**ORAL ARGUMENT NOT YET SCHEDULED**

No. 20-1424

IN THE

# United States Court of Appeals for the District of Columbia Circuit

CITADEL SECURITIES LLC,

Petitioner,

v.

UNITED STATES SECURITIES AND EXCHANGE COMMISSION,

Respondent.

INVESTORS EXCHANGE LLC,

Intervenor.

On Petition for Review of a Final Order
of the Securities and Exchange Commission

## FINAL BRIEF FOR INTERVENOR INVESTORS EXCHANGE LLC

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May 26, 2021

## CERTIFICATE AS TO PARTIES, RULINGS, AND RELATED CASES

### A. PARTIES

1. The parties to this Petition for Review are Petitioner Citadel Securities LLC ("Citadel"), Respondent United States Securities and Exchange Commission (the "Commission"), and Intervenor Investors Exchange LLC ("IEX").

Amicus Curiae are XTX Markets LLC; Better Markets, Inc.; Healthy Markets Association; Andrew N. Vollmer; the New York Stock Exchange LLC; NYSE Arca, Inc.; NYSE American LLC; NYSE National, Inc.; and NYSE Chicago, Inc.

2. Launched in 2016, IEX is a stock exchange committed to enhancing performance, fairness, and transparency; addressing predatory trading strategies harming long-term investors; and facilitating trading on a level playing field with respect to speed and access. IEX is wholly owned by IEX Group, Inc., a privately held company. No publicly traded company holds 10% or more of IEX Group, Inc.'s stock.

### B. RULINGS UNDER REVIEW

Petitioner seeks review of Commission Release No. 34-89686, File No. SR-IEX-2019-15, filed on October 16, 2020, and titled "Self-Regulatory Organizations; Investor Exchange LLC; Order Approving a Proposed Rule Change to Add a New Discretionary Limit Order Type Called D-Limit."

## C. RELATED CASES

There are no related cases.

/s/ Catherine E. Stetson
Catherine E. Stetson

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## GLOSSARY

| | |
|---|---|
| CboeEDGA | Cboe EDGA Exchange, Inc. |
| Citadel | Citadel Securities LLC |
| Commission | United States Securities and Exchange Commission |
| D-Limit Order | Discretionary-Limit Order Type |
| IEX | Investors Exchange LLC |
| NYSE | New York Stock Exchange LLC |
| Regulation NMS | Regulation establishing rules for protecting investors and modernizing and strengthening the national market system |
| Indicator | IEX's publicly disclosed Crumbling Quote Indicator formula codified in Rule 11.190(g) of IEX's rulebook |

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## INTRODUCTION

Congress charged securities exchanges with creating rules that "promote just and equitable principles of trade" and "protect investors and the public interest." 15 U.S.C. § 78f(b)(5). Consistent with those principles, Investors Exchange LLC (IEX) offers a stock order type, called "D-Limit," which protects investor orders from a small subset of high-speed traders that engage in a predatory trading practice known as latency arbitrage.

These high-speed traders exploit the fleeting instants of time it takes for information about stock price changes to travel from geographically dispersed securities exchanges to traders. Even with modern technology, data must traverse these physical distances. Traders who are closer to exchanges and have faster connection speeds gain privileged access to market data and can learn about price changes fractions of a second before others. A small contingent of high-speed traders abuses this reality by engaging in "latency arbitrage" – using their speed advantage to exploit those information asymmetries in the microseconds before less-well-connected market participants receive the most up-to-date pricing information.

This predatory trading strategy extracts profits for latency arbitrageurs at the direct expense of retail and institutional investors. And it hurts the stock market as a whole, as investors flee from latency arbitrage by moving to dark or off-exchange trading instead of displaying their trading interests publicly. *See* A64-65 [Order 54,442-43]. The result has been a significant long-term decline in displayed trading, which degrades price transparency and thus the efficiency of public markets. *See* A64-66 [Order 54,442-43].

D-Limit orders are a narrowly targeted solution to address latency arbitrage using a publicly disclosed formula, the Crumbling Quote Indicator (or "Indicator"), to detect an imminent price transition in the market and automatically update orders to reflect changing market conditions. The use of D-Limit orders thus prevents latency arbitrageurs from picking off stale quotes in the fleeting moments when prices are in transition and market information is traveling over geographical distances. The Indicator is highly targeted, engaging for mere seconds of the trading day – on average for just 0.007% of the trading day for each security. A87 [Order 54,448]. By mitigating the effects of latency arbitrage for investors, as the Commission concluded, D-Limit orders enhance market quality for the "benefit of all market participants." A90 [Order 54,449].

Petitioner Citadel Securities LLC is one of the nation's largest high-speed traders. It objects to D-Limit orders, just as it previously objected – unsuccessfully – to all of IEX's prior efforts to combat predatory latency arbitrage. *See* 81 Fed. Reg. 41,142, 41,150-51 & nn.138, 144 (June 23, 2016). Before the Commission, a broad and diverse array of market participants and observers – including respected financial firms, pension funds, and even other high-speed traders – spoke up in favor of D-Limit orders based on their firsthand experience. They agreed that latency arbitrage was harming their own trading and markets in general, and that D-Limit orders are an effective and tailored solution.

After carefully weighing the issues, the Commission approved IEX's D-Limit in a well-reasoned and thorough order, concluding that D-Limit is consistent with the Exchange Act, promotes investor protection, encourages more displayed liquidity to the benefit of both liquidity providers and takers, and contributes to transparent and efficient markets. This Court "properly defers to policy determinations invoking the agency's expertise in evaluating complex market conditions," and it should do so again here. *Mozilla Corp. v. FCC*, 940 F.3d 1, 55 (D.C. Cir. 2019) (per curiam) (brackets and internal quotation marks omitted). The petition should be denied.

## PERTINENT STATUTES AND REGULATIONS

17 C.F.R. § 242.600(b)(4) is reprinted in the Addendum to this brief; other applicable statutes and regulations are in the Addendum to Petitioner's brief ("Citadel Br.").

## STATEMENT OF THE CASE

### A. Latency Arbitrage

This case is about latency arbitrage and its effect on investors. Before discussing those particulars, however, it may help to understand the basic components of trading on an exchange.

For exchanges to function, there must be a pool of securities to buy and sell. In standard parlance, when a market participant offers to buy or sell securities, they "provide liquidity." When another participant accepts that offer, they "take liquidity." Market participants often play both roles – liquidity provider and taker – over the course of a trading day.

Securities are traded through orders. A liquidity provider may choose to publicly display an order at a specific price, called a "quotation." Publicly displayed quotations, known as "displayed liquidity," benefit the market as a whole by contributing to "fair and orderly" markets and supporting "public price discovery." A65 [Order 54,443].

Latency arbitrage is a predatory trading tactic that exploits the delays inherent in geographically separated exchanges. For instance, if a broker posts an order on the New York Stock Exchange (NYSE), it takes time for information about that order to travel from Mahwah, New Jersey (the site of NYSE's data center) to traders in Manhattan. Traders who have paid to locate equipment close to the exchange's data servers and purchased the fastest data transmission between exchanges can see and react to the posted orders first. *See* A167-168 [AJO 2/10 at 1-2]; A113 [Zoican 1/20 at 2].

