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Exchange Rate Regimes in Selected Advanced Transition Economies—Coping with Transition, Capital Inflows, and EU Accession

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Abstract

<p>The views expressed in this Policy Discussion Paper are those of the author(s) and do not necessarily represent those of the IMF or IMF policy. Policy Discussion Papers describe research in progress by the author(s) and are published to elicit comments and to further debate.</p>
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Since beginning economic transition, the Czech Republic, Estonia, Hungary, Poland, and Slovenia have—with much success—employed diverse exchange rate regimes. As these countries approach EU accession, they will need to avoid the perils of too much or too little exchange rate variability when capital flows are likely to be large and volatile; narrow band arrangements in particular could be problematic. The exception is Estonia, where there are good arguments for retaining the currency board arrangement. Countries wishing to join the euro area at an early stage should not leave the removal of remaining capital controls to the last minute.

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I. INTRODUCTION

1. This paper discusses the main considerations that should guide exchange rate and monetary policy in the five central and eastern European countries most advanced in the process of transition and in their EU accession negotiations—the Czech Republic, Estonia, Hungary, Poland, and Slovenia (the CEEC5). Individually, the CEEC5 have addressed many of the problems of transition in quite different ways. Their approaches to monetary and exchange rate policy have been no exception. As transition progresses and EU accession nears, it will continue to be the case that one size will not fit all. However, evolution of exchange rate regimes should also not be ruled out. Indeed for some countries, a combination of high capital inflows and a commitment to complete the removal of capital controls makes the choice of the appropriate exchange rate regime very much a pressing issue.

II. DIVERSITY AND NOMINAL CONVERGENCE

2. The wide degree of exchange rate regime diversity in the CEEC5 bears some correspondence to the structural features of the countries. However, choice of regime also reflects historical factors, the authorities' reactions to economic shocks, and the preferred approach to disinflation. Regardless of its regime choice, each of the CEEC5 has made considerable progress in reducing inflation to low levels.

A. *Vive la Difference*

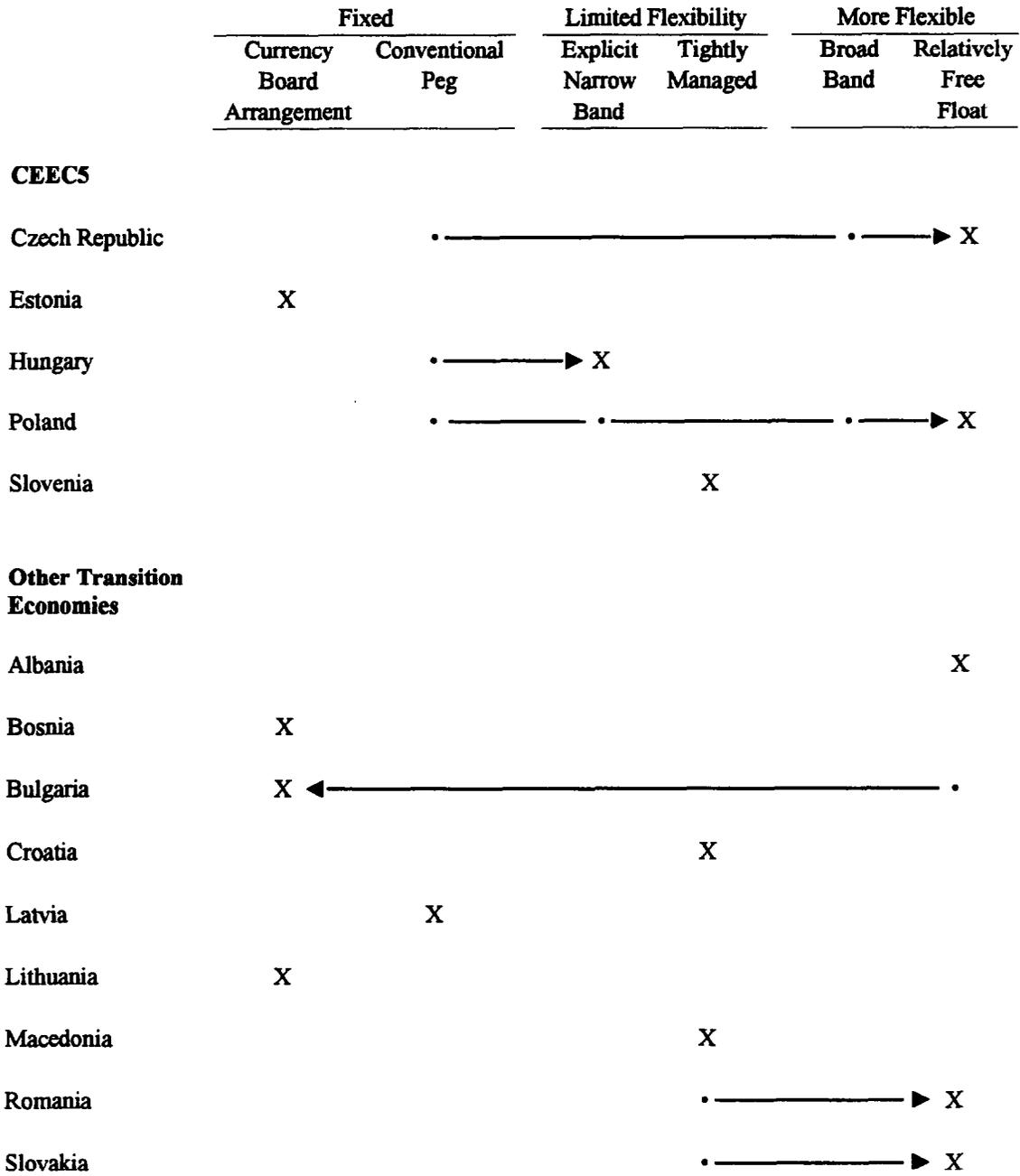
3. Despite sharing a number of common economic traits and the objective of EU membership, exchange rate regimes in the CEEC5 exhibit remarkable diversity, ranging from a currency board arrangement (CBA) in Estonia to relatively free floats in the Czech Republic and Poland (Table 1). In between, Hungary has a narrow band arrangement,

