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Implications of EMU for Exchange Rate Policy in Central and Eastern Europe¹

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Abstract

In view of the requirements of Stage 2 of European Monetary Union (EMU) for accession to the European Union, this paper examines the desirability for, and the ability of, the lead candidates in Central and Eastern Europe to participate in the new exchange rate mechanism (ERM2) and eventually in EMU. For most of these countries the benefits are likely to outweigh the cost of participation. After successfully meeting the basic conditions (wage flexibility, prudent fiscal and monetary stance, financial system soundness) for ERM2, each candidate should be able to shadow the euro, with sufficient flexibility around the central rate, prior to formal participation. The paper concludes with a discussion of two policy dilemmas.

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I. INTRODUCTION

The establishment of Europe's Economic and Monetary Union cannot be ignored by Central and Eastern European countries (CEECs), especially by those aspiring to join the European Union. Whereas participation in EMU is not a formal requirement for EU accession, it is reasonable to assume that, by the time of accession, these countries will be expected to be on a path of convergence to meet the key criteria for EMU participation.² Indeed, new member states will have to adopt the *acquis communautaire* of Stage 2 of EMU, including adherence to the relevant provisions of the Stability and Growth Pact. Also, they will be expected to have completed the liberalization of capital movements, to participate in the exchange rate mechanism and to avoid excessive exchange rate changes.³

According to the Pact, non-participant (opt-out and left-out) EU members are required to submit annually medium-term convergence programs, subject to surveillance by the Council. In addition, they should adhere to the new exchange rate mechanism, ERM2, which requires parity between their currency and the euro within a +/- 15 percent margin—to be maintained for at least two years prior to qualifying for Stage 3 of EMU. It can be inferred, therefore, that a basic—albeit implicit—prerequisite for EU accession would be to demonstrate ability for operating within the ERM2 regime and for eventual participation in EMU. Presumably, this requirement would have to be met along with credible convergence toward EMU reference values for government deficit and debt, and for inflation and interest rates.

This paper seeks to answer the following questions concerning the implications of EMU for the CEE candidates for EU accession. Is there a case for EMU participation by these countries on the basis of the theory of optimum currency areas? If so, are these countries ready to adopt a hard currency strategy, or more specifically, to join the ERM2 regime? And above all, what are the necessary conditions for these countries to enter and operate within the ERM2? The paper concludes with an attempt to explore the time frame and manner for converging to ERM2. Although the discussion focuses on the lead accession

²The Copenhagen European Council of June 1993 declared that, in general, the applicant country must have “the ability to take on the obligations of membership, including adherence to the aims of political, economic and monetary union.” Subsequently, however, it was recognized that, “with respect to the aim of economic and monetary union, it is unlikely that the applicants will be able to join the euro area [Stage 3 of EMU] immediately upon accession.” See European Commission (1997, p. 57).

³More basically, the *acquis* implies central bank independence, coordination of macroeconomic policies, prohibition of direct central bank financing of public sector deficits, and privileged access to financial institutions, at the outset, EU membership would be limited to participation in the customs union and the single market, as well as convergence toward, but not participation in, the currency union.

countries (Czech Republic, Estonia, Hungary, Poland, Slovenia), the main points are applicable, *mutatis mutandis*, to other candidate countries as well; moreover, in some respects, they are relevant for all transition economies in the region.

II. CASE FOR PARTICIPATION IN EMU

The economic case for joining the ERM2 regime, and for eventual EMU participation, rests primarily on the theory of optimum currency areas—assuming, of course, that EMU is an optimum currency area.⁴ The relevance of this theory for the accession countries transcends the familiar debate over fixed versus flexible exchange rates for economies in transition.⁵ The dominant view in this debate is that during the transition from central planning to a market economy, a fixed peg can serve as a policy anchor for macroeconomic stabilization, while the necessary institutional framework, including market-based hard budget constraints, is being developed. According to an alternative view, a flexible rate can be useful for maintaining external competitiveness and can serve as a more immediate gauge for macroeconomic discipline, without constraining the transformation of the economy. By now, these arguments seem less germane for the lead candidates than for many other economies in transition that still face strong destabilizing forces, with insufficiently developed institutions and macroeconomic policy instruments.

In an assessment of the applicability of the theory of optimum currency areas to the accession countries, it is necessary to examine the potential benefits and costs that would accrue to these countries from entering the EMU currency area. (These are, of course, above and beyond the welfare effects of joining the EU as a customs union or as a single market.) It is well known that the benefits would primarily stem from reduced costs of economic transactions (trade, investment, services) between these countries and the existing currency area. Also, currency risk premia, including the risk of exchange rate depreciation, would fall and eventually vanish for these countries. Reduced transaction and information costs, and declining currency risk premia would, in turn, lead to a permanent surge in trade, investment, employment and growth.

An important potential cost of joining a currency area consists of the impaired ability of the participant country to absorb asymmetric real-side shocks in the absence of an independent monetary and exchange rate policy—an unlikely prospect for most EU members.⁶ In principle,

⁴For a recent review of the basic arguments and qualifications in support of this assumption, see the essays, including by Mundell, in Blejer and others (1997). See footnote 6 below for a brief summary of the empirical evidence.

⁵See, for example, Sachs (1996).

⁶Much empirical analysis, such as in Bayoumi and Eichengreen (1993), based on historical
(continued...)

this loss in macroeconomic stability could be more than negligible for some economies in transition that may experience fiscal stress during EU accession, over the medium term, as they attempt both to finance the costs of meeting the single-market requirements and to converge preferably toward budget balance—or at least a deficit of less than 3 percent of GDP. In the event, the candidate country might even be compelled to adopt a procyclical fiscal policy stance when faced with a negative asymmetric shock.⁷ In addition, it may lack sufficient flexibility in its internal goods and labor markets⁸ to serve as a shock absorber.

In general, the net benefits from joining an optimal currency area will be larger (a) the smaller the size of the candidate country relative to the union, (b) the higher the degree of economic and political integration between the candidate and the union, (c) the stronger the similarity in economic structure between the candidate and the union, and (d) the larger the public indebtedness of the candidate country. Characteristics (a), (b) and (c) reduce the likelihood of asymmetric shocks in the enlarged union that need to be offset through policy action at the country level. Further, a major up-front gain, in the form of a significant reduction in exchange rate risk premium, accrues under (d)—as experienced during the convergence to EMU in recent years, for example, by Italy.

In view of the brief and historically unique track record during post-socialist transition, it is difficult to predict for the lead accession countries the net effect of joining the EMU. The only attempt at assessing quantitatively the likely effect of joining the EMU currency area for any of these countries suggests that Slovenia (the candidate with the highest income level)

⁶(...continued)

correlations of output changes, arising from demand and supply shocks among EU member countries and among U.S. regions, suggests that a number of EU members in the periphery (as compared with only a few outlying U.S. regions) are prone to suffer destabilizing consequences from the loss of the exchange rate as a policy instrument upon joining EMU currency area. For a recent review of similar evidence, see Calmfors and others (1997). However, Canzoneri, Valles and Viñals (1996) found that past shocks that caused most output variations in the EU do not seem to have resulted in nominal exchange rate fluctuations, while the shocks that explained nominal exchange rate movements are monetary in nature. Overall, the exchange rate seems to have acted as an asset price rather than a shock absorber. The upshot of this study was that EMU will not entail a significant cost in stability for participating EU member countries—with the possible exception of Italy.

⁷Such a situation could arise if, for example, as a result of a downturn caused by recession in a major trading partner economy in transition, the candidate experiences a decline in output growth below its trend GDP yet without entitling it to a waiver (i.e., with less than the threshold 2 percent contraction) under the Pact; see Kopits (forthcoming).

⁸In particular, given constraints to labor mobility, due to the undeveloped housing market and inadequate mass transport.

would be a net beneficiary from joining the area.⁹ Nevertheless, to some extent, all five candidates stand to gain from attributes (a) through (c), and at least one candidate from (d).

These economies are relatively small and have already reached a considerable degree of economic integration with the EU, reflected in the share of their trade with the EU in proportion to GDP (Chart 1). In fact, they are at least as open to trade with the EU as a number of non-core EU members and more so than Greece or Italy. Integration through factor flows is less impressive: although some countries (Estonia, Hungary) are recipients of significant direct investment in relation to GDP, mainly from the EU, the scope for cross-border labor mobility has been limited for the most part to informal channels. In addition, important steps toward political integration (for example, OECD and NATO membership) have been taken by at least three candidates (Czech Republic, Hungary, Poland).

When ranked (in descending order) according to per capita GDP, the economic structure of most candidates (expressed in terms of sectoral distribution of gross value added or labor force) is only slightly more skewed toward agriculture and industry than that of non-core EU members, except Greece (Chart 2).¹⁰ The three-way sectoral breakdown glosses over the diversified manufacturing base of these accession countries, lowering further their susceptibility to asymmetric shocks.¹¹ Therefore, on the basis of their size, integration and structure, most candidates are likely to benefit from participating in the EMU currency area. In addition, Hungary and, to a lesser extent, Poland should gain more than the other countries from the decline in the currency risk premium and in the interest cost associated with a relatively high level of public debt, as compared with the other three candidates.

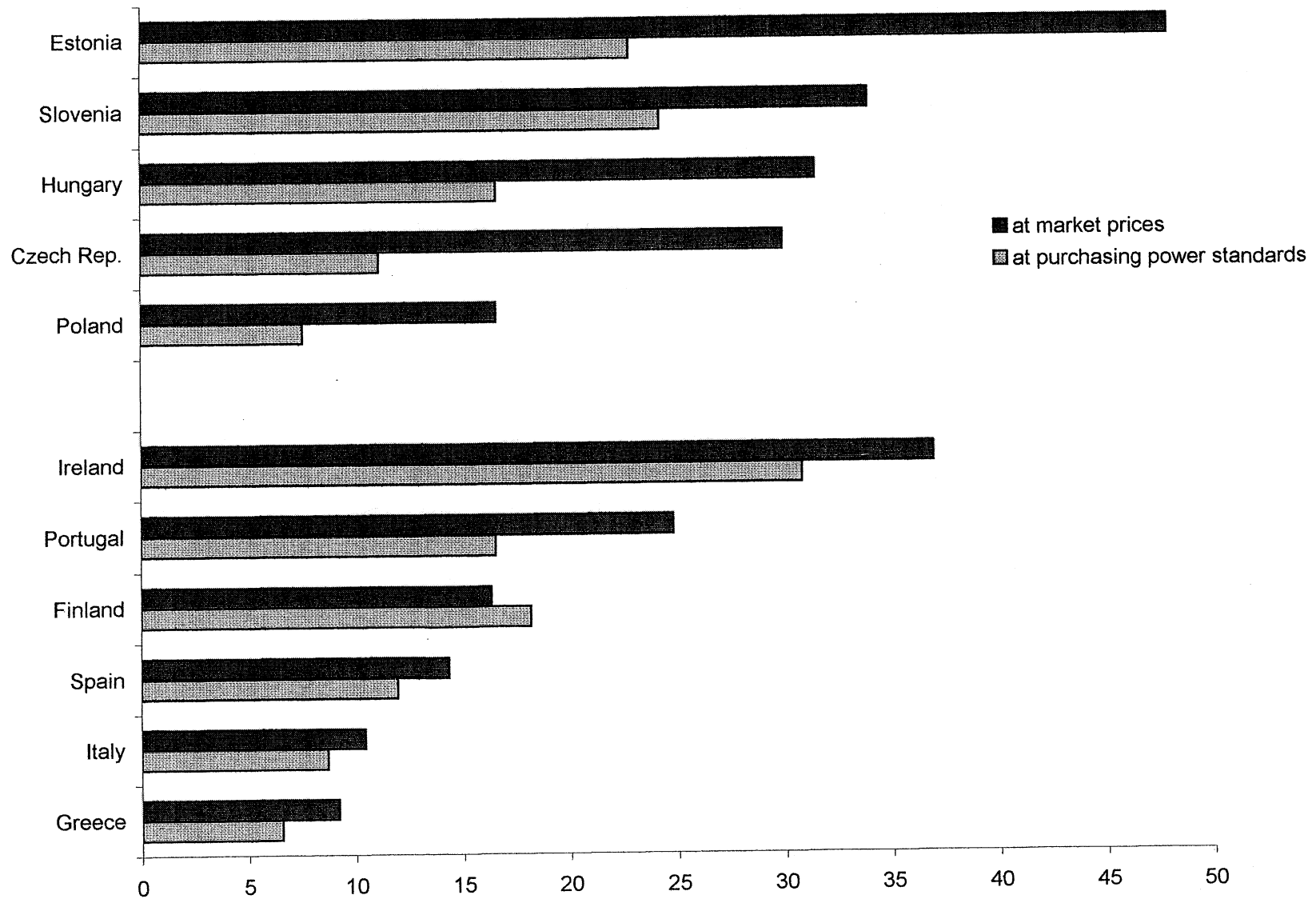
However, the assumption that for any country, let alone a CEE candidate, vulnerability to asymmetric shocks can be ascertained on the basis of accumulated historical data is open to question. In fact, recent findings suggest that trade and factor movements, as well as income or output correlations, between potential or actual participants of a currency area are *endogenous* to participation (or anticipated participation) in that area. The observed strong relationship between trade intensity and cross-country correlation of business cycles, implies a

⁹Estimates of the effect of asymmetric shocks (using alternatively GDP, industrial output and employment as dependent variables) on pooled panel data for EU members and Slovenia, in De Grauwe and Aksoy (1997), indicate that Slovenia does not diverge from Germany, the benchmark country.

