

On the Prevention of Speculative Bubbles by Market Makers

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ABSTRACT

This paper investigates a stock trading model with finite discrete N periods. I propose a pessimistic result for prevention of speculative bubbles by *market makers* in a sense that it considerably restricts pricing activities and generically fails. The model is composed of a single speculator, a single market maker, and non rational behavioral traders. The market maker sets a *linear price function* before the market opens. The speculator tries to implement a speculation exploiting behavioral traders, which causes a speculative bubble. I characterize a set of linear price functions whose element prevents the speculation and show that the set is negligible compared with the case of no behavioral trader. Moreover, its element is not favorable to the market maker, so the speculative bubble generically occurs. Even if there are competitive market makers, it may be serious in the case of asymmetric information.

Key Words: market microstructure, positive feedback trader, price bubble, price impact, difference equation.

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