UNITED STATES OF AMERICA
before the
SECURITIES AND EXCHANGE COMMISSION

In The Matter of the Application of:

SECURITIES INDUSTRY AND FINANCIAL MARKETS ASSOCIATION

for Review of Actions Taken by Self-Regulatory Organizations

Admin. Proc. File No. 3-15350

The Honorable Brenda P. Murray,
Chief Administrative Law Judge

THE SECURITIES INDUSTRY AND FINANCIAL MARKETS ASSOCIATION'S OPENING BRIEF

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The Securities Industry and Financial Markets Association (SIFMA) respectfully submits this brief seeking reversal of the Initial Decision rendered by Chief Administrative Law Judge (Chief ALJ) Brenda Murray in this matter.

INTRODUCTION

In *NetCoalition I*, the D.C. Circuit set aside the Commission's order approving NYSE Arca's fees for its flagship depth-of-book data product, ArcaBook. *NetCoalition v. SEC*, 615 F.3d 525 (D.C. Cir. 2010). The court held that the Commission, supported by NYSE Arca and Nasdaq (the Exchanges), had failed to provide a reasoned basis or substantial evidence to find that significant competitive forces constrained NYSE Arca's fees. *Id.* at 539–44. Three years later, in *NetCoalition II*, the D.C. Circuit held that it lacked jurisdiction to review the Commission's non-suspension of fees that became effective without Commission approval, but reaffirmed that "there must be evidence that competition will in fact constrain pricing for market data before the Commission approves a fee charged for market data premised on a competitive pricing model." *NetCoalition v. SEC*, 715 F.3d 342, 354 (D.C. Cir. 2013).

Following *NetCoalition II*, SIFMA filed applications challenging the Exchanges' depth-of-book data fees under Section 19(d) of the Securities Exchange Act, 15 U.S.C. § 78s(d), consistent with the Commission's representations to the D.C. Circuit that it would "make the section 19(d) process available to parties seeking review of unreasonable fees charged for market data, thereby opening the gate to [the D.C. Circuit's] review." *NetCoalition II*, 715 F.3d at 353. Given the D.C. Circuit's focus "on the state of the record," the Commission referred two of SIFMA's challenges to an ALJ "for development of the record and preparation of an initial decision." Order Establishing Procedures and Referring Applications for Review to Administrative Law Judge for Additional Proceedings, Release No. 34-72182, at 19–20.

The Chief ALJ held a week-long hearing in April 2015. At the hearing, the Exchanges attempted to meet their burden of showing that their fees are consistent with the Exchange Act under the "market-based" approach adopted by the Commission in the ArcaBook order. Contradicting the statements of their own officers—who have repeatedly affirmed in statements outside the courtroom and to the investing public that their market-data business does not "experienc[e] pricing pressure," SIFMA-283 at 19—the Exchanges claimed inside the courtroom that the pricing of their depth-of-book data is constrained by "significant competitive forces." In support, the Exchanges relied principally on the same theories the D.C. Circuit rejected in *NetCoalition I*, namely, that their depth-of-book data fees are significantly constrained by the availability of alternative depth-of-book data products and by competition for order flow.

In response, SIFMA showed that not only had the Exchanges failed to carry their burden of proving that their fees are subject to significant competitive constraints, but that the evidence overwhelmingly establishes the opposite—that the Exchanges possess significant market power over their exclusive depth-of-book data products and thus can charges prices well above those that would prevail in a competitive market. Most importantly, SIFMA showed that the evidence presented by the Exchanges' own experts establish the almost complete lack of substitution in response to significant increases in the price of the Exchanges' depth-of-book data products. The evidence further shows the Exchanges have repeatedly imposed—in the words of Nasdaq's head of market-data sales—"naked price increases" on the very firms the Exchanges claim have leverage over data pricing due to their order flow. Tr. 604–05; NQ-526. And the Exchanges' high—and constantly proliferating—fees severely limit access to their data, undermining the investor protection and transparency goals of the Exchange Act.