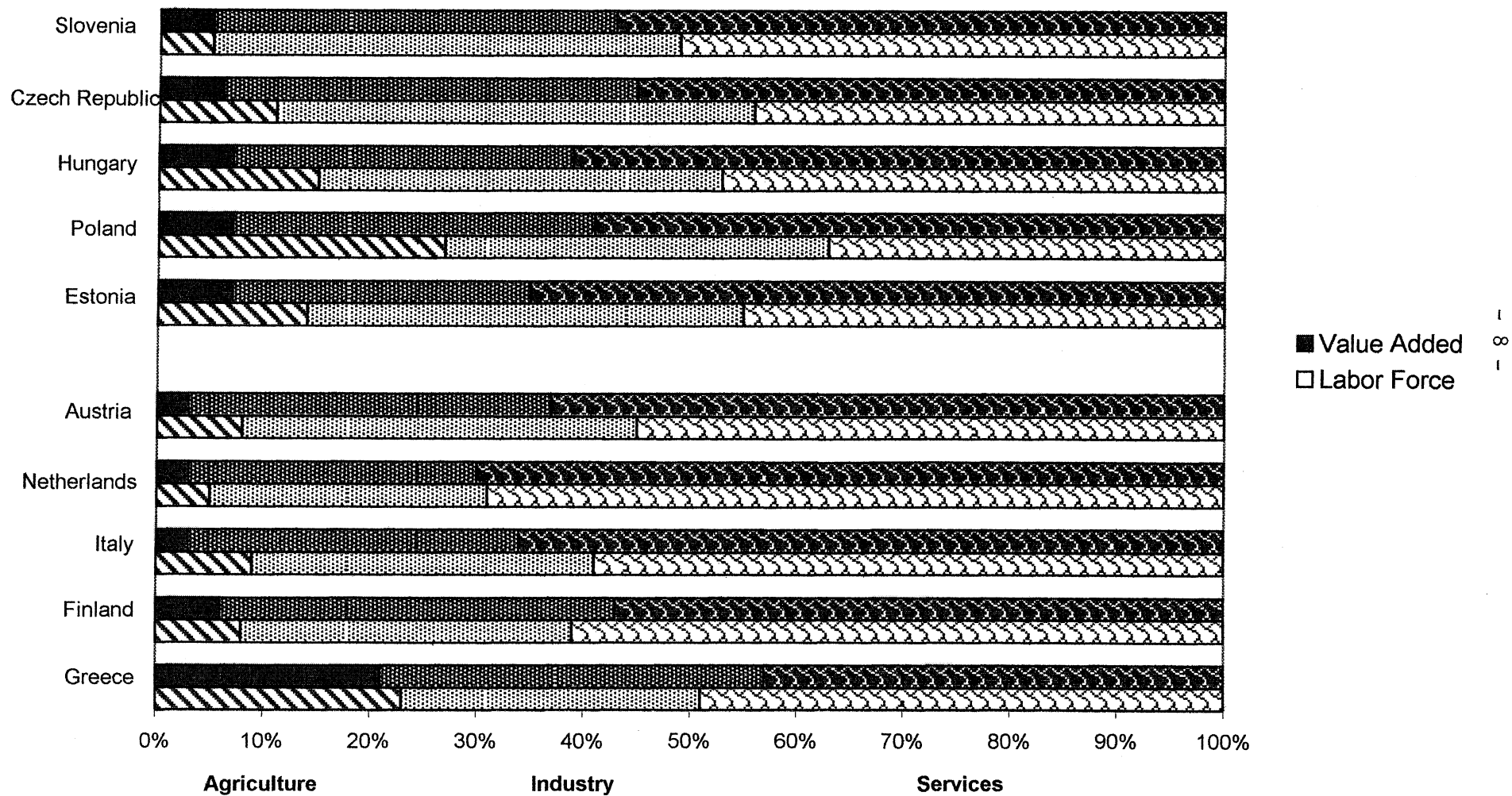
¹⁰This pattern is not surprising given the worldwide trend of declining contribution, first, of agriculture, and then, of industry, to output and employment, during economic development observed in past decades; see IMF (1997, ch. 3).

¹¹It may be noted that all candidates have a more advanced and diversified economic structure than the CFA franc zone member countries which automatically participate in Stage 3 of EMU.

Chart 1. Selected European Countries: Trade with EU, 1997
(percent of GDP)



**Chart 2. Selected European Countries: Distribution of Value Added and Labor Force, 1996
(percent of total)**



self-reinforcing process: as trade intensifies, the probability of asymmetric shocks declines, and conversely, participation in a currency area leads to trade expansion and thus to highly synchronized cycles.¹² Moreover, arguably, even absent immediate prospect for accession, integration and similarity between CEE candidates and EU members is bound to increase in the future. In sum, for the five lead accession countries the benefits can be expected to outweigh the cost of joining EMU over the medium term.

III. EXCHANGE RATE SYSTEM AND MACROECONOMIC FRAMEWORK

Following the collapse of central planning, most economies in transition sought to eliminate the accumulated monetary overhang by liberalizing prices—including the exchange rate, interest rates, wages—and external trade and by attempting to curb monetary expansion and containing the budget deficit. At the outset, these steps were accompanied by a sharp depreciation (overshooting) of the exchange rate. Thus, early in the transition, faced with continued inflation pressures and lacking sufficiently developed indirect macroeconomic instruments, a number of countries (among them, the Czech Republic, Estonia, Poland) chose to anchor their policies with a fixed exchange rate. Others (Hungary and Slovenia), starting from a position closer to macroeconomic balance, adopted a more flexible exchange rate system.

Exchange rate-based stabilization programs contributed to restoring domestic equilibrium, though in some cases at the cost of a widening current account imbalance financed largely with debt-creating capital inflows. In any event, both Poland and the Czech Republic were forced to abandon the fixed peg: the former did so in the initial stage of the transition, the latter acted more recently in response to a currency crisis—reflecting insufficient progress in economic restructuring and weak fundamentals that made it susceptible to speculative attacks.¹³ Confronted with untenable external and fiscal imbalances, and erosion in policy credibility, by the mid-1990s, Hungary could not rely any longer on an adjustable peg. Instead, as part of a stabilization program, it switched to a preannounced crawling peg regime, much like Poland had done a few years earlier.

At present, the accession countries under scrutiny rely on a wide range of exchange rate arrangements (Table 1). At one end of the spectrum, the Czech Republic follows a managed float, subordinate to the inflation target set by the central bank. Slovenia's floating rate is managed within an undeclared margin against the Deutsche mark, while the central bank seeks to target a broad monetary aggregate. As an intermediate case, Hungary and Poland adopted a

¹²The econometric evidence on a large panel of annual country data, in Frankel and Rose (1996), further seems to rule out the hypothesis that increased trade integration can result in greater industry specialization by country and thus to asymmetric industry-specific supply shocks put forth in Krugman (1991).

¹³For a discussion of the Czech case, see Begg (1997) and OECD (1998).

Table 1. Accession Countries: Exchange Rate System, December 1998

Country	Regime 1/	Rate of Crawl 2/ (Percent monthly)	Margin 2/ (Percent +/-)	Currency Basket	Monetary Policy Framework
Czech Republic	Managed float (May 1997)	n.a.	n.a.	n.a.	Inflation targeting
Estonia	Fixed peg (June 1992)	0	0	DM 4/	Currency board arrangement
Hungary	Preannounced crawling peg (March 1995)	0.7 (1.9)	2.25 (2.25)	70% DM 4/ 30% \$US	Implicit inflation targeting
Poland	Preannounced crawling band 3/ (October 1991)	0.5 (1.8)	12.5 (0.5)	35% DM 4/ 10% Stg 5% Ffr 5% Sfr 45% \$US	Inflation targeting
Slovenia	Managed float (October 1991)	n.a.	n.a.	n.a.	M3 targeting

1/ Date of adoption shown in parentheses.

2/ Initial rate shown in parentheses.

3/ Crawling peg prior to May 1995.

4/ Effective January 1999, all European currencies in the basket are replaced by the euro.

crawling peg, preannounced at more or less regular intervals, with the aim of progressively lowering the rate of depreciation. Hungary has retained its initial narrow margin, so that the inflation target is in fact co-determined with the rate of crawl. Poland raised the margin significantly, in essence shifting to a preannounced crawling band that allows considerable latitude for inflation targeting. At the other extreme of stringency, Estonia has persevered successfully with a currency board arrangement, maintaining a fixed peg with the Deutsche mark. Thus, Estonia can be said to automatically participate in the euro currency area from the very outset.

Notwithstanding differences in exchange rate arrangements, all five accession countries have liberalized considerably the external current account in the initial stages of the transition, securing Article VIII status with the IMF; all, except Estonia, have become WTO members.

Average nominal and effective rates of protection are low by international standards.¹⁴ A small import surcharge, adopted at various times by the Czech Republic, Hungary and Poland, has been phased out. Most candidates have achieved a fair degree of openness in the capital account as well. For the Czech Republic, Hungary and Poland this step was instrumental to gaining OECD membership; among the few remaining restrictions are those on short-term capital inflows. Estonia went the farthest in abolishing all restrictions. In a partial reversal of the initial liberalization effort, since mid-1995, Slovenia has engaged in a progressive tightening of controls on capital inflows.

For the conduct of monetary policy and to support their respective exchange rate arrangements, the accession countries have been relying increasingly on indirect market-based instruments. Along with central bank independence, they imposed strict limits or prohibition on direct financing of government budget deficits. All have legal reserve requirement systems and central banks are actively engaged in repurchase agreement operations and open market operations. Besides intervening through outright foreign exchange sales or purchases, at various times each country has sought to contain the monetary impact of capital movements through sterilized intervention. While in some countries (Hungary) the principal instrument of sterilization consists of short-term interest rates on repurchase agreements, others (Poland, Slovenia) rely on a mix of short-term interest rates and quantitative limits on auctioning of government securities or central bank paper. Given the openness of the capital account, such intervention has been undertaken with limited success and often at a significant cost.¹⁵

The current macroeconomic situation in the accession countries is broadly characterized by sustainable growth, underpinned with rapidly increasing labor productivity, by deceleration in inflation to low double-digit or high single-digit rates and, in the case of Hungary and Poland, by moderate external current account imbalances (financed largely with direct investment inflows) or, in Slovenia, by a surplus (Table 2). As an exception, the Czech Republic has recently emerged from a currency crisis—following a period of relatively slow restructuring and sizable current account deficits—with adverse consequences on output and price performance. Estonia stands out with a relatively large current account deficit that reflects strong economic growth and investment import demand financed with non-volatile capital inflows.

¹⁴Trade-weighted average import tariff rates are: 3 percent in Hungary, 6 percent in Poland, and 11 percent in Slovenia. Estimates of average effective rates of protection are 5 percent for Hungary and 7 percent for Slovenia. In Estonia, the nominal and effective rates are near zero. Although difficult to quantify, nontariff barriers have been lowered significantly in all accession countries.

¹⁵For example, in Hungary, the average annual net cost of sterilization has been measured at nearly 0.2 percent of GDP; see Szapary and Jakab (1998). On the effectiveness of sterilized intervention, recent IMF staff estimates of offset coefficients for the Czech Republic, Hungary and Poland range between -0.4 and -1.

Table 2. Accession Countries: Selected Performance Indicators, 1993–97

(Annual percent change, unless otherwise indicated)

	1993	1994	1995	1996	1997 1/
Czech Republic					
Real GDP growth	0.6	3.2	6.4	3.9	1.0
Labor productivity in manufacturing	3.7	4.9	11.1	9.6	11.1
CPI inflation (year-end)	18.2	9.7	7.9	8.6	10.0
Unemployment rate (percent of labor force)	3.5	3.2	2.9	3.5	5.2
External current account balance (percent of GDP)	0.3	-0.1	-2.7	-7.6	-6.1
Foreign direct investment, net change (percent of GDP)	1.8	2.0	4.8	2.5	2.5
Estonia					
Real GDP growth	-9.0	-2.0	4.3	4.0	11.4
Labor productivity in manufacturing	...	6.7	0.4	3.7	17.8
CPI inflation (year-end)	35.6	42.0	28.8	15.0	12.0
Unemployment rate (percent of labor force)	6.5	7.6	9.7	10.0	10.5
External current account balance (percent of GDP)	1.3	-7.3	-4.7	-9.2	-12.0
Foreign direct investment, net change (percent of GDP)	9.3	9.5	5.6	2.6	2.7
Hungary					
Real GDP growth	-0.6	2.9	1.5	1.3	4.4
Labor productivity in manufacturing	6.5	7.3	11.2	9.1	14.5
CPI inflation (year-end)	21.1	21.2	28.3	19.8	18.4
Unemployment rate (percent of labor force)	12.1	10.4	10.4	10.5	10.4
External current account balance (percent of GDP)	-9.0	-9.4	-5.6	-3.7	-2.2
Foreign direct investment, net change (percent of GDP)	5.9	2.6	10.1	4.3	4.6
Poland					
Real GDP growth	3.8	5.2	7.0	6.1	6.9
Labor productivity in manufacturing	15.0	13.9	7.0	9.9	13.9
CPI inflation (year-end)	37.6	29.4	21.6	18.5	13.2
Unemployment rate (percent of labor force)	16.4	16.0	14.9	13.2	10.5
External current account balance (percent of GDP)	-0.7	2.5	4.6	-1.0	-3.1
Foreign direct investment, net change (percent of GDP)	0.6	0.5	0.9	2.1	2.2
Slovenia					
Real GDP growth	2.8	5.3	4.1	3.1	3.8
Labor productivity in industry	5.8	11.4	7.2	6.6	5.2
CPI inflation (year-end)	22.8	19.5	9.0	9.0	8.8
Unemployment rate (percent of labor force)	14.4	14.4	13.9	13.9	14.4
External current account balance (percent of GDP)	1.5	4.2	-0.1	0.2	0.2
Foreign direct investment, net change (percent of GDP)	0.9	0.9	0.8	1.0	1.7

Sources: EBRD, IMF, OECD.

1/ Estimate.

In most of these countries, exchange rate policy increasingly has been governed by the twin objectives of price stability and external competitiveness, and more generally, by the need to strengthen the credibility of macroeconomic policies. From this perspective, both Hungary and Poland have managed to restore competitiveness and to achieve credibility in the fundamentals, despite some differences in the application of the preannounced crawl. Unlike Hungary, Poland earlier had resorted to several one-off exchange rate adjustments,¹⁶ and more recently, it moved aggressively in reducing the rate of depreciation and widening the band. Evidence of increased credibility in both countries can be found in the rapid convergence of exchange rates in the forward market to the preannounced rate, as well as the decline in domestic interest rates along with a pivoting of the yield curve on government paper in favor of long-term maturities,¹⁷ including the extension of the market to five-year bonds. While perhaps more complex and less transparent, the implementation of Slovenia's exchange rate system has had similar salutary effects. Although the experience under the present Czech regime has been too brief for evaluating its overall impact, so far it seems to have restored exchange rate stability. The case of Estonia has been particularly remarkable in achieving both high growth and low inflation during its prolonged adherence to the fixed peg.

