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August 5, 2024

Via Email

Haoxiang Zhu
Director, Division of Trading & Markets
U.S. Securities & Exchange Commission
100 F Street, NE
Washington, DC 20549

Re: Rulemaking Suggestions in Light of the Events of June 3, 2024

Dear Mr. Zhu:

We write on behalf of Interactive Brokers LLC ("IBKR")[1] to provide our perspective on needed rule improvements in light of the events surrounding the wild price-action in Berkshire Hathaway Class A shares ("BRK A") on June 3, 2024, immediately following its resumption of trading after a nearly two-hour regulatory halt.

In briefest summary, the following extraordinary events happened on June 3:

- The New York Stock Exchange ("NYSE") had to suspend trading in as many as 40 symbols less than 30 minutes after the open as a result of a technical issue.

  In connection with that technical issue, **the price of BRK A** – the most expensive NMS stock – **fell more than 99.97% in the space of a few seconds**, from approximately $622,000 to approximately $185.

- **BRK A was then halted from trading for nearly a third of the trading day**.

- Nearly two hours later, with no news in between, and with an apparently massive unaddressed buy-side order imbalance now on NYSE's book from retail customers who placed market orders during the halt thinking they could buy BRK A at $185, **BRK A reopened at $648,000, nearly 4.2% higher than its fair market value immediately prior to the halt**.

  In less than two minutes, the price then proceeded to climb an additional $94,000 – an increase of an additional 14.5% over the re-opening price.

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[1] IBKR is a FINRA-member self-clearing electronic broker-dealer and NFA-member futures commission merchant. IBKR has affiliates that operate electronic brokerage businesses around the world. IBKR's ultimate parent, Interactive Brokers Group, Inc., is a NASDAQ-listed public company that trades under the symbol "IBKR".

It then fell more than $100,000 *within 3 seconds* and closed at $631,110 at the end of the day.

These events have highlighted deficiencies in two areas:

1. The Limit Up-Limit Down Plan (the "LULD Plan"):
    a. The LULD price-band applied to extremely high value stocks (such as BRK A) is too wide; and
    b. The Reference Price is calculated in a manner that is too reactive, following a reopening event, to price action in the moments following the reopening.
2. The clearly erroneous execution rules ("CEE Rules") of the various national securities exchanges eliminate discretion to review a trade as clearly erroneous if the trade occurred within the published LULD band.

Before getting into specifics, however, we think it is worth reviewing in slightly more detail our understanding of the facts surrounding the events of June 3.

I. Background: Trading in BRK A on the Morning of June 3

On the morning of Monday, June 3, 2024, at approximately 9:50 am, the price of BRK A suddenly plummeted in the space of a few seconds from approximately $622,000 per share to approximately $185 per share, *a decrease of over 99.97%*.[2] This occurred in connection with an unspecified technical issue at NYSE and/or the Securities Industry Automation Corporation ("SIAC", an affiliate of NYSE). This technical issue and dramatic price event led NYSE to promptly halt BRK A from trading.

News of BRK A's anomalous price move quickly spread across social media. Many retail traders, including some of our clients, in an ill-advised attempt to take advantage of this "opportunity", unwisely submitted market orders to their brokers during the trading halt, presumably expecting those orders to be filled at approximately $185/share when trading resumed.

This influx of buying interest during the halt led to a substantial buy-side order imbalance in NYSE's limit order book for BRK A. We have limited visibility to what the Designated Market Maker ("DMM") for BRK A at NYSE may have done to *attempt* to resolve that imbalance prior to re-opening trading, but it is clear that the imbalance remained unresolved as of the re-open of trading.[3] As a result, trading resumed at approximately 11:35:54 am with a reopening cross at $648,000. This is particularly notable in that it is:

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[2] A number of other NYSE-listed symbols also suffered significant price dislocations in connection with the same technical issues, but BRK A's price move was the most dramatic.

[3] NYSE also did not act to bust the low-priced trades resulting from their system issue until nearly 4 pm, several hours after the stock had re-opened. Accordingly, the displayed / disseminated last trade price on the consolidated tape remained approximately $185 until the re-open.