After post-hearing briefing by the parties, the Chief ALJ issued her Initial Decision on June 1, 2016.[1] Adopting the Exchanges' arguments virtually wholesale, and either ignoring altogether or erroneously rejecting SIFMA's arguments and evidence, the Chief ALJ concluded that "th[e] record supports the Exchanges' position that their depth-of-book fee rules are constrained by significant competitive forces." Initial Decision 43. Specifically, the Chief ALJ concluded that (1) alternative depth-of-book products from other exchanges are a significant competitive force, *id.* at 33–36, 42–43; (2) shifts in order flow and threats of shifting order flow provide a significant competitive force in the pricing of the Exchanges' depth-of-book data, *id.* at 37–42; (3) the Exchanges' cost and profit margin data are not required to assess market power, *id.* at 31–33; and (4) there is no "substantial countervailing basis" to find that the Exchanges' depth-of-book data fees are inconsistent with the Exchange Act, *id.* at 43–44.

The Commission should reverse the Initial Decision because it embodies clearly erroneous "finding[s] or conclusion[s] of material fact" and erroneous "conclusion[s] of law." SEC Rule of Practice 411(b)(2)(ii)(A)–(B). The Initial Decision's reasoning and conclusions are fundamentally and thoroughly flawed. The Initial Decision uncritically adopts the Exchanges' positions without meaningfully addressing SIFMA's countervailing evidence and arguments; it wrongly rejects the most probative evidence of significant market power in the record; it entirely fails to address important issues and evidence; and it draws erroneous and unsupported economic inferences from the evidence. When basic economic principles are properly applied to the undisputed facts, the absence of significant competitive constraints—and the presence of significant market power—is clear. Accordingly, the Commission should reverse the Initial Decision and vacate the Exchanges' fees.

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[1] On June 28, 2016, the Chief ALJ made minor changes to the Initial Decision in response to SIFMA's motion to correct manifest errors of fact.

LEGAL STANDARD

The question presented is "whether the challenged rules should be vacated under the statutory standard set forth in Exchange Act Section 19(f)—as informed by the two-part test set out in [the Commission's] 2008 ArcaBook Approval Order [and] the D.C. Circuit's decision in *NetCoalition I*." Referral Order 20. Under Section 19(f), the Exchanges bear the burden of proving that their fees are "consistent with the purposes of [the Exchange Act]." 15 U.S.C. § 78s(f). As the Commission explained to the D.C. Circuit in *NetCoalition II*, "the section 19(f) standard is identical to that applied both in *NetCoalition I* and in ordinary approval proceedings under section 19(b)(2)(C)," 715 F.3d at 352, which requires the Commission to find that the fees are "consistent with the requirements of [the Exchange Act]." 15 U.S.C. § 78s(b)(2)(C)(i).[2]

One of the Exchange Act's express purposes is to assure "the availability to brokers, dealers, and investors of information with respect to quotations for and transactions in securities," *i.e.*, market data. 15 U.S.C. § 78k-l(a)(1)(C)(iii). "To ensure the wide availability and equitable dissemination of market data, section 11A requires exclusive processors of proprietary market data such as [the Exchanges] to distribute that data on terms that are 'fair and reasonable' and 'not unreasonably discriminatory.'" *NetCoalition II*, 715 F.3d at 345 (internal citation omitted) (citing 15 U.S.C. § 78k-1(c)(l)(C), (D)). In addition, "Section 6 of the Exchange Act requires that the rules of national securities exchanges, *inter alia*, 'provide for the equitable allocation of reasonable dues, fees, and other charges among its members and issuers and other persons using its facilities'; 'promote just and equitable principles of trade'; and do not 'permit unfair discrimination between customers, issuers, brokers, or dealers' or 'impose any burden on

[2] A more detailed background of the *NetCoalition* cases and the Exchanges' depth-of-book data fees is set forth in the Commission's referral order, as well as in SIFMA's post-hearing brief to the Chief ALJ (at 4–15).

competition that is not necessary or appropriate in furtherance of the purposes of' the Exchange Act." *Id.* (citing 15 U.S.C. § 78f(b)(4), (5), (8)); *see also NetCoalition I*, 615 F.3d at 528, 538.

In the ArcaBook order, the Commission adopted a "market-based approach" to determining whether an exchange's depth-of-book data fees comply with the Exchange Act. 73 Fed. Reg. 74770 (Dec. 9, 2008). Under this approach, the Commission first "ask[s] whether the exchange was subject to significant competitive forces in setting the terms of its proposal for non-core data, including the level of any fees." *Id.* at 74781. If so, "the Commission will approve the proposal unless it determines that there is a substantial countervailing basis to find that the terms nevertheless fail to meet an applicable requirement of the Exchange Act." *Id.* "If, however, the exchange was not subject to significant competitive forces in setting the terms of a proposal for non-core data, the Commission will require the exchange to provide a substantial basis, other than competitive forces, in its proposed rule change demonstrating that the terms of the proposal are equitable, fair, reasonable, and not unreasonably discriminatory." *Id.*

ARGUMENT

I. The Initial Decision Erred In Concluding That Alternative Depth-Of-Book Products From Other Exchanges Are A Significant Competitive Force.