These speed advantages allow a "small subset" of firms to "opportunistically" pick off "stale quotes" in the instants before those quotes update to reflect current prices across all exchanges. A152-153 [T. Rowe Price 2/5 at 1-2]. To give a simplified example, a stock price may be in the process of changing from $10.00 to $10.01 across different exchanges. A high-speed trader might swoop in and buy at $10.00 from an investor that cannot update its quote fast enough, and then sell at $10.01 – the price the investor could have received microseconds later if the arbitrageur had not intervened. That penny that would have gone to the investor goes instead to the arbitrageur. And those pennies add up: Latency arbitrage costs U.S. investors *billions per year*. *See* A165 [Themis 2/6 at 2].

Latency arbitrage requires hyperspeed. "In those rare moments when market prices are in transition, a race condition exists between liquidity providers who want to reprice their on-exchange displayed liquidity to reflect the changing market prices and the liquidity takers who want to take before those updates can occur." A64 [Order 54,442]. This race happens in microseconds – hundreds of times quicker than the blink of an eye.

This race hurts market participants. *See* A62-65 [Order 54,442-43]; A255 [Ontario Teachers' Pension Plan 2/24 at 1]. That encompasses the majority of investors, including many brokers and large institutional investors that manage assets like pension funds, which lack the infrastructure to combat predatory speed traders. *See* A108 [XTX 1/17 at 2] ("the marginal cost of gaining an edge over other market participants, now measured in microseconds and nanoseconds, is harming investors"); A255 [Ontario Teachers' Pension Plan 2/24 at 1]. When latency arbitrageurs "pick off" a pension fund's quote at a stale price, the predatory trader has used its speed to extract profit at the investor's direct expense. *See* A101 [Proof 12/24 at 3].

To avoid paying this toll to latency arbitrageurs, market participants "hide" liquidity on exchanges – they stop displaying their prices – or move to off-exchange trading venues known as "dark pools." A144-145 [Clearpool 1/21 at 1-2]. This trend of hiding liquidity has had a profoundly negative impact on the national market system. It decreases access to securities on exchanges and makes markets less efficient. A65 [Order 54,443]. Over the last 10 years, there has been a "staggering" decline in shares displayed on exchanges. A175 [AGF 2/11 at 1]. The Commission concluded that this outcome does not promote "fair and orderly securities markets." A65 [Order 54,443].

**B. IEX's Exchange**

In 2016, the Commission approved IEX's exchange, along with rules to "discourage predatory behavior," "counter latency arbitrage," and promote investors' interests. 81 Fed. Reg. at 41,150 & n.139, 41,157.

IEX initially sought to address latency arbitrage of "pegged" orders. A pegged order is an offer to buy or sell securities priced in relation to the best pricing available (the "national best bid and offer"). A48-51 [Order 54,438-39].[1] All

[1] One common example is the "midpoint" peg, which floats with the midpoint of the national best bid and offer. If the best bid (the price at which a buyer will buy) is $10.00 and the best offer (the price at which a seller will sell) is $10.02, a midpoint order "rests" at $10.01. If the best bid/offer moves, the midpoint, and the pegged order, move with it.

exchanges automatically update pegged orders as the national best bid and offer change, which happens in fractions of a second. *See id.* Latency arbitrageurs exploit the delay before those orders are updated by (for example) buying shares at the stale price and selling them microseconds later at the new price. *See id.*

IEX's early innovation was a "speed bump" – 38 miles of coiled optical fiber cable that delays inbound orders by 350 microseconds. *See* A48-49, 58-59 [Order 54,438-39, 54,441 n.49]. The "speed bump" simulates geographic latency, similar to the 36-mile physical distance between NYSE's and Nasdaq's data centers. *See* 81 Fed. Reg. at 41,161 & n.270. It usually takes "roughly 300 microseconds for IEX to learn about a price change on another market," so the 350-microsecond delay "is a sufficient buffer to ensure that . . . all of the pegged orders on IEX will already be updated by the time the incoming order is processed."[2] The speed bump applies equally to all members of IEX's exchange. Citadel, a dominant high-speed trader,[3] objected to the speed bump before the Commission. 81 Fed. Reg. at 41,150-51 & nn.138, 144. The Commission rejected Citadel's contentions. *See id.* at 41,157.

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[2] Allison Bishop, The Evolution of the Crumbling Quote Signal 2 (IEX Grp., Inc. 2017), *available at* https://bit.ly/38UZ1eM.

[3] Citadel claims it is largely a simple retail operation. *See* Citadel Br. 14-15. Not quite. It pays retail brokers hundreds of millions of dollars to send orders to Citadel and then routes them to exchanges at "moments where Citadel can make the most money." A362 [Anonymous 5/13 at 3].

IEX also developed the Indicator, a mathematical formula codified in IEX's rulebook that uses publicly available data from other exchanges to detect when market prices are in transition. When the Indicator is "on," for up to two milliseconds at a time, IEX automatically pegs certain nondisplayed orders to a less aggressive price during those "very short periods of time when they face a high risk that the market price will immediately move against them" – protecting against latency arbitrage. 84 Fed. Reg. 71,997, 71,998 (Dec. 30, 2019). Citadel objected to the Indicator, too. The Commission rejected its contentions. *See, e.g.*, 81 Fed. Reg. at 41,152 & nn.163-164, 166, 41,153.

**C. The D-Limit Order**

The speed bump and Indicator substantially decreased predatory trading with respect to non-displayed orders. *See* 84 Fed. Reg. at 71,999. But nearly a *quarter* of displayed volume on IEX was being executed during the *0.007%* of the day when the Indicator was on. *Id.* at 72,002. Why? Latency arbitrageurs were still "seeking to aggressively target liquidity providers during periods of quote instability" with respect to displayed orders. *Id.* at 72,001-02.

IEX thus proposed the D-Limit, a displayed (or non-displayed if the user chooses) "limit order" available to all exchange members.[4] When the Indicator is

[4] A "limit order" is an order to buy or sell securities at a specific price or better.

on, IEX automatically updates the price of a D-Limit order, typically by a penny a share up or down, to more accurately reflect the most up-to-date prices in the market, before latency arbitrageurs can capture the profit from that change. *See* A51-52 [Order 54,439 & n.23]. For displayed D-Limit orders, IEX displays the updated price on its exchange; those orders are immediately available to trade at the new price. *See id.*

A diverse group of market participants – financial firms, institutional investors, pension funds, mutual funds, asset managers, hedge funds, broker dealers, non-profit organizations, academics, and even other high-speed traders – filed public comments supporting D-Limit as an effective solution to address latency arbitrage. Based on their firsthand experience, they explained that D-Limit "seeks to improve the quality of displayed trading for all participants" and "protect[s] displayed orders on a level playing field that is accessible to all market participants." A217 [Vontobel 2/14 at 2]; *see* A66 [Order 54,443] (finding these comments "persuasive"). A few commenters – primarily high-speed trading firms like Citadel, as well as Nasdaq, a competitor exchange that profits from selling faster connections to such traders – opposed D-Limit. *See, e.g.*, A67-68 [Order 54,443 & nn.71-74]; A83-84 [Order 54,447 & n.130]. Some objectors also argued that D-Limit orders should not qualify as "protected quotations" under Rule 611 of Regulation NMS. Many others disagreed. *See infra* pp. 23, 38.

