DISCUSSION

MAUREEN O'HARA*: This paper examines the differences in stock prices introduced by different trading mechanisms. The authors note that whether securities trade via a call market or a continuous auction may have important implications for price behavior. They test their theory by examining the open-to-open price series and the close-to-close price series. They find that opening prices exhibit greater variance and curtosis, and that there is negative autocorrelations in opening prices.

I think the authors are investigating an important topic in financial economics. One difficulty with the economics literature is that the mechanisms by which prices are formed have largely been ignored. I believe this has arisen, in part, because the focus has been on the equilibrium properties of prices, so that the manner in which this equilibrium is attained has been irrelevant. The problem with this approach is that, because prices arise through market institutions and not via Walrasian auctioneers, the prices we examine in our theoretical models may not be obtainable with any existing market mechanism. Until we understand the price formation process, therefore, we cannot hope to understand the equilibrium nature of prices.

In their analysis, the authors want to compare the prices arising from two distinct trading mechanisms. They identify the opening prices as arising from a call market and the closing prices as resulting from a continuous auction process. One difficulty with this characterization is that closing prices may not be the best choice to represent the continuous auction process. In particular, closing prices may be affected by dealers' inventory positions, and other factors unique to the end of the day. A more important problem is that because of trades involving "market at close" orders, the closing price may actually bear some resemblance to a call market price.

One way to avoid these problems may be to examine the noon-to-noon price sequence. If this price sequence shares similar properties with the close-to-close, then a more convincing story of the role of the trading mechanism in affecting price behavior may be told. The recent intra-day analyses of Harris [1986] and Smirlock and Starks [1986] suggest, however, that time of day may have important affects on prices, so that consistency across prices arising from continuous auctions perhaps should not be expected.

The authors' results do suggest, however, that the trading process has an important influence on security prices. One implication of their research is that opening prices and closing prices are really two different economic variables. This observation has several implications for empirical research. First, it may provide some insight into the weekend effect. Investigations of this anomaly, for example Rogalski [1984], examine the return from Friday-close to Monday-open and from Monday-open to Monday-close. By comparing close to open prices, however, empirical investigations pick up the biases introduced by the different trading mechanisms. While this is unlikely to be the explanation for the weekend effect, it is a factor which should be considered.

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A second area that may benefit from this research is the investigation of trading and variance. As French and Roll [1986] note, the intra-day variance of prices (i.e. open to close) exceeds the between day variance (i.e. close-to-open). They attribute this to traders reacting to information arrival during the trading day. One intriguing result of this paper is that the variance is higher if you consider a 24 hour period ending with a non-trading period as compared to a 24-hour period ending with a trading period. One interpretation of this is that trading actually reduces the variance of stock prices, rather than increases it. It would be interesting to investigate this trading affect on variance in more detail.

Finally, let me suggest an area of future research which the authors or others interested in this area might pursue. If, as the authors believe, trading mechanisms do influence prices, then it would be interesting to examine the effect of yet another trading mechanism, the block trading process, on price formation. The block trading process differs from the continuous auction process in that prices arise essentially from negotiation. Kenneth Burdett and I [1987] have analyzed this process in a theoretical framework, while several authors have presented empirical evidence on the differential behavior of block trades. What would be interesting to study is the effect that this syndication process has on the properties of the price sequence. Given the increasing number of trades bypassing both the opening call and the daily continuous auction process, an understanding of this alternative mechanism seems long overdue.

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