The Logic of Currency Crises

\[ f = \frac{1}{2} \tau^2 + \frac{\theta}{2} \varepsilon^2 + cZ \quad (Z = 1 \text{ if } \varepsilon \neq 0, Z = 0 \text{ otherwise}), \]

rather than (15). In figure 6 I have calculated how the original loss function (15) rises with the nominal interest rate under the purely discretionary regime analyzed so far, in which \( \varepsilon \) is given by (20), and under a fixed exchange rate, in which \( \varepsilon \) is constrained to be 0. (The parameter settings are the same as in figure 5.) Given the expectations embodied in the period 1 interest rate \( i \), the loss under discretion is below that under a fixed rate, and the relative disadvantage of maintaining a fixed rate rises with \( i \). Once the excess loss of a fixed exchange rate exceeds \( c \), the government will find it optimal to devalue. The figure shows a value of \( c \) such that two distinct outcomes are possible. The first is that the bond market expects no devaluation, in which case the nominal interest rate is set at \( i^* \) and, indeed, no devaluation occurs.

**Figure 6**

The second possibility is a direct consequence of the existence of two equilibria under pure discretion. Suppose the market expects the currency to be devalued at the rate \( \varepsilon \), shown in figure 5, and sets the nominal interest rate at the corresponding level \( i \). Then the government will be induced to carry out the anticipated devaluation, the realignment cost \( c \) notwithstanding. This is a first example of a self-fulfilling speculative attack: there exists an equilibrium in which the exchange parity is viable, but the government is nonetheless led to change the parity simply because private expectations of a change make it too costly not to. Clearly, a sharp fall in \( c \) from a previously high level—as may have occurred, for