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The choice between fixed and flexible exchange rates: Which is best for a small open economy?☆

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Abstract

The optimal exchange rate regime choice for a small open economy is investigated in a stochastic general equilibrium model. Even if the home money supply fluctuates heavily, pegging the exchange rate to a country with a less volatile monetary policy may not be welfare improving if prices are sticky in producer's currency. Owing to a reduction in the risk premium incorporated in prices output and thus work effort may rise so much that the positive welfare effect of an increase in overall consumption is overcompensated. This effect is stronger the closer the substitutability between home and foreign goods and the larger the tradable sector is. The model further implies that the policymaker can almost always reap a welfare gain by choosing an exchange rate peg if prices are set in the consumer's currency.

JEL classification: F41; F42; E52; E58

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1. Introduction

The optimal choice of the exchange rate system is among the perennially debated issues in international economics. The main argument for floating was formulated by Friedman (1953) and Mundell (1961). Exchange rate flexibility leads to efficient outcomes in the presence of sticky

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prices since it brings about the adjustment of the real exchange rate if needed. In the face of country-specific productivity shocks that require adjustments in relative prices, flexible exchange rates are therefore desirable.[1] An exchange rate peg for a small open economy is advocated traditionally with reference to its trade-increasing effects or to the import of credibility.[2]

Further arguments have been added to the debate recently in general equilibrium models of the New Keynesian type. Devereux and Engel (1998) were among the first to readdress the choice of the exchange rate system in these models. They point out that the optimal exchange rate regime critically depends on the degree to which exchange rate changes pass through to prices. Devereux and Engel argue that when there is full pass-through the optimal choice of exchange rate regime is not unambiguous. A freely floating exchange rate is associated with a lower consumption variance than a fixed rate, but exchange rate volatility imposes an additional welfare cost in terms of a lower average consumption level. An unambiguous result reappears when prices are set in local currency. Now, floating exchange rates always dominate fixed rates because home consumption is insulated from foreign policy shocks. In line with Friedman and Mundell, Devereux and Engel (2003) show in another paper that exchange rate flexibility is desirable in the face of real shocks if the law of one price holds. If, however, the ability of floating exchange rates to redirect aggregate demand is limited owing to prices that are (partly) unresponsive to exchange rate fluctuations, the benefit to exchange rate flexibility declines.[3]

This paper picks up the recent discussion about fixed versus floating exchange rates and investigates the optimal regime choice for a small open economy in a stochastic general equilibrium framework. The traditional arguments in favor of fixed and flexible exchange rates are at the core of the analysis: do flexible exchange rates do a better job of stabilizing the economy than fixed exchange rates? Is the import of monetary stability through an exchange rate peg from a regime that has manifested strong monetary discipline really beneficial?

As opposed to the work of, e.g. Devereux and Engel (1998), Devereux (2004) and Senay and Sutherland (2004), we do not only consider the impact of foreign monetary uncertainty on the optimal regime choice but also explicitly take home monetary uncertainty into account. We further suppose that consumption goods are produced in two sectors, a tradable and a non-tradable goods sector. This set-up makes the optimal regime choice dependent on the stochastic characteristics of the home and foreign money supplies and on the relative size of the consumption goods sectors.

Two further aspects of the model are noteworthy. To allow for a variation in the strength of the expenditure switching effect, the elasticity of substitution between home and foreign tradables is not restricted to unity, as in many recent papers on the optimal regime choice (such as the papers by Devereux (2004) and Devereux and Engel (1998, 2003, 2004)).[4] Furthermore, an asymmetry

[1] If, however, monetary shocks predominate, a fixed exchange rate is optimal.

[2] Recent empirical studies show a large, significant effect of a fixed exchange rate on bilateral trade between a base country and a country that pegs to it. See, e.g. Klein and Shambaugh (2004). For a broader recent empirical study on the benefits of fixed and flexible exchange rates (with a focus on regime durability and regime performance in terms of key macroeconomic variables) see Husain, Mody, and Rogoff (2005).

[3] Further arguments against exchange rate flexibility are presented by Devereux (2004) and by Devereux and Engel (2004). Devereux (2004) argues that, if international risk sharing is not perfect, a fixed exchange rate may be superior because not mitigating the impact of demand shocks on output may move output closer to the level that would arise under full risk sharing. In the model by Devereux and Engel (2004), exchange rate stability may be desirable if exchange rate flexibility only provokes undesired movements in the consumption-based real exchange rate, thus interfering with the ability of financial markets to share consumption risks efficiently.

[4] Senay and Sutherland (2004) point to the elasticity of substitution as a key determinant of the regime choice.