

Speculative Attacks: A Laboratory Study in Continuous Time

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Summary

Speculative attacks are a recurrent phenomenon in the international community. The present paper describes one of the first laboratory investigations of speculative attacks.

The experiment focuses on a question central to many of the speculative attack models: when can speculators coordinate on their preferred equilibrium, an attack that forces devaluation? The question is particularly acute when the speculators are uncertain about the strength of fundamentals, or are uncertain about what the other speculators are doing. We examine whether public information about the fundamentals and about other players' choices affects coordination and, hence, the probability of a successful attack. In some trials we include one speculator able to take a larger position and sometimes with better information on the fundamentals. It is widely believed that a single large player, George Soros, was essential in coordinating the successful 1992 attack on the British pound, and a branch of the theoretical literature justifies that belief. The experiment also examines some predictions from the theoretical literature.

Unlike most current models and experiments, time is continuous in our laboratory game. During each trial, the strength of fundamentals can deteriorate moment by moment, and the speculators can switch back and forth between passive mode and attack mode. Such asynchronous decisions by human subjects illuminate aspects of the coordination problem that are invisible in static models, but that may be crucial in the decentralized 24-hour global foreign exchange market.

Our experiment results show that a) when feasible, attacks succeed more often than not; b) with speculators of symmetric size and access to information, speculative attacks are more often successful and occur sooner when fundamentals are weaker; c) contrary to some theory, public access to information about either the net speculative position or the fundamentals also enhances success; d) the presence of a larger speculator further enhances success, and experience with large speculators increases small speculators' response to the public information. However, giving the large speculator increased size or better information does not significantly strengthen his impact.