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Additional Information Increases Uncertainty in the Securities Market – Using Both Laboratory and fMRI Experiments

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ABSTRACT

The paper shows that in double auction markets with uneven information distribution that is common knowledge, returns are a J-shaped function of the information known by different investors. Huber proposed the trend reversal of future earnings flow as the reason of J-shaped function. But our paper asserts the psychological state of investor as the reason. Functional magnetic resonance imaging (fMRI) scans of subjects in a simple game which extracts the essence of double auction markets with uneven information distribution indicate that subjects with medium amounts of information use different brain areas engendering different psychological states. The paper argues that these patterns are consistent with medium-informed investors using a matching strategy rather than the maximizing strategy of the least and best informed investors. The paper motivates an accounting connection by remarking that financial statement disclosure is mandated in most developed stock markets.

Keywords: Efficient market hypothesis, Laboratory market, fMRI experiment, Psychology bias, Matching Law

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