The Commission carefully examined whether D-Limit orders are consistent with the Exchange Act and Rule 611 in light of the comments and record evidence. After thorough analysis, the Commission unanimously approved IEX's proposal. The Commission concluded that D-Limit "promotes the interest of long term investors in a narrowly tailored manner that will inure to the benefit of displayed markets, leading to increased displayed liquidity from which all market participants ultimately will benefit." A67 [Order 54,443]. The Commission also concluded that D-Limit orders are "protected quotations" under its longstanding interpretation of Rule 611. A81-83 [Order 54,447].

The Commission's order should be upheld.

## STANDARD OF REVIEW

The Commission will "approve a proposed rule change" if it "is consistent with the requirements" of the Exchange Act and applicable regulations. 15 U.S.C. § 78s(b)(2)(C)(i). This Court reviews an approval under the "arbitrary and capricious standard." *NetCoalition v. SEC*, 615 F.3d 525, 532 (D.C. Cir. 2010).

"Congress has expressly delegated to the Commission the power to determine, after notice and comment, whether a proposed rule change is consistent with the Exchange Act." *Id.* at 533. The Commission's factual findings, "if supported by substantial evidence, are conclusive." 15 U.S.C. § 78y(a)(4). Its "determinations based upon highly complex and technical matters are entitled to great deference," even when "reasonable minds could differ" about what the evidence means. *Domestic Sec., Inc. v. SEC*, 333 F.3d 239, 248-249 (D.C. Cir. 2003) (internal quotation marks omitted).

## SUMMARY OF ARGUMENT

I. The Commission reasonably determined, after careful study, that D-Limit promotes just and equitable trading principles by achieving a more level playing field for all investors. The Commission relied on substantial evidence to find that latency arbitrage exists, harms investors and markets, and occurs on IEX during discrete moments when the Indicator triggers. The Commission also reasonably concluded that D-Limit will counteract latency arbitrage's detrimental effects in a highly targeted way, without disrupting or burdening other trading activity. And, based on the evidence and considered views of dozens of commenters, the Commission determined that D-Limit would benefit *all* market participants by enhancing price transparency and promoting on-exchange trading. The Commission's thorough analysis did not overlook any material considerations and is fully entitled to deference.

II. The Commission did not act arbitrarily and capriciously by approving D-Limit while disapproving securities exchange CboeEDGA's materially different proposal. As the Commission thoroughly explained, CboeEDGA's proposal differed in multiple respects, was not narrowly tailored, and could have *exacerbated* unfair discrimination in the market.

III. The Commission correctly determined that D-Limit orders are protected quotations under Rule 611. Trading centers must "immediately" execute or cancel protected quotations and update them to reflect changes in material terms. 17 C.F.R. § 242.600(b)(4). In approving IEX as an exchange in 2016, the Commission interpreted the word "immediately" to require exchanges to act with no more than *de minimis* delay. *See* 81 Fed. Reg. 40,785, 40,792-93 (June 23, 2016). The Commission determined that IEX's speed bump is a permissible *de minimis* delay, similar to (or less than) the delay caused by geographic latencies on other exchanges. *See* 81 Fed. Reg. at 41,161-62. D-Limit orders add no additional delay, and thus meet the "immediately" requirement. The Commission did not act arbitrarily and capriciously by adhering to its settled interpretation of "immediately," which is entitled to deference.

Citadel and its amici argue that the Commission did not consider various other issues, including unfairness, quote fading, access to best prices, and price discovery. The Commission, however, factored each of those issues into its analysis and reasonably concluded based on substantial evidence that D-Limit orders would benefit the market as a whole.

# ARGUMENT

## I. THE COMMISSION PROPERLY CONCLUDED THAT THE D-LIMIT ORDER PROMOTES FAIR AND EFFICIENT MARKETS AND IS NARROWLY TAILORED.

The Commission correctly determined that D-Limit is consistent with the Exchange Act because it "promotes just and equitable principles of trade," encourages "a free and open market," and safeguards "investors and the public interest." A98 [Order 54,451]. Abundant evidence provided by IEX and dozens of commenters supports that conclusion. Each of Citadel's challenges misses its mark, and together they amount to little more than an impermissible attempt to "second-guess" the Commission's considered judgment. *Bd. of Cnty. Comm'rs of Wash. Cnty v. U.S. Dep't of Transp.*, 955 F.3d 96, 99 (D.C. Cir. 2020).

### A. Substantial Evidence Shows That Latency Arbitrage Exists And Harms Investors.

Citadel first asserts that "[t]he Commission has never attempted to define latency arbitrage with any precision." Citadel Br. 25. Wrong: The Commission precisely defined latency arbitrage as "a race condition" during those "small increments of time" when the market is moving, "between liquidity providers who want to reprice their on-exchange displayed liquidity to reflect the changing market prices and the liquidity takers who want to take before those updates can occur." A64-65 [Order 54,442]. When "information asymmetries" allow liquidity takers to win that race, latency arbitrage occurs. *Id.* That definition is widely accepted and well-supported by the record. *See* A107 [XTX 1/17 at 1]; A152 [T. Rowe Price 2/5 at 1]; A273 [RBC 2/28 at 2]; A358 [Allianz 5/12 at 2].

The Commission also reasonably found that latency arbitrage, as "identified and quantified" in IEX's proposal, presents "a legitimate disadvantage" to "many market participants." A86-89 [Order 54,448-49]. The fear of getting "picked off" negatively impacts "the willingness of many market participants to post displayed liquidity." A62-65 [Order 54,442-43] (internal quotation marks omitted); *see* A173 [Council of Institutional Investors 2/11 at 2] (latency arbitrage is "a multi-billion-dollar tax on institutional investors"); A327 [Vanguard 4/23 at 2] ("This high-speed environment discourages all but the fastest market participants from posting their trading interest."). This reticence to display quotes publicly has led "to greater off-exchange trading," where securities are less transparent and accessible to investors, resulting in "harm" to "price discovery." A97 [Order 54,451]. The Commission concluded that all of this "negatively impact[s] markets and market participants." *Id.* That finding is conclusive and supports the Commission's reasonable determination that "[e]xchanges should be able to innovate to address this competitive imbalance." *Id.*

### B. Substantial Evidence Shows Latency Arbitrage Occurring When The Indicator Is On.

Citadel next claims that the Commission simply "accepted IEX's assumption that liquidity-taking trades when the [Indicator] was on were evidence of" latency arbitrage. Citadel Br. 35. But IEX provided ample data documenting a cluster of trading activity by a small subset of predatory high-speed traders targeting displayed liquidity at the moment the Indicator engages.

Citadel admits this data shows a "correlation" between trading and the Indicator, yet resists the conclusion that this is "latency arbitrage." *Id.* at 36. The Commission "critically reviewed and considered the data and analysis that IEX provide[d]," A87 [Order 54,448], along with numerous comments, and determined that "the market conditions that trigger activation of the [Indicator] are the same short-term market conditions that the most highly sophisticated latency-sensitive traders detect and seek to trade on." A66 [Order 54,443]; *see* Commission Br. 37-43 (describing record evidence).