The central question in assessing market power is "the extent to which consumers will respond to an increase in the price of one good by substituting or switching to another." *Mobil Pipe Line Co. v. FERC*, 676 F.3d 1098, 1102 (D.C. Cir. 2012); *see* Phillip E. Areeda & Herbert Hovenkamp, *Antitrust Law* § 506 (3d ed. 2007) (Areeda) ("the degree of market power depends on the response of buyers to price changes"); Evans ¶ 51; Tr. 1069, 1134–37, 1175. As the D.C. Circuit explained in *NetCoalition I*, "[t]he inquiry into whether a market for a product is competitive ... focuses on the customer and, in particular, his price sensitivity—in economic terms, the product's 'elasticity of demand,'" *i.e.*, "'the rate at which customers will turn away

from the firm's product in response to a price increase or toward it in response to a price decrease.'" 615 F.3d at 542. The court found that the record lacked the evidence needed to determine whether the Exchanges have market power because it did "not reveal the number of potential users of the data or how they might react to a change in price." *Id.* at 542–43.

Remarkably, despite the D.C. Circuit's call for evidence of how traders respond to price changes, neither Exchange's economist analyzed this issue, even though only the Exchanges possess these data in systematic form. Tr. 1069, 1099–1100, 1167–68, 1284–85. But unlike in *NetCoalition I*, here the record does contain data on how customers respond to price changes. The data reported (but not analyzed) by the Exchanges' own economists show that very few depth-of-book data customers switch to another product or stop buying in response to significant price increases. *Id.* at 1066–67, 1134–35. Indeed, all three economists in this case agreed that the demand for the Exchanges' depth-of-book data is inelastic.[3] Evans ¶¶ 38–49; Tr. 310, 753.

The Chief ALJ nonetheless concluded that "depth-of-book products from different exchanges function as substitutes for each other." Initial Decision 33. That conclusion is clearly erroneous. The Chief ALJ wrongly rejected undisputed evidence showing the almost total absence of substitution in response to massive price increases—"the gold standard of evidence for evaluating whether there is market power." Tr. 1095; *see also* Tr. 1110. And she wrongly concluded that different depth-of-book data products are substitutes for each other based on

[3] The record contains four expert reports, which served as the expert witnesses' direct testimony. SIFMA submitted reports by its industry expert, Bernard Donefer (SIFMA-376), and its economic expert, David Evans (SIFMA-377). Nasdaq submitted a report by its economic expert, Janusz Ordover (NQ-601). And NYSE Arca submitted a joint report by its industry expert, Terrence Hendershott, and its economic expert, Aviv Nevo (NYSE-65). The reports are cited herein by name and paragraph number. Professor Donefer was the only expert or fact witness who presented actual depth-of-book data from the Exchanges to the Chief ALJ, and his report shows how the data differ between the Exchanges based on their unique order books.

evidence that does not even speak to that issue, let alone establish that the availability of alternative depth-of-book data products significantly constrains the Exchanges' fees.

A. The Initial Decision erred in rejecting evidence establishing that the demand for the Exchanges' depth-of-book data products is highly inelastic.

1. The record establishes that demand for the Exchanges' depth-of-book data products is highly inelastic. Although the Exchanges did not present comprehensive data showing how customers have responded to fee increases, *see* Tr. 92–93, the record contains two unambiguous examples showing that the vast majority of the Exchanges' depth-of-book customers do not substitute in the face of significant price increases, Tr. 359, 1066–67, 1109–10, 1134–35. These undisputed facts "provide powerful evidence that there is significant market power." Tr. 1124.