- nearly 4.2% higher than the fair value price of approximately $622,000 that BRK A had been trading at immediately prior to the technical issues that morning, *without any intervening news regarding the company's fortunes*; and
- more than 2.5% higher than the highest price (approximately $632,000) at which BRK A had traded in the prior month.

Over the course of the next *98 seconds*, the price of BRK A climbed an additional $94,000, rising to as high as $741,971.39 per share. That $94,000 represented *an increase of approximately 14.5% over the re-opening price less than two minutes earlier* and an additional approximately 15.1% (on top of the 4.2% increase at the reopen) over the most recent fair market value of $622,000 prior to the beginning of the system issue that morning.

After peaking at over $741,000, the price then fell even more precipitously over the next 5 seconds, dropping over $100,000 in a single tick. Ultimately, BRK A closed at $631,110 that day.

Many of the retail traders that had placed market orders during the trading halt were filled in the re-open or at various prices during the run-up to the peak, including some who were filled at the peak price. IBKR – and we presume a number of other broker-dealers – promptly filed petitions with NYSE and the other exchanges seeking to have these anomalously high-priced trades busted as clearly erroneous. NYSE (and the other exchanges) determined that they **lacked authority** to review these trades as clearly erroneous **because they had occurred within the disseminated LULD bands**, and thus declined to act on these petitions.

As a result, traders (or their brokers who compensated them) and NYSE/SIAC (which, after an outcry from street participants, compensated some firms for losses under NYSE Rule 18) suffered tens of millions of dollars in losses in connection with trades that never should have occurred in the first place and never should have been allowed to stand if they did occur.

In light of those events, we now address the rule deficiencies that we believe they made plain.

II. Deficiencies in the LULD Plan

A. *The defined LULD bands are a poor fit for extremely high-value stocks.*

The LULD Plan divides all securities subject to the plan into two tiers. BRK A, as a Tier 2 NMS stock (since it is not an S&P 500 or Russell 1000 constituent or one of a

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Had NYSE instead waited to re-open the stock until after it had busted the trades and corrected the tape, much of that market-buy interest from retail customers might have resolved itself by customers cancelling their orders. But instead, the stock was allowed to re-open while spurious last-sale data was still being disseminated.

select set of ETPs), is subject to a Percentage Parameter band of 10% relative to the calculated Reference Price.[4]

This *may* be appropriate for most non-S&P 500 stocks or Russell 1000 stocks. **But unfettered freedom to trade up to 10% in either direction on a stock trading at well over $600,000 per share (i.e., a more than $60,000 price move in either direction) is clearly inappropriate**.

By comparison, under the price bands set forth in the various exchange CEE Rules (e.g., NYSE Rule 7.10), **if the LULD plan had not applied, the applicable price band (relative to the reference price) would have been only 3%**.[5]

Put another way, **the reopening price itself** (which was nearly 4.2% away from the last reasonable reference price that morning) **would have already been outside of the clearly erroneous execution band, and the immediately-subsequent 14+% rise would have only punctuated the point**.

B. *The Reference Price under the LULD Plan is inappropriately reactive, especially immediately following a reopening.*

Under the LULD Plan, the Reference Price is calculated as the arithmetic mean of prices reported to the consolidated tape over a window of not more than five minutes. Immediately following a reopening, that window is even shorter (since there is less than five minutes of prices to incorporate).

As a result, there is little to prevent the Reference Price from virtually tracking the market move-for-move during those first critical minutes following a re-opening.[6]

Indeed, such a short sliding window for calculation of the Reference Price provides little drag on the ability of the market to gyrate to wildly inappropriate prices; it may prevent flash crashes that occur in seconds, but it does little more than that.

III. Lack of Discretion for Exchanges to Review Clearly Erroneous Trades

The above deficiencies might not be a problem if the LULD Plan formed just one part of a multi-layered array of tools in the exchanges' toolbox to address transient, wild price action.

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[4] *See* LULD Plan, Appendix A (Percentage Parameters), Section II (Tier 2 NMS Stocks), *available at* https://cdn.luldplan.com/plans/LULD-Plan-Amendment-20.pdf.

[5] The CEE Rules generally provide for a price band of 3% relative to the reference price during regular trading hours for stocks over $50/share.

[6] Although the LULD Plan does include a 30-second minimum dwell time for the Reference Price under Section V.B.1 of the Plan following a re-open, our observation is that that still does little to prevent wild price excursions, given how broad the band is.