IV. DETERMINANTS OF EXCHANGE RATE MOVEMENTS

For an assessment of the future ability of the accession countries to operate under the ERM2 regime, it is necessary to examine the likely pressures, and their relative strength, on the nominal exchange rate within the allowed margin. For this purpose, above all, it must be borne in mind that, though having attained a high degree of external openness, none of these economies has yet completed the transition process. In particular, for the Czech Republic and Slovenia, and some sectors in Poland, a considerable restructuring task still lies ahead. In these conditions, the main sources of movements in the nominal exchange rate in the accession countries are: productivity performance, wage formation, fiscal and monetary policy stance, soundness of financial institutions, and outside shocks.

Productivity performance in the tradables sector is a well-known determinant of the long-run equilibrium real exchange rate in a relatively low-income economy. Gains in labor productivity in the tradables sector give rise to an increase in wages, including in the nontradables sector; this leads to an increase in the relative price of nontradables, as well as an increase in the price level at home compared to the level abroad, reflected in an appreciation of the real (relative price-based) exchange rate. The real appreciation is manifest in an upward pressure on the nominal exchange rate or on the price level or both. This productivity effect or bias—known as the Harrod-Balassa-Samuelson effect—has been observed during the rapid

¹⁶In 1992 and 1993, Poland undertook two one-off devaluations totaling 19 percent, and in 1995, it revalued three times by a cumulative amount of 18 percent.

¹⁷See Kopits (1995).

convergence of low-income economies to advanced economies.¹⁸ However, nowhere has the scope for such effect been as great as in the economies in transition, after operating so inefficiently under several decades of socialist central planning.¹⁹ These economies have considerable potential for major improvements in allocative and X-type efficiencies mainly in export activities and import-competing activities, which materialize as they open up to competition from abroad. The effect is compounded by a surge in foreign direct investment, much of it attracted by the tradables sector, especially in the most advanced accession countries in transition, engaged in rapid industrial restructuring. On the other hand, these economies are also experiencing an overall increase in supply—as a result of economy-wide building and upgrading of infrastructure—which can lead to a decline in the domestic price level, reflected in a real depreciation. Unless the output increase is, instead, accompanied by a rise in the wage level, this depreciation may offset part of the appreciation due to the productivity gains limited to the tradables sector.²⁰

Wage formation can exercise considerable influence on the nominal exchange rate, without consequences necessarily on the real rate. Wage increases systematically in excess of productivity increases, especially in the context a (backward-looking) wage indexation mechanism, tend to get imbedded in expectations. Such increases, usually accommodated by monetary policy, have a depressing effect on the exchange rate to maintain competitiveness. (Alternatively, a fixed nominal rate results in real overvaluation, above the equilibrium rate, requiring eventually a devaluation to correct the disequilibrium.) There have been many high-

¹⁸See the analysis in Obstfeld and Rogoff (1996, Ch. 4), and the estimates for major industrial countries in MacDonald (1997) and for Southeast Asian countries in Chinn (1998). Perhaps the best known corroborating case is that of postwar Japan: the appreciation of the yen (in real terms throughout the period, and in nominal terms since the mid-1970s, following the abandonment of fixed parities) can be largely explained by productivity gains in the tradables sector. Masson (1998) has shown that the trend appreciation attributable to the productivity bias is roughly equivalent to the relative rate of technical progress in the tradables sector multiplied by the share of nontradables in total output.

¹⁹For an attempt at measuring this effect in economies in transition, see Halpern and Wyplosz (1997) and Krajnyak and Zettelmeyer (1998). For Hungary, Simon and Kovacs (1998) estimated a 3 percent annual rate of appreciation in the long run.

²⁰During the transition, major reform in education, health care, pension system, public administration, as well as infrastructure investment in transportation, communications, environmental cleanup and protection, all create conditions for balanced productivity improvements across all sectors. See the distinction drawn between the opposite effects of economy-wide and tradables-based productivity increase in Krugman and Obstfeld (1997, p. 242). However, the net effect of an overall increase in output on nominal exchange rate is ambiguous, depending on whether the output increase raises the real transaction demand for money, pushing down the domestic price level in the long run.

inflation episodes in developing countries, where the underlying source was full wage indexation, that could only be corrected with an exchange rate-based stabilization program. Less dramatic has been the experience of some Mediterranean EU members (notably Greece and Italy) where wage indexation led to successive devaluations. Although none of the CEECs has a complete and formal wage indexation mechanism,²¹ there are some candidates where various forms of implicit wage indexation or wage drift can be found in practice.²²

The effect of the *fiscal policy stance* on the exchange rate depends, first of all, on whether it is monetized or not—as shown in the basic Mundell-Fleming model. If monetized, as done until recently in some candidate countries, a fiscal expansion has a downward effect on the exchange rate. If not monetized, the increased government borrowing requirement results in an upward pressure on interest rates and on the exchange rate over the medium term, crowding out both domestic investment and net exports. However, allowing for uncertainty of expectations and an intertemporal budget constraint, a lasting fiscal expansion will result in real and nominal depreciation.²³ The increase in the budget deficit, accompanied by the anticipation of a rise in public indebtedness and possibly of its future monetization, leads to an increase in currency risk and default risk premia embodied in the domestic interest rate. The ensuing decline in riskier asset holdings explains both the rise in domestic interest rates and the downward pressure on the exchange rate. This latter explanation seems most relevant for the CEE candidates, especially those with a relatively high public debt-GDP ratio. Although significant in the past, monetization of budget deficits is no longer a viable

²¹In each country, wage negotiations take place in the first instance under the auspices of a tripartite commission of social partners (constituted by representatives of employers' associations, organized labor, and government), which sets guidelines for maximum and/or minimum wage increments—usually on the basis of inflation forecasts—that are more or less binding for the private and public sectors. For government employees, wage adjustments are determined in the context of the budget. In the rest of the public sector and private enterprises, an overshoot in the inflation outcome—above the forecast reached under the tripartite agreement—can give rise to upward adjustment even where decentralized bargaining is the dominant form of wage negotiation.

²²For empirical evidence on the high degree of effective wage indexation (especially in the public sector) in Poland, see Pujol and Griffiths (1998). Wage indexation has been less prevalent in Slovenia. For estimates of wage drift in Hungary, see OECD (1997). In addition, explicit or implicit price indexation in some sectors (e.g., energy in Hungary) may have a similar effect as wage indexation.

²³See the discussion and simulation results for Italy, allowing for risk aversion, and the United States, without uncertainty, by Clark and Laxton in IMF (1995, annex). Failure to capture this distinction explains the difficulty of estimating an empirically robust relationship between fiscal policy and exchange rate movements.

alternative in these countries, except perhaps for some quasi-fiscal activities, financed ultimately by the central bank.

The exchange rate may be influenced also by shifts in private domestic absorption financed by foreign capital inflows. Depending on whether a surge in domestic demand is directed primarily to nontradables, it can lead to a real appreciation of the exchange rate. Insofar as much foreign investment, especially in the form of portfolio inflows, in the earlier phase of transition, was channeled to finance private consumption, mainly of nontradables, this may explain some of the initial real appreciation experienced by some of these economies.²⁴ However, more recently, the increasing share and volume of direct investment in the lead candidates, used mainly to finance imports of machinery and equipment, should have had no discernible effect on the exchange rate.²⁵

A more complete explanation of exchange rate fluctuations needs to bring together long-run and short-run determinants. Besides the above fundamentals, the current exchange rate is based—drawing on the uncovered interest parity condition—on the differential risk-adjusted rates of return on comparable financial assets denominated in domestic and foreign currencies.²⁶ Thus, sudden shifts in perceptions of risk, while nominal interest rates remain unchanged, can contribute to capital movements and exchange rate volatility, a situation not uncommon in emerging markets, including the economies in transition, that have a rather open capital account. Such changes in risk premia can be associated with new information or assessment of the above fundamentals, as well as about structural conditions in the economy. In this regard, of critical importance is the *soundness of the financial system*, including its implications for the real side of the economy. Although considerable progress has been made in restructuring commercial banks, including through privatization, several accession countries have yet to complete the cleanup of nonperforming portfolios and to impose hard budget constraints on financial institutions.

Shifts in investor sentiment and perception of risk also may be shaped by *exogenous shocks*, namely, by developments outside a given country. This is the situation that prevails especially in emerging markets, where a financial crisis in one country or region (such as the Southeast Asian crisis, or more important, the recent Russian crisis) may spread rapidly to

²⁴Such a process has been observed initially in Latin America; see Calvo, Sahay, and Vegh (1996) for the early experience in CEECs.

²⁵Second-order repercussions, as the direct investment activity matures, depend on the export creation, import substitution, and profit repatriation associated with the initial investment.

²⁶See the linkages between long-run and short-run determination of the equilibrium exchange rate in MacDonald (1997).

other countries that are deemed to have comparable risk-return characteristics.²⁷ Again, given their external openness, the accession countries may well be vulnerable to such contagion effects transmitted through financial flows and, to a lesser extent, through trade flows.

V. COUNTRY EXPERIENCE

The foregoing discussion provides a basis for assessing the extent to which exchange rate movements in the accession countries reflect the relative influence of each of the above determinants. Such an assessment would suggest the sort of pressures that are likely to support, or prevent, a candidate's adherence to the ERM2 regime. Unfortunately, the limited sample period for each country precludes statistical estimates to explain exchange rate fluctuations in terms of selected determinants—a deficiency that cannot be satisfactorily compensated with a pooled sample of time series and cross-country observations because of the heterogeneity of the sample. Instead, it is necessary to capture the relative importance of these determinants by examining fluctuations in real and nominal effective exchange rates separately for each candidate economy.

Movements in the nominal exchange rate, even under a fixed peg, reflect, over time, the cumulative pressures that drive the rate toward equilibrium. More immediately, these pressures usually become apparent in the real rate. Assuming that the initial position is one of equilibrium, upward (downward) deviations in the real rate can be interpreted as *prima facie* evidence of overvaluation (undervaluation) and of downward (upward) pressures on the nominal rate, that would argue for a nominal depreciation (appreciation). Conversely, deviations in the nominal rate, while the real rate remains invariant, suggest that equilibrium is maintained through nominal exchange rate adjustments. This interpretation is generally valid for a *relative unit labor cost-based real exchange rate* index, free of the productivity bias mentioned above, as compared with a relative price-based index that reflects the bias.

Admittedly, any real rate index represents a rough gauge for deviations from equilibrium in a country undergoing major structural transformation, such as these accession economies.²⁸ For this reason, the start of the index must be set following the initial

²⁷For an attempt at identifying the reasons and forms of contagion effects, see Kaminsky and Reinhart (1998).

²⁸Even under relatively stable conditions, price- and cost-based indicators of competitiveness are subject to a number of limiting assumptions (unchanged technology, demand structure, output mix) that are not likely to hold beyond the short run; see Lipschitz and MacDonald (1992). The assumption underlying the ULC-based index, namely that other factor costs move in tandem with labor costs, is not overly restrictive; see Kopits (1982) for a comprehensive measure of unit factor costs. Other shortcomings include underlying statistical sampling problems and breaks in the series.

macroeconomic adjustment (including exchange rate overshooting) at the outset of the transition. Thus, it is more meaningful to concentrate only on movements over a relatively recent period, under the assumption that, by this time, a critical mass of the external liberalization and much domestic restructuring had taken place in these economies. Although selected on the basis of such considerations, the base period (January 1993) for the monthly index cannot be interpreted as anything more than a crude approximation of the equilibrium real exchange rate, particularly for a country with a sizable external imbalance. By the same token, although suggestive, fluctuations in real effective indexes (Charts 3 through 7) can only be regarded as illustrative of broad trends rather portraying actual developments with any precision.²⁹ At the very outset, it may be noted that while the CPI-based index tracks consistently above the ULC-based index, the difference cannot be attributed solely to the productivity bias. Indeed, the relatively small difference (observed in the Czech Republic and Slovenia) does not necessarily reflect lagging productivity improvement (Table 2), but rather the prevalence, until recently, of price controls in certain (mainly nontradables) activities.

Subject to these caveats, perhaps most salient is the apparent relationship between variations in relative unit labor costs and in the nominal effective exchange rate index across countries. Although all countries experienced significant labor productivity gains in manufacturing (accounting for the bulk of the tradables sector), apparently often these gains have been more than offset by wage awards. The cases of Poland, where relative unit labor costs doubled over the past five years, and Slovenia, where they increased by some 60 percent in the same period, illustrate the strong downward pressure exerted by *de facto* wage indexation on the nominal exchange rate (Charts 3 and 4). In turn, it appears that the flexibility provided by the crawling peg or the managed float may have conditioned the wage demands of organized labor and inhibited the authorities from reducing faster the rate of depreciation.

In Hungary, fiscal policy has played a dominant role in determining exchange rate fluctuations. Given the high level of public sector indebtedness (Table 3), changes in the fiscal stance influence expectations about the sustainability of macroeconomic policies in general and of the exchange rate in particular. Although not obvious in the indicators shown (Chart 5), the deterioration in the fiscal position, accommodated by a loose monetary stance, led to mounting downward pressures on the adjustable peg by early 1995. To correct the external imbalance and to cool inflation expectations, the authorities embarked on a major fiscal consolidation and adopted the preannounced crawling peg—following a one-off devaluation.

The Czech case illustrates the vulnerability of an open economy with a weak banking system and unreformed enterprise sector, while subject to a fixed exchange rate, to shifts in

²⁹In all the charts, an upward (downward) movement of the exchange rate indicates appreciation (depreciation).