The Commission determined that this trading was latency arbitrage by considering what it targeted and who was responsible. *See* A64 [Order 54,442 & n.62] (citing IEX's data and analysis at A55 [Order 54,440 & n.36]). In particular, the Commission determined that the Indicator comes on during "small increments of time" "when certain market-moving conditions are present," and that 24% of IEX's displayed volume was trading during an increment of time that averaged only 0.007% of the trading day per security. A55, 64, 87-88 [Order 54,440 & n.36, 54,442, 54,448]. The trading during that period executed against displayed liquidity at a much higher rate than non-displayed liquidity. A66 [Order 54,443]. Displayed quotations are visible to latency arbitrageurs, and the concentration of activity targeting displayed orders in the seconds when prices are in transition is "consistent" with latency arbitrage. *Id.* ("[W]hen the [Indicator] is on, the marketable interest IEX receives is not seeking merely to access liquidity on IEX in the normal course, but rather is seeking specifically to remove a displayed quote on IEX . . . .").

IEX and other commenters showed that a small subset of proprietary trading firms – which trade on their own capital and are incentivized to "invest in high speed infrastructure to predict price changes, leverage small latency advantages, and opportunistically trade against stale quotes," A153 [T. Rowe Price 2/5 at 2] – accounted for the vast majority of marketable orders sent during the two milliseconds the Indicator was on. *See* A345-346 [IEX 5/10 at 13-14] (describing data in detail); Commission Br. 27-29. Other traders, the Commission concluded, do not and cannot trade during those moments because they "have not purchased the fastest connectivity and market data from multiple individual exchanges that are necessary to be able to trade at the precise moments in time identified by the [Indicator]." A88 [Order 54,449]. An "investor's marketable order arriving randomly to IEX would have a 1 in 5,000 chance of arriving when the [Indicator] is on." A61 [Order 54,442 n.53] (citation omitted).

The agency's factual findings are conclusive. "[N]o commenter" submitted data contradicting IEX's data "on the existence of latency arbitrage, the effectiveness of the [Indicator] in detecting it, and the efficacy of IEX's discretionary order types in combating it." A87 [Order 54,448].

Citadel questions the reliability of the data IEX provided, based on IEX's classification of certain firms – including Citadel – as "proprietary." According to Citadel, some of its trading activity was on behalf of "retail investors." Citadel Br. 35. But Citadel carefully avoided telling the Commission and this Court how much of its trading activity when the Indicator is on is on behalf of retail investors,[5] and whether retail investors (as opposed to Citadel) benefit from routing retail orders at those moments. As the Commission explained, Citadel's trading activity purportedly on behalf of retail investors actually benefits Citadel. *See* A55-56 [Order 54,440 n.38] (noting that Citadel "is not directly routing the customer's order to exchanges, but rather is, for example, buying shares for its own account and selling shares to the customer"); *see* A391-394 [IEX 8/3 at 9-12]; A362 [Anonymous 5/13 at 3] (explaining that "Citadel has used information asymmetry to their own private benefit"). Notably, one of Citadel's key competitors in processing of retail orders, Virtu, wrote a letter *supporting* D-Limit. A105-106 [Virtu 1/16 at 1-2].

[5] The one number Citadel provides, that 15% of its retail trading arrives when the Indicator is on, Citadel Br. 40, is irrelevant. All that shows is that Citadel *chooses* to route some retail orders during those moments. *See supra* p. 8 n.3.

In any event, IEX also provided data excluding Citadel but including other members of FIA Principal Traders Group (of which Citadel is a member), which self-describes as "an association of firms that trade their own capital." A345 [IEX 5/10 at 13 & n.53] (internal quotation marks omitted). That data showed the same correlation. A55-56 [Order 54,440 n.38].

This case is therefore nothing like *Susquehanna International Group, LLP v. SEC*, 866 F.3d 442 (D.C. Cir. 2017). There, this Court rejected a rule change where the Commission demonstrated "unquestioning reliance" on a regulated entity's conclusions without knowing "what analysis" the entity conducted. *Id.* at 448-449. Here, IEX showed its work. It provided its data and analysis. The Commission relied on its own assessment of the record. Citadel suggests (at 42) that the agency could not act without *more* data. The Supreme Court disagrees. *See FCC v. Prometheus Radio Project*, 141 S. Ct. 1150, 1159-60 (2021) (agencies may make "reasonable predictive judgment[s] based" on "data from commenters").

### C. The Commission Reasonably Concluded That The D-Limit Order Benefits The Market And Is Narrowly Tailored To Address Latency Arbitrage.

Citadel's backup argument is that the D-Limit order is insufficiently tailored to address latency arbitrage. *See* Citadel Br. 41-44. The Commission reasonably concluded, however, that D-Limit orders accomplish their mission in a "very targeted" way that protects against latency arbitrage and benefits the market as a whole. A80 [Order 54,446].

As the Commission explained, additional data from the first four months of 2020 shows that, on average across all symbols, the Indicator was on between 0.026% of the trading day in January to 0.125% in March, one of the most volatile months for trading in recorded history. A68-69 [Order 54,443-44]; A349 [IEX 5/10 at 17]. The Commission found that "the [Indicator] accurately predicted the direction of the next price change" in a given security, with a "75% accuracy rate," and "its application to D-Limit orders is well understood" even during periods of volatility. A70, 87-88 [Order 54,444, 54,448-49] (internal quotation marks omitted).

Thus, D-Limit orders provide protection from latency arbitrage when it matters – while behaving like a standard limit order for 99.9% of the trading day. In the Commission's view, this narrowly tailored solution promotes the Exchange Act's goal of "just and equitable" markets that are "free and open," 15 U.S.C. § 78f(b)(5), by alleviating the burdens imposed by unequal access to technology and data. *See* A65-67 [Order 54,443]. This Court should defer to the Commission's reasonable interpretation of the Act's open-textured goals. *See NetCoalition*, 615 F.3d at 534-535.

Citadel claims that the Commission did not consider whether D-Limit orders might affect market "sweeps" when retail orders are sent to multiple exchanges to fill a large order. Citadel Br. 41. The Commission fully evaluated and rejected Citadel's argument, explaining that "market participants can, and generally do, account for" differences in exchange latencies and functionality with basic order-routing strategies. A59 [Order 54,441 & n.50]; *see* Commission Br. 29 (describing how market participants can use routing technology to avoid triggering the Indicator). Multiple commenters confirmed that they routinely use these commonplace routing techniques to ensure orders reach different exchanges at the same time, taking into account known latency differences and other factors affecting the time it takes for orders to reach each exchange. A59-61 [Order 54,441]; *e.g.*, A271 [Goldman Sachs 2/26 at 4] (D-Limit "does not increase th[e] complexity" of "order routing strategies").[6]

Citadel contends (at 45) that "IEX did not provide any estimate of the costs" of smart-routing technology. The Commission, however, found that technology "affordable and readily-available." A61 [Order 54,442]. Citadel also argues (at 45) that traders should not be expected to adjust their routing to "prioritize[]" IEX. But traders *already* route to account for geographic latency and technological differences

[6] *Amicus* Andrew Vollmer suggests that hedging will trigger the Indicator. *See* Vollmer Br. 18. But "market makers hedge throughout the day and [i]t is not credible to suppose that orders from market makers sent to hedge risks on various markets happen to converge at IEX in the tiny time increments when the [Indicator] is on." A62 [Order 54,442] (internal quotation marks omitted).

between exchanges, including IEX's speed bump, each based on their own technology and location, and would not need to preference IEX. *See* A59 [Order 54,441 n.50]. To the extent Citadel complains that IEX's speed bump slows down its trading – and indeed it is *designed* to slow down trading to combat latency arbitrage – the Commission considered and rejected that concern years ago. The time to appeal that decision is over. *See* 81 Fed. Reg. at 41,161.

