational. It is also possible that the abandonment of a currency board could in-

volve the domestic private sector, and even the government or its agents, in costly litigation for alleged breach of contract. A currency board created under a government decree is more easily abandoned than one established by law. A currency board established by law is more easily abandoned than one enshrined in the constitution. But ultimately, anything that has been made politically can also be unmade politically. The cost of abandoning a currency board may be higher than the cost of abandoning a conventional peg, but it is certainly not high enough to rule out that contingency. Ireland abandoned its currency board with the UK in 1979 and Argentina abandoned its currency board in December 2001.

One argument in favour of a currency board is that, compared to a full-fledged central bank, it is a cheap way of managing monetary policy. All that is needed is a sufficient number of modestly skilled bank clerks who exchange, at a fixed rate, domestic currency for the foreign currency or basket of currencies in terms of which the peg is defined. Of course, banking supervision and regulation still are required, but these activities need not be undertaken by the monetary authority. Under a currency board, the regulator/supervisor can only rely on the sticks of public disapproval, fines or prosecution. The carrot of a financial safety net, should a liquidity crisis hit, is no longer available, as neither the regulator/supervisor nor the monetary authority can expand domestic credit at their discretion in response to such a contingency.

A second argument in favour of a currency board is that it is a strong, 'double-barrelled' commitment device. Through the currency peg it represents a commitment to price stability. Through the 'no domestic credit expansion' constraint, it represents a commitment to budgetary restraint. The value of these commitments depends either on the currency board arrangement being perceived as credible and permanent, or on the belief that, if it is abandoned, it will be replaced by something representing a comparable commitment to price stability and budgetary responsibility as a credible currency board.

These considerations permit us to specify some key characteristics that any currency board must satisfy for it to be stability-enhancing rather than instability-amplifying:

– First, a currency board arrangement must be recognised as *temporary*, and there must be a *strong exit* strategy. As the only exchange

rate regimes that are sustainable in the long run are a floating exchange rate and a formally symmetric common currency or monetary union, these two regimes also define the two possible strong exits from a currency board. Note that a currency board is as vulnerable to speculative attacks as any fixed exchange rate regime. The notion that it is safe (or at least safer) because the stock of international reserves is at least as large as the domestic monetary base is mistaken. The magnitude of the portfolio shift out of domestic currency-denominated assets into foreign exchange is not limited by the outstanding stock of domestic base money. At the most basic level, foreign currency-denominated bank deposits with domestic banks can be swapped into foreign currency instantaneously. If it is possible to borrow domestic currency to go long in foreign exchange, the scope for speculative attacks is further enhanced. To discourage this, sky-high domestic interest rates would be required. The only way to prevent a foreign exchange crisis would be a fully credible commitment by the monetary authorities to raise domestic interest rates to whatever level might be required to safeguard the currency peg. Such a commitment to bring about, if necessary, a banking crisis, and even, if the speculative pressures were to persist, a general financial crisis, a public debt crisis, or a full-fledged economic crisis, is not credible since the middle of the 20th century. If the peg is not credible, and a *weak* exit is likely, domestic-currency-denominated financial instruments will carry a premium reflecting the expected rate of depreciation of the home currency. The 'peso-paradox', by raising the nominal and real cost of borrowing through domestic currency-denominated debt instruments, can put additional stress on public and private budgets.[7]

– Second, no country should consider a currency board unless it can afford to do without a *lender of last resort*. One obvious drawback of a currency board is that there can be no lender of last resort, since domestic credit expansion by the monetary authority is ruled out (see Chang and Velasco 1998 and Della Paolera and Taylor 1999). There may be ways of partially privatising the lender of last resort function by arranging contingent credit lines, but the scope for that is inevi-

[7] The 'peso paradox' refers to the phenomenon of a fixed exchange rate regime with unrestricted financial capital mobility which produces a domestic interest rate that persistently exceeds the foreign interest rate. This is consistent with financial market efficiency and rational expectations, if there is a (small) probability of a collapse of the peg followed by a substantial currency depreciation, and this (rare) event has not (yet) occurred in the sample.

tably limited. This means that a currency board should not be considered unless the banking system (and indeed the financial system in general) is solvent and strong, and there are institutions and mechanisms other than the lender of last resort function of the traditional central bank for dealing with bank runs and other liquidity crises.