Table 1. Exchange Rate and Monetary Policy Regimes in the CEECS

Country	Exchange Regime	Official Intervention	Capital Controls	Monetary Goal
Czech Republic	Relatively free float.	Occasional intervention to smooth large swings in the exchange rate.	Largely liberalized.	Announced inflation targets (net of administered prices): 4–5 percent, end 1999, 3½–5½ percent, end 2000.
Estonia	Currency board arrangement.		Fully liberalized.	Maintain exchange rate fixed to the euro.
Hungary	Crawling peg to the euro with a narrow band of +/- 2.25 percent.	Intervention at the edges of the band.	Long-term controls liberalized. Controls on short-term capital remain.	Low inflation (2–3 percent above euro zone), and sustainable external position.
Poland	Relatively free float.	Occasional intervention to smooth large swings in the exchange rate.	Long-term controls liberalized. Some controls on short-term capital flows.	Announced inflation targets (headline inflation), 6.7–7.8 percent, end 1999; 5.4–6.8 percent, end 2000; below 4 percent, 2003.
Slovenia	Managed float.	Closely managed on a gradually depreciating path.	Long-term controls liberalized (Sept. 1999). Short-term controls remain.	Announced targets for annual M3 growth. Day-to-day intervention also guided by desire to reduce interest rate differential with EU and limit excessive volatility in the exchange rate.

and Slovenia a managed float. Exchange rate regimes have not, however, been static since transition began. In recent years, regimes have been moving toward the more extreme ends of the spectrum, in keeping with trends observed more generally among transition economies and countries world-wide (Figure 1).

Figure 1. Exchange Rate Regimes in Transition Economies 1/



1/ An X indicates the current exchange regime, a • denotes a previous regime, and an ———▶ indicates a regime change

4. Progress with disinflation and pressure from capital flows have been important factors behind the evolution of exchange rate regimes. Hungary, after a series of step devaluations, moved to a narrow band with a crawling central peg as part of a strategy to disinflate gradually from over 25 percent in 1995. Slovenia avoided exchange rate rules, but limited exchange rate volatility so as to dampen effects on inflation expectations and preserve competitiveness. In contrast, in the Czech Republic and Poland, changes from more to less controlled exchange rate regimes occurred largely under the pressure of capital flows. The Czech Republic was forced to abandon its exchange rate band under extreme market pressure while Poland widened—and recently abandoned—fluctuation bands in stages in the context of persistently large capital inflows and a tendency for the exchange rate to gravitate to the upper half of the band. Only in Estonia has there been adherence to one exchange rate regime. Estonia adopted a CBA at independence partly to emphasize its break from its Soviet past. As credibility in the CBA has grown, so has the cost of an exit.

5. The evolution of exchange rate regimes has been accompanied by the liberalization of capital controls, although the pace of liberalization has differed across the CEECS. Estonia liberalized all flows at the beginning of transition and all the others have removed controls on long-term capital. Slovenia and Hungary rely most on controls to regulate short-term capital flows. Poland's controls on short-term capital flows are to a large extent non-binding, while the Czech Republic has abolished practically all controls.

B. Structural Explanations for Diversity

6. Exchange rate regime choice should take into account the likely source and nature of economic shocks and the institutional and structural features of the economy. It is generally

considered that a small, open economy may find it advantageous to peg to the exchange rate of a much larger trade partner. However, if it chooses to peg, its trade and economic structures should be aligned with those in the anchor area (they would be more likely to face similar shocks, making the monetary policy of the anchor area more suitable) and its labor market should be flexible (pegs put more onus of adjustment on wages and prices).

7. Differences in economic characteristics provide some rationale for the pattern of relative exchange rate flexibility across the CEEC5 (Table 2). Poland's exchange rate flexibility is in keeping with its relatively large size, lower degree of openness, and its less than fully flexible labor market. The need to improve the functioning of labor markets is also consistent with the need for exchange rate flexibility in Slovenia and the Czech Republic. At the other end of the scale, Estonia, with a CBA, has a very small, open and flexible economy. Likewise, Hungary's narrow band regime is supported by flexible labor markets.