### D. The Commission Reasonably Concluded That D-Limit Orders Are Not Unfair Or Discriminatory.

Citadel asserts that D-Limit orders impose an unfair and discriminatory burden on liquidity takers. *See* Citadel Br. 44-47. Not so. The Commission determined that D-Limit orders impact only the very small group of traders that engage in latency arbitrage, while benefitting "all market participants" – *including* liquidity takers – through greater displayed liquidity and better price discovery. A90-91 [Order 54,449]. In situations like this, "when an agency's decision is primarily predictive," this Court "require[s] only that the agency acknowledge factual uncertainties and identify the considerations it found persuasive." *Rural Cellular Ass'n v. FCC*, 588 F.3d 1095, 1105 (D.C. Cir. 2009).

The agency did just that. It laid out competing views. *See* A74-89 [Order 54,445-49]. It considered them at length. And it ultimately found that the D-Limit order "is not unfairly discriminatory because it makes available a benefit that any liquidity provider can readily access and provides a narrowly focused protection that is calibrated to impact only the small number of liquidity takers that engage in latency arbitrage," ultimately "incentiviz[ing] liquidity providers to post orders for the benefit of all market participants." A90-91 [Order 54,449].

That conclusion is far from arbitrary and capricious. It reflects substantial data and the overwhelming support for D-Limit orders by a broad range of industry participants that manage "well over $13 trillion in assets," including institutional giants like Goldman Sachs, T. Rowe Price, and Vanguard; large pension funds; state regulators; and members of Congress. A335-338 [IEX 5/10 at 3-6] (summarizing comments); A153-154 [T. Rowe Price 2/5 at 2-3] (D-Limit orders would benefit T. Rowe Price's liquidity taking). Likewise, high-speed market makers like Virtu and XTX support D-Limit. *See* A106 [Virtu 1/16 at 2]; A107 [XTX 1/17 at 1]. This Court should uphold the Commission's considered judgment. *See Rural Cellular Ass'n*, 588 F.3d at 1105.[7]

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[7] Citadel faults the Commission for failing to respond to a study it cited regarding an asymmetrical speed bump in Canada. *See* Citadel Br. 45. But the Canadian speed bump differed in crucial ways – it applied nearly all the time, to nearly all orders, and could be avoided only by paying a fee. H. Chen et al., The Value of a Millisecond: Harnessing Information in Fast, Fragmented Markets 2-3 & n.5 (Nov. 18, 2017) (unpublished manuscript), *available at* https://bit.ly/3mAzgWR. The Commission need not respond to comments that do not raise "significant problems." *Reytblatt v. U.S. Nuclear Regul. Comm'n*, 105 F.3d 715, 722 (D.C. Cir. 1997).

Citadel suggests that D-Limit orders are discriminatory because they involve "selecting winners" in some transactions. Citadel Br. 46. That argument is facile.[8] As this Court has explained, the Exchange Act "prohibits 'unfair discrimination,' not 'discrimination,' *simpliciter*." *Timpinaro v. SEC*, 2 F.3d 453, 456 (D.C. Cir. 1993), *as amended* (Nov. 9, 1993). It likewise prohibits only those burdens that are "not necessary or appropriate in furtherance of" the Act's other "purposes." 15 U.S.C. § 78f(b)(8). D-Limit orders make it more difficult for latency arbitrageurs just as steroid regulations make it more difficult for runners on steroids. Both level the playing field. *See* Commission Br. 44-46. The Commission reasonably found IEX may counteract the "specific harm" of latency arbitrage. A89-90 [Order 54,449]. The agency is entitled to make such "policy decisions." *Domestic Sec.*, 333 F.3d at 249.

### E. The Commission Adequately Considered The Effect Of Further Adoption Of D-Limit Orders.

Last, Citadel and its amici complain that the Commission "[i]gnored" the possibility of widespread adoption of D-Limit orders. Citadel Br. 47; *see* NYSE Br. 13-15. The Commission – again – did not "ignore" anything. It explained that "[t]o the extent that another exchange seeks to adopt its own speed bump, [Indicator], and

[8] In fact, an exchange that enables latency arbitrage by selling speed or co-location advantages could be accused of "selecting winners." *See* Commission Br. 14-15.

D-Limit order type, the Commission would carefully analyze it and the comments received thereon, and consider whether the new proposal is narrowly tailored to achieve its stated objectives and consistent with the Exchange Act and the rules and regulations thereunder." A79-80 [Order 54,446 n.114]. That explanation comports with the Commission's longstanding position that such "concerns" are "addressed by the existing requirements and process through which exchanges publicly propose their rule changes under the Act, and [such proposals] would be scrutinized on an individual basis." 81 Fed. Reg. at 40,790.

The Commission did not act arbitrarily and capriciously by analyzing the effects of the proposed rule change before it, while reserving analysis of future rule changes for future proceedings. It would be arbitrary and capricious for the Commission to deny approval of the D-Limit order, despite concluding that it is a beneficial market innovation, based on the hypothetical possibility that other exchanges might adopt it. *See TOMAC, Taxpayers of Mich. Against Casinos v. Norton*, 433 F.3d 852, 864 (D.C. Cir. 2006) (agency "under no obligation to hypothesize about future regulations"). Before other exchanges can adopt D-Limit orders (or similar order types), moreover, the Commission will carefully analyze each proposal, providing ample opportunity to evaluate its potential market impact. *See* 15 U.S.C. §§ 78f, 78s(a)-(b).

As the Commission concluded, "[e]xchanges should be able to innovate to address . . . competitive imbalance in a manner that is consistent with the Exchange Act." A80 [Order 54,446-47]. The high-speed technology that enables latency arbitrage continues to evolve, and exchanges must be permitted to maintain market integrity and ensure a level playing field for all market participants. This Court should affirm the D-Limit order, which addresses a pressing market need and is carefully tailored to meet that need.

## II. THE COMMISSION FULLY EXPLAINED ITS DECISION TO APPROVE THE D-LIMIT ORDER WHILE REJECTING CboeEDGA's PROPOSAL.

Citadel argues (at 48) that the Commission acted arbitrarily and capriciously by approving the D-Limit order while rejecting a different proposal from CboeEDGA. But CboeEDGA's proposal differed "substantially," as the Commission fully explained. A93-94 [Order 54,450]; *see California Communities Against Toxics v. EPA*, 928 F.3d 1041, 1057 (D.C. Cir. 2019) (agency action not arbitrary and capricious when agency sufficiently explains different treatment).

### A. The Commission Explained The Material Differences Between The D-Limit And CboeEDGA Proposals.

The Commission identified key differences between the D-Limit order and CboeEDGA's proposal, justifying the different treatment of those proposals.

First, "IEX, unlike CboeEDGA, presented substantial evidence of latency arbitrage occurring on its market" and "narrowly tailored" its proposal to that threat.