As to NYSE Arca: ArcaBook was free until 2009. In January of that year, NYSE Arca imposed what its own experts called "a significant price increase." Hendershott & Nevo ¶ 66. Professional users would now pay $30/month, nonprofessionals $10/month, and data-feed users $750/month. Because broker-dealers and other firms often have many users, the total fees paid by a single institution are usually a large multiple of these fees. Yet, despite this massive fee increase, hardly any ArcaBook customers stopped subscribing. The number of professional subscribers decreased by less than 2%, from 29,636 to 29,133, and the number of accounts fell by only about 5%, from 3,787 to 3,594. Hendershott & Nevo ¶ 74; Tr. 359. "That indicates that most of the subscribers who obtained ArcaBook could not find substitutes in the face of this massive price increase and decided to continue purchasing ArcaBook." Evans ¶ 39; *see* Tr. 1287 ("So massive increase in price, and less than 2 percent of the subscribers drop off. And that shows, in my view, some of the most decisive evidence I've seen of lack of substitution.").

As to Nasdaq: In April 2012, it imposed what its own economist agreed was a "material" price increase, Tr. 708, when it implemented a new $300/month fee for nondisplay usage (which

was previously covered by its $70/month professional fee), and more than doubled the overall fee cap for nondisplay usage from $30,000 to $75,000. 77 Fed. Reg. 21125 (Apr. 9, 2012).[4] Yet in the year following this significant price increase, Nasdaq lost at most only 3.1% of its depth-of-book revenue because of customer attrition.[5] Evans Ex. 3; Tr. 1296–98. And Nasdaq lost only .2% of its revenue to customers who went to NYSE Arca—even though NYSE Arca at that time did not charge separately for internal nondisplay usage. Tr. 36, 128; Evans Ex. 3; SIFMA-380. Thus, as with NYSE Arca, Nasdaq's own data "sho[w] that the[re] are not significant substitutes because in the face of a significant increase in price for TotalView, there's very little evidence of customers either switching to other products or stopping their purchases altogether." Tr. 1299.

Given this undisputed evidence, even the Exchanges' economists had to concede that demand for the Exchanges' depth-of-book data products is inelastic. Tr. 310 (Nevo: "there's no disagreement about the fact that the demand for ArcaBook is inelastic"), 753 (Ordover: Nasdaq's "not ... very large" losses in response to fee increases "suggest to me ... inelastic ... demand"). And Nasdaq's CFO Lee Shavel has repeatedly told the investing public—and admitted in his testimony—the same thing in slightly less technical terms: that Nasdaq wields "strong pricing power" over its depth-of-book data products, because it can "raise the price ... without lowering the demand for th[e] product." Tr. 1384–88 (discussing SIFMA-298, -302, -386).

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[4] "Nondisplay usage" occurs when the data are used by a computer, for example, in algorithmic trading or smart-order routing. This is in contrast to "display" usage, when a customer views the data on a screen. Before the Exchanges imposed separate nondisplay fees, both kinds of usage were covered by the Exchanges' professional subscriber fees. Tr. 36, 43, 463–64.

[5] As Dr. Evans explained—and Nasdaq's economist agreed—the revenue lost as a result of a price increase, not a headcount of lost customers, is ultimately what matters most in assessing substitution. Tr. 752, 1294–96; *see* DOJ & FTC, *Horizontal Merger Guidelines* § 6.1 (2010). And these revenue figures likely overstate the amount of revenue Nasdaq lost because Professor Ordover's count of customer "losses" may include customers who simply switched to taking Nasdaq's data through a redistributor. *See infra* at 17.

2. The Chief ALJ nonetheless "reject[ed], as unpersuasive" this overwhelming evidence of inelastic demand. Initial Decision 35. This was error—not least because it unaccountably ignores the Exchanges' own concessions that demand is inelastic. Tr. 310, 753. The undisputed fact that demand is inelastic should end the discussion with regard to substitution. Inelastic demand, by definition, reflects the absence of good substitutes. Evans ¶¶ 21, 37, 39; *Mobil*, 676 F.3d at 1102; Areeda § 507 ("the demand for a product is more highly responsive to its price (i.e., its own-price elasticity will be larger) as substitutes are closer and more numerous").

Moreover, the reasons the Chief ALJ gave for rejecting the evidence of inelastic demand are clearly erroneous. She claimed, for example, that SIFMA "grossly mischaracterized" the extent of NYSE Arca's 2009 price increase. Initial Decision 35. But SIFMA did no such thing. NYSE Arca's own experts agreed that the price increase was "significant." Hendershott & Nevo ¶ 66. The percentage figures that SIFMA cited actually *understate* the extent of the price increase because they assumed the previous price was $1 rather than $0. Evans ¶ 38. In all events, the price increase was much larger than the 5%–10% increase economists normally focus on in assessing substitution. *Id.*; Tr. 1243–44. And the fact that the previous price was $0 strongly *reinforces* the striking lack of substitution, because changing from $0 to a positive price is a significant pricing event in response to which one would expect a substantial drop-off in demand if customers could readily switch or stop buying. Tr. 1216–19.