8. However, it would be wrong to overemphasize differences between the countries. At a broader level, they all share a high degree of openness, similar trade and output structures to the EU and, for the most part, sufficient labor market flexibility to justify some degree of alignment of their exchange rates to the euro. The CEEC5 also enjoy many strengths in their external and fiscal positions that give them the option to choose more or less flexible exchange rate systems than they currently possess (Table 3). Some specific vulnerabilities apart—a high current account deficit in Poland, a moderately-high debt ratio in Hungary, and a weak banking sector in the Czech Republic—they all have comfortable reserve cover and came through the latest emerging market crisis (Russia, 1998) largely unscathed.

Table 2. Exchange Rate Regimes and Basic Economic Characteristics of the CEEC5

	Czech Rep.	Estonia	Hungary	Poland	Slovenia	EU
(1998 unless indicated otherwise)						
Exchange Rate and Monetary Policy Regime						
Exchange regime 1/	Relatively free float	Currency board	Narrow band with crawl	Relatively free float	Managed float	...
Monetary policy	Inflation target	Exchange rate target	Exchange rate target	Inflation target	M3 target	...
Real GDP growth, 1995-99 average	1.6	4.2	3.3	5.7	4.0	2.2
CPI inflation (1999, average)	2.1	3.3	10.0	7.2	6.1	1.2
Size and Openness 2/						
Per capita GDP (percent of EU)	24	16	21	18	43	100
Population (percent of EU)	2.7	0.4	2.7	10.3	0.5	100
GDP (percent of EU)	0.7	0.1	0.6	1.9	0.2	100
Share of total extra-EU trade 3/	2.2	0.3	2.2	3.1	0.8	...
Imports and exports (percent of GDP) 4/	121	165	122	52	109	50
Exports to EU (percent of total)	64	55	73	68	66	...
Imports from EU (percent of total)	63	60	64	66	69	...
Alignment with the Euro Area						
Shares of GDP (percent)						
Agriculture	4.5	6.2	5.9	4.8	3.9	2.3
Industry & construction	41.8	26.3	32.7	36.5	37.7	30.7
Services	53.7	67.5	61.4	58.7	58.4	67.0
Trade structure—deviation from EU 4/						
Exports	27	56	14	52	35	32
Imports	16	17	21	11	15	19
State of Transition						
Progress in transition index (0-4) 5/	3.5	3.5	3.7	3.5	3.3	...
Share of private sector in GDP 5/	75	70	85	65	50	...
Per capita GDP, US\$ (1999)	5,230	3,334	4,786	3,979	9,924	22,813
Labor Market Flexibility						
Survey Indicators, average	4.6	...	6.6	4.0	2.8	4.1
Labor regulations 6/	5.3	...	7.4	4.8	3.3	4.1
Unemployment benefits 7/	4.0	...	5.7	3.2	2.3	4.0

Sources: IMF staff estimates, except where noted.

1/ Annual Report on Exchange Arrangements and Exchange Restrictions, International Monetary Fund 1999.

2/ These data sourced from Eurostat Memo 10/99, 7 December 1999.

3/ Trade is merchandise imports plus merchandise exports.

4/ Sum of the absolute deviations of from EU trade shares of food and drink, raw materials, energy, chemicals, manufactures, and machinery. The number in the EU column shows the average of the deviations for the European Union countries.

5/ EBRD Transition Report, 1999.

6/ Index where 0=too restrictive, 8=flexible enough, Global Competitiveness Report, 1999.

7/ Index where 0=weak incentives for job search, 8=strong incentives for job search, Global Competitiveness Report, 1999.

Table 3. CEEC5 - Vulnerability Indicators

	Czech Rep.	Estonia	Hungary	Poland	Slovenia
(1998, in percent of GDP unless otherwise indicated)					
External Sector					
Current account balance (1999)	-1.0	-6.3	-4.2	-7.6	-1.3
External debt	43	28	53	25	27
External debt net of reserves	21	12	34	7	11
International reserves					
Reserves (in months of imports)	4.4	2.2	3.7	6.4	3.8
Short term external debt to reserves	1.0	0.9	1.1	0.1	0.7
Broad money to reserves	3.4	1.9	2.3	2.3	2.9
Financial Account					
Net FDI, average 1993-1998	2.9	6.8	4.9	2.8	1.0
Net portfolio and other inv., avg. 1993-98	5.0	4.5	1.5	0.5	0.9
FDI stock, percent of 1998 GDP	22.8	28.8	35.8	13.4	8.1
Capital account liberalization index 1/					
Overall liberalization	79	100	62	70	66
Short-term cap. controls liberalization	75	100	44	63	63
Credit ratings (long-term foreign currency)					
Moody's	Baa1	Baa1	Baa1	Baa1	A3
Standard and Poor's	A-	BBB+	BBB+	BBB	A
Banking Sector (percent)					
Capital adequacy ratio, 1999	12.4	16.7	14.2	16.0	16.0
Non-performing loans, 1999	31.5	2.8	4.2	12.3	11.5
Asset share of state-owned banks, 1998 2/	18.8	7.8	11.8	48.0	41.3
Foreign owned share of bank capital 3/	...	90	63	44	4
Fiscal Sector					
Public debt	13	6	60	39	33
Fiscal balance, average 1996-98	-1.0	0.1	-2.5	-3.2	-0.5

Sources: IMF staff estimates, except where noted.