– Third, no country should consider a currency board unless it has a *sound fiscal framework* that will not require discretionary access to central bank financing by the general government. A nation adopting a pure currency board throws away the key to the drawer labelled 'monetary financing of government budget deficits'. In a well-run economy, with a benevolent, competent and credible policy maker, this would actually be a drawback (see Calvo and Leidermann 1992). Seigniorage can be a useful source of revenue for cash-strapped governments. There is no reason to believe that the inflation rate generated under a currency board is anywhere near the optimal rate from a neoclassical public finance point of view (which assumes a benevolent and competent monetary authority, which is capable of credible commitment). However, political economy considerations, distilled from the often brutal lessons of history, suggest that the printing press is a great seducer, and that the freedom to issue monetary liabilities at will is likely to be abused. Using the rather blunt instrument of an outright ban on domestic credit expansion by the central bank may therefore be desirable if the alternative is the opportunistic abuse of the power of the printing press by myopic and/or self-serving governments. Without a sustainable fiscal programme, interest rates on domestic public debt (both domestic- and foreign-currency denominated) will be higher because of a default risk premium. As default risk increases, quantity rationing will constrain the government's ability to borrow.

– Fourth, the currency or basket of currencies involved in the peg should be appropriate from the point of view of the country's external trading pattern. Changes in the nominal effective exchange rate are potentially effective means of bringing about a necessary change in international relative price or cost levels. Pegging the nominal exchange rate to a currency or basket of currencies that has but a small weight in the country's effective exchange rate index is therefore unlikely to be wise.

Argentina failed on criteria 1, 3 and 4. The currency board had been presented and defended as a permanent arrangement. There also

was no chance of a strong exit to membership in a formally symmetric monetary union with the USA. There are no common, supranational institutions spanning the USA and Argentina that would make such a symmetric monetary union possible. Unilateral dollarisation may be a short-run temptation, but it is not a viable long-run option. If unilateral dollarisation were to occur, the first populist President elected, with a parliamentary majority, following the event, will reintroduce a national Argentine currency, partly for symbolic reasons and partly to get hold of the seigniorage. Argentina never solved its fiscal federalism problems, nor did it tackle effectively the problem of overall limited revenue raising capacity and strong public sector unions. Finally, the US accounted for less than 10% of Argentina's exports and imports.[8]

There are also interesting parallels here with Turkey before the collapse of its currency regime in February 2001. Turkey did not have a currency board, but it did have something very close to it, something that could be called a 'crawling peg board'. Like a currency board, Turkey's monetary regime ruled out domestic credit expansion by the central bank. The exchange rate was not fixed, but depreciated at a predetermined rate. Turkey failed criteria 1, 2 and 3. It had no strong exit strategy. Membership in a formally symmetric currency union, that is membership in EMU, is a long-term ambition, not a medium-term possibility. The Turkish banking system was very weak, and there were long-lasting unresolved fiscal problems. The burden of the internal public debt was high and rising fast. The country had been involved in 16 earlier IMF programmes, each of which had failed. Unlike Argentina, the composition of the basket, in terms of which Turkey's crawling peg was defined, did reflect the country's international trading patterns.

3.3. … *and for the accession countries?*

From an economic point of view, euroisation or a currency board with the euro can make sense for the ten, small, highly open accession candidates. An accession candidate opting for a currency board with the euro would be pegging to a currency that accounts for the lion's share of its external trade.

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[8] There could have been a strong exit into a free float-cum-inflation targeting in the mid-1990s, but this moment passed.

An accession country with a currency board involving a peg to the euro would have a natural 'strong exit' in the form of EMU membership, preferably on the same date that EU membership is achieved. Even the stragglers in banking sector reform, such as the Czech Republic, are now engaged in a determined effort at financial and 'real' restructuring of their banking sectors. This eliminates a further obstacle to a currency board. Finally, while fiscal restraint, like chastity, is something that has to be fought for every day, the accession candidates of Eastern and Central Europe appear to be in no worse budgetary shape than the majority of the existing EU and EMU members. This precondition for a successful currency board therefore appears to be satisfied also. It is important that the additional pressures on public sector budgets caused by spending to meet the demands of the *acquis communautaire*, especially in the environmental and infrastructure fields, do not jeopardise the fiscal stability of the accession candidates.

4. Free floating

As we have mentioned, free floating is nowadays widely regarded as the only other credible exchange rate regime in the long run. We restrict the discussion here to the particular variant of free floating-cum-inflation targeting. Inflation targeting has been 'en vogue' in most industrialised countries for quite some time. Although the US Fed does not officially and formally target inflation, its actual operating procedures under Volcker and Greenspan have mimicked inflation targeting. The Bank of England has had an inflation target since 1992 and the ECB has, since its launch in 1999, had an inflation target that dare not speak its name.[9] New Zealand, Australia and Canada also use inflation targeting. So, why not the accession candidates?