Further, the Chief ALJ cited no authority or evidence for her claim that it is "inappropriate" to use the pre-2009 price of $0 as a "baseline from which subscriber attrition is measured." Initial Decision 35. Neither Exchange's economist claimed the pre-2009 price was an improper baseline. And SIFMA's economist, Dr. Evans, explained that it did not matter to his conclusions whether the pre-2009 price was the competitive price, because if there were good

substitutes one would expect to see significant customer attrition in response to such a massive price increase, even if the prior price was below the competitive price. Tr. 1150–51, 1217–19. The Chief ALJ offered no basis for rejecting Dr. Evans's testimony, which is the only record evidence on this point. And her claim that "nothing in this record suggests that the Exchanges set depth-of-book data at a supracompetitive price," Initial Decision 42, ignores that the lack of substitution in response to significant changes in relative price is itself compelling evidence of significant market power. *See* Tr. 1220 ("The lack of substitution is inconsistent with NYSE Arca being constrained by competitive forces, and therefore, it is consistent with there being significant market power, and therefore, the ability to raise prices significantly above the competitive market."); Tr. 1175–76 ("I would, based on [the lack of substitution] believe that the prices being charged by NASDAQ and NYSE Arca are not at the competitive levels.").[6]

Likewise, the Chief ALJ cited nothing to support her claim that the trivial customer attrition in response to NYSE Arca's 2009 price increase is irrelevant because ArcaBook "was still ... cheaper than competing products from Nasdaq and New York Stock Exchange." Initial Decision 35. Again, Dr. Evans provided the only evidence on point, when he explained that if different depth-of-book products were good substitutes for each other, one would expect to see substitution in response to such a significant change in their relative price, regardless of whether ArcaBook was still cheaper than Nasdaq's and NYSE's products. Tr. 1246–47, 1254–55. Moreover, the Chief ALJ ignored that the BATS exchange continued providing its depth-of-book

[6] The Chief ALJ put the cart before the horse in suggesting it is necessary to observe "trader behavior in the face of a 'supracompetitive price' for depth-of-book data." Initial Decision 42. The whole point of analyzing whether customers can and do substitute alternative products in response to price changes is to determine whether sellers have the ability to set supracompetitive prices. If one already knew, *a priori*, that the seller's price was set at a supracompetitive level, there would be no need to analyze substitution.

data for free after the 2009 ArcaBook fee increase, and yet almost all of NYSE Arca's customers continued subscribing to NYSE Arca's more expensive ArcaBook. Tr. 1287.

In fact, the significant disparity in the prices of different exchanges' depth-of-book products further confirms they are not good substitutes. *See* Donefer Ex. 2; *In re Graphics Processing Antitrust Litig.*, 527 F. Supp. 2d 1011, 1022 (N.D. Cal. 2007) ("competitive market forces will tend to drive the prices of like goods to the same level"). "If depth-of-book data products from different exchanges were close substitutes, we would expect to see consumers purchasing only from the lowest-priced provider." Evans ¶ 52 n.62. Why, for example, was Nasdaq able to charge substantial fees for TotalView when ArcaBook was free? *See* Tr. 566–67, 1254. Why is NYSE able to charge $60/month to its professional subscribers for OpenBook, when Nasdaq's allegedly competing OpenView product costs only $6? *See* Tr. 439, 570–71. Why, if BATS's depth-of-book data product is a competitive threat, *see* Tr. 402, 479, 610, 676, 694, have the Exchanges not matched BATS's considerably lower prices? *See* Evans ¶ 76. Why did NYSE Arca's head of market data not even know the name of BATS's "competing" product? *See* Tr. 64. And why has Nasdaq *never* matched another exchange's price? *See* Tr. 571. The only plausible reason is that customers do not treat different depth-of-book products as substitutes for one another. The Chief ALJ ignored this fatal problem with the Exchanges' substitution theory.