1/ Index where 100 = fully liberalized, short term capital is defined as credit operations plus portfolio excluding equity. See Temprano-Arroyo and Feldman (1999) for methodological details.

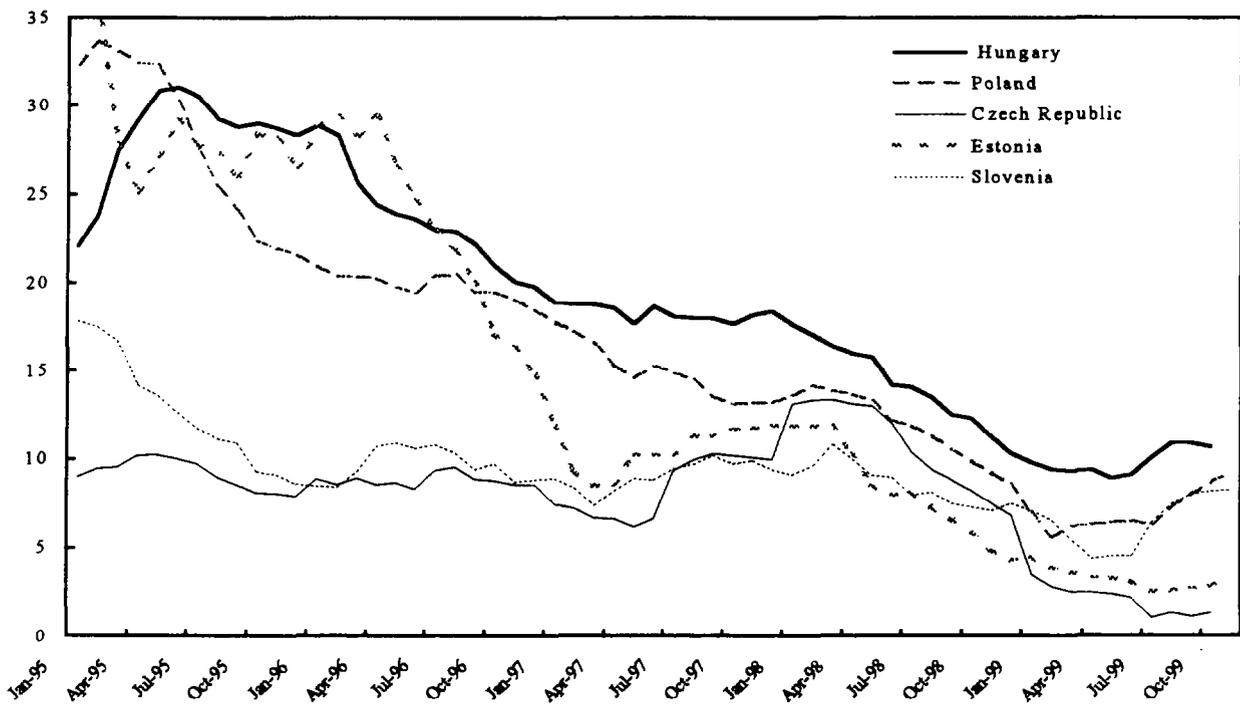
2/ EBRD Transition Report, 1999. Figure for Czech Republic excludes Ceska Sportelna and Komerčni Banka, which are undergoing privatization.

3/ IMF Capital Markets Report, 1999.

C. Progress in Reducing Inflation

9. Despite the variety of approaches to exchange rate policy, the CEEC5 have all made substantial progress in reducing inflation, which is now 10 percent or less in all the countries (Figure 2). This achievement emphasizes that it is the consistency of a country's entire policy package, including fiscal policy and structural reform, that matters most for macro-economic performance rather than the exchange rate regime per se. Policy consistency will remain of primary importance as the CEEC5 try to complete inflation convergence to EU levels.

Figure 2. CEEC5: CPI Inflation 1995-99
(12-month; in percent)



Source: IFS

III. TRANSITION, ACCESSION, AND CAPITAL FLOWS

10. Over the next few years, exchange rate regimes in the CEEC5 will need to be robust to the challenges of completing economic transition and readying for EU membership in an environment of high and variable capital flows. Before accession, the EU does not impose requirements on applicants' exchange rate regimes. But once in, countries will have joined a club where exchange rate variability, especially in the downward direction, is frowned upon.

A. The Economic Transition Process

11. Exchange rate regimes will need to accommodate the unfinished business of the transition to market economies. To the extent that incomplete transition increases the risk of adverse domestic shocks, magnifies the effect on the domestic economy of shocks from foreign sources, and imposes a restraint on fiscal flexibility, it could reduce the credibility of an exchange rate peg. More generally, the process of catch up to per capita income levels in the EU is likely to be associated with real exchange rate appreciation.

