

May 11, 2010

Elizabeth M. Murphy, Secretary  
Securities and Exchange Commission  
100 F Street, NE  
Washington, DC 20549-1090

**Re: Concept Release on Equity Market Structure, File No. S7-02-10**

Dear Ms. Murphy:

The events of Thursday May 6 serve as an indicator that markets need regulation designed to increase liquidity - which serves as a shock absorber against volatility caused by temporary increases in supply or demand for a stock. The events further demand that market-wide steps be taken to mitigate liquidity shocks should existing liquidity be unable to match the size of temporary liquidity shocks. Reports in the press indicate that the Commission and exchanges are focusing on circuit breakers to address the latter. However, even more important than stopping trading is how does it get restarted? Below, I address these two issues. This letter serves as a supplement to my April 20 letter to the SEC on the referenced concept release.

As far as regulations to increase liquidity are concerned, enacting the Trade-At rule will encourage limit order traders to provide liquidity, by routing market orders to displayed markets. The Commission has suggested reducing the tick size on some stocks as a way to make internalization less profitable and hence lead to brokers routing orders to displayed markets. The same logic was used by regulators when penny ticks were adopted. When I testified before the House Committee that proposed the Dollars and Cents Act, I was asked if adopting penny ticks would reduce payment for order flow. I answered that as long as purchasers (and internalizers) could partition orders into informed and uninformed orders it would not eliminate it. Both payment for order flow and internalization are both still with us and reducing tick size will have the same small impact on both that it did 10 years ago. Reducing tick sizes will only make it cheaper to front run and thus further discourage liquidity provision. Consistent with my testimony before Congress - in my paper, Tick Size and Market Quality<sup>1</sup>, my co-author and I

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<sup>1</sup> "Tick Size and Market Quality," David Porter and Daniel G. Weaver, *Financial Management*, vol. 6, no.4, 1997, p. 5-26.

found that reducing the tick size on the Toronto Stock Exchange had a negligible impact on internalization.

The Trade At rule on the other hand will result in more market orders sent to displayed markets and hence more limit orders provided to interact with them. I therefore urge the Commission to adopt the Trade At rule instead of reducing tick sizes.

Following on the same logic in the above paragraph, I urge the Commission, as I did in testimony in April 2004, to impose a significantly larger tick on higher priced stocks (e.g. \$0.5) The higher the tick the more expensive (less frequent) front-running becomes and the then the more willing limit order traders are to submit liquidity in displayed markets. My paper, Tick Size and Market Quality, shows that market quality does not linearly improve as tick sizes are reduced. A graduated tick size coupled with the adoption of the Trade At rule will increase displayed liquidity for higher priced stocks.

The second point I want to address in this letter is what measures the Commission can undertake to prevent markets from running away in the event temporary supply or demand greatly exceeds the size of the shock absorbers provided by liquidity providers. When trading was concentrated on exchanges with humans providing liquidity through affirmative obligations a temporary pause in trading could allow the market to take stock of market conditions and avoid over reaction. However, increasingly order flow is being executed on limit order driven venues without liquidity providers. As I teach in my classes, the most common method for preventing markets from running away in markets without liquidity providers is to institute maximum daily price limits. For example, US futures markets have used this mechanism since their inception. Another example is the Tokyo Stock Exchange which limits market moves to 30% from the previous day's close for most stocks. Stocks can trade at prices within that band for the day, but not outside it.

It appears from press reports that current discussions are focusing on some type of temporary halt. But the most important question for this proposal is - how do you begin again? Merely closing the flood gates on a rain swollen river will only serve to exacerbate the situation if they are reopened before flood waters have receded. Similarly, if trading in stock is temporarily halted then restarted after an arbitrary time period - pent-up supply or demand could cause an even greater market move. I do not think that there is much sentiment in favor of an all day maximum daily price limit for stocks, even though the limits method has merit. How then could trading start again on the same day? It is obvious that we need to wait until the market digests the information about what is happening. However, that is a variable length of time which cannot be standardized. Therefore some human judgment is necessary. On the NYSE markets,

Designated Market Maker firms are well equipped to make that judgment. Or FINRA could adopt that responsibility. On the NASDAQ markets the exchange could appoint a lead market maker firm for each stock to make that judgment - or FINRA could do it. These firms would be the same ones charged with pausing trading in consultation with their exchanges.

But what can we do to allow the flood waters to recede? I believe that a large contributing factor to last Thursday's volatility was that many computer algorithms did not account for the possibility of such a large decline in the market and exacerbated the problem by assuming existing market conditions that were far from the reality of the moment. In today's increasingly computer driven markets participants need to be notified that market conditions have changed by pausing trading and sending that signal out to participants. Then participants can be allowed to cancel or modify existing unexecuted orders or submit new orders before trading in a stock begins again. Order imbalances should be communicated to the market and will probably serve as a key indicator as to when trading should begin again.

The Commission should require that all algorithmic traders program their algorithms to take into account these market-wide temporary trading pauses. To enforce compliance, the Commission (or FINRA) can impose fines on algorithmic traders who cause undue market volatility due to non-compliance.

Sincerely;

A handwritten signature in black ink, appearing to read 'D. G. Weaver', with a stylized flourish at the end.

Daniel G. Weaver