Nor did the Chief ALJ provide any sound reason for rejecting the evidence concerning Nasdaq's 2012 price increase.[7] Again without citing any authority, and advancing an argument

[7] The Chief ALJ cited Nasdaq's 2003 price decrease as "evidence of trader behavior" in response to a price change. Initial Decision 43 & n.45. But market conditions in 2003 have little if any relevance to today's market given changed conditions, including the advent of decimalized and high-speed trading, that have greatly enhanced the need for depth-of-book data. *See* Donefer ¶¶ 46–47, 50. And it is arbitrary to rely on the 2003 price change, while (1) dismissing the more recent price changes cited by SIFMA, and (2) excusing the Exchanges' failure to produce evidence of how customers have responded to other recent price changes. *See* Tr. 92–93, 135.

that neither Nasdaq nor its economist made, the Chief ALJ claimed it is "unreasonable to expect" a sizeable reduction in revenue from the 2012 price increase because it affected only a "tiny group of subscribers." Initial Decision 35. This ignores that this "tiny group of subscribers" is responsible for the vast majority of Nasdaq's depth-of-book revenue. *See* SIFMA-133 at 11, 14 (top 20 customers represent over 80% of revenue); Tr. 400, 478. In any event, as the Chief ALJ recognized, *see* Initial Decision 35 n.39, Nasdaq has conceded that this group of nondisplay subscribers cannot constrain prices by substituting alternative depth-of-book data products, because they need the depth-of-book products from all the major exchanges. *See* Tr. 1344–45 (Nasdaq CFO conceding the data are "crucial for a category of traders" including "large banks, sophisticated market makers, algorithmic traders"), 715–16 (Ordover "not denying" that "some customers ... may need all the sources of market data"); *see also* Tr. 608, 1380–81.

The other reasons the Chief ALJ provided for dismissing the 2012 Nasdaq fee increase are simply incoherent. SIFMA did not need to "sho[w] any causative relationship" between the fee increase and the customers that left. Initial Decision 35. The point is that virtually all significant customers *remained* with Nasdaq after the fee increase, and the economic significance of that *fact* does not depend on any causal analysis. Nor does it matter whether Nasdaq raised its fees "to better reflect [the] value" of the data to customers. *Id.* This says nothing about whether other depth-of-book products are substitutes for Nasdaq's data. In a competitive market in which there are good substitutes, a firm's prices are set by the market, not by the firm's perception of the product's "value" to consumers. *See* Areeda § 503 ("The competitive firm would lose all of its sales if it raised its price above that being charged by its rivals."). A firm that can set prices based on what it believes customers will pay—the "value" to customers—has market power. *See Fortner Enters., Inc. v. U.S. Steel Corp.*, 394 U.S. 495, 503–

04 (1969) (when a seller has significant market power, some buyers, "whether few or many ... can be forced to accept the higher price because of their stronger preferences for the product").

Finally, the evidence of inelastic demand cannot be dismissed on the ground that "most of the price increases have affected a handful of large customers, rather than large numbers of subscribers."[8] Initial Decision 35–36. The D.C. Circuit squarely rejected the contention that the relatively small size of the current depth-of-book data market indicates a lack of market power: "that there are few buyers does not by itself demonstrate a lack of market power—which, after all, is 'the ability to raise price profitably by *restricting output*.'" *NetCoalition I*, 615 F.3d at 543; *see* Tr. 1300–02. As Nasdaq's own economist explained, "one of the hallmarks of anticompetitive behavior is an attempt to restrain supply for the purposes of raising the price." Tr. 680. Thus, the limited number of subscribers *confirms* that the Exchanges have significant market power. The profit-maximizing strategy for firms with significant market power is to extract higher prices (and thus greater profits) from customers whose demand is inelastic because the product is essential to them, even though this means sacrificing sales to other potential customers. *See Fortner*, 394 U.S. at 503–04; Evans ¶¶ 10, 36; Tr. 1071–72.

That is exactly what the Exchanges have done—found ways to "harvest" more revenue from customers for whom the data are essential. Tr. 593–94. The Exchanges conceded that their depth-of-book data products are essential to many market participants—consisting, according to Nasdaq, of "roughly 100 large banks and electronic trading firms." Nasdaq Post-Hearing Br. 3; *see* Tr. 715–16, 1344. It is these large customers that execute trades for institutional investors, such as pension funds and educational and charitable endowments. And it is precisely these firms that the Exchanges have targeted for "naked price increases" by, among other things, imposing

[8] NYSE Arca's 2009 price increase affected nearly 30,000 professional subscribers.