12. Each of the CEEC5 is well advanced in establishing a market economy. As measured by the EBRD, the private sector's contribution to GDP ranges from 50 percent in Slovenia to 85 percent in Hungary. And all score highly on the EBRD's index of progress in transition, with ratings in the range 3.3 to 3.7 on a scale of zero to 4 (see Table 2). Even so, economic restructuring remains to be completed in each of the CEEC5. In particular, industrial restructuring remains a priority in the Czech Republic, Poland, and Slovenia. In Poland, a large shakeout of employment in the agricultural sector is also required. Industrial restructuring is most advanced in Estonia and Hungary where foreign ownership or participation is prevalent.

13. With per capita incomes of between 16 percent (Estonia) and 43 percent (Slovenia) of EU levels, a sustained period of high growth can be expected as the CEEC5 catch up. During the catch-up process, prices of nontradable goods may be expected to rise more rapidly than prices of traded goods due to: (i) improvements in the quality of services; (ii) liberalization of domestic prices; and (iii) Balassa-Samuelson (B-S) effects arising from more rapid productivity growth (and associated cost advantages) in the traded goods sector relative to other sectors. It follows that the real exchange rate would tend to appreciate on a CPI basis, but not necessarily on a unit labor cost basis (traded goods sector). For the CEEC5, where productivity growth in the traded goods sector has tended to be quite brisk, the contribution of the B-S effect to CPI inflation might be expected to be larger than the 1–2 percentage points per annum estimated for EU countries experiencing productivity catch up.²

B. EU Accession Requirements

14. EU accession, and subsequent adoption of the euro, provide a clear end point for the exchange rate regimes of the CEEC5. It is generally accepted that the CEEC5 could become EU members in 3–5 years—some aspire to join even earlier—and it would take at least two more years before they would be eligible to adopt the euro. The timetable is thus immediate enough for accession to be a consideration in determining exchange rate regimes in the CEEC5. But it is far enough away to give countries latitude to adjust their regimes during the interim in a manner that best serves their transition and macroeconomic policy needs.

² However, B-S effects are hard to track down and measure in the CEEC5. The strongest evidence is found in Hungary, Poland, and Slovenia.

15. Prior to accession, candidate countries are free to choose whatever exchange rate system suits them, although the requirement to bring institutions and economic structures into line with those in the EU will have a bearing on that choice. In particular, countries are expected to complete the liberalization of capital accounts, make their central banks fully independent and create efficient, market-oriented financial sectors.³ In practice, however, candidate countries have some leeway to negotiate their terms of membership, not least because the main economic requirements—the existence of a functioning market economy and the capacity to cope with competitive pressures and market forces inside the EU—are open to interpretation. New members may, in principle, be granted temporary exemptions (derogations) from compliance with the EU's body of laws and rules, including those regarding capital mobility and financial market development, although excessive requests for derogations could slow EU membership.

16. Upon membership, exchange rate policy becomes a matter of common interest: the new member is obliged to avoid excessive exchange rate fluctuations and competitive devaluations, and is expected to embark on a phased process toward adoption of the euro.⁴ The first step in this process is participation in the new exchange rate mechanism (ERM2), although there is no compulsion to enter ERM2 immediately. Participants are required to agree an entry exchange rate of their currency against the euro with the ECB, EC, and Council of Ministers and to maintain the exchange rate within a band of ± 15 percent for at

³ Temprano-Arroyo and Feldman (1999) contains a comprehensive discussion of the requirements for EU and EMU accession. See also European Central Bank (2000).

⁴No opt-outs will be granted to new members with respect to adoption of the single currency.

least two years prior to adopting the euro. However, while devaluations are not consistent with convergence requirements, revaluations of central rates would be permitted, thus giving an incentive to ensure that the chosen central rate is not overvalued. ERM2 is in principle compatible with a range of exchange rate regimes. For example, if a country had made substantial progress with structural and nominal convergence, it could be permitted to adopt narrow fluctuation bands, as is the case at present with Denmark. From an economic perspective, a CBA would also seem to be consistent with ERM2, although the EU has yet to formally rule whether a CBA will be permitted under ERM2. Other than exchange rate stability within ERM2, the new member will need to meet Maastricht convergence criteria on fiscal deficits, public debt, interest rates, and inflation before it can adopt the euro.

C. Capital Flows in the Run Up to Accession

17. The CEEC5 have enjoyed sizable capital inflows since transition began and in the coming period there is a strong likelihood that such inflows will increase. Competitive labor costs, well-educated labor forces, proximity to Western Europe, and the expectation of EU accession will continue to make the CEEC5 attractive platforms for investment. Moreover, their attractiveness may increase as they make progress in structural reform and as the prospect of EU accession cements confidence in the countries' stability and continued free access to the common market. As a benefit of accession, new members will also receive annual net transfers from the EU's structural assistance programs and common agricultural policy amounting in some cases to up to 5 percent of the recipient country's GDP for several decades. While only some limited EU transfers will be available to applicant countries prior to accession, durable capital inflows could be expected to pick up well in advance.

