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Order Flow and Liquidity around NYSE Trading Halts: Discussion

Author(s): Daniel G. Weaver

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Discussion

DANIEL G. WEAVER*

I enjoyed reading this paper. It fills an important gap in the market microstructure literature. In recent years, the NYSE and Nasdaq have debated the circumstances under which trading in a security would be halted. On the NYSE, the debate has centered on marketwide trading halts and how to reopen trading after a halt. On Nasdaq, discussions have occurred as to whether trading should halt if markets are crossed (i.e., the highest bid is greater than the lowest ask) or locked (i.e., the bid is equal to the ask). Understanding the mechanics of trading halts, including order submission strategies of market participants, and identifying which types of traders

* Zicklin School of Business, Baruch College.

provide liquidity will provide important information for the ongoing debates. This paper provides a good description of the mechanics of trading halts, which most academics know very little about.

Previous theoretical papers on trading halts have reached opposite conclusions regarding the impact of trading halts on price formation. For example, Stein (1987) and Greenwald and Stein (1988) suggest that halts result in subsequent prices being more informative. In contrast, Brown and Jennings (1989) and Grundy and McNichols (1989) suggest that halts result in subsequent prices being less informative. In addition, previous empirical work on trading halts has focused on the volatility of prices around trading halts. Although Corwin and Lipson do not shed direct light on the efficacy of trading halts on price formation, they do add to the debate by empirically examining the behavior of liquidity providers around halts.

Their sample consists of 295 NYSE trading halts during 1995 and 1996. Of the 295 trading halts they examine, 44 are order imbalance halts and 251 are news halts. They find that news halts have a duration of about 50 percent longer than order imbalance halts but that order imbalance halts are associated with average absolute price changes that are much larger than news halts. Given that Lee, Ready, and Seguin (1994) find substantial differences in market reaction between news pending and news dissemination halts, the authors should explain why they chose to examine them together. This does not detract from the paper's findings. It merely leaves the reader wondering what knowledge could be gained by a finer partition of halt causes.

Using proprietary NYSE order data, they next examine order entry behavior around trading halts. As might be expected, order imbalance halts (but not news halts) are associated with a large increase in order submissions during the 30-minute period immediately prior to the halt. In both cases, there is an abnormally high amount of order cancellations during the halt. The authors rightly suggest that halts indirectly encourage limit order submissions, because limit order traders can be assured that during times of unusual company specific price movements, they will be given the opportunity to cancel and reenter their orders at prices that reflect current conditions. This feature relieves limit order traders from constantly monitoring market conditions and thus encourages them to provide liquidity.

Using the methodology of Kavajecz (1999), they reconstruct the limit order book around the halt and examine depth away from the inside. By comparing depth at various increments away from the inside for halt days versus nonhalt days, they are able to construct a measure of abnormal depth. They find that for both types of trading halts, depth is generally abnormally low prior to the halt and abnormally greater after the halt. However, because they do not report spread width frequencies, interpretation of the results for smaller distances from the inside is difficult. During the period of their study, the minimum price change, or tick, was \$0.125. Then, if the stocks in their sample vary by normal spread width, using a grid of \$0.25 may result in an unequal number of stocks in the \$0.25 and \$0.50 gradations. For example,

examining quoted depth within \$0.25 of the midpoint for stocks with a normal spread of \$0.125 will encompass the inside depth plus depth one tick away from the inside. However, examining quoted depth within \$0.25 of the midpoint for stocks with a normal spread of \$0.25 will only encompass the inside depth. Therefore, I would suggest adopting an approach that measures depth at various increments of ticks from the inside spread rather than a dollar distance from the midpoint approach. This would capture variations in spread width and thus allow for cross-sectional comparisons. At the very least, the authors should report the frequency of spread widths for their sample.