nondisplay fees for computer-based uses of the data. Tr. 43, 463, 585–94, 602–05. Thus, even if the Exchanges had shown that competition constrains the prices paid by customers who pay the nonprofessional fees (such as the retail brokers cited by the Chief ALJ, Initial Decision 36)—which they did not[9]—that would say nothing about whether the separate and much higher fees they charge to professional and algorithmic traders reflect significant market power. That these "groups reflect only a small percentage of all market participants," *id.*, does nothing to establish that the Exchanges' fees are competitively constrained, and is entirely consistent with supracompetitive pricing unconstrained by substitutes. The Chief ALJ's contrary conclusion directly conflicts with the D.C. Circuit's decision in *NetCoalition I*. *See* 615 F.3d at 543.

B. The Initial Decision erred in concluding that other evidence shows that depth-of-book data products from different exchanges are substitutes.

Having erroneously rejected the most probative—and damning—evidence of significant market power in the case, the Chief ALJ then compounded her error by finding that depth-of-book products from different exchanges function as substitutes for each other based on other evidence that does not remotely support that conclusion. None of the evidence the Chief ALJ cited shows that alternative depth-of-book data products are a "significant competitive force" that constrains the price of the Exchanges' depth-of-book data products.

1. The Chief ALJ relied on an analysis performed by NYSE Arca's experts purporting to show that "trading in securities is widely dispersed across exchanges." Initial Decision 33. But

[9] That some retail broker-dealers do not "directly purchase all depth-of-book data products from every major exchange," Initial Decision 36, does not mean that they treat different depth-of-book data products as substitutes. *See* Evans ¶ 51; Tr. 1253–55, 1305–09. A more plausible explanation is that depth-of-book data from all exchanges would be cost-prohibitive to provide to retail investors, so the broker-dealers who serve them must ration the kind and amount of data they can provide to them. *See* Donefer ¶ 62; *infra* at 38. In any event, the Exchanges presented no evidence of how retail brokers have responded to price changes and thus did not carry their burden of proving substitution. And the Exchanges' order flow theory does not apply to retail investors who do not route their own orders.

this analysis, which was based on *monthly* trading statistics, says absolutely nothing about whether traders treat depth-of-book products as substitutes. Even if a stock is traded on multiple exchanges in a given month, liquidity may fluctuate significantly from one exchange to another over the course of even a single day. Donefer ¶¶ 39–43, 47–49; Tr. 898–901. Many traders—particularly those needing to trade large blocks for institutional investors that may require liquidity from multiple exchanges—need real-time visibility into the order books of each of the major exchanges. Donefer ¶ 72; Tr. 816–17. And, as Professor Donefer showed through actual depth-of-book data, such data from the major exchanges differ markedly at a single point in time. Donefer ¶ 49 & Exh. 5 thereto. Thus, NYSE Arca's monthly "analyses are irrelevant for determining the need for depth-of-book data because they do not reflect the concentration in liquidity available at an exchange at the time when traders are seeking that liquidity."[10] Evans ¶ 72; *see* Tr. 895. Indeed, NYSE Arca itself *conceded* it "did not argue that the [concentration] analysis proved substitution." Post-Hearing Reply 7.

Further, trading for some equities—particularly mid- and small-cap stocks that are an important part of many investors' trading strategies—may be concentrated on a single exchange (typically, the listing exchange), such that an investor who stopped buying that exchange's depth-of-book data product would lose significant visibility. Donefer ¶¶ 48, 77; Ordover ¶ 41 ("certain stocks tend to be more heavily traded on a particular exchange"); Hendershott & Nevo ¶ 61(c) ("Stocks that exhibit concentrated trading volume are more likely to be small-cap and thinly traded stocks."); Tr. 414 ("Arca is not as strong in non NYSE listed issues."). Investors

[10] They also suffer from methodological flaws that cause them to understate the number of stocks for which trading is concentrated. Evans ¶ 72 n.83. For example, they improperly include trading on non-exchange trading venues, which do not provide depth-of-book data. *Id.*

cannot simply ignore these securities. Tr. 897 ("[A]s an investor, what I'm told is invest in large cap, small cap and mid cap. This is not an area that you can just ignore.").

