

Signalling versus Commitment Strengthening: Exchange Rate Insurance against Currency Attacks

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Summary

Both empirical and theoretical studies suggest that currency attacks can occur even in a fixed exchange rate regime with sound fundamentals. Can mechanisms be designed to prevent future currency attacks? To address this question, we first need a theory of currency crisis. Such a theory should contain two ingredients that have been identified in the literature. The first is that government's preferences are private information, while the public is uncertain about them. The second is the time consistency problem faced by the government. Since it is optimal for the government to give up the peg in case maintaining the peg does more harm than help, foreseeing this, the public knows that commitments made by the government to maintain the peg are usually incredible.

In this paper, I model the government with both features. In particular, I assume that the government is of two possible types. Its attitude in maintaining the peg can be either determined or undetermined; given the same fundamentals, the undetermined type is always more likely to devalue than the determined one. The exact type, however, is the government's private information.

With such a model, I evaluate the proposal that Chan and Chen (1999) and Miller (1998) made during the Asian economic crisis to defend the Hong Kong dollar and Chinese RMB via government sale of insurance against devaluation. The proposal was usually claimed to have two effects: (1) it increases the government commitment to maintaining the peg; and more importantly (2) it ensures a separating equilibrium – the government will adopt the scheme if and only if it is of the determined type.

While doubts have been expressed about whether the proposal may work *in practice*, this paper asks whether the proposal can work *in theory*. The following results are obtained. (1) In the game where the government's type is private information, a separating equilibrium does not, in general, exist where only the strong type adopts the insurance scheme. The reason is that as the issuance of insurance makes devaluation more costly, the commitment to peg is strengthened. Therefore, if that separating "equilibrium" existed, the undetermined type – given that its type in any case is revealed – will still benefit from using a positive amount of insurance, hence entailing the separating equilibrium infeasible.

(2) Despite this, I also find that the insurance scheme is never a negative signal: that is, it will never be the case that the weak type adopts the proposal while the strong type does not. Therefore, the goal of the Chan-Chen-Miller proposal can be fulfilled by giving the government one more dimension of choice. In addition to recommending the government to issue the exchange rate insurance to strengthen commitment, a complete proposal should, for instance, recommend the strong type to give out money for free (i.e., to *burn money*) to distinguish itself from the weak type. This latter component, however, may be politically infeasible.