18. Flows are likely to be highly reactive to actual or perceived policy slippages and to news about the timing of EU entry and the size and timing of future transfers from the EU budget. New information will create pressures for immediate and potentially large adjustments in the real exchange rate. In the run up to accession and entry into ERM2, a country may also experience an increase in temporary capital flows as interest rates are bid down toward levels prevailing in the euro zone and markets speculate about entry central parities. These so-called convergence plays can induce surges in inflows that are quickly reversed once arbitrage opportunities disappear or a credible exchange rate is announced.

19. Contagion effects could also prove increasingly troublesome. As convergence proceeds, the foreign exchange market fortunes of each of the CEEC5 are likely to become increasingly intertwined with those of the other four both through increasing competition in their main market, the EU, and interconnections through increasingly liberalized capital accounts. Potential volatility in exchange rates (and interest rates, especially in countries with CBAs) could be linked to the fortunes of any of the countries suggesting that the CEEC5 will need to prepare early, both individually and collectively, to get their fundamentals in shape and to minimize the opportunities for speculative attacks.

D. Post-Accession Considerations

20. Once a country joins the EU, it will face a number of choices regarding timing and the manner in which it will participate in ERM2 and subsequently adopt the euro. While for now somewhat of a way off, the applicant country will need to bear the following key issues in mind when formulating exchange rate policy in the interim period:

- Countries that wish to enter ERM2 at—or shortly after—accession, will need to be prepared. Premature entry could delay convergence if the country is not able to cope with unanticipated changes in foreign exchange flows, especially if it has left the abolition of remaining capital controls to the last minute.
 - A new entrant will need to avoid choosing an uncompetitive central rate. While entry rates do not have to be market-determined, market signals about what constitutes an appropriate rate will be useful in the period leading up to participation in ERM2.
 - Equilibrium real exchange rate appreciation may make it difficult for countries to meet inflation convergence criteria. Rough calculations suggest that Balassa-Samuelson effects could easily add to inflation more than the 1½ percentage point margin allowed under the Maastricht criterion. The problem is most acute for countries with CBAs—those using the wide band of ERM2 could allow their exchange rates to appreciate, including through revaluation of central rates.
21. Further ahead, and of less immediate concern, the countries will face other issues such as choosing a conversion rate to the euro and choosing the precise entry date.

IV. MONETARY POLICY CONSIDERATIONS AND OPTIONS

22. Over the next few years, monetary and exchange rate policy will be attuned to achieving and/or sustaining inflation at close to EU levels at a time of high and variable capital inflows and when reliance on capital controls will have to diminish. Real currency values will likely appreciate, real interest rates may fall, and upward pressure on current account deficits could be substantial. The choice of exchange rate regime cannot prevent the

more hazardous aspects of this process—real appreciation and large current account deficits. Rather, the choice must be guided by the aim of making the process orderly, predictable and as consistent with underlying investment opportunities as possible.

A. Monetary and Exchange Rate Policy Issues for the CEEC5

23. The diversity of exchange rate arrangements in the CEEC5 is mirrored in the diversity of their approaches to monetary policy. Those countries that have recently moved to more flexible exchange rate arrangements, the Czech Republic and Poland, have adopted inflation targeting (IT). Hungary remains an exchange rate targeter, although in practice the narrow band and controls on short-term capital flows give it a modicum of discretion in interest rate policy. Likewise, capital controls help Slovenia to pursue multiple intermediate objectives: in principle, monetary policy is centered on monetary targets, but in practice day-to-day monetary policy is guided by developments in the foreign exchange market. In Estonia, monetary policy is subordinated to the currency board.

24. Under a fixed exchange rate system, capital inflows will in the absence of sterilization—either because it is costly or ineffective—put downward pressure on interest rates and upward pressure on the money supply, thereby potentially conflicting with inflation goals. Moreover, to the extent that a peg discourages hedging, there is a risk that agents would build up unbalanced portfolios that would severely add to the economic costs of exit from a fixed exchange rate regime. The experience of Asian countries during the crisis in the late 1990s is a good example of the consequences of this risk. A degree of exchange rate flexibility would raise the exchange risk premium (driving a wedge between the interest rate differential), helping to dampen interest-sensitive capital flows.

25. Problems of capital inflows do not vanish under flexible exchange rate systems. Persistent capital inflows put upward pressure on the exchange rate, potentially weakening competitiveness more rapidly than under a fixed regime, and widening external current account deficits. Concerns about external sustainability could increase the vulnerability of the country to wide swings in capital inflows. Considerable exchange rate volatility could damage trade and investment and be inconsistent with low and stable inflation given that the exchange rate is a key element of the transmission mechanism in the CEEC5.

