Estimating the Equilibrium Exchange Rate of the Central and Eastern European Acceding Countries: The Challenge of Euro Adoption

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Abstract: This study estimates the equilibrium real and nominal exchange rates for five Central and Eastern European (CEE) countries. A new approach is adopted, which combines the fundamental equilibrium exchange rate (FEER) with the behavioural equilibrium exchange rate (BEER) methodology. In a VAR-based 3-equation cointegration system, we estimate structural equations for internal and external balances and link them to the real exchange rate. The estimated misalignment is used to derive equilibrium nominal exchange rates. The sustainability of an ERM-II-type exchange rate regime is investigated on ex post data, and the credibility problem of fixing the currencies of CEE countries vis-à-vis the single European currency is analysed. JEL no. E31, F31, O11, P17 Keywords: Equilibrium exchange rate; real exchange rate; transition; ERM-II; euro adoption

1 Introduction

The systematic appreciation of real exchange rates has been a common feature for all Central and East European (CEE) countries. Nevertheless, the extent of the appreciation of the real exchange rate has been rather heterogeneous across the countries. For instance, the Czech Republic and Slovakia have experienced an average real appreciation of 4–5 per cent per year between 1991 and 2001. This can be explained by the for long unchanged peg of the currencies accompanied by posi-

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tive inflation differentials against the reference countries. Likewise, in Poland, the conjunction of exchange rate flexibility and capital movement liberalization resulted in a strong real appreciation of 5–6 per cent per year. By contrast, real appreciation has been relatively low in countries with active exchange rate management. The annual average real appreciation ranges from 2.5 to 4 per cent in Hungary and amounts to 1.5–2 per cent in Slovenia.

As real exchange rates belong to the set of macroeconomic competitiveness indicators, a trend appreciation invites the question as to what extent, if at all, competitiveness is eroded. While purchasing power parity (PPP) is widely used as a first approximation for price differences, it cannot ground competitiveness analysis as far as transition of developing countries are concerned because productivity gaps create equilibrium price gaps between emerging and developed countries. In the long run, the Balassa–Samuelson (B–S) hypothesis is assumed to provide a reference for measuring real equilibrium exchange rates. However, as shown recently (see Řegert 2002a, 2002b; Řegert et al. 2003; Flek et al. 2002; Kovács 2002; Mihaljek and Klau 2003), the B–S effect turns out to be a relatively weak yardstick for equilibrium real exchange rates in CEE countries, and this calls for a more structural approach connected to the fundamental equilibrium exchange rates (FEER), i.e. real exchange rates when internal and external equilibria are attained simultaneously.

Assessing the equilibrium real exchange rate for CEE countries also bears great importance in the light of the EU enlargement process, and the perspective of euro adoption for candidate countries. The euro entry parity should indeed be as close as possible to the equilibrium nominal exchange rate, given the price levels and the macroeconomic balances of the countries under consideration. In this respect, estimates of nominal equilibrium exchange rates can be used to direct market expectations and ensure a smooth introduction of the euro.

This paper provides estimates for the equilibrium real exchange rate combining the concepts of fundamental and behavioural equilibrium exchange rate (FEER and BEER) so as to derive real exchange rate misalignments for Hungary, Poland, the Czech Republic, Slovakia and

1 It is remarkable that, while the nominal exchange rate depreciated by almost 300 per cent in Hungary and Poland during the period under study, the Slovak and Czech currencies only depreciated by 20–30 per cent in nominal terms.