Because the intertemporal depth patterns are similar for the two types of halts, they combine their sample and partition according to bid-side or ask-side depth and the direction of the price change following the halt. Here the results suggest that although some traders fail to reposition their limit orders, a substantial portion update promptly. This suggests that in the absence of a halt, some traders may have had unwanted fills. It can then be inferred that halts encourage limit order submitters to supply liquidity by keeping the probability of an unwanted fill low.

The next portion of Corwin and Lipson's study exploits the nature of their data to examine spreads around halts. Because they can reconstruct the limit order book, various spread measures can be measured.¹

They calculate not only the quoted spread (which most researchers are limited to) but also the spread dictated by orders on the limit order book and also the marginal spread for 5,000- and 10,000-share orders. This type of partitioning allows us to examine the role of the specialist in setting the spread. Our understanding of market microstructure would be greatly improved if this type of data were routinely available to researchers (NYSE take note!).

Examining their results reveals that as one might expect, quoted spreads are equal to or narrower than the spread provided by the limit order book—except for the period during an order imbalance halt. During that time, the median percentage quoted spread is nearly seven times greater than that of the limit order spread. It is with this fact that the paper illustrates the important role of the specialist during order imbalance halts. During an order imbalance halt, the specialist is allowed to ignore standing limit orders in setting the spread (the authors call this “spreading the quote”). This gives market participants an indication of the direction of the imbalance and allows them to adjust their orders accordingly. Interestingly, the authors state that both limit and market orders can be canceled during a halt. I was

¹ NYSE order data are limited to orders submitted through the SuperDOT system. Orders originating from the floor are excluded. According to the 1996 NYSE *Fact Book*, SuperDOT orders account for only 38 percent of NYSE volume; they account for 85 percent of all orders. This suggests that these excluded floor orders are large and probably held by floor brokers rather than being entered in the limit order book. Therefore, the expected bias from these excluded orders is expected to be small.

unaware that market orders could be canceled. The authors need to discuss this point further. Also, the rules governing “spreading the quote” need to be discussed further.

Corwin and Lipson then examine the contribution of floor liquidity (orders held by floor brokers instead of placed on the limit order book, or supplied by the specialist) to the actual depth (depth available from all sources) in the market. They find that the floor is a major provider of liquidity in the period immediately after a halt. This section again illustrates the depth of understanding (no pun intended) that would be possible if exchanges and markets routinely made order data available to researchers.

Next, the authors analyze whether the specialist uses information in addition to existing limit orders to set the opening price. Following the methodology of Madhavan and Panchapagesan (1998), they employ two-stage regressions to examine the relation between prices following the halt and several alternative prices (system clearing, limit order book clearing, or opening price). They find that opening price is the best predictor of price one hour after the halt. Therefore, consistent with Madhavan and Panchapagesan, the specialist adds to the price discovery process.

In the final section of the paper the authors explore whether the increase in volatility following a halt (first documented by Lee et al. (1994)) is caused by the decreased liquidity that the authors find. In essence they want to see if posthalt volatility is caused by orders “running through the book.” They find that although the reduced liquidity following a halt has some explanatory power with regard to posthalt volatility, a very large part of the volatility can be explained by increased trading volume following the halt. The only problem I have with this section is that the authors do not explain why they dropped their partitioning by halt type for their tests. It left me wondering if the impact was uniform across halt types.

The authors point out that they cannot answer the question of whether halts are beneficial. I suggest a method that may allow for an answer. When the NYSE halts trading, not all other exchanges follow suit. If a regional exchange or Nasdaq still allows trading in a stock while the NYSE halts trading, it could be argued that it was not a true halt. By separately examining those halts that only the NYSE participated in from those that all market centers participated in, we may be able to judge the efficacy of halts. Of course this would require an investigation of the conditions under which other market centers follow the NYSE in initiating a trading halt. Delineating the conditions would lead to an even better understanding of trading halts.

In closing I thank the authors for writing this paper. I learned a great deal, and others will as well.

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