In principle, an "escape-clause" arrangement of this sort (such as the one present in Stage Two of the plan for European Monetary Union) can raise welfare. It allows exchange-rate flexibility in those extreme situations where it is most needed, while restraining inflationary proclivities otherwise; and this effect provides a potential rationale for imposing a realignment cost c. In practice, however, a beneficial escape clause may be hard to implement. The reason for this difficulty, as (31) shows, is that the trigger points $\underline{u}$ and $\bar{u}$ at which the escape option is exercised depend on prior expectations of depreciation π_t, and these, in turn, depend on market perceptions of where the realignment trigger points lie. This element of circularity creates the potential for multiple equilibria, and a sudden shift in equilibria can trigger a crisis for an exchange rate that previously appeared strong on the basis of fundamentals.

To illustrate this possibility, it simplifies matters to assume temporarily that devaluation requires policymakers to pay a cost c, but that revaluations aren't possible at all. (The validity of this presumption will be verified later for a particular example.) For concreteness, the disturbance u_t is assumed to be uniformly distributed over the interval $[-\mu, \mu]$. I suppose that market participants believe the domestic currency will be devalued whenever a shock more severe than a threshold level $\bar{u}$ occurs (i.e., when $u_t > \bar{u}$). In an equilibrium, the market assessment of $\bar{u}$ equals the highest value of the shock at which the government still finds it optimal to defend the exchange parity.

Identification of equilibria requires two steps: (1) the calculation of market depreciation expectations given an anticipated devaluation threshold $\bar{u}$, and (2) calculation of the actual threshold given market expectations.

When market participants believe on date $t-1$ that the date t exchange rate will be changed if $u_t > \bar{u}$, they expect the date t depreciation rate to be

$$(32) \qquad \pi = Prob\,\{u_t \leq \bar{u}\} \cdot 0 + Prob\,\{u_t > \bar{u}\} \cdot E\{e_t - e_{t-1} \,|\, u_t > \bar{u}\},$$

where the last expectation is a date $t-1$ expected value of what depreciation will be next period conditional on u_t exceeding $\bar{u}$. (π is not a function of time because the shock u_t is serially independent.) Under the assumed uniform probability distribution for u_t,

$$Prob\,\{u_t > \bar{u}\} = \frac{\mu - \bar{u}}{2\mu}, \quad E\{u_t \,|\, u_t > \bar{u}\} = \frac{\mu + \bar{u}}{2}.$$

and, given the devaluation reaction function (27),

$$(33) \qquad E\{e_t - e_{t-1} \,|\, u_t > \bar{u}\} = \lambda\left(\frac{\mu + \bar{u}}{2\alpha}\right) + \lambda\pi + \lambda\,(y^*/\alpha).$$

Thus, (33) implies that

$$\pi = \left(\frac{\mu - \bar{u}}{2\mu}\right)\left[\lambda\left(\frac{\mu + \bar{u}}{2\alpha}\right) + \lambda\pi + \lambda\,(y^*/\alpha)\right],$$

which reduces to

$$(34) \qquad \pi = \delta(\bar{u}) = \lambda\left(\frac{\mu - \bar{u}}{2\mu}\right)\left[\left(\frac{\mu + \bar{u}}{2\alpha}\right) + (y^*/\alpha)\right] \div \left[1 - \lambda\left(\frac{\mu - \bar{u}}{2\mu}\right)\right].$$

The government takes the expectations in (34) as given and minimizes its loss. Equation (31) implies that the largest shock consistent with a continuing fixed exchange rate is a solution $\tilde{u}$ to the equation $\frac{1}{2}\lambda\,[\alpha\delta(\bar{u}) + \tilde{u} + y^*]^2 = c$. Since $\bar{u}$ must equal $\tilde{u}$ in equilibrium, and since, moreover, we are only interested in devaluation situations such that $\alpha\delta(u) + u + y^* > 0$ [(1)], the condition for $\bar{u}$ to be an equilibrium devaluation threshold is that

$$(35) \qquad \sqrt{\lambda}[\alpha\delta(\bar{u}) + \bar{u} + y^*] = \sqrt{2c}.$$

(1) When this quantity is negative devaluation is never optimal but revaluation (which has been excluded) is.