

## ALTERNATIVE INVESTING

## Securities Lending, Shorting and Pricing

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In this paper, we provide a framework for the price impact of the practice of shorting. Taking into account the potentially time-consuming nature of establishing short positions, we captured the price effect of more and more agents expressing opinions via trading, and how lending fees are determined and incorporated into the price.

We show that, in some special cases — characterized by a small float of the asset relative to the demands for shorting and buying the asset, a large discrepancy between the beliefs of optimists and pessimists regarding the company's value, or high lender bargaining power — the effect can be strong enough to push the price of the asset above the valuation of the most optimistic investors.

Further, the results show that the common wisdom that easier access to shorting reduces the price need not be true. We also illustrate how negative stub values can arise from the effect of lending fees. While we concentrate on the price behavior of recently offered equities, the results can be reinterpreted in the context of repo specials, convenience yields and the valuation of corporate and government bonds, as well as commodities. One can also investigate "bubbles" within this framework.

One could easily extend our model to incorporate partial information revelation over time, the updating (and perhaps convergence) of beliefs, new agents arriving over time, disagreement among agents over the implications of new information, and fluctuations in the float and in the ease with which agents of various types are located.

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