Chart 3. Poland: Exchange Rate and Unit Labor Costs, 1993-98
 (January 1993 = 100)

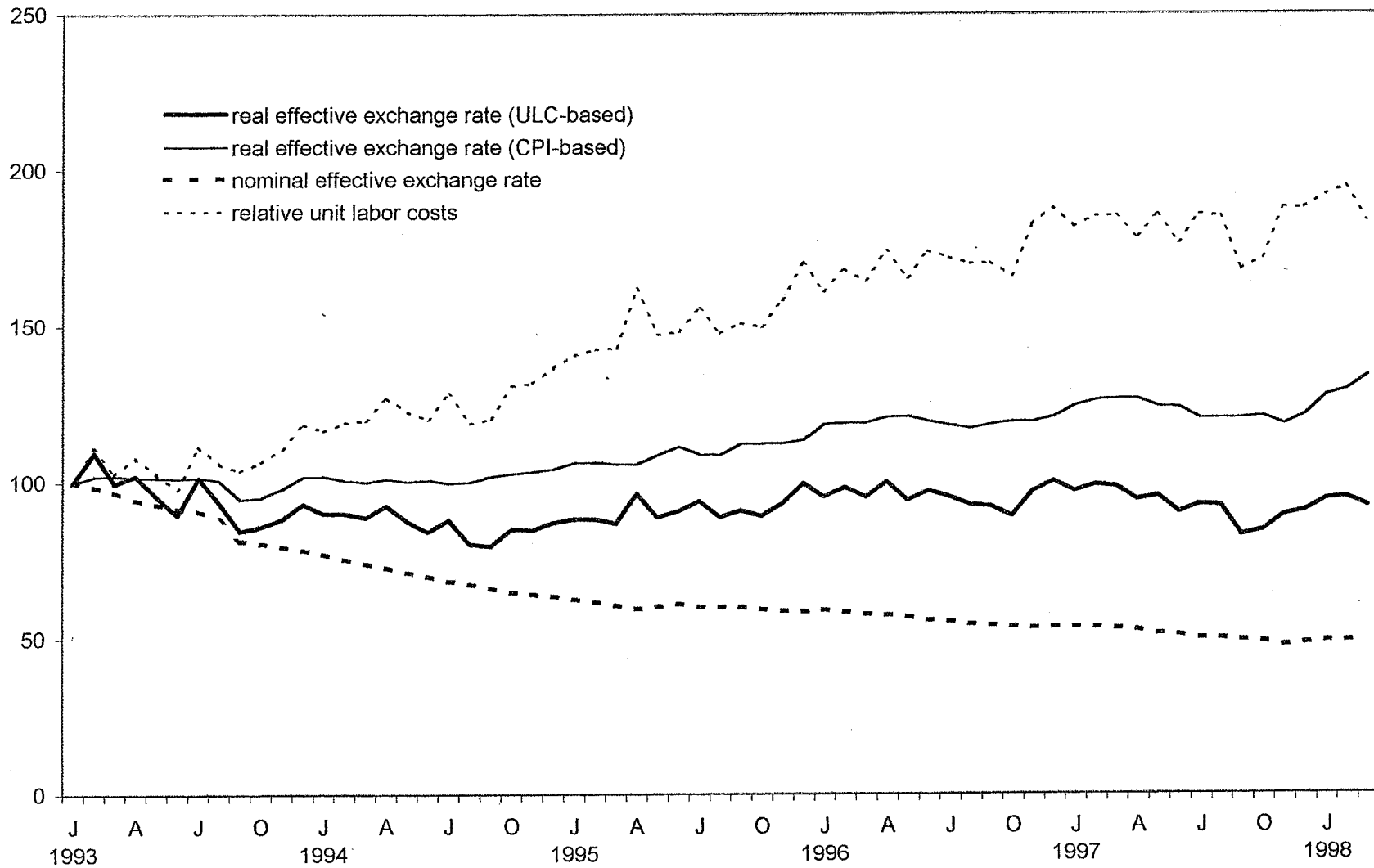


Chart 4. Slovenia: Exchange Rate and Unit Labor Costs, 1993-98
 (January 1993 = 100)

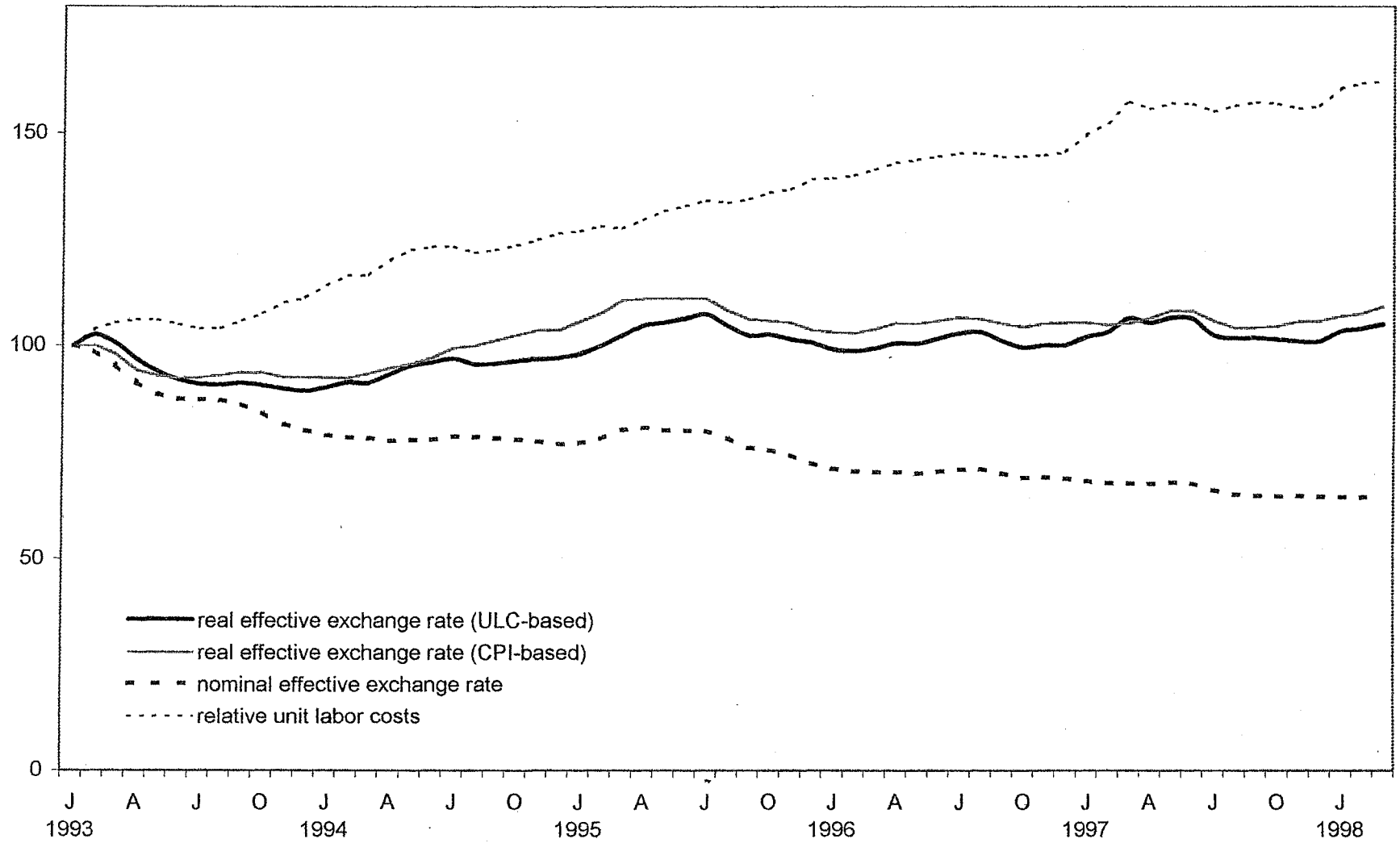


Chart 5. Hungary: Exchange Rate and Unit Labor Costs, 1993-97
(First quarter 1993 = 100)

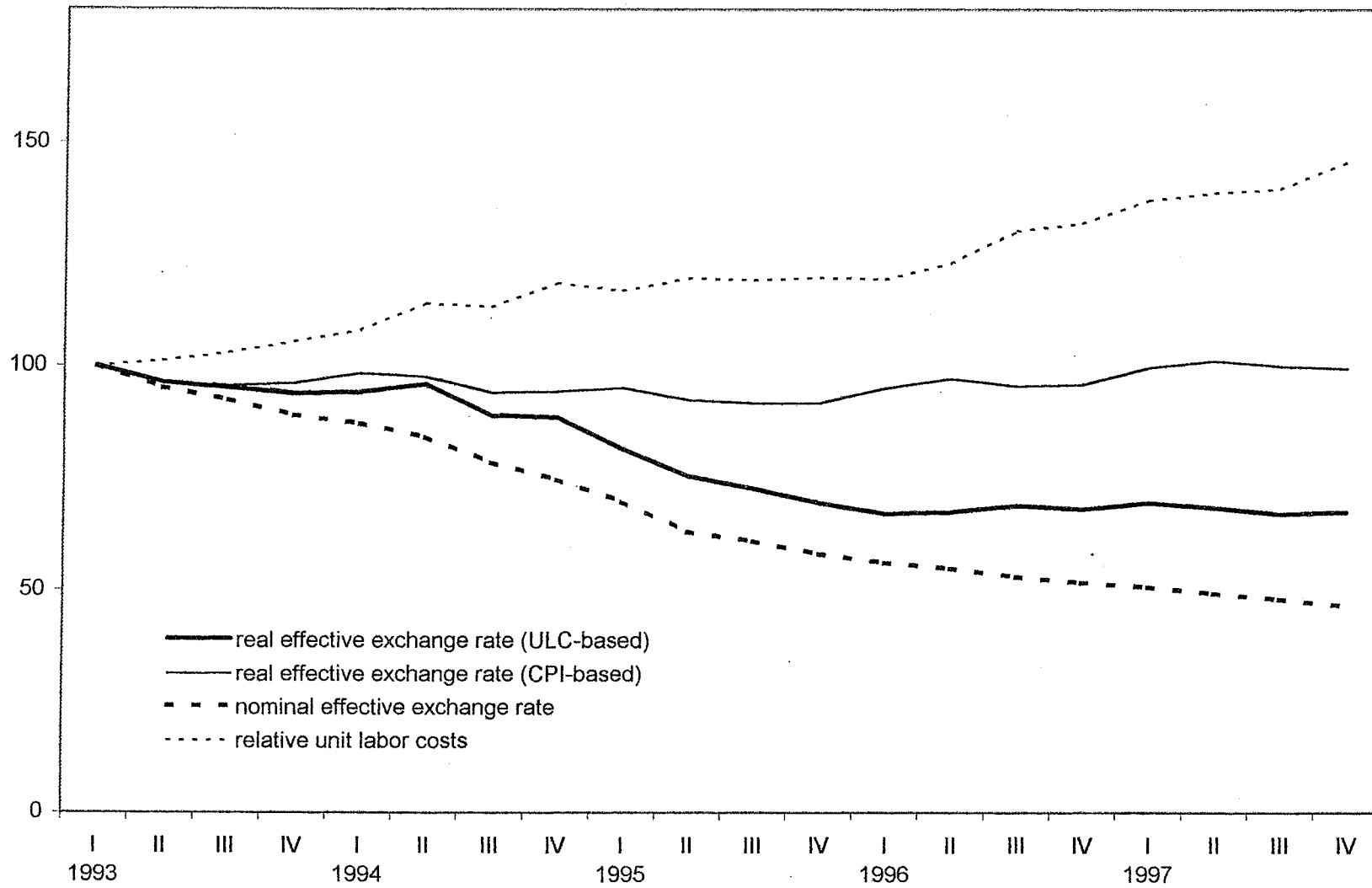


Chart 6. Czech Republic: Exchange Rate and Unit Labor Costs, 1993-98
 (January 1993 = 100)

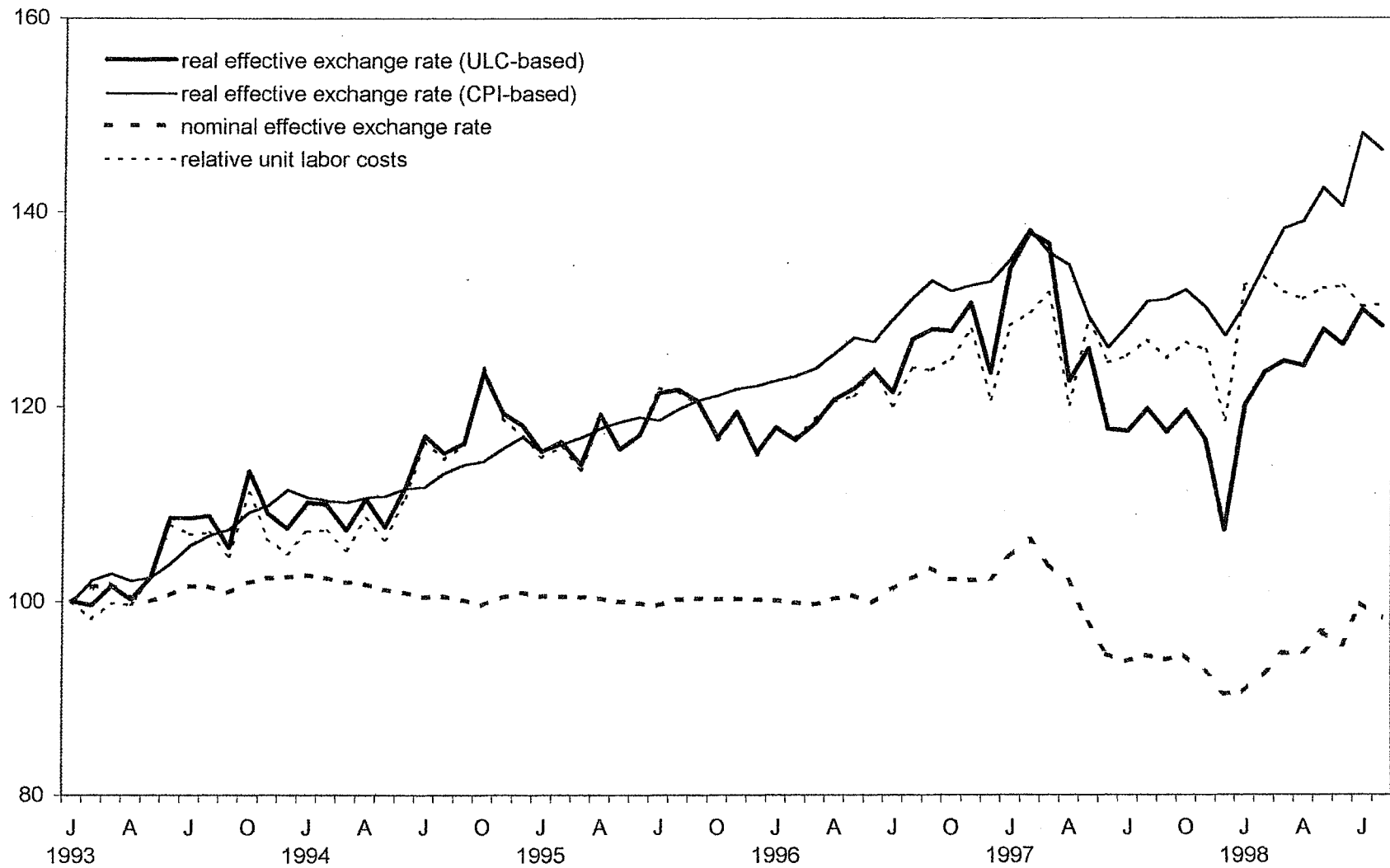


Chart 7. Estonia: Exchange Rate and Unit Labor Costs, 1994-97
(First quarter 1994 = 100)