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[9] The official ECB position is that it has a medium-term price stability target. An inflation rate (for the HICP index) between 0 and 2% per annum is deemed consistent with the price stability target.

4.1. *Key requirement for effective inflation targeting*

Although there are quite a few differences among the ways in which inflation targeting can be designed and implemented, there is a common core of key requirements for effective inflation targeting for all viable variants. This goes well beyond the government announcing some short-term inflation target. This common core consists of the following:

– The public announcement of a numerical medium-term target for inflation for a clearly defined and easily monitored index for a representative basket of goods and services.

– An institutional commitment to price stability as the primary goal of monetary policy, to which other goals are subordinated.

– A credible toolbox for linking monetary instruments to medium-term inflation outcomes, that makes use of all the information available.

– Legitimacy of the monetary arrangements and transparency of the monetary policy strategy. This requires accountability of the monetary authorities to the elected representatives, open and transparent procedures, and effective communication with the public and the markets.

Inflation targeting is said to have the key advantage that a country can keep control over its monetary policy, which is, according to conventional optimum currency area theory, desirable in the presence of asymmetric (non-monetary) shocks. Nevertheless, in many countries it has proven quite difficult to exploit this advantage.

Monetary independence through a floating exchange rate permits flexibility (the valuable ability to respond to shocks), but the downside of this flexibility are, first, opportunism, that is, discretion in the negative sense of lack of credible precommitment and, second, vulnerability to exchange rate shocks. Opportunistic discretion has been discredited by the inflationary experience of the 1970s, and 'rules based' monetary policy, that is, monetary policy based on credible precommitment, is advocated by all mainstream economists. Of course, rules can and should, in principle, be flexible, contingent rules that permit a response to news. But it is also true that the benefits of monetary independence in most accession countries should not be

overstated. In addition to the universal problems of instrument uncertainty, monetary policy in the accession candidates is particularly unlikely to be very effective in stabilising output because credit, deposit and debt markets are still rather underdeveloped. Furthermore, especially in the less advanced countries, a substantial share of credits and deposits continues to be in foreign currency. Thus, changes in the cost and availability of domestic credit are unlikely to have a large immediate effect on output, either through the interest rate or through the credit channel.

Accepting inflation as the overriding goal of monetary policy and giving up the goal of stabilising the exchange rate can have important repercussions for the banking system. Especially in the less advanced countries of the region, large parts of the balance sheets of banks are denominated in dollars and other hard currencies. Even if the balance sheet of the bank itself is balanced as regards its foreign currency liabilities and assets, this need not be adequate insurance against loss in case of large fluctuations in the exchange rate. A large depreciation may lead to defaults by parties that have borrowed from the bank in hard currency without matching the currency denominations of their own debits and credits. Such borrower defaults can have a knock on effect on the banking system.[10]

A further important requirement for successful inflation targeting is the institutional commitment of the central bank to the aim of price stability. This involves the insulation of the policymaking board of the central bank from the partisan, party-political process. Members of the policy-making board of the central bank should not have close ties to political parties or factions. They should be appointed for a single term of office, which should be longer than the political cycle. Much of the success of the inflation targeting central banks depends on reputation. While this does take time to establish, the experience of the Bank of England has shown that it is possible to gain quite rapidly the trust of the financial markets through a combination of transparency and active engagement in explaining policy decisions to the public.

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[10] While a large unexpected exchange rate change can cause default and bankruptcy when there is a significant degree of currency mismatch in the balance sheets of banks, commercial and industrial enterprises and households, such 'real effects' do not, of course, make monetary policy an effective and efficient stabilisation tool.

4.2. *Which target?*

Over recent years much research has gone into the question of what constitutes the optimal inflation target. This involves the composition of the target basket, the horizon over which the target is to be pursued, and the numerical value assigned to the target. Currently the Czech central bank targets headline inflation for up to 30 months ahead. The Polish Central bank instead targets headline inflation for at most 18 months ahead. The consensus for very open economies appears to be that ideally the central bank should target a *medium-term inflation target* that filters out temporary variations in the inflation rate, such as those due to transitory exchange rate movements. The advantages of this approach over simple consumer price basket targeting are greater the more open the economy is and the more volatile the exchange rate. Paying attention to these issues is the more important the larger and more volatile capital flows are. Especially when domestic financial markets and the foreign exchange market lack depth and breadth, capital flows can easily have large transitory effects on the exchange rate and through that on the domestic currency prices of internationally traded goods and services.

