Output Costs, BOP Crises, and Optimal Interest Rate Policy
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Abstract

Raising domestic interest rates is often the first line of defense that is adopted by central banks in the face of a balance of payments (BOP) crisis. In this paper we study the efficacy of raising interest rates for fighting a BOP crisis. In particular, we focus on two issues: (a) the ability of higher interest rates to delay an attack; and (b) the optimality of raising interest rates. The conventional wisdom behind raising interest rates to fight speculative attacks is that this policy increases the demand for domestic currency denominated assets. This slows down the fall in reserves and postpones the crisis. We call this the money demand effect. However, policymakers and observers often also worry about the possibility of big output contractions due to such policies.

We analyze the trade-off between the money demand effect and the output effect in the context of a small open economy which is prone to Krugman-type crises. The crucial feature of the economic environment that we study is that firms are dependent on bank credit for their productive activities while banks need deposits to make loans. We model interest rate policy as the central bank's ability to set the interest rate on an interest-bearing domestic bond which is held by domestic commercial banks. Raising the interest rate on this domestic bond raises both the lending rate to firms as well as the deposit rate paid to depositors. The latter effect increases money demand (defined as the demand for demand deposits) and postpones the time of the attack. The higher lending rate, however, reduces bank credit to firms and, hence, reduces employment and output.

We show that while higher interest rates always succeed in postponing an impending speculative attack, the welfare effect of raising interest rates may be non-monotonic. In particular, we use simulations to show that for small increases in the domestic interest rate the fall in bank credit to firms and, hence, the fall in output is small as well. In this event the positive money demand (or postponement) effect dominates the negative output effect and it is optimal to raise interest rates. However, for sufficiently large increases in the domestic interest rate the fall in output becomes large enough to overwhelm the positive money demand effect so that welfare starts declining in the interest rate. This result is particularly striking since it shows that even though raising interest rates can postpone a crisis it may not be optimal to do so.