Disagreement and the Stock Market

Harrison Hong and Jeremy C. Stein
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The authors illustrate the importance of the joint behavior between stock prices and trading volume by using disagreement models. Unlike traditional asset-pricing models, these behavioral finance models allow for differences in the beliefs of investors. The authors present models that are consistent with the findings of the momentum effect and observations of stock prices and trading volume from periods before and after speculative bubbles.

In classical asset-pricing models, only risk should be able to predict stock returns; however, numerous variables, without any clear association with risk, have been documented to predict stock returns. The authors offer arguments that support disagreement models as a natural framework for explaining predictable patterns in stock returns (e.g., momentum, postearnings return drift, and the fundamental reversion of "glamour" stocks). The disagreement models are a type of heterogeneous-agent model that explain the specific nature of the patterns of predictability. The disagreement models can include models with gradual information flow, limited attention, and heterogeneous priors. The most promising aspect of the disagreement models is that they include both stock returns and trading volume.

The authors state that the joint behavior of stock prices and trading volume is appealing to the proponents of traditional asset-pricing models (based on rational expectations) and to the proponents of behavioral finance. Traditionalists believe that investors who disagree on the price of a stock will trade. Because of the idiosyncratic nature of the trades, however, the price will not be affected because the trades of disagreeing investors will cancel each other out. Thus, factors affecting price are not related to, or are decoupled from, factors affecting volume. Contrary to this decoupling point of view, the

Harrison Hong is at Princeton University. Jeremy C. Stein is at Harvard University. The summary was prepared by Stephen Phillip Huffman, CFA, University of Wisconsin Oshkosh.

occurrences of speculative bubbles have been found to be associated with increased trading volume (e.g., 1928 and 1929 had 13 record-breaking volume trading days). The authors' review of the academic literature on speculative bubbles points to trading volume as an indicator of investor sentiment.

In addition to a review of data on the relationship between prices and volumes during speculative bubbles, the authors also examine turnover of glamour stocks—that is, those with a high market-to-book ratio—and low-priced value stocks and find that over the 20-year period from 1986 to 2005, glamour stocks had consistently higher volume of trading. The authors interpret these data as a further indicator that higher-priced stocks are associated with higher volume even outside of speculative bubbles. This finding is further confirmed by their finding of a robust correlation (0.49) between changes in price levels and changes in trading volume for the S&P 500 Index between 1900 and 2005. The authors conclude that strong statistical evidence exists for a price–volume connection, which needs to be theoretically addressed.

The authors suggest that the explanation lies in investor disagreement and identify three mechanisms that cause this disagreement. The first mechanism is gradual information flow, which assumes that information is disseminated differently (cheaper and sooner) to specialists than to generalists. The second mechanism is limited attention, where the timing and manner of the news release can create disagreement. For example, earnings releases on Fridays have been documented as stimulating less volume than earnings releases on other days (i.e., investors fail to remember the importance of the Friday announcement on Monday). The third mechanism is heterogeneous priors, where investors all receive the same information at the same time but because of differing expectations, their interpretations of the information are different. The authors show that increases in trading turnover spiked around earnings announcements during the 1986–2005 period and volume remained high for the week following the announcement, which is contrary to the rational expectations model, where publicly released information should increase agreement among investors rather than reduce it.

The authors use the momentum effect and the recent collapse of the internet bubble to illustrate the importance of trading volume in an asset-pricing model. The disagreement model that they present indicates that the momentum effect is larger for companies with higher trading volume. Empirical findings for the momentum effect from prior studies are consistent with this prediction. A dynamic disagreement model with a short-selling constraint is used to illustrate the joint behavior of overpricing and volume (i.e., trading increases when the level of disagreement changes). Given the short-selling constraint, these dynamic models predict that higher volume predicts lower returns, which is supported by current empirical findings. There is also research, however, that reports that companies with the largest surges in trading volume around earnings announcements experience the largest price increases.

The authors conclude that if behavioral finance is to become as enduring as the classical asset-pricing theory, then behavioral finance will have to become more than just a collection of empirical facts. The disagreement models are promising because they include the joint behavior of prices and volume and because they are able provide explanations for some of the observed anomalous return patterns.

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