The challenges posed by international financial integration will continue to be important for the accession countries, and on balance its effects are likely to be beneficial, provided effective regulation and supervision of domestic financial institutions and markets can be established. With rapidly ageing populations, domestic saving rates are unlikely to be sufficient to finance the capital stock replacement and expansion necessary to catch up with the EU (see Transition Report 2000). FDI inflows are key to the international transfer of technology and know-how. International portfolio diversification offers insurance possibilities against asymmetric shocks that are not available domestically.

The downside of international financial integration is that the international financial market system can be a source of volatility, shocks and instability. Such financial instability is of course not eliminated when a country joins a monetary union which encompasses most of its external trade in goods, services and financial instruments. Exchange rate instability, however, is a significant part of total financial instability. Exchange rate volatility is reflected in import price volatility and temporary variations in the rate of inflation. This effect

is stronger the more open the economy is to trade in goods and services. Undue sensitivity of domestic monetary policy to such short-term movements in the inflation rate can be destabilising for the real economy. Skilful monetary targeting filters out the noise in the observed price, exchange rate and inflation signals and extracts the signal concerning the underlying inflation rate. It is sometimes argued that if highly open transition economies target inflation, they should target 'domestically generated inflation'. Unfortunately, there is no conceptually clean way of separating imported and domestically generated inflation.

Where does this discussion leave the accession countries? Given the short and often turbulent time period since transition started, the central banks in the region are still in the process of accumulating the reputational capital that is needed for effective inflation targeting. With the monetary and financial systems undergoing rapid transformations, the monetary transmission mechanisms are both poorly understood and quite unstable, which increases the likelihood that central banks in the region may miss the announced inflation targets. This will make it difficult for them to improve their reputations. The strength of the political commitment to central bank independence remains questionable in quite a few accession candidates. Even if no further challenges to central bank independence occur, it will take time for markets to become assured of the independence of the central banks. Also, given the size and volatility of capital flows compared to these countries' GDP, transitory exchange rate movements are likely to be large but difficult to strip out of the inflation series. Thus, it is difficult to argue that these countries are currently good candidates for inflation targeting.

5. Balassa-Samuelson meets the EMU inflation and exchange rate criteria

There may be a conflict between a key structural feature of the accession countries and the inflation and exchange rate criteria for EMU membership. We will show that, unless the inflation criterion is relaxed or reinterpreted for accession countries adopting a currency

board (or any other credible fixed exchange rate regime), EMU may only be achievable at the expense of an unnecessary recession in the accession countries. Likewise, for those candidate EMU members that adopt a floating exchange rate, it is likely to be necessary for the exchange rate stability criterion to be interpreted asymmetrically if the inflation criterion is to be satisfied. That is, unlike significant exchange rate depreciations, significant exchange rate *appreciations* should be permitted during the two year 'probationary period'.[11]

Together, the exchange rate criterion and the inflation criterion restrict the scope for changes in the real exchange rate of the accession candidate *vis-à-vis* the euro-zone. To have, say, a real appreciation requires either a nominal appreciation (if accession country and the euro-zone inflation rates are the same), or a higher domestic rate of inflation relative to the euro-zone (holding the nominal exchange rate constant).

Real exchange rates of transition economies are volatile and subject to large medium-term swings. There can be little doubt, however, that for most accession countries, there must be the expectation, as part of the process of transition and catch-up in productivity and living standards, of a significant trend appreciation of the real exchange rate. The reason for this belief is the Balassa-Samuelson effect. This is explained in Box 2.[12] In a nutshell, relatively faster productivity growth in the traded sector of the accession countries will convert into a higher inflation rate if the exchange rate is kept constant.

Several authors have recently estimated the empirical magnitude of the impact of the Balassa-Samuelson effect on the real appreciation of accession countries' currencies. De Broek and Sløk (2001) estimate in a panel regression that a one percentage point increase in the relative productivity levels of the industrial sector in accession countries compared to the EMU area increases (appreciates) the real exchange by 0.4%. Given this point estimate, they find that the catch-up of

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[11] The exchange rate criterion does indeed only require that a member state shall not have devalued its currency on its own initiative for a two-year period. Revaluations are not mentioned explicitly. While this asymmetry in the treatment of devaluations and revaluations may be good news from the perspective of a country wishing to qualify for EMU membership, it raises concerns about a possible lack of symmetry in the interpretation of the price stability target by the ECB. Unlike the Bank of England, whose inflation target and 'open letter procedure' are both explicitly symmetric, it is not clear whether the ECB frowns equally on price inflation and price deflation.