26. The question also arises as to what should anchor monetary policy under a flexible exchange rate. In principle, inflation targets can deliver less inflation volatility than a monetary policy centered on a monetary or exchange rate target. In practice, this may not be so because: (i) any discretionary policy is open to political pressures (though the risk is reduced with independent central banks, as is the case in the CEEC5); and (ii) the technical requirements to forecast inflation and understand the lags in the response of the economy to changes in monetary policy instruments are considerable. While the Czech Republic and Poland are making progress in refining their technical expertise for inflation targeting, it remains a learning-by-doing exercise: unless they deliver inflation within stated targets, the cost of reducing inflation may be greater than under a simpler rule-based policy. However, while Slovenia has had success with monetary targets, the stability of money demand would be open to question in a transition economy undergoing rapid structural transformation.

27. Further complications arise for countries that have to dismantle remaining capital controls. Along with the large benefits of capital flows for increasing resources for domestic investment, liberalization will reduce the scope for using interest rates to achieve domestic

monetary policy objectives. Freer capital flows will also make it easier for investors to take large positions against a currency and contagion effects could be more difficult to contain. The reduced monetary independence and higher volatility of capital flows would argue in favor of phasing liberalization over time and avoiding an overly narrow exchange rate band.

28. In sum, for countries without a credible CBA, there are arguments for avoiding both too much and too little exchange rate variability. A possible solution suggested in Masson (1999) is to adopt a hybrid approach whereby weight is given to both inflation and the exchange rate. Formal or informal bands for the exchange rate, assuming they are not too narrow, could provide additional reassurances that the authorities will avoid potentially large swings in the exchange rate that would be inconsistent with the goals of low inflation and external sustainability. Finally, it should be stressed that these goals cannot be achieved by monetary policy alone: the support of fiscal policy will ultimately be needed regardless of the monetary policy regime. Structural reform to promote flexibility in product and factor markets is also indispensable for lowering the costs of adjusting to change and shocks.

B. Implications for the CEECS

29. In the run up to accession, only Estonia has opted to eschew exchange rate flexibility. The other four countries will need to determine the appropriate extent of exchange rate flexibility, a suitable framework to ensure low inflation, and the speed at which capital account liberalization should be pursued. The main issues for each country are as follows:

30. *Czech Republic.* The shift to an inflation targeting framework has been successful in terms of achieving price stability. Inflation targeting nevertheless entails a number of

challenges, as evidenced by an undershooting of the target in recent periods. The undershooting partly reflects the authorities' need to build policy credibility, as well as technical problems with data quality and establishing stable relationships between inflation and its determinants. Under the inflation target, intervention in the foreign exchange market is used only to smooth excessive volatility in the exchange rate and the exchange rate against the DM/euro has so far varied within a roughly 10 percent range.

31. In view of the expected large size and volatility of capital inflows in coming years, the uncertain impact of completing transition reforms, potential shocks from domestic sources (including fall out from banking sector difficulties), and likely real exchange rate appreciation, a return to a relatively fixed exchange rate regime would appear to be risky. This is all the more so since the earlier exit from a narrow band regime may impact the credibility of a return. In addition, the burden on government expenditures from EU required reforms and the large, unreformed, state-owned enterprise sector suggest that neither fiscal nor wage policy may be sufficiently flexible to support a rigid exchange regime.

32. *Estonia.* Having withstood severe tests—banking failures (1992–93), the emerging markets and Russian crises (1997-1998)—the authorities intend to maintain the CBA through EU accession and ERM2. This should not be problematic. First, the CBA enjoys considerable credibility: while in the 1997 and 1998 crises, short-term domestic interest rates rose from about 5–6 percent to over 15 percent, they unwound relatively quickly and are now close to euro area levels. Second, the authorities have transformed their economy: in particular, the banking system has been consolidated and labor markets made quite flexible. Third, a very low level of public sector debt provides room for fiscal policy flexibility.

33. Concerns that the currency board does not allow a market test for exchange rate stability and will not help to ensure that Estonia enters the euro zone at an appropriate exchange rate do not appear to be valid. With unfettered capital flows, the appropriateness of the exchange rate parity can be inferred indirectly from the size of interest differentials and the durability of export and GDP growth.⁵ And, provided that prices and wages are sufficiently flexible (which they are in Estonia), real exchange rate flexibility can still be achieved under a CBA—albeit at a risk of conflicting with inflation convergence criteria. Moreover, moving from a CBA to a more flexible exchange regime is unlikely to provide a clear indication about the appropriate market rate when market participants are speculating about the rate for euro-zone entry. Instead, it could lead to reduced policy transparency and discipline and to lower investment as a result of greater uncertainty. Finally, there may be no obvious candidate for an alternative monetary policy framework since it might be difficult to identify stable links between (possibly inadequate) policy instruments and inflation. If there is a case for change, it would be in the direction of early adoption of the euro, given that Estonia's CBA has a long established record of credibility. This could be a convergence option the EU might want to consider.