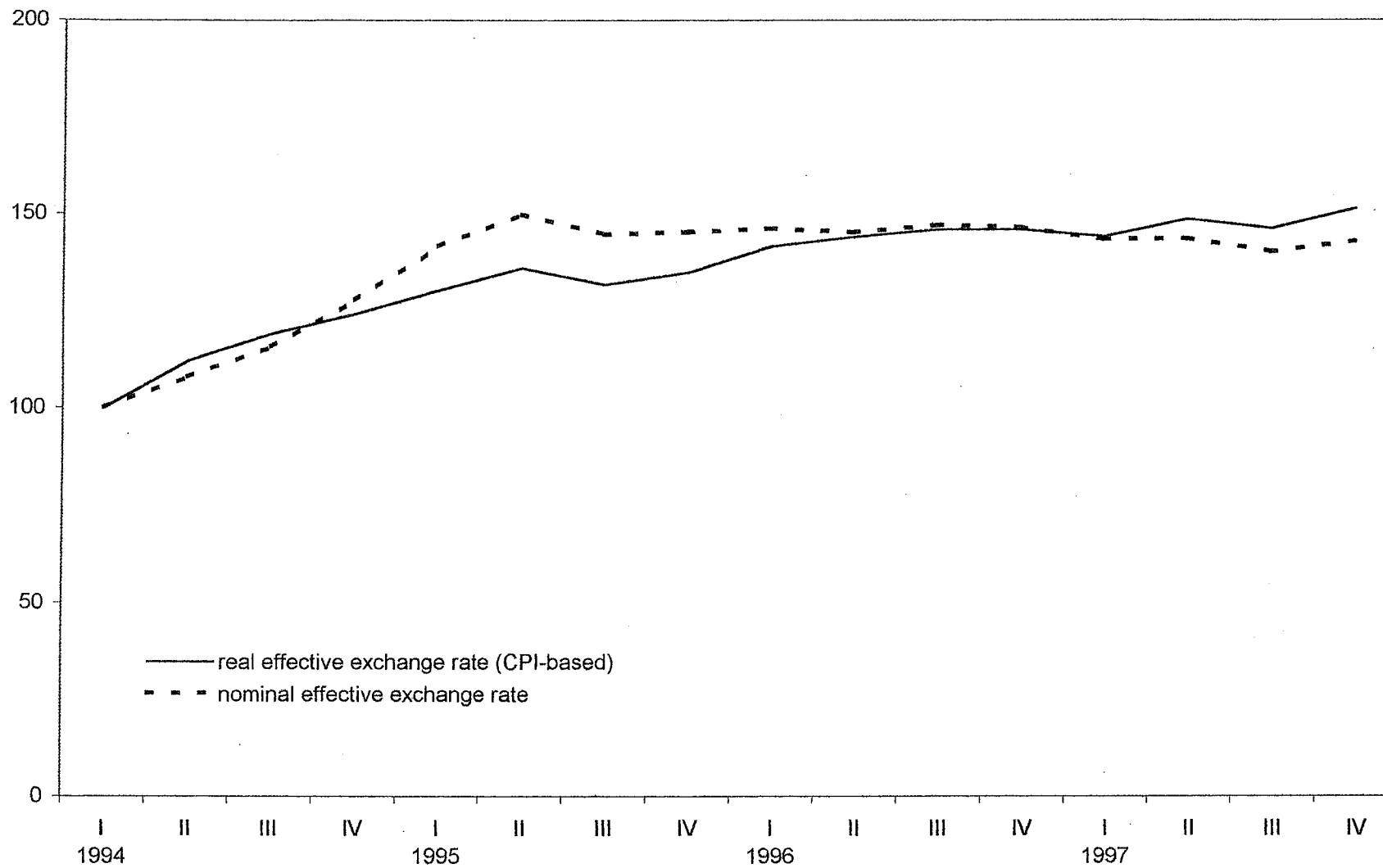


Table 3. Accession Countries: Selected Financial Indicators, 1993–97
(Percent of GDP, unless otherwise indicated)

	1993	1994	1995	1996	1997 1/
Czech Republic					
General government					
Overall balance 2/	0.5	-1.2	-1.8	-1.2	-2.1
Primary balance 2/	2.1	0.0	-0.7	-0.2	-0.9
Gross debt 3/	15.8	13.8	11.5	10.2	10.9
Short-term interest rate (percent, year-end)	6.7	12.6	11.0	12.6	17.5
M2/foreign exchange reserves (percent, year-end)	3.77	4.10	2.71	3.10	3.19
Share of nonperforming loans (percent of total)	23.0	34.0	33.3	30.0	28.8
Estonia					
General government					
Overall balance 2/	-0.7	1.3	-1.2	-1.5	2.2
Primary balance 2/	-0.6	1.6	-0.8	-1.2	2.5
Gross debt	5.7	6.9	5.6
Short-term interest rate (percent, year-end) 4/	30.4	25.2	15.3	13.8	14.0
M2/foreign exchange reserves (percent, year-end)	1.15	1.43	1.55	1.78	1.79
Share of nonperforming loans (percent of total)	7.0	3.5	2.4	2.0	2.1
Hungary					
General government					
Overall balance 2/	-5.5	-8.4	-6.7	-3.5	-4.6
Primary balance 2/	-1.0	-1.8	2.3	5.0	4.6
Gross debt	89.0	86.2	85.1	74.1	68.0
Short-term interest rate (percent, year-end)	21.8	31.3	27.8	23.2	19.7
M2/foreign exchange reserves (percent, year-end)	2.26	2.29	1.28	1.58	1.75
Share of nonperforming loans (percent of total)	29.0	17.6	10.3	7.8	3.6
Poland					
General government					
Overall balance 2/	-3.4	-3.2	-3.2	-3.6	-3.2
Primary balance 2/	0.1	1.0	1.6	0.4	0.5
Gross debt	86.0	69.0	55.5	49.4	48.2
Short-term interest rate (percent, year-end)	25.2	21.2	24.7	21.2	24.2
M2/foreign exchange reserves (percent, year-end)	5.53	4.99	2.78	2.60	2.34
Share of nonperforming loans (percent of total)	31.0	28.7	20.9	13.2	10.4
Slovenia					
General government					
Overall balance 2/	0.3	-0.2	0.0	0.3	-1.5
Primary balance 2/	1.1	0.7	0.8	1.2	-0.6
Gross debt	21.1	18.6	18.8	23.2	23.5
Short-term interest rate (percent, year-end)	34.7	24.7	15.9	10.2	9.8
M2/foreign exchange reserves (percent, year-end)	4.15	3.29	3.25	3.03	2.21
Share of nonperforming loans (percent of total)	19.0	22.5	13.2	14.3	12.3

Sources: EBRD, IMF.

1/ Estimate.

2/ Excluding revenue from privatization.

3/ Central government.

4/ 3-6 months lending rates.

investor confidence.³⁰ constraints had lead to the largest accumulation of nonperforming bank loans among the accession countries (Table 3).³¹ The lack of sufficient enterprise restructuring was accountable for wage increases beyond those warranted by productivity growth, which led to an overvalued ULC-based real exchange rate (Chart 6). However, apparently not fully reflecting the weaknesses in the financial sector, the image of the Czech economy as a successful example of transition—in some respects comparable to the favorable image of the Asian “tigers”—drove up the nominal exchange rate to the upper limit of the band (+/- 7.5 percent around the official parity) prevailing in mid-1997. Then, partly due to contagion from the Asian crisis, sudden awareness of the underlying weaknesses prompted a shift in investor perception of risk that resulted in sizable capital outflows. After an unsuccessful attempt at defending the exchange rate, the authorities abandoned the peg (including the band) and tightened fiscal and monetary policies. The fact that none of the other accession countries suffered such a speculative attack, despite the openness of their capital account, confirms the potentially adverse repercussions of an unreformed and unregulated financial sector on the sustainability of the exchange rate.

In several respects the case of Estonia can be regarded as an exceptional case among the advanced accession countries on account of its geopolitical situation, small size, historical background, and macroeconomic policies. Consistent with the currency board arrangement, Estonia has kept the budget near balance or in surplus and maintained a high degree of wage flexibility. The combination of the fixed peg and the deep restructuring effort have translated into some inflation—in part attributable to administered price adjustments.³² On the external front, the large current account imbalance, accompanied by strong export growth, is indicative of buoyant domestic demand rather than a deterioration in competitiveness—as a portion of the recorded rise in the CPI-based real effective rate reflects the productivity bias (Chart 7).³³

An issue that requires particular attention concerns the potential effects of exogenous shocks on the exchange rate and its volatility. In this respect, it is useful to focus a bit closer on developments—namely, daily fluctuations in the nominal exchange rate and short-term interest rates—over the past couple of years, when these economies were exposed to the

³⁰Vulnerability was also apparent in the high and rising ratio of the stock of broad money (M2) to official foreign exchange reserves in 1996 (Table 3). The rationale for using this ratio as an indicator of vulnerability to financial crises is developed in Calvo (1998).

³¹The large stock of nonperforming loans, including those inherited from the previous socialist regime, also reflect legal impediments to writing off such loans.

³²By comparison, it is interesting to observe that in Argentina, as expected under a currency board arrangement, inflation has remained equivalent to the rate (less than 2 percent yearly) in the anchor currency area.

³³No reliable ULC-based measure of the real effective exchange rate is available for Estonia.

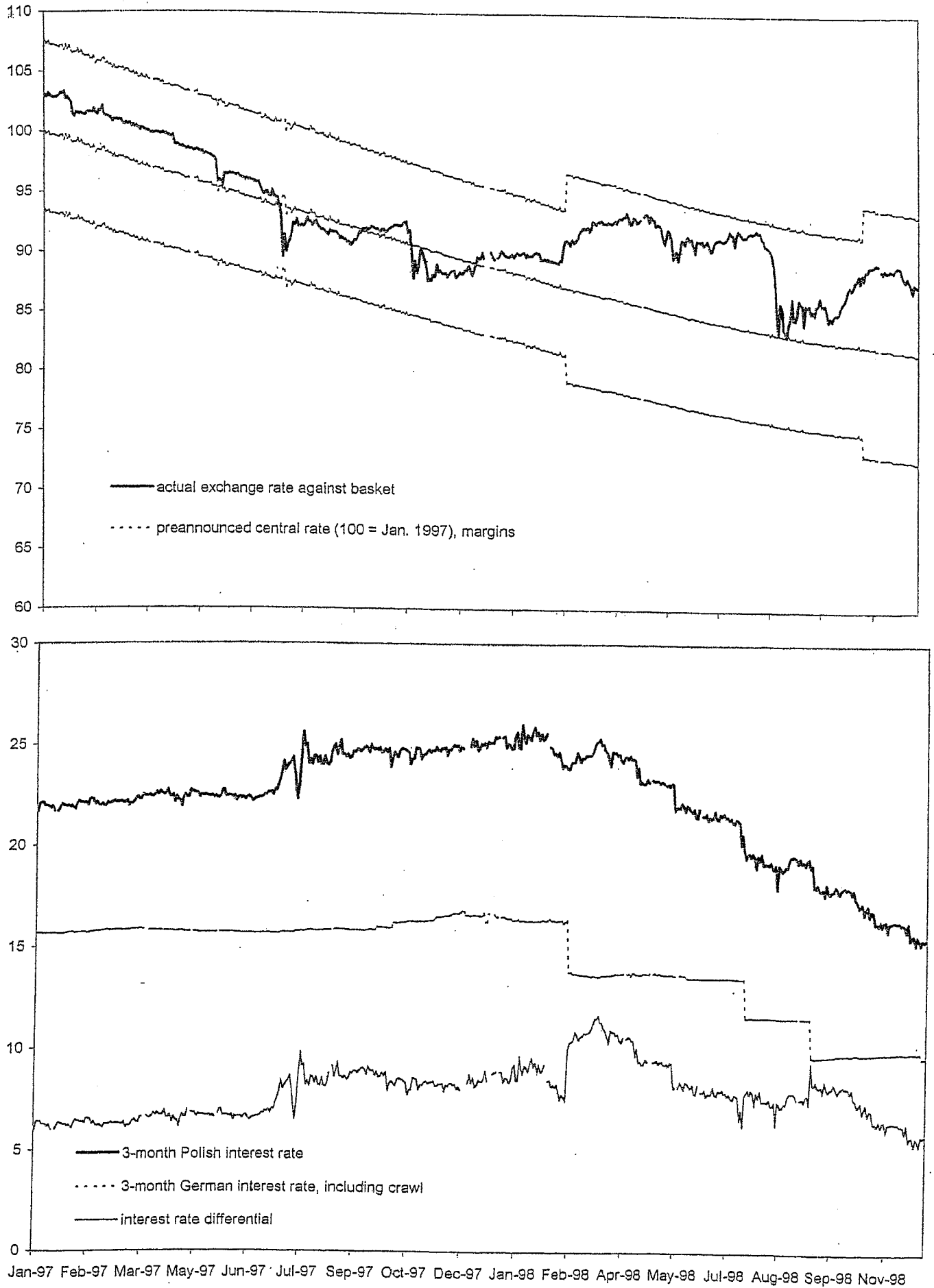
financial crises in Asia and Russia in June 1997 and August 1998, respectively. Among the candidates, the Czech Republic was hit the hardest by the first crisis and Hungary by the second, while Poland experienced the effect of both to a significantly lesser extent.³⁴ By contrast, Estonia and Slovenia have been largely immune from contagion effects.