[12] See also Samuelson (1994) and Heston, Nuxoll and Summers (1994).

productivity in accession countries currently causes a real appreciation of around 1.5% per annum on average for all the accession countries. Given the dispersion of productivity growth differentials across countries, the effect is significantly stronger for some countries.

Jakab and Kovacs (1999) estimate the effect on Hungarian data and find about 1.9% per year for Hungary over their sample period. Rother (2000), analysing Slovenian data, puts the effect at 2.5% per year. All these estimates have the obvious shortcoming that they are done on very short data sets that do not allow the authors to filter out some of the cyclical factors. Subject to that *caveat*, estimates of the impact of the Balassa-Samuelson effect on the recent real appreciation of the Eastern European currencies against the euro appear to be in the range of 1.5% to 2.5% per annum. Thus, at constant exchange rates, this appreciation would raise annual inflation rates in accession countries by 1.5% to 2.5% compared to the EMU average, and by even more compared to the best three performing EMU countries (which the Maastricht criterion is based on).

BOX 2

THE BALASSA-SAMUELSON EFFECT

Let π_T^A denote the inflation rate of traded goods prices in the accession country, π_T^E the inflation rate of traded goods prices in the euro-zone and ε the proportional rate of depreciation of the accession country's currency *vis-à-vis* the euro. Assume that the law of one price holds for traded goods, that is, the forces of international trade arbitrage equalise the prices of traded goods and services (expressed in a common currency) between the euro-zone and the accession candidate. Then:

$$\pi_T^A = \pi_T^E + \varepsilon.$$

The inflation rate relevant for the inflation criterion for EMU membership is the inflation rate of a broad-based consumer price index, which includes both traded and non-traded goods. Let π^A and π_N^A be the CPI inflation rate and the non-traded goods inflation rate in the accession country, and π^E and π_N^E be the same two variables in the euro-zone. The share of non-traded goods in the consumption bundle is α both in the accession country and in the euro-zone. It follows that

BOX 2 (*cont.*)

$$\pi^{i} = \alpha\pi^{i}_{N} + (1-\alpha)\pi^{i}_{T} \qquad i = A, E$$

The prices of both types of goods are determined as constant proportional mark-ups on unit labour costs. Assume the growth rate of wages within a country is the same for both sectors and that the proportional mark-up on unit labour costs is constant. The growth rate of money wages in country i is w^{i} and the sectoral productivity growth rates are denoted g^{i}_{N} and g^{i}_{T}, $i = A, E$. It follows that

$$\pi^{A} - \pi^{E} = \varepsilon + \alpha\left[\left(g^{A}_{T} - g^{A}_{N}\right) - \left(g^{E}_{T} - g^{E}_{N}\right)\right].$$

Thus, under reasonable assumptions, the difference between the CPI rates of inflation in an accession country and the euro-zone equals the proportional rate of deprecation of the nominal exchange rate plus the (common) share of non-traded goods in the consumption basket, multiplied by the excess of the productivity growth differential between the traded and non-traded goods sectors in the accession country over that same sectoral productivity growth differential in the euro-zone. It seems likely that the differential between productivity growth in the traded goods sector and productivity growth in the non-traded goods sector is larger in the candidate accession country than in the euro-zone, because productivity catch-up is likely to be faster in the traded goods sector than in the sheltered sector. This means that the relative price of non-traded goods to traded goods will be rising faster in the accession candidate than in the euro-zone. This in turn implies that, at a given exchange rate, the overall inflation rate will be higher in the accession candidate than in the euro-zone.

While we have restricted our attention so far to the Balassa-Samuelson effect as the driving force behind an equilibrium real appreciation of the currencies, the economic literature points out several other channels that can give rise to a real appreciation during times of economic catch up. For instance, under the reasonable assumption that the tradable sector is more capital-intensive than the nontradable sector, it is easy to show that a reduction in the difference in the cost of capital in transition countries compared to existing EMU countries will give rise to a real appreciation. For simplicity assume that capital is only used in the tradable sector. A decrease in the cost of capital in the transition country leads, *ceteris paribus*, to an increase in the capital-labour ratio and to an increase in the marginal product of labour in

the tradable sector. This in turn raises wages in the tradable sector. Labour mobility across sectors implies that wages in the nontradable sectors will have to rise as well. Companies in the nontradable sector will only be able to pay these higher wages if the relative price of nontradables compared to tradables rises.