Indeed, if the exchanges' CEE Rules currently existed in the same form they had prior to the adoption of the LULD Plan, the exchanges would still have a second tool available to them in the unusual circumstances where the LULD Plan was inadequate to curtail unnatural price action.

Yet the current CEE Rules of the various national securities exchanges prohibit them from taking any action to bust trades occurring during regular trading hours if the LULD bands are in effect and the trade happened within those bands, i.e., if:

- the relevant symbol is subject to the LULD Plan;
- the LULD bands were being disseminated at the time of the trade; and
- the trade occurs within the LULD price bands.[7]

This unfairly and unnecessarily leaves market participants to bear losses as a result of particularly disorderly markets that the LULD Plan was inadequate to prevent – losses that could have been avoided entirely if the trades at spurious prices were simply busted as the traditional clearly erroneous price bands (as found in NYSE Equities Rule 7.10(c)(2)) would allow.

The sheer complexity and interconnectedness of modern markets and trading systems, both automated and otherwise, makes it impossible to envision in advance every set of circumstances that could result in extreme, erroneous price moves, or to design a system that will always prevent them. **Returning discretion to the exchanges and allowing them the flexibility to promptly address unexpected events and outcomes, including with trade busts where appropriate, is the necessary cure.**

IV. Conclusion

Accordingly, we urge the Commission and Staff, in conversation with the various exchanges and the LULD Plan Advisory Committee, to:

- Restore discretion to the exchanges to bust trades occurring within the LULD bands under extraordinary circumstances.[8]

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7 *See, e.g.,* NYSE Rule 7.10(c)(1); NYSE Arca Equities Rule 7.10(c)(1); NASDAQ Equities Rule 11890(c)(1); Cboe BZX Rule 11.17(c)(1); IEX Rule 11.270(c)(1); MEMX Rule 11.15(c)(1). The only exception to this limitation on the exchanges is in the case of "(1) a corporate action or new issue or (2) a security that enters a Trading Pause pursuant to the LULD Plan and resumes trading without an auction, [and the] Reference Price [] is determined to be erroneous by an Officer of the Exchange because it clearly deviated from the theoretical value of the security." *See, e.g.,* NYSE Rule 7.10(c)(1)(C) (emphasis added). Even where that exception applies, the sole available remedy is simply to apply a corrected Reference Price, and measure the trade in question relative to that Reference Price and the LULD Plan Percentage Parameter. *Id*.

8 If the Commission and Staff are concerned about exchanges being granted discretion too liberally, appropriate safeguards could be put in place, such as limiting the exercise of discretion to only when a plurality or majority of the listing / UTP exchanges agree.

- For LULD Plan Tier 2 stocks trading at over $10,000/share,[9] narrow the LULD Percentage Parameter to the *lesser* of:
    - 5% (the same as it would be if it was a Tier 1 stock); and
    - $25,000 (so that the maximum price swing within the band cannot grow without bound as the price of the stock grows).
- Make the LULD Plan Reference Price calculation less reactive under circumstances surrounding a re-open <u>in connection with an exchange system issue</u>.[10]
    - One way to do that would be to require an officer of the listing exchange to set a "Prior Fair Price", based on the last orderly trade price before the halt, and incorporate that Prior Fair Price into the Reference Price in a way that:
        - gives it substantial weight at the time of the reopen, and
        - decays that weight down to zero over a period of 5-10 minutes.

We would be happy to discuss any of these ideas with the Commission, Staff, LULD Plan Advisory Committee, or the Staff of the various exchanges at your convenience.

Respectfully,

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Cc: Megan Barbero, General Counsel
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9 As a practical matter, **there is only one NMS stock that trades at over $10,000 per share – BRK A**. Accordingly, an alternate approach would be to consider whether exchange listing standards should set an absolute price ceiling per share – e.g., $25,000 per share – above which an issuer must either (i) split the stock to reduce the price below the ceiling or (ii) delist the stock from the exchange.

10 Relatedly, **consider whether tighter LULD bands ought to apply** – e.g., 75% of the width the band would otherwise be – for some period of time (e.g., 15 minutes) **<u>following a re-open in connection with an exchange system issue</u>**.