In Poland, the exchange rate came under pressure (declining below the central rate) in the second half of 1997, accompanied by a moderate hike in the short-term interbank offer rate (Chart 8). Subsequently, an upward pressure prevailed as the band was widened to +/- 10 percent and the rate of crawl was reduced, while the differential with the German interest rate increased briefly. Again, in August 1998, the exchange rate declined toward the central rate, though without need for intervention and with room for continued interest rate cuts and further widening the band to +/- 12.5 percent by end-October. In mid-1997, the Czech Republic was able to dampen the fall of the exchange rate only through massive intervention in the foreign exchange market and a sharp boost in the short-term interest rate, as well as abolition of the peg (Chart 9). With greater exchange rate flexibility and significant tightening in financial policies, the nominal rate returned to the initial parity, without much fallout from the Russian crisis. Meanwhile, Hungary was unaffected by the Asian meltdown, but felt a tremor from the Russian crisis, reflected in a temporary push of the market exchange rate to the bottom of the band in October 1998 (Chart 10). This development was reversed successfully with a significant rise in short-term interest rates. These episodes suggest that, besides attending to the fundamentals and to restructuring tasks, a country with some exchange rate flexibility—whether in the form of a wider band or a float—may be in a better position to contain downward pressures and volatility due to contagion from an outside financial shock.

The experience of Estonia and Slovenia—tracked with the available monthly data—represents a departure from the foregoing cases, as they have been largely protected from the effect of both crises. On the one hand, in Slovenia, the tightening of capital controls obviated recourse to interest rate increases to support the exchange rate which was allowed to depreciate slightly following the Asian crisis; in fact, interest rates continued to decline even after the Russian crisis (Chart 11). In Estonia, on the other hand, protection against potential speculative attacks was provided by the unshaken credibility—tested over an uninterrupted period of six years—of the currency board arrangement, despite total openness of the capital account. However, interest rates firmed in the second half of 1998 (Chart 12).

³⁴The impact of both crises was much stronger in Slovakia. Short-term interest rates jumped above 45 percent and the exchange rate fell below the 7.5 percent margin; the peg was abandoned by end-October 1998.

Chart 8. Poland: Exchange Rate and Interest Rates, January 1997 - December 1998



Jan-97 Feb-97 Mar-97 May-97 Jun-97 Jul-97 Sep-97 Oct-97 Dec-97 Jan-98 Feb-98 Apr-98 May-98 Jul-98 Aug-98 Sep-98 Nov-98

Chart 9. Czech Republic: Exchange Rate and Interest Rates,
January 1997 - December 1998

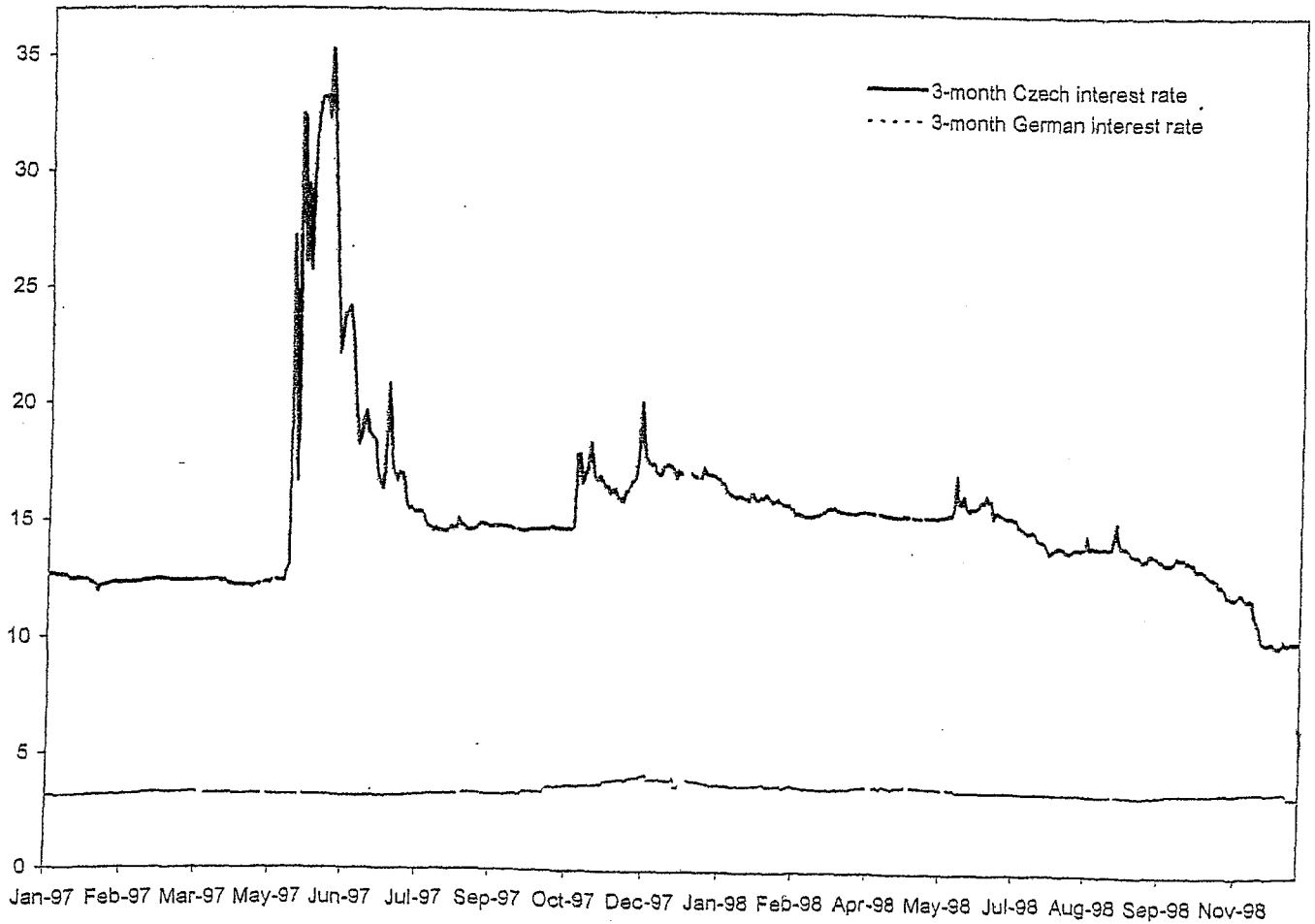
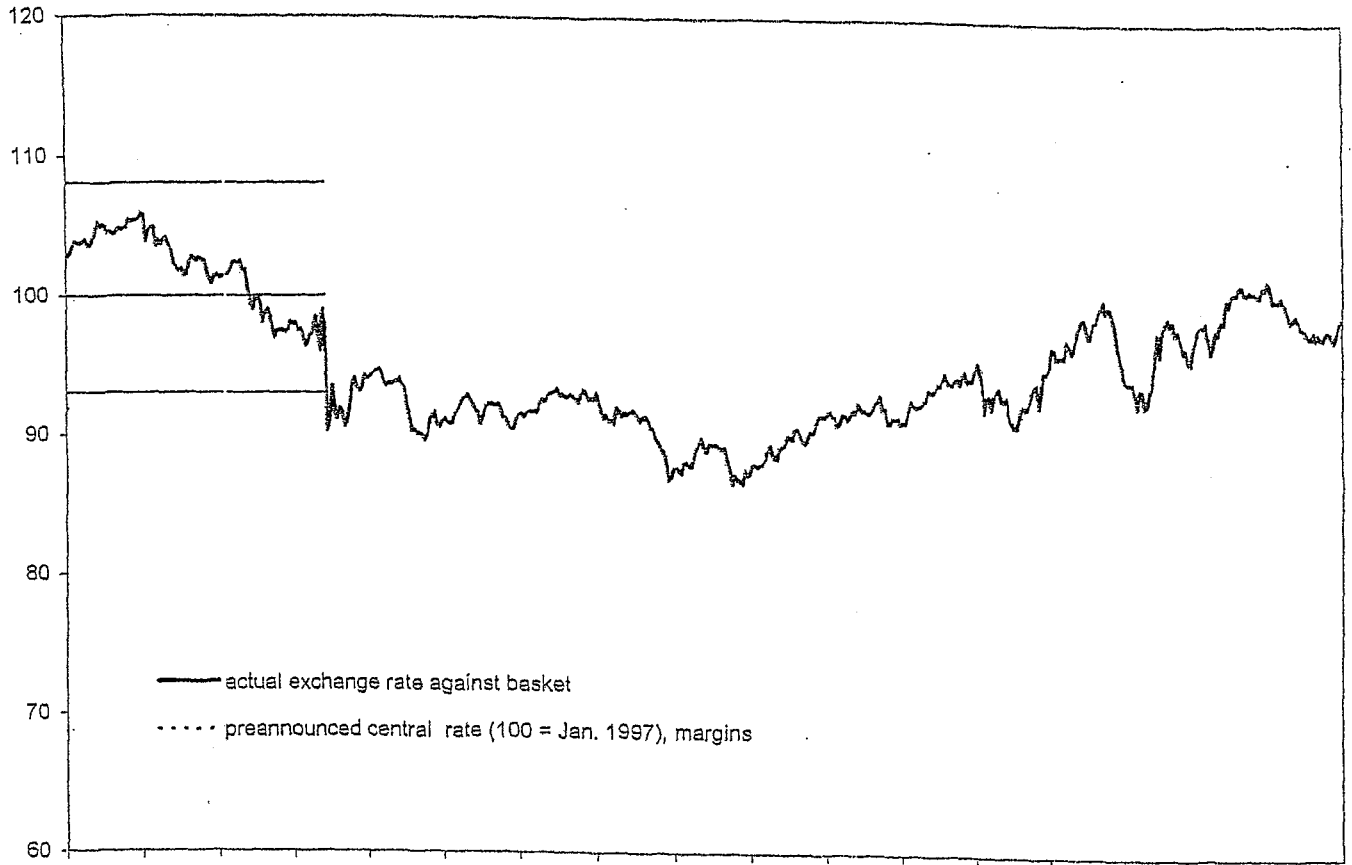


Chart 10. Hungary: Exchange Rate and Interest Rates, January 1997 - December 1998

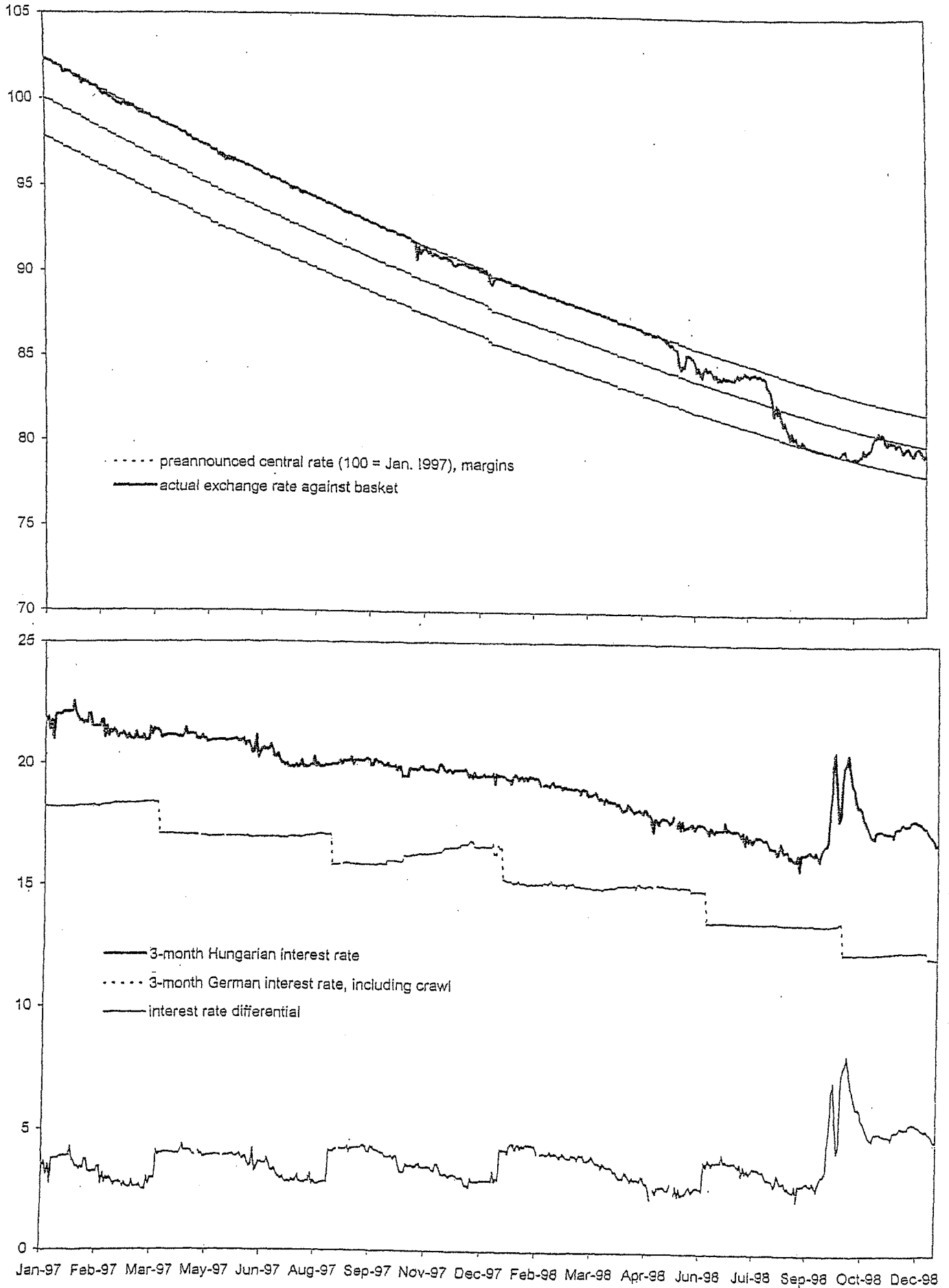


Chart 11. Slovenia: Exchange Rate and Interest Rates, January 1997 - November 1998