Given these other channels, it is no surprise that Pelkmans, Gros and Nuñez Ferrer (2000) find a larger equilibrium real appreciation for accession countries, when they base their estimation on relative price levels in accession countries compared to existing EMU member countries rather than on productivity growth differentials. They estimate the annual equilibrium real appreciation to be around 3.5 to 4% per annum, which at a constant nominal exchange rate to the euro would easily imply an annual inflation differential above the permitted 1.5% in the Maastricht Treaty.

If a candidate EMU member subject to the Balassa-Samuelson effect were to float its exchange rate (possibly within a band), it is unlikely that there would be problems in satisfying the Maastricht criteria for Balassa-Samuelson reasons. Consider the case where monetary policy in the accession country were to keep inflation at a level no more than 1.5% per annum above the euro-zone level (or above the average of the 3 EMU members with the lowest inflation rates), but the inflation differential warranted by the Balassa-Samuelson effect is greater than 1.5% per annum at a given exchange rate and at full capacity. The equilibrium response of the exchange rate would be an appreciation. This could cause the accession country to fall foul of the exchange rate criterion, but only if the Balassa-Samuelson effect were truly massive. The Balassa-Samuelson effect is unlikely to exhaust the 15% bands of the ERM in two years, assuming the exchange rate starts off in the middle of the band.

Of course, as pointed our earlier, a floating exchange rate regime has other serious drawbacks for the accession candidates. What about Balassa-Samuelson and fixed exchange rates? If, at full capacity utilisation and a fixed exchange rate, the inflation differential were to exceed the 1.5% permitted by the Maastricht inflation criterion, the only way the candidate EMU member could meet the inflation criterion at a fixed exchange rate would be to have a transitional recession to depress the inflation rate for at least one year to the level required by the Maastricht treaty. Following EMU membership however, the inflation rate in the former accession country would continue to exceed

that of the older EMU members by the margin implied by the Balassa-Samuelson effect, for as long as these intersectoral productivity growth differentials have not converged.

A more elegant solution, permitting the EMU candidate to maintain a fixed exchange rate without incurring an unnecessary recession would be to redefine the inflation criterion of the Maastricht Treaty in terms of the inflation rate of traded goods only. Without such a redefinition, only a waiver or derogation would allow a candidate accession country with a strong Balassa-Samuelson effect to qualify for EMU while maintaining a fixed exchange rate and without incurring an unnecessary recession. But this leads to the question of whether broader derogations from, or more flexible interpretations of, the EMU criteria are not desirable.

6. A practical suggestion

Currently the existing member countries and the ECB maintain the position that (unilateral) euroisation is not compatible with qualifying for EMU membership. The analysis in this paper leads us to the conclusion that a workable, practical solution to the exchange rate regime dilemma faced by those accession countries that are likely candidates for early EU membership should be to allow them to euroise (at a properly negotiated parity) prior to EMU membership and even prior to EU membership without running the risk of jeopardising eventual full EMU membership.[13]

For euroisation or a strong currency peg to be an attractive option for candidate countries hoping for early full EMU membership, it may be necessary to waive or alter the inflation criterion for EMU accession. The reason is that, for Balassa-Samuelson reasons, the proc-

[13] The argument why *unilateral* euroisation is not a permissible exchange rate regime under which to qualify for EMU membership relies mainly on the requirement that the entry exchange rate into EMU should be fixed in negotiation between the candidate and existing member countries. However, we can see little reason why the existing EMU countries should object to euroisation, if the exchange rate at which a country euroises is fixed in bilateral negotiations between the candidate country and the current EMU member countries.

ess of real convergence could lead to significantly higher inflation rates in accession countries than in the existing EMU area, once the exchange rate is fixed. Thus without a waiver or alteration of the inflation criterion, the candidate country that euroises (or operates any fixed exchange rate regime, including a currency board) might either have to engineer a temporary, and quite unnecessary recession to get inflation down for a year, or forego EMU membership.[14]