34. *Hungary.* The narrow band regime, together with fairly firm control over short-term capital flows, provides an anchor for the authorities' objective of reducing inflation from its current level of about 10 percent, while allowing some monetary policy flexibility for reacting to shocks. This approach to disinflation has become quite credible in recent years,

⁵ For more discussion, see Gulde, Kähkönen, and Keller (2000).

with reductions in the rate of exchange rate crawl reflected in a steady decline in inflation. The authorities are contemplating the introduction of a fixed peg to the euro within a wide band (± 15 percent) once they have reduced inflation to 4–5 percent by further slowing the rate of crawl.

35. An exit from the band is at least as likely to reflect upward as downward pressures, as evidenced by the recent position of the rate near the top of the band. In particular, the costs of sterilizing capital inflows may reduce the authorities' tolerance for trying to insulate the economy from the monetary effects of the inflows. As competitiveness appears to be relatively favorable, there might also not be a strong incentive for fiscal tightening to prevent a real exchange rate appreciation. A move to a wider band thus appears to be appropriate. While some increase in the risk premium resulting from more exchange rate volatility would raise debt service costs, it would help to discourage interest-sensitive flows and could provide more scope to meet inflation objectives. A wider band would also facilitate the phasing out of remaining capital controls.

36. *Poland.* Judicious use of crawling and, over time, widening exchange rate bands has provided a successful framework for the authorities' gradualist approach to disinflation as well as flexibility to help address capital surges and external shocks. Even though end-1999 inflation was, at almost 10 percent, above the authorities' target range, there is no persuasive case for a return to a more restrictive exchange rate arrangement. The fundamental arguments for exchange rate flexibility continue to apply, and in light of pending EU accession and the need to complete capital account liberalization, flexibility may prove a key element of the toolkit available to the authorities to respond to strong capital inflows.

37. Nonetheless, there are constraints on the authorities' use of exchange rate flexibility. Poland's current account deficit was 7½ percent of GDP in 1999 and further increases could risk engendering an adverse shift in market sentiment. For this reason, the monetary authorities have to weigh the consequences of their actions for the exchange rate and hence for the current account balance. In addition, the exchange rate is the most robust leading indicator of inflation, thus also constraining the variability that can be tolerated. So while Poland has recently eliminated the fluctuation band entirely, policymakers can be far from indifferent to the exchange rate. The key challenge is to support the flexible exchange rate regime with an appropriately ambitious fiscal stance. This would help strengthen performance on inflation and the current account balance, and relieve the constraint on inflation targeting.

38. *Slovenia.* A pragmatic approach to monetary targeting supported by intervention to limit short-term exchange rate variability has helped to keep inflation below 10 percent in recent years. Until they were liberalized substantially in 1999, controls on capital provided crucial support to the authorities' monetary policy framework. The current more liberal environment—and the authorities intention to liberalize capital flows completely by 2002—will make it harder for the Bank of Slovenia to maintain a balance between its objective of lowering inflation and exerting some control over exchange rate movements.

39. With more volatile capital flows and the expectation that nondebt-creating inflows—which thus far have been smaller than in the other CEECS countries—will increase in the run up to accession, some evolution of the approach to monetary policy will be necessary. In particular, the authorities will likely have to accept greater exchange rate flexibility—

especially as they have recently announced a move to a narrower target range for M3. While the balance between money and exchange rate variability will need to be kept under review, commitment to a relatively flexible exchange rate regime and absence of formal exchange rate bands offers few hostages to speculators.

V. CONCLUSIONS

40. The following conclusions emerge from the paper:

- The CEEC5 have made considerable progress in establishing fairly low inflation despite the past divergence in their approaches to monetary and exchange rate policy.
- Differences in economic structures provide some rationale for the current diversity in exchange rate regimes among the CEEC5, although in no case do the economic fundamentals point unambiguously in one direction as regards regime choice.
- Whereas these differences are likely to diminish as the countries further adopt EU institutional structures, increase already strong economic ties with the EU, and address remaining transition issues, there is no imperative for them to adopt a common strategy for their monetary and exchange rate policy in the near term.
- In the run up to accession, exchange rate regimes will need to cope with high and variable capital inflows. Narrow bands or overly managed exchange rates—credible CBAs excepted—are unlikely to provide sufficient flexibility to reconcile domestic and external policy objectives and may prove tempting targets for speculators. On the other hand, benign neglect of the exchange rate also carries risks and does not fully

resolve conflicts in policy objectives in an environment of high capital inflows. Some formal or informal commitment to avoid excessively large exchange rate swings seems desirable to support credible inflation reduction policies and avoid uncompetitive exchange rates.

- Thus, for Hungary, a widening of the exchange rate band in due course appears to be appropriate, while Slovenia should be prepared to accept greater exchange rate volatility. Maintaining flexible exchange rate regimes in Czech Republic and Poland also appears to be appropriate, but these countries—and Slovenia—will need to weigh the advantages of adding formal exchange rate bands in anticipation of the regime they are likely to adopt under ERM2. For Estonia, there are good economic reasons why it should retain the CBA both in the run up to accession and under ERM2.
- Countries wishing to enter ERM2 at an early stage should not leave the required removal of capital controls to the last minute as this would add to exchange rate volatility and difficulties with monetary policy management at a time when the focus will be on macroeconomic convergence.

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