A93 [Order 54,450]. Citadel generally maintains that "IEX and CboeEDGA made similar conclusory statements" and the D-Limit order is not "more 'narrowly tailored.' " Citadel Br. 49. But the D-Limit order is supported by detailed data and analysis mined from months of trading data across all IEX symbols, *supra* pp. 15-22, compared with CboeEDGA's "limited" information for just six stocks. 85 Fed. Reg. 11,426, 11,432 (Feb. 27, 2020). And the D-Limit order is plainly more narrowly tailored; it impacts liquidity takers 0.007% of the trading day. CboeEDGA's proposal, in contrast, permitted repricing *one hundred percent* of the trading day. CboeEDGA never explained why its proposal, rather than a more tailored approach like IEX's, was necessary to address latency arbitrage. A93-94 [Order 54,450].

Second, the D-Limit order automatically reprices quotations based on a transparent and publicly disclosed Indicator, and market participants "benefit equally regardless of their technological capabilities." *Id.* CboeEDGA's proposal, in contrast, permitted liquidity providers to change quotations *at their discretion* for four milliseconds – benefitting only those with the high-speed technology to update their quotes that quickly. *See id.* Such technology is "generally outside the reach for most institutional investors and their brokers." *Id.* (quoting A153 [T. Rowe Price 2/5 at 2]). The Commission thus rejected CboeEDGA's proposal in part because "slower liquidity providers" "would be unable to benefit." *Id.*

Third, and again unlike IEX, CboeEDGA did not "demonstrate that the proposed rule change would not permit unfair discrimination against liquidity taking orders that are not related to latency arbitrage." *Id.* (alterations and internal quotation marks omitted). Citadel's claim (at 50) that the IEX proposal is "identical" in this respect is wrong. The Commission explained that the D-Limit order automatically reprices quotations *only* when the Indicator is on – a few seconds of the trading day that coincide with the precise conditions for latency arbitrage. A94 [Order 54,450]. CboeEDGA's proposal allowed repricing all the time. *See id.*

**B. The Commission's Reasoning Is Consistent.**

Citadel cites two snippets from the CboeEDGA order that it claims "rely on contradictory reasoning" from the D-Limit approval. Citadel Br. 50. Not so.

First, the Commission stated that CboeEDGA "has not explained why providing a benefit without a corresponding obligation . . . to liquidity providers is consistent with the Act." 85 Fed. Reg. at 11,435. In contrast, IEX explained why the D-Limit order is narrowly tailored to address latency arbitrage and ultimately benefits all market participants. *See supra* pp. 19-22. As the Commission found, because "all traders" could "use D-Limit orders on the same terms," "D-Limit orders consequently have the potential to encourage more types of market participants to post more displayed liquidity on an exchange, and may contribute to price discovery and displayed depth" – benefitting liquidity takers *and* providers. A90 [Order

54,449]. Multiple commenters agreed, highlighting these important distinctions between the D-Limit order and CboeEDGA's proposal. *See, e.g.*, A153 [T. Rowe Price 2/5 at 2] (supporting D-Limit and opposing CboeEDGA's proposal as benefitting only "highly sophisticated market makers" (internal quotation marks omitted)); A212 [Healthy Markets 2/14 at 7] (similar).

Citadel also cites the Commission's statement in the CboeEDGA order that "a market participant's ability to adapt its business model or alter its trading strategies . . . does not, *by itself*, demonstrate that the proposal would not permit unfair discrimination, and the Exchange *has not provided adequate analysis* to support its assertion." 85 Fed. Reg. at 11,435 (emphases added). IEX, in contrast, demonstrated that the D-Limit order was narrowly tailored to address latency arbitrage, ultimately benefitting all market participants. *See supra* pp. 19-24. And IEX provided data and analysis supporting that conclusion, which the Commission evaluated and accepted. *See id.*

The Commission's well-reasoned explanation, which relies on technical expertise and policy judgment, is an example of how agency proceedings should work, not a reason to remand.

## III. THE COMMISSION CORRECTLY DETERMINED THAT THE D-LIMIT ORDER IS A PROTECTED QUOTATION AND IS CONSISTENT WITH THE EXCHANGE ACT.

Citadel's arguments on Rule 611 are hard to follow. Citadel's primary contention – that D-Limit orders cannot be protected quotations – is contrary to the Commission's settled interpretation of Rule 611. The remainder of Citadel and its amici's arguments have little to do with Rule 611, and instead reprise policy challenges to the D-Limit order that the Commission fully considered and reasonably rejected.

### A. The Commission Reasonably Adhered To Its Longstanding Interpretation of Rule 611.

Citadel claims (at 54) that the Commission "provided no actual explanation for why D-Limit orders qualify as 'protected quotations' " and failed to "respond to numerous comments" on that issue. Citadel and its amici ignore the Commission's longstanding and well-reasoned interpretation of Rule 611.

Under Rule 611, an exchange must adopt "written policies and procedures that are reasonably designed" to avoid executing orders at prices worse than "protected quotations" on other exchanges (called "trade-throughs"). 17 C.F.R. § 242.611(a)(1). To qualify as a protected quotation, a quote must (among other things) be "automated." *Id.* § 242.600(b)(4), (61)-(62). A quote is "[a]utomated" if the trading center displaying the quote "[i]mmediately and automatically executes an order marked as immediate-or-cancel against the displayed quotation up to its full size," "[i]mmediately and automatically cancels any unexecuted portion," "[i]mmediately and automatically transmits a response to the sender . . . indicating the action taken," and "[i]mmediately and automatically displays information that updates the displayed quotation to reflect any change to its material terms." *Id.* § 242.600(b)(4).

The Commission adopted Rule 611 to "promote market efficiency and further the interests" of "investors who submit displayed limit orders." 70 Fed. Reg. 37,496, 37,505 (June 29, 2005). Earlier regulations "were drafted for a world of floor-based markets," not automated trading, and required "order routers to wait for a response from a manual market" – a person rather than a computer. *Id.* at 37,501. Rule 611 addressed this inefficiency by protecting from trade-throughs "only automated quotations," thus reducing reliance on manual trading. *Id.*

When the Commission adopted Rule 611 in 2005, it interpreted "immediate[ly]" to require exchanges to respond typically "within one second after receipt of an order." *Id.* at 37,519. In approving IEX's exchange in 2016, the Commission clarified its interpretation of "immediately" to permit exchanges to adopt intentional *de minimis* delays, such as IEX's speed bump, when responding to orders. The Commission defined *de minimis* as "a delay so short as to not frustrate the purposes of Rule 611 by impairing fair and efficient access to an exchange's quotations." 81 Fed. Reg. at 40,792.[9] It further explained that due to the geographic and technological latencies of different exchanges, no quote on any exchange can execute "instantaneously," and the definition of "immediately" must accommodate the built-in delay inherent in all trading. *Id.* at 40,788-89. And the Commission determined that IEX's 350 microsecond speed bump – 1/1000th of a blink of an eye – is a *de minimis* delay comparable to, and even less than, the geographic and technological latencies already extant in the market. *See* 81 Fed. Reg. at 41,161-62.

Given that settled interpretation, as the Commission explained in this order, D-Limit orders are protected quotations because there is no more than *de minimis* delay between when a trader submits an order and when IEX responds to that order. *See* A81-83 [Order 54,447]. D-Limit orders are as "immediate" and "automated" as any other quotation on IEX, and equally qualify as protected quotations. "Because IEX is not introducing any new delay or modifying its speed bump in connection with D-Limit orders, IEX's quote can continue to be . . . 'protected' under Rule 611 . . . ." *Id.* The Commission did not act arbitrarily and capriciously by adhering to its longstanding interpretation of Rule 611.