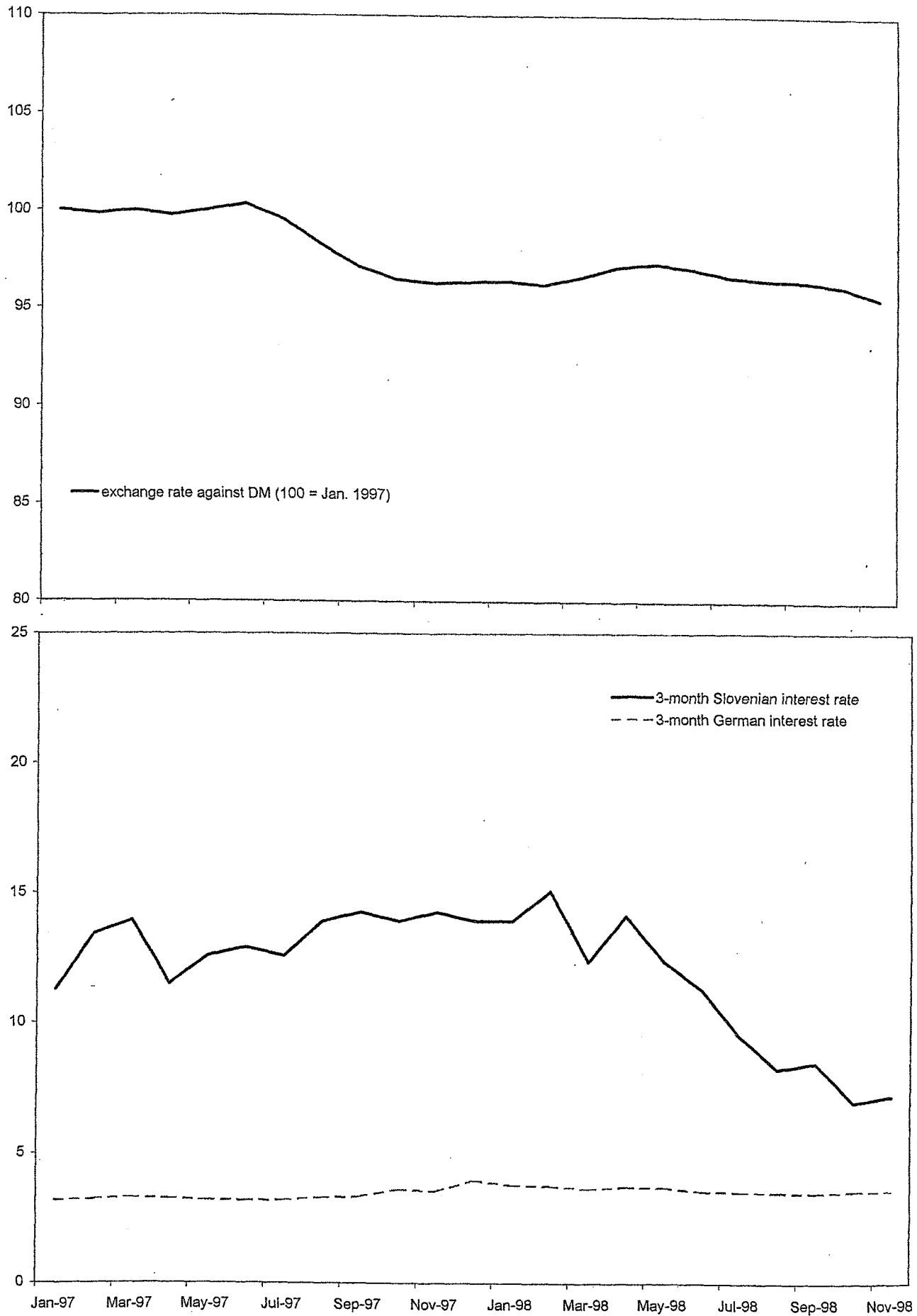
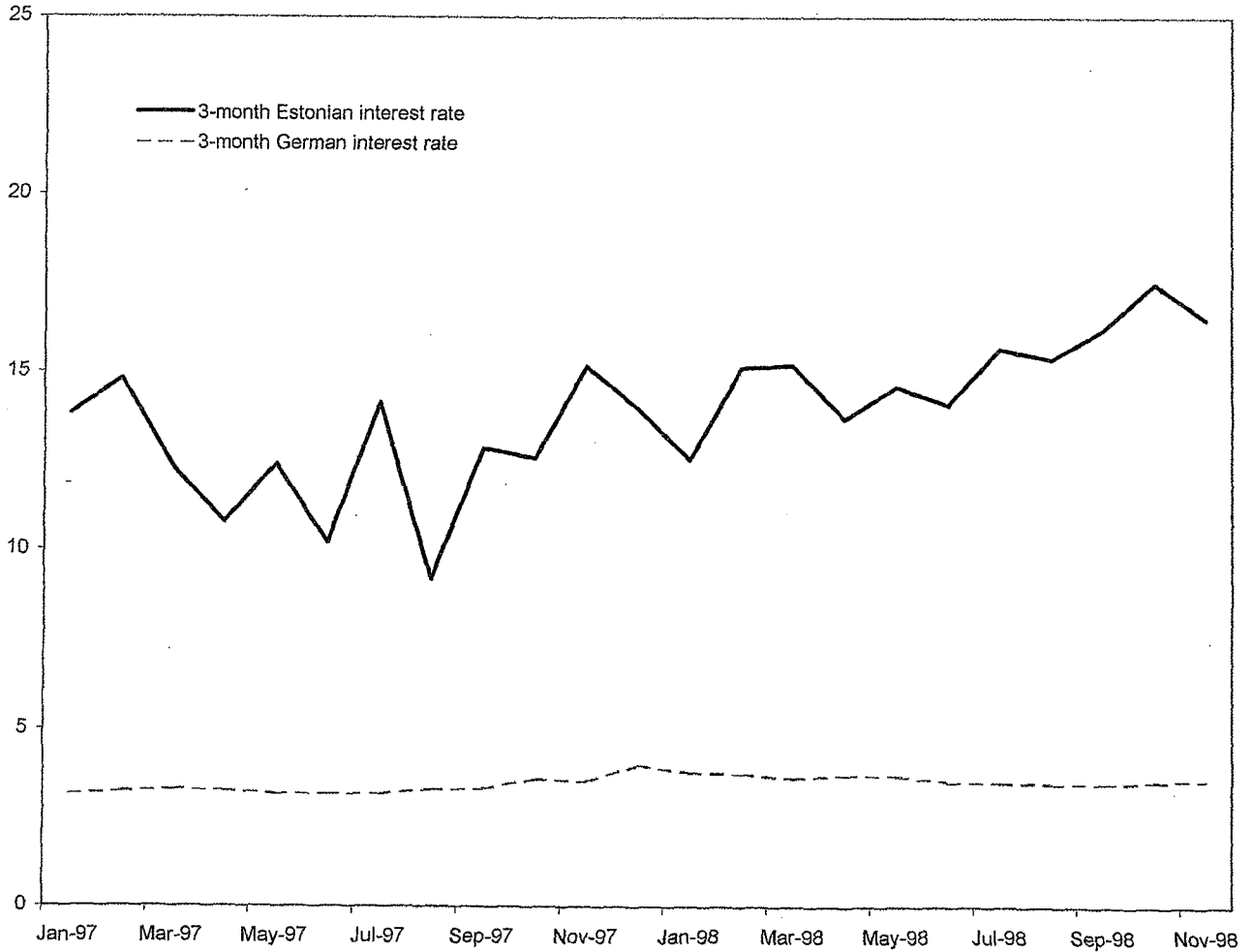
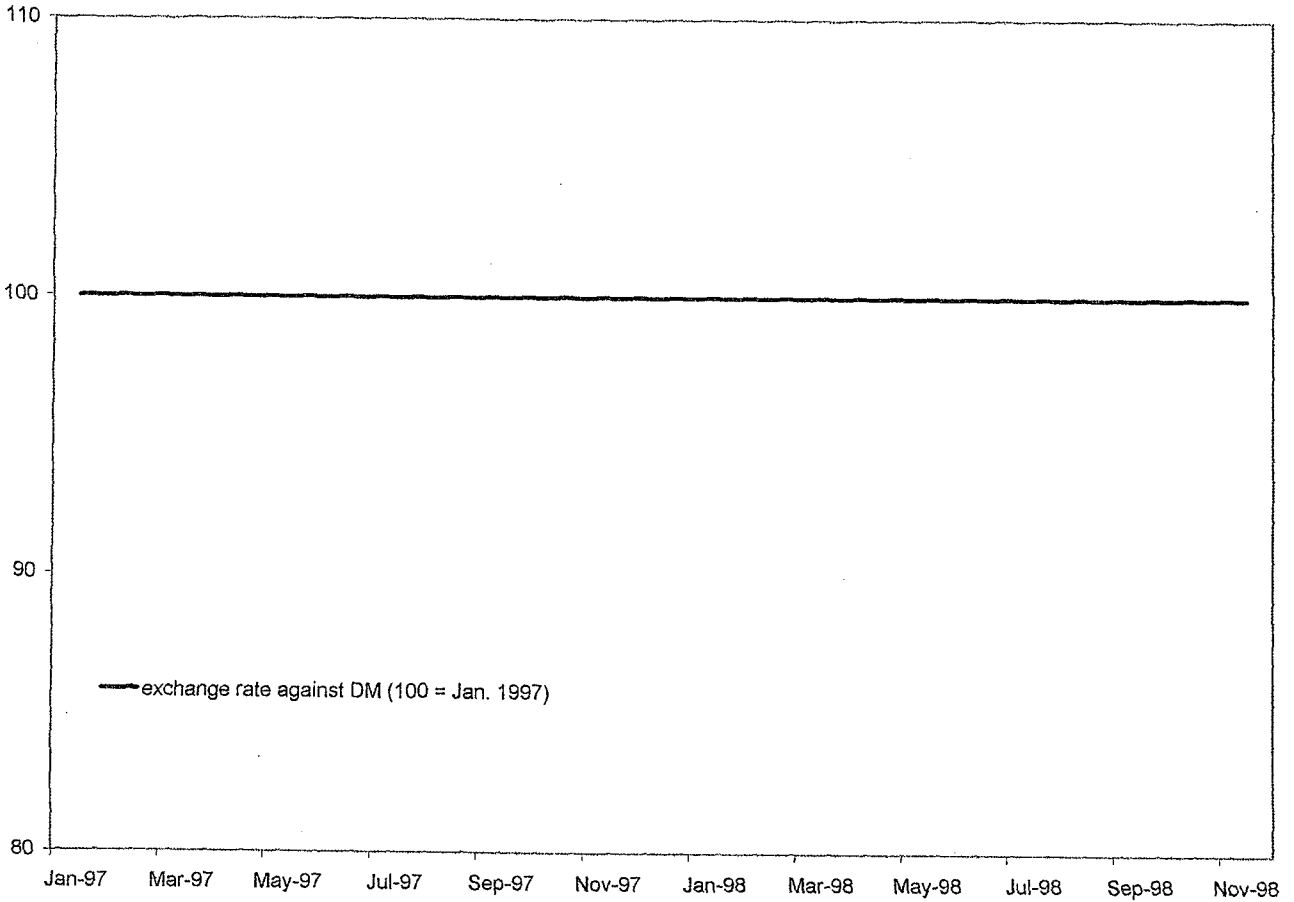


Chart 12. Estonia: Exchange rate and Interest Rates, January 1997 - November 1998



VI. PATH TO ERM2

The overall picture that emerges is one of diversity in exchange rate regime and diversity of experience across accession countries. Exchange rate developments reflect to an extent the effect of productivity gains in the tradables sector. However, this effect has been overwhelmed in each country by a particular strength or weakness in terms of policy consistency. While wage indexation has been a major deficiency in Poland, and to a lesser extent in Slovenia, public sector deficits and indebtedness represent the principal source of Hungary's vulnerability. Insufficient financial and enterprise restructuring has rendered the Czech economy vulnerable. By contrast, wage flexibility, fiscal discipline, as well as substantial restructuring, provide strength to Estonia.

All five countries have been served relatively well by their respective exchange rate regimes, when supported by appropriate flanking policies, as suggested by key performance variables. This is all the more remarkable in view of the large-scale transformation they were burdened with, while maintaining considerable openness by international standards. All candidates are poised to move toward the ERM2 regime, admittedly from different starting points; there is no reason why they should follow a unique path toward that goal. Stated differently, none of the exchange rate regimes is inconsistent with convergence to ERM2.

Before touching on operational aspects of entering the new regime, it is necessary to discuss measures for coping with the risks ahead. On balance, the greatest risk to sustaining a hard currency strategy consists of downward pressures on the exchange rate from excessive wage increases and expansionary fiscal policies, accommodated by monetary ease, rather than of upward pressures due to labor productivity gains in the tradables sector. In addition, a major threat to exchange rate stability stems from unsound financial intermediaries servicing (either state-owned or nominally privatized) enterprises still subject to a soft budget constraint, rather than from excessive external liberalization.

