The Small Price Effect in Trading Prices: an Experimental Study

Wael Bousselmi*†[1], Patrick Roger*‡[2], Tristan Roger*§[3], and Marc Willinger*¶[4]

[1]MRM, University of Montpellier – University of Montpellier, MRM Finance – 208 Rue Vendémiaire, 34000 Montpellier, France

[2]Laboratoire de recherche en gestion et économie (LARGE) – université de Strasbourg – Pôle européen de gestion (PEGE) 61, avenue de la Forêt -Noire 67085 STRASBOURG CEDEX, France

[3]Dauphine Recherches en Management (DRM) – CNRS : UMR7088, Université Paris IX - Paris Dauphine – Place du Maréchal de Lattre de Tassigny 75775 Paris Cedex 16, France

[4]Laboratoire Montpelliérain d'Économie Théorique et Appliquée (LAMETA) – Centre international de hautes études agronomiques méditerranéennes [CIHEAM], Institut national de la recherche agronomique (INRA) : UR1135, CNRS : UMR5474, Université Montpellier I – 34960 Montpellier cedex 2, France

Abstract

Studies in neuropsychology show that the human brain processes small numbers and large numbers differently. Small numbers are processed on a linear scale, while large numbers are processed on a logarithmic scale. Recent papers in finance and accounting also indicate that market participants exhibit a bias in their perception of the future return distribution of small and large price stocks. In this paper, we report the results of an experiment in which we test for the existence of a small price effect. Our experiment consists in 8 sessions of two sequential experimental markets where the cash-flows and endowments are 12 times higher in one market compared to the other. We find that optimism, measured as the relative difference between transaction prices and fundamental values, is significantly greater in small price markets. This result is obtained both within and across subjects. Our experimental results indicate that price level influences the way people perceive relative price variations (i.e., returns), a result at odds with standard finance theory but consistent with: 1) a number of empirical observations on financial markets; and, 2) the use of different mental scales for small and large prices.

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*Speaker
†Corresponding author: wael.bousselmi@umontpellier.fr
‡Corresponding author: proger@unistra.fr
§Corresponding author: tristan.roger@dauphine.fr
¶Corresponding author: willinger@lameta.univ-montp1.fr