[9] Citadel contends that this interpretation applies only to "*symmetrically* delayed quotations," Citadel Br. 55, but the Commission did not express such a limitation in its 2016 interpretation.

### B. Citadel's Interpretation Is Inconsistent With The Rule's Text And The Commission's Settled Interpretation.

Citadel appears to argue that the word "immediately" in Regulation NMS does not refer to the time it takes for an exchange to respond to an order, but instead whether an order successfully "takes" liquidity. *See* Citadel Br. 55-56. But Citadel does not explain how such an interpretation is consistent with the word "immediately," which describes a *metric of time*. *See supra* pp. 31-32.

Quotes change all the time. That happens on every exchange, and the "displayed price" viewed by a trader may "no longer be available for a number of reasons." A269 [Goldman Sachs 2/26 at 2]. Another liquidity taker may have gotten to the quote first; the liquidity provider may have repriced its quote; the quote may be pegged to the best price available nationally, which may change; or for a D-Limit order, IEX may have automatically repriced the quote. *See id.*; A61 [Order 54,441-42] (recognizing that liquidity providers can "change or cancel their quotes on IEX").[10] "The ability of any market participant to successfully execute against any particular displayed quote" is thus "subject to a number of factors and is not guaranteed on any market, as at any time any market participant can be seeking to

[10] Citadel mischaracterizes D-Limit orders by suggesting that when the Indicator engages, a D-Limit order is "inaccessible at the displayed price." Citadel Br. 56. Wrong: When the displayed price changes, the order is *immediately* accessible at the new price. *See* A51-52 [Order 54,439]; A269-270 [Goldman Sachs 2/26 at 2-3].

execute against an order that is being repriced, changed, cancelled, or executed by a different market participant." A75 [Order 54,445]. Put simply: *Every* protected quotation on *every* exchange may change before a liquidity taker can execute the trade.

The possibility that a quote may change does not render it "unprotected." The text of Regulation NMS recognizes that an immediate-or-cancel order may "cancel" – precisely *because* protected quotations (like all quotations) are constantly changing. 17 C.F.R. § 242.600(b)(4). Moreover, FIA Principal Traders Group raised this issue years ago, in the context of the Commission's 2016 interpretation of Rule 611, arguing that "intentional access delays, even de minimis ones" could "cause orders to be routed to protected quotes that are no longer available," which it said would "harm market transparency and degrade the value of the [national best bid and offer]." 81 Fed. Reg. at 40,788 (internal quotation marks omitted). The Commission rejected that concern: "Market participants today already necessarily experience very short delays in receiving updates to displayed quotations," which do not "impair fair and efficient access to protected quotations." *Id.* at 40,789. The Commission acknowledged that "latency-sensitive market participants" – like Citadel – may be "impact[ed]" by the delay between when they view a quotation and when their order reaches an exchange's matching engine, but that does not render a quote "unprotected" under Rule 611. *Id.*

The Commission in 2016 also rejected one commenter's proposed definition of "immediate[ly]" that "is not 'elapsed-time dependent' " but turns on "an exchange's response to an incoming order." *Id.* at 40,790 n.55. The Commission found that "an order-by-order determination of whether a quotation is 'protected' could introduce unworkable complexity into order routing and could frustrate the incentive provided to market participants to post the resting displayed limit orders that underpin much of the price discovery in the market." *Id.* Citadel ignores that the Commission years ago evaluated and rejected the argument it reprises here.

The Commission's interpretation of Rule 611, published in the Federal Register following extensive notice-and-comment, is authoritative. *See id.* at 40,788-90. It is based on the agency's substantive expertise with how exchanges actually work in the modern world, including its recognition of inherent geographic latency and its effect on latency-sensitive traders. *Supra* p. 31. And it reflects the agency's fair and considered judgment predating this litigation. *See id.* It is entitled to deference. *See Kisor v. Wilkie*, 139 S. Ct. 2400, 2416-18 (2019).

### C. The Commission Fully Considered Whether D-Limit Orders Are Unfairly Discriminatory.

Citadel argues that the Commission violated its "statutory obligation" to "closely scrutinize asymmetric delays," citing the Commission's 2016 comment that it "would be concerned about access delays that were imposed only on certain market participants." Citadel Br. 52-54 (citing 81 Fed. Reg. at 40,792 n.75).[11] D-Limit orders, however, are not "asymmetric." They do not impose delays "only on certain market participants." They function automatically based on a publicly disclosed formula – without input from either liquidity takers or providers – and are available to all market participants. *Supra* pp. 8-9. That is one reason the Commission approved the D-Limit order while rejecting CboeEDGA's proposal. *Supra* p. 27; *see* 85 Fed. Reg. at 11,434 (describing CboeEDGA's proposal as an "asymmetric speedbump").

Even if the D-Limit order could be considered an "asymmetric" delay, the Commission explained that it would scrutinize such delays to determine whether "the discriminatory application of that delay is unfair" under "the [Exchange] Act." 81 Fed. Reg. at 40,792 n.75. Here, the Commission carefully examined the D-Limit order and concluded that it "is not unfairly discriminatory" under the Exchange Act and "should benefit all market participants." A90-91 [Order 54,449]. The Commission thus did precisely what Citadel says it failed to do.

### D. Citadel And Its Amici's Remaining Challenges Are Meritless.

Citadel and its amici raise an additional grab-bag of arguments unconnected to Rule 611, *see* Commission Br. 57-59, and that the Commission fully addressed in

[11] Citadel does not identify the source of this "statutory obligation."

any event. Citadel contends that the D-Limit order "institutionalizes quote fading" and "maybe" quotations. Citadel Br. 23, 56. It also points to the Commission's 2016 footnote discussing IEX's repricing of non-displayed pegged orders that "an access delay that does not allow the repricing of displayed orders does not impact an exchange's displayed quotation, and cannot be said to lead to 'maybe' quotations." 81 Fed. Reg. at 41,156 n.216.[12]

The Commission, however, fully examined "quote fading" in the context of the D-Limit order and found that "[g]iven how narrowly tailored the [Indicator] is and how infrequently it activates, IEX's D-Limit order type will not result in the average market participant experiencing significant quote fading when trying to take liquidity on IEX, though . . . it will by design effect speed traders engaging in latency arbitrage." A80-81 [Order 54,447]. That finding is conclusive. The Commission concluded, moreover, that D-Limit orders will *improve* "displayed liquidity" – rather than lead to "phantom" liquidity. A78-81 [Order 54,446-47]. That conclusion is based on record evidence. *See* A76-78 [Order 54,445-46] (describing comments

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[12] This comment described a scenario where (the commenter claimed) a liquidity taker would be unable to "sweep" a pegged order. *See* Markit Comment Letter at 3 (Apr. 18, 2016), https://www.sec.gov/comments/s7-03-16/s70316-18.pdf. The Commission reasonably declined to revisit a five-year-old, footnoted statement addressing a hypothetical challenge to a different order type. And the Commission here determined that D-Limit orders would not affect market sweeps. *See supra* pp. 20-21.

from "institutional investors and asset managers," including T. Rowe Price, that "D-Limit orders" will not be "less accessible").

