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The Contrarian Put

Fernando Chague[2], Bruno Giovannetti[2] and Bernardo Guimaraes[1,2]

[1]Centre For Macroeconomics, [2]Sao Paulo School of Economics

It is well known that retail investors are prone to behavioral biases. In particular, they have a preference for distressed stocks. In order to study how this affects asset prices, this paper develops a quantitative model with behavioral investors and rational arbitrageurs. The key ingredients of the model are the contrarian demand of retail investors and short-selling costs.

The model is tightly calibrated using all transactions by retail investors and short-sellers on OGX, a failed Brazilian oil giant popular among retail investors. We find an average overpricing of USD 1.7 billion over almost two years. Rational investors are indifferent between buying or selling the stock when its price is 6% above its fundamentals. We conclude that active trading by retail investors can indeed lead to substantial overpricing of risky enterprises, thus generating a sizable misallocation of resources.

Intuitively, when negative shocks hit and the firm becomes distressed, prices fall and retail investors buy the stock. Owing to short-selling costs, this extra demand by retail investors makes the stock price fall less than it should. As a result, rational investors pay more than the fundamental value of the stock in regular times since, in a possible future distress scenario, they will have a way out at a higher price. The contrarian behavior of retail investors effectively gives them a put option.