There are plenty of lessons from around the world, including among some EU members, that underscore the inconsistency between a fixed or preannounced exchange rate and a backward-looking wage indexation mechanism or a sizable and prolonged fiscal imbalance. The short-lived experience with the *tablita* in the Southern Cone of Latin America in the late 1970s was flawed on both counts.³⁵ For the same reason, Greece has been unable to join the ERM until recently, and Italy joined at the cost of frequent (downward) exchange rate realignments and relatively high interest rates. Therefore, an indispensable step toward a hard currency strategy for Poland is the abandonment—already begun—of wage indexation. Likewise, in other countries, it will be necessary to end the practice of granting ex post wage awards, unrelated to productivity performance, aimed at maintaining real wages constant. Instead, wage negotiations with effective representation of major labor unions should be

³⁵See the discussion of the experience of Argentina, Chile and Uruguay with the preannounced crawling peg in McKinnon (1981).

conducted keeping a close eye on the exchange rate commitment, on the one hand, and on labor productivity trends, on the other. This will involve a gradual learning process, particularly for organized labor in a large country like Poland. It should be noted that a concerted effort at consistency between the pegged exchange rate and wage formation has been the keystone of Austria's hard currency strategy for over two decades,³⁶ well ahead of convergence to EMU. More recently, after dismantling the *scala mobile*, in 1993 Italy adopted a highly coordinated approach—establishing binding guidelines for industry- and firm-level bargaining—where the social partners participate in negotiations that encompass wage determination, fiscal adjustment, and major reforms (for example in public pensions) within a medium-term macroeconomic framework, in line with EMU criteria.³⁷

Fiscal discipline is a critical ingredient to exchange rate stability, as confirmed by experience with macroeconomic stabilization in a large number of advanced as well as developing countries, and more recently, in the economies in transition.³⁸ Among the latter, the accession countries have learned this lesson, as demonstrated by their fiscal consolidation attempts. However, given the budgetary costs of pending restructuring tasks—including those associated with EU single-market requirements and NATO membership—these countries are likely to live under considerable fiscal stress over the medium term.³⁹ In these circumstances, no effort can be spared to contain fiscal imbalances and to promote convergence toward the EMU deficit and debt reference values. The good news is that anticipation of a durable fiscal adjustment, as part of the commitment to ERM2, will lead to a significant decline in currency risk premium for the accession countries.⁴⁰ The resulting fall in the interest burden should facilitate fiscal adjustment in countries with a large stock of public debt; on this score, Hungary should be a major beneficiary.

Over the medium run, all candidates for EU accession are engaged in a major effort at completing the tasks of post-socialist transition. These tasks, necessary for qualifying for the EU single market, include reform of public administration, infrastructure investment, enterprise and financial restructuring, and domestic and external liberalization. An indispensable input for exchange rate stability, among these, consists of cleaning up nonperforming portfolios of the banking system and of implementing effective prudential regulations and banking supervision standards, to assist the liberalization of the domestic

³⁶For an analysis of the Austrian experience, see Hochreiter and Winckler (1995).

³⁷See the evaluation of the effects of the *concertazione* in Fabiani and others (1997).

³⁸For the most part, high inflation and marked exchange rate depreciation in these economies has been induced by monetized fiscal expansion; see Fischer, Sahay and Vegh (1996).

³⁹See Kopits (forthcoming).

⁴⁰See the evidence for Italy in Giorgianni (1997).

financial market. Recent developments in Southeast Asia provide a strong argument in this regard. The Czech Republic, in particular, will need to take major steps in this area.

In addition to making steady progress on the above fronts, namely, toward increased wage flexibility, containment of fiscal imbalances supported with a prudent monetary stance, and financial sector restructuring, each accession country should acquire sufficient operational experience in managing a stable exchange rate regime. In the first phase, such a regime—completed by virtually all lead candidates—whether in the form of a managed float or a preannounced or fixed rate, should be predictable; the nominal rate exchange rate should be kept within relatively narrow implicit or explicit margins, subject to few, if any, one-off adjustments (especially devaluations). Furthermore, monetary policy should be aimed (whether directly or indirectly) at a decelerating rate of inflation, consistent with the exchange rate policy. For this purpose, if necessary, the central bank must be ready to engage in sterilized intervention, through an active short-term interest rate policy.

In the second phase—being reached by some candidates—upon having met the above conditions and achieved an adequate level of credibility, while accumulating sufficient operational experience, the candidate should approach fixed parity exclusively with the euro (replacing the existing currency basket as soon as practicable after January 1999) and widen substantially the official margins—though not to be fully utilized for intervention purposes.⁴¹ A wide band should help shift some exchange rate risk to potential speculators against the currency;⁴² in addition, it can facilitate inflation targeting to support the future convergence to EMU reference values for inflation and interest rates.⁴³ Poland's wide nominal exchange rate band has proved useful in this regard, fending off the fallout from the recent Russian devaluation. Nevertheless, the ERM2 margins—which may be viewed as excessively wide—if utilized fully and prematurely, could lead to a loss in credibility. In any event, accession countries should exercise caution in taking steps toward greater flexibility—through either adoption of a wider band or exit from a currency board arrangement—during a period of turbulence in the foreign exchange market.⁴⁴

⁴¹Estonia is due to shift automatically to the euro as the anchor currency. Hungary and Poland have announced substituting the euro for European currencies in the basket, effective January 1999, but retaining the U.S. dollar with its present weight

⁴²See Helpman, Leiderman and Bufman (1994).

⁴³On the compatibility of inflation targets with exchange rate bands in shock-prone developing countries, see Leiderman and Bufman (1996). For a theoretical analysis of inflation targeting in an open economy, see Svensson (1997).

⁴⁴See discussion of exit strategies for countries seeking greater exchange rate flexibility in Eichengreen and Masson (1998).

In the final stage prior to formal adoption of the ERM2, the accession country should consider shadowing unilaterally the euro—that is, de facto staying within the exchange rate corridor—as closely as possible, but without adhering to it at all costs, especially since this will not be a requirement even with formal participation.⁴⁵ However, to preserve credibility, the authorities could declare the country's commitment to follow a restoration rule, namely, to reinstate the former parity following a temporary deviation due to a speculative attack.⁴⁶ In general, having completed the fundamental tasks discussed above, the exchange rate will be subject to upward pressures stemming from the long-run productivity bias and, more immediately, from capital inflows responding to declining currency risk premium.

VII. POLICY DILEMMAS

While it might be unrealistic to formulate a precise timetable for formal entry in the ERM2 or for EU membership, it is plausible for the lead accession countries to aim at convergence within, say, a five-year period. During this period, each accession country would endeavor to meet the basic conditions for exchange rate stability: wage flexibility, fiscal and monetary discipline, and financial sector soundness. Following successful completion of the bulk of these tasks, the exchange rate of the candidate would shadow unilaterally the euro, albeit with sufficient flexibility.

However, successful completion of the tasks discussed above opens up two policy dilemmas that eventually will need to be addressed jointly by accession countries and EU members. The root of the dilemmas is that, partly as a result of the success in tackling the above requirements, the exchange rate of each accession country will be subject to pressures for appreciation due to the productivity bias and to induced capital inflows. The first dilemma faced by the authorities involves the scope for revaluations; the second concerns the possible reliance on capital controls.

To alleviate upward pressures on the exchange rate at the time of EU accession, candidate countries should attempt to narrow productivity differentials vis-à-vis the EU average as rapidly as feasible, through an accelerated restructuring effort during the pre-accession period. Yet, no matter how speedy the restructuring process and how large the concomitant productivity gains in the tradables sector, the productivity bias is likely to prevail

⁴⁵Central banks of ERM2 participating countries are not required to engage in automatic and unlimited intervention to defend the declared parity with the euro if this conflicts with the price stability objective.

⁴⁶Introduction of this rule—implicit under the gold standard and more recently followed by France during the convergence to EMU—along with capital controls temporarily, during such an episode, has been advocated for accession countries by McKinnon (1997).

well beyond accession, hence the dilemma.⁴⁷ The solution for accommodating the appreciation pressures consists of allowing either for occasional (or continuous) upward realignments of the nominal exchange rate and/or for a higher inflation rate. Under the first option, the accession country would be permitted to undertake occasionally one-off revaluations—as it occurred in the case of Ireland—prior to locking its exchange rate irrevocably to the euro, in the final stage of EMU. Nominal appreciation against the central parity, even beyond the ERM2 margin, would, in fact, be consistent with the Treaty of Maastricht.⁴⁸ The second option would entail relaxation of the EMU reference values for the inflation rate and the long-term interest rate, of 1½ and 2 percentage points, respectively, above the average of the three best performers. In all, upward realignments are more likely to be acceptable to the EU, than relaxation of the inflation and interest rate reference values.

The other dilemma, relating to capital controls, requires more immediate attention, as accession countries may be vulnerable for a while to excessive exchange rate volatility and to sudden shifts in investor sentiment. In general, the sequencing of external liberalization must be implemented prudently.⁴⁹ It is widely recognized that current account convertibility, as well as liberalization of direct investment and long-term non-debt-creating capital flows, are appropriate—and necessary for supporting market-oriented transformation—from the very outset.⁵⁰ Furthermore, no restrictions should remain on outward flows. However, decontrol of debt-creating capital movements, especially short-term inflows, should not proceed faster than domestic financial liberalization and implementation of prudential regulations and banking supervision.⁵¹ Premature short-term capital account liberalization can pose a considerable burden on countries that attempt to adhere to (or announce adoption of) a hard currency policy in that it may exacerbate the country's exposure to speculative attacks, including from

⁴⁷The opposite approach—apparently followed to a large extent in Czech Republic, prior to the 1997 crisis—that is, of slowing down the restructuring process for the sake of exchange rate and price stability, is highly counterproductive in that it simply delays the necessary relative price adjustments and fuels demand pressures, which eventually lead to an unsustainable external imbalance.

⁴⁸According to Article 109j of the Treaty, as part of the obligation to qualify for Stage 3 of EMU, EU members are required to observe “the nominal fluctuation margins provided for by the exchange rate mechanism of the EMS, for at least two years, without devaluing against the currency of any other Member State.”

⁴⁹For an early discussion, see, for example, McKinnon (1982).

⁵⁰As indicated above, all the lead accession countries, with the exception of Slovenia, have reached this stage of external liberalization.

⁵¹See the evaluation of various types of market-consistent capital controls in Eichengreen and Mussa (1998). For recent arguments in favor of capital controls, see Bhagwati (1998).

contagion effects of currency crises elsewhere, unrelated to the country's fundamentals. Therefore, a case can be made for delaying short-term capital account liberalization until after EU accession.⁵² Such postponement would, of course, require approval by the EU—for example, on the basis of the precedent set in connection with the enactment of the Single European Act of 1987—⁵³ and, in the case of three accession countries, by the OECD.

VIII. SUMMARY AND CONCLUSIONS

Although participation in EMU is not a formal requirement for EU membership, candidates for accession will be expected to adopt the *acquis communautaire* of Stage 2 of EMU, including convergence toward EMU reference values and adherence to the new exchange rate mechanism (ERM2) created for non-participant EU members. For the CEECs that aspire to join the EU, it is necessary to ascertain the desirability of adopting a hard-currency strategy and their ability to meet the conditions for entering the ERM2. Thus, focusing specifically on the lead accession countries (the Czech Republic, Estonia, Hungary, Poland, and Slovenia), this paper examines the applicability of the theory of optimum currency areas and explores the determination of exchange rate movements in these countries.

On the basis of their small size, degree of integration (in particular, concerning trade) with the EU, and similarity in economic structure, the benefits (lower transaction costs, information costs, currency risk premium) are likely to outweigh the cost (inability to absorb asymmetric shocks) of joining the ERM2 and eventually the euro currency area, for most lead accession countries. In any case, potential net benefits from participating in EMU are found to be larger for these countries than for some present non-core EU members. Furthermore, as trade and cross-country correlation of output changes are endogenous to participation (or anticipated participation) in EMU or to EU membership, net gains can be expected to be positive and rising for all lead candidates over the medium term.

A review of recent exchange rate developments reveals a dominant strength or weakness in terms of policy consistency in each accession country, which seems to overwhelm the effect of productivity gains in the tradables sector. While wage indexation has been a major shortcoming in Poland, and to a lesser degree in Slovenia, public sector deficits and indebtedness constitute the principal source of Hungary's vulnerability. Insufficient financial and enterprise restructuring has rendered the Czech economy vulnerable to downward

⁵²However, after having liberalized these flows, it is very difficult to retreat by reimposing restrictions on them.

⁵³The schedule for capital liberalization, under the Act, was postponed (with the possibility of further extensions) for Greece, Ireland, Portugal, and Spain, from July 1990 until January 1993. Moreover, a safeguard clause permitted a member country that suffered monetary and exchange rate disturbances stemming from short-term capital movements to reimpose controls for a six-month period.

pressures on the exchange rate. By contrast, Estonia has been characterized by flexible wage determination, fiscal balance, and a sound financial system. Against the background of some weaknesses in fundamentals, the combination of a relatively constrained exchange rate system and openness in the capital account has made some of these countries susceptible to speculative attacks due to shifts in investor sentiment, as experienced in the aftermath of the recent financial crises in Asia and Russia.

Therefore, wage flexibility, a prudent fiscal and monetary stance, and soundness in the financial system, are basic prerequisites for joining the ERM2. Having successfully met these conditions, each accession country should be in a position to shadow unilaterally the euro with adequate flexibility around the central rate, while maintaining sufficient openness in the capital account. Overall, the lead accession countries have the ability to make steady progress in this direction and their present exchange rate system is not inconsistent with convergence to the ERM2. There remain, however, two policy dilemmas that need to be addressed jointly by accession countries and EU members. One involves the scope for revaluations and the other for postponement of full capital account liberalization, as accession countries will be subject to upward exchange rate pressures stemming from long-term productivity growth in the tradables sector and from capital inflows induced by successful reform and stabilization. Apparently, both dilemmas can be solved on the basis of relevant EU statutes and precedents.

These implications of EMU are broadly valid for other, less advanced, CEE candidates that are about to reach a comparable stage in the development of market-based institutions and to achieve sufficient macroeconomic stability. There is yet another group of economies in transition where, lacking these conditions, the exchange rate strategy must be selected by weighing more basic criteria, namely, the need for a macroeconomic policy anchor, on the one hand, and the need to accommodate deep structural transformation and to maintain external competitiveness, on the other.

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