As major asset managers – including the Ontario Teachers' Pension Plan and the California State Teachers Retirement System – stated, D-Limit orders "will likely be more accessible to traditional investors than quotes on other exchanges" because "other exchanges with protected quotations sell multiple speeds of technology and data, which may make their quotations less accessible to those who do not purchase the same tier of access from the exchange." A77 [Order 54,446 n.102] (internal quotation marks omitted); *see, e.g.*, A220 [Baird 2/19 at 3] (D-Limit quotations will "be as, or more, accessible compared to protected quotes on other markets."); A223 [London Company 2/20 at 2] ("D-Limit orders will be as accessible . . . as any other liquidity is available today from other venues.").[13]

For their part, Citadel's amici assert that the D-Limit order "frustrates one of the purposes of" Rule 611 by preventing investors from finding "the best price

[13] IEX's co-founder stated in a 2016 article that IEX did not seek to contribute to quote fading, and IEX has likewise explained that it seeks to avoid "a deleterious effect on liquidity for investors attempting to access . . . quote[s]." Citadel Br. 13-14, 54. As the Commission concluded, the D-Limit order "will not result in the average market participant experiencing significant quote fading" and will *improve* access to liquidity. A80-81 [Order 54,447].

available." NYSE Br. 11[14]; *see also* Vollmer Br. 6-7. NYSE complains that it must route orders to IEX "if IEX alone is displaying the best price at the time of routing," and a quote subject to a D-Limit order may update before the order reaches IEX's matching engine. NYSE Br. 10-11. As the Commission has explained, however, a quote on *any* exchange may change before an order reaches the exchange. That possibility does not render a quotation "unprotected." *See* supra pp. 33-34. Further, the Commission reasonably concluded that D-Limit orders would benefit liquidity takers, who "would have access to more liquidity at the best prices." A92 [Order 54,450 n.151].

Amici also argue that D-Limit orders "would result in less true price discovery." NYSE Br. 11; *see* Vollmer Br. 4-8. The Commission reasonably rejected that argument, concluding that D-Limit orders will encourage more displayed orders by protecting liquidity providers "against being 'picked off' when the conditions for latency arbitrage are present," resulting in *more* price discovery. A65-66 [Order 54,442-43]. Without that kind of protection, liquidity providers would "trade in the dark, either off exchange or through non-displayed exchange

[14] Amicus NYSE is more aptly described as a friend of Citadel rather than a friend of the Court. Citadel is *the* dominant market-maker on the NYSE floor. *See* Hayley McDowell, *Citadel Securities expanding trading floor unit at NYSE with IMC takeover*, The Trade (Oct. 9, 2020), https://www.thetradenews.com/citadel-securities-expands-trading-floor-unit-at-nyse-with-imc-takeover. That might explain why NYSE, despite not commenting below, filed a brief.

order types," which "does not advance the Exchange Act's goal of promoting fair and orderly securities markets." *Id.* (citing record evidence). To the extent Citadel's amici suggest that D-Limit orders *set* prices, that is false (and irrelevant to Rule 611); investors choose prices and use D-Limit orders to update those prices through a publicly disclosed formula when market prices change. *See supra* pp. 8-10; A73-74 [Order 54,445].

Finally, Citadel's amici argue that the Commission fundamentally departed from the purposes of Regulation NMS. Nothing is further from the truth. When it adopted Regulation NMS, the Commission explained that its "core concern" is "the welfare of long-term investors," not "short-term traders." 70 Fed. Reg. at 37,500-01. The Commission did not violate Regulation NMS by protecting the interests of long-term investors. *See* A173 [Council of Institutional Investors 2/11 at 2] ("[I]t makes no sense to define as 'protected' only quotes that provide investors no protection against speed trading strategies.").

## IV. IF THIS COURT REMANDS, IT SHOULD DO SO WITHOUT VACATUR.

Citadel's petition should be denied. If the Court determines that further agency review is necessary, however, it should remand without vacatur.

When considering whether to vacate an agency action, this Court considers "the seriousness of the order's deficiencies (and thus the extent of doubt whether the agency chose correctly) and the disruptive consequences of an interim change that may itself be changed" if the agency reaches the same conclusion on remand. *Am. Equity Inv. Life Ins. Co. v. SEC*, 613 F.3d 166, 179 (D.C. Cir. 2010) (internal quotation marks omitted). Those factors counsel strongly in favor of remand without vacatur here. Citadel's arguments, to the extent any have merit, can be adequately addressed on remand. The existing data, and widespread support for D-Limit orders, clearly "suggest . . . that on remand the [Commission]" would "be able to provide" the necessary "support." *Timpinaro*, 2 F.3d at 459; *see Allied-Signal, Inc. v. U.S. Nuclear Reg. Comm'n*, 988 F.2d 146, 151 (D.C. Cir. 1993).

Prohibiting D-Limit orders for the interim period – or revoking their status as "protected quotations" – would be highly disruptive. Citadel never sought a stay before the Commission or from this Court. D-Limit orders have been available since October 2020 and are treated as protected quotations. Investors and exchanges have adjusted their trading to account for D-Limit orders. And D-Limit orders are having the intended effect: Since their introduction, displayed liquidity quoting the best price on IEX's exchange has risen from about 10% to 40% of the trading day, and IEX has gone from displaying under 1,000 symbols per day at the best price to over 3,000 – the precise outcome the Commission identified as benefitting *all* market participants. *See* Ronan Ryan, *To D-Limit and Beyond: Impact on IEX Exchange and the Broader Market*, Medium (Mar. 31, 2021), https://medium.com/boxes-andlines/to-d-limit-and-beyond-impact-on-iex-exchange-and-the-broader-market-f6cdae210ca0. In these circumstances, vacatur is inappropriate.

## CONCLUSION

For the foregoing reasons, and those in the Commission's brief, the petition should be denied.

Respectfully submitted,

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May 26, 2021

## CERTIFICATE OF COMPLIANCE

1. This document complies with the type-volume limit of Circuit R. 32(e)(2)(B) because, excluding the parts of the document exempted by Fed. R. App. P. 32(f), this document contains 9,087 words.

2. This document complies with the typeface requirements of Fed. R. App. P. 32(a)(5) and the type-style requirements of Fed. R. App. P. 32(a)(6) because this document has been prepared in a proportionally spaced typeface using Microsoft Word for Office 365 in 14-point Times New Roman.

/s/ Catherine E. Stetson
Catherine E. Stetson

**ADDENDUM**

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**17 C.F.R. § 242.600(b)(4)**

**§ 242.600 NMS security designation and definitions.**

* * *

(b) For purposes of Regulation NMS (§§ 242.600 through 242.612), the following definitions shall apply:

* * *

(4) *Automated quotation* means a quotation displayed by a trading center that:

(i) Permits an incoming order to be marked as immediate-or-cancel;

(ii) Immediately and automatically executes an order marked as immediate-or-cancel against the displayed quotation up to its full size;

(iii) Immediately and automatically cancels any unexecuted portion of an order marked as immediate-or-cancel without routing the order elsewhere;

(iv) Immediately and automatically transmits a response to the sender of an order marked as immediate-or-cancel indicating the action taken with respect to such order; and

(v) Immediately and automatically displays information that updates the displayed quotation to reflect any change to its material terms.

* * *

## CERTIFICATE OF SERVICE

I certify that on May 26, 2021, the foregoing brief was electronically filed through this Court's CM/ECF system, which will send a notice of filing to all registered users.

/s/ Catherine E. Stetson
Catherine E. Stetson