There is a further good reason (distinct from the Balassa-Samuelson effect) to grant an inflation waiver, as observing the inflation criterion (to the extent that this implies an inflation rate that is lower than optimal from the strictly national perspective of the EMU candidate) may involve up-front costs without commensurate prospective benefits. Once a country joins EMU, its medium and long-term inflation profile is determined by the EMU-wide monetary policy and the operation of the Balassa-Samuelson effect. The value of the investment in a reputation for monetary policy competence and for commitment to price stability is sharply devalued when monetary autonomy is given up as a country joins EMU.[15] National fiscal policy can still affect national inflation rates, but only transitorily. At most, inflation concerns should therefore imply fiscal constraints (and fiscal coordination). They do not call for an inflation criterion *per se*. Indeed, monetary union is the means *par excellence* for achieving inflation convergence (up to a Balassa-Samuelson differential). To make inflation convergence a precondition for monetary union is putting the cart in front of the horse.[16]

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[14] This is actually a dilemma for Brussels and Frankfurt that is unavoidable as there are already candidate countries that have adopted currency boards towards the euro and which could arguably be kept in the cold outside EMU for many years due to the inflation criterion.

[15] It is not zero, because, under current rules, a new EMU member's central bank governor will be a member of the ECB Governing Council.

[16] A good case can be made that any kind of exchange rate criterion would compel EMU candidates to engage in costly investment with no prospective return. Consider the requirement that a candidate EMU member must satisfy the normal fluctuation margins of the ERM for at least 2 years prior to the decision. As soon as the EMU candidate establishes that it can manage its exchange rate for the required period of time within the assigned bands, the capacity to manage the exchange rate is given up irrevocably and permanently when the country joins EMU. Reputational capital is accumulated, through a costly and risky investment process. This reputational capital is scrapped at the moment the country joins EMU.

What would be the consequence of an accession country joining EMU while its inflation rate is higher than its long-run EMU equilibrium inflation rate? If there is inertia in the accession country's inflation process, the country would become increasingly uncompetitive for as long as its inflation rate exceeded its long-run EMU equilibrium inflation rate. That loss of competitiveness will ultimately be recouped through a period of unemployment in excess of the NAIRU, or a period of excess capacity. While regrettable, there are no obvious negative externalities for the existing EMU members from the entry into EMU of a (small) accession country at a rate of inflation that is above its EMU long-run equilibrium inflation rate.[17] The decision as to the appropriate inflation rate of the new EMU entrant at the moment of entry can therefore be safely delegated to the new entrant. It is also worth pointing out that we know very little about the persistence of inflation momentum across a change in the currency – the *numéraire*. It is not obvious that, for instance, Polish z³oty or Hungarian forint inflation inertia will, once the *numéraire* of wage and price contracts has switched to the euro, be inherited by euro inflation rates in Poland and Hungary respectively.

We also believe that there is a good economic case for the leading EU candidate countries to become members of EMU as soon as possible, and without having to go through a two-year period of formal ERM membership. 'Shadowing' the ERM ought to be sufficient. We do not believe that a formal derogation from or waiver of the Maastricht exchange rate criterion is required for this to be possible.

Without a firm ruling either that ERM membership can start before EU membership (which seems implausible), or that it is possible to satisfy the normal fluctuation margins of the ERM without being a formal ERM member (which seems eminently plausible), the accession candidates would face at least a two-year period during which they are members of the EU but not part of EMU. This means that the accession countries would have to manage their exchange rate for

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[17] If a country were to join EMU with its inflation rate above its long-run EMU rate of inflation, it would, if there is inflation persistence across monetary regimes, raise the average rate of inflation of the enlarged EMU. With an unchanged EMU-wide inflation target, the existing EMU members would have to achieve a somewhat lower rate of inflation. Since all accession candidates are economically very small, this 'externality' is very small indeed.

a period of at least two years after joining the EU with a completely open capital account – part of the *acquis* requirements.

There will be an unavoidable risk of speculative attacks on the new EU member's currency. Fighting off such speculative attacks is costly. Giving in to them is even more costly. Deferred EMU membership would also defer the microeconomic efficiency gains and the portfolio diversification and financial market deepening benefits from having a common currency. The ability to use variations in the nominal exchange rate to adjust more swiftly and effectively to asymmetric shocks is a greatly overvalued commodity, especially for small and highly open economies. Those who put store in it (and few central bankers do) attribute to the national monetary authorities a capacity for fine-tuning which simply is not present in reality.

Our position, that successful EU accession candidates can avoid spending two years (or more) in ERM purgatory after joining the EU, is based both on the text of the Treaties and on the precedents of the EMU membership of Finland, Italy and Greece. We do not argue that a waiver of or derogation from ERM membership is required. That would imply that the Maastricht Treaty and Protocols formally require two-year ERM membership prior to EMU membership. They do not. What they do require is the *observance of the normal fluctuation margins provided for by the exchange rate mechanism of the European Monetary System*, which is not the same thing. This is consistent with 'shadowing' the ERM without being a member.[18]

There are also precedents that support the view that the exchange rate criterion can be satisfied without the candidate country being an ERM member. Italy and Finland joined EMU at its start, on January 1, 1999, even though at the time the decision to admit these

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[18] The third indent of Article 109j(1) of the Treaty refers to the exchange rate criterion as: "the observance of the normal fluctuation margins provided for by the exchange-rate mechanism of the European Monetary System, for at least two years, without devaluing against the currency of any other Member State"; Article 3 of Protocol no. 6 specifies that: "The criterion on participation in the exchange-rate mechanism of the European Monetary System referred to in the third indent of Article 109j(1) of the Treaty shall mean that a Member State has respected the normal fluctuation margins provided for by the exchange-rate mechanism of the European Monetary System without severe tensions for at least the last two years before the examination. In particular, the Member State shall not have devalued its currency's bilateral central rate against any other Member State's currency on his own initiative for the same period".

two countries was made, they had not yet spent two years in the ERM.

This tension is clearly reflected in the language used in the Commission's Convergence Report.

> "Although the lira has participated in the ERM only since November 1996, it has not experienced severe tensions during the review period and has thus, in the view of the Commission, displayed sufficient stability in the last two years" (European Commission 1998, p. 24).[19]

This assessment was made in March 1998.

There can be no doubt that, if the exchange rate criterion for EMU membership does indeed require a candidate country to be a formal ERM member, then this criterion was interpreted extremely generously for Italy and Finland (and later for Greece). The only way it can be argued that both the letter and the spirit of the Treaty and Protocol were respected by the Commission and the EMI (and subsequently by the Council) is by accepting that the exchange rate requirement can be met as long as the ERM fluctuation margins have been respected, regardless of whether or not the candidate country was formally an ERM member.

Since the Treaty does not require that a candidate for EMU must also be an EU member during the two years that it has to observe the ±15% margins, there would seem to be no reason why the flexible interpretation applied to Italy and Finland could not be extended to accession countries to allow them, in principle, to become EU and EMU members at the same time, or with minimal delay.

There is a view in Frankfurt and Brussels which supports the 'hard ERM' approach for prospective EMU members: that is two or more years of formal ERM membership following EU accession. Associated with this view is a preference for post-EU entry exchange rate that floats within a target zone with symmetric 15% bands. Inflation targeting (with the target inflation rate low enough to meet the inflation criterion for EMU membership), subject to the exchange rate target zone constraints, appears to be the recommended nominal anchor *within* the exchange rate target zone.

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[19] See also European Monetary Institute (1998). This was also published in March.

Even in Brussels and Frankfurt, the support for the 'hard ERM' view is not unanimous or unqualified. There is widespread awareness that inflation targeting, even when pursued competently, does not rule out either a highly volatile exchange rate or persistent, medium-term misalignments. Also, the inflation criterion of the Maastricht Treaty is a 'raw' consumer price index (the HICP), with no allowance for differences between actual and 'core' inflation, between transitory and permanent changes in the inflation rate, or between inflation in traded goods prices and in non-traded goods prices. A sensible inflation target, chosen to deliver smooth convergence when EMU membership is achieved, would also have to allow for persistent equilibrium inflation differentials – but that is not what is specified in the Treaty.

More generally, the history of the pursuit of two nominal targets (or one nominal target subject to a nominal constraint) is not a happy one. The history of exchange rate target zones under unrestricted financial capital mobility is an especially unhappy one (see for example Buiter, Corsetti and Pesenti 1998). Accession candidates wishing for early EMU membership should not have to spend two or more years in this unnecessary and uncomfortable purgatory.

In our view, the only substantive argument against the earliest possible EMU membership for all accession candidates who qualify for EU membership is that the current constitution of the ECB's Governing Council (a six-member Executive Board plus the national central bank governor of each EMU member state) and its current voting procedures (equal weight for each Council member) would become unmanageable with an additional eight to ten members. We share these concerns, but the solution is surely to reform, before 2004, the composition and voting procedures of the Governing Council of the ECB, rather than to delay the EMU membership of the successful EU accession candidates.

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