The Chief ALJ also claimed that "price and quantity information can be correlated between the exchanges." Initial Decision 33. This purely theoretical claim, which is based on an academic article cited by NYSE Arca's experts, Hendershott & Nevo ¶ 92, also says nothing about whether traders in the real world can and do treat different depth-of-book products as substitutes. Tr. 1057–58; Evans ¶ 30 n.32. Contrary to the Chief ALJ's assertion, moreover, the article says nothing about price correlation. Tr. 176. As NYSE Arca itself explained, the study "concerned the correlation between *supply and demand* across trading venues, *not price correlation*." Post-Hearing Br. 31 n.35 (emphases added). In the real world, price matters.

Indeed, the notion that depth-of-book data products from different exchanges are substitutes for each other is not only divorced from reality, it is at odds with the basic underpinnings of modern market structure as devised by the Commission. If different exchanges' order books were truly "correlated" such that data from one exchange could be substituted for data from another, then why require market participants to "use reasonable diligence to ascertain the best market for the subject security and buy or sell in such market so that the resultant price to the customer is as favorable as possible under prevailing market conditions"? FINRA Rule 5310(a)(1). And why have an Order Protection Rule requiring orders to be routed to the venue with the best price? *See* 17 C.F.R. § 242.611; Donefer ¶ 43. These rules are necessary because each exchange's order book is unique and non-substitutable.[11] Donefer ¶¶ 26, 38–42, 72.

[11] The Division of Trading and Markets recently reached a similar conclusion when it advised that, under the Vendor Display Rule, a broker-dealer may not rely solely on the BATS One Feed, which "aggregates approximately 20% of the daily volume" in NMS securities, to provide quotations to a customer. Division of Trading and Markets, Denial of No-Action Request under Rule 603(c) of Regulation NMS (July 22, 2015). Just as a 20% "subset of consolidated market

2. The Chief ALJ's assertion that "switching between depth-of-book products is commonplace" could not be more contrary to the record. NYSE Arca's fact and expert witnesses could not identify a single example of "switching" between ArcaBook and another depth-of-book product. Tr. 137–38 (Brooks failing to "identify a customer that switched from TotalView to ArcaBook" or "between ArcaBook and TotalView"), 257–58 (Hendershott: "I'm not aware of" any customer "that switched from NYSE Arca to TotalView or the other way around"), 351–52 (Nevo: "I can't point to a particular case where someone had ArcaBook, switched to NASDAQ, [and] went back."). And Nasdaq's head of market-data sales, Oliver Albers, could identify only *three* customers who switched from TotalView to ArcaBook over the last ten years, and he identified *no* customers who switched from ArcaBook to Total View. Tr. 565–66.

Nor did Nasdaq's economist, Professor Ordover, demonstrate *any* switching, let alone "commonplace" switching. As Professor Ordover conceded, his "churn analysis"—including the "31 to 35 examples" of "switching" he identified at the hearing, Initial Decision 33—was incapable of demonstrating switching, or even customer attrition, because he could not tell whether the customers he counted as "losses" had in fact simply switched from taking Nasdaq's data directly from Nasdaq to taking the data through a redistributor such as Bloomberg.[12] Tr. 767–68, 774–77; Evans ¶¶ 41–42; Donefer ¶¶ 78–80. But even if Professor Ordover's "31 to 35 examples" were in fact instances of switching, that number of switches over an eight-year period would still be insignificant. Tr. 780 ("the vast majority is staying with NASDAQ"). And the revenue Nasdaq lost from the alleged switchers—which Professor Ordover agreed is the

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data" was inadequate there, depth-of-book data from one exchange is no substitute for depth-of-book data from other exchanges.

[12] The "churn analysis" also did not reveal whether the alleged "losses" were firms that left the industry or otherwise stopped subscribing for reasons unrelated to price. Evans ¶¶ 41–42; Donefer ¶¶ 78–80; Tr. 444, 767–68, 774–77. It thus did not speak to the relevant question—how customers respond to price changes. *See* Tr. 1138–39, 1308–09.

appropriate metric for assessing substitution, though he did not analyze it, Tr. 752, 771–72, 1294–96—was even more trivial. Evans ¶ 47 & Ex. 3. Thus, on a revenue-weighted basis, Nasdaq's own "churn data," even if accepted at face value as reflecting customer losses, fatally undermine its claim that it experiences significant customer attrition. *Id.*; *see* Tr. 1292–99.

Likewise, it speaks volumes that NYSE Arca's head of market data, James Brooks, was able to identify only *one* customer that dropped NYSE Arca's depth-of-book data in response to a price increase.[13] In any event, substitution is assessed based on what customers overall actually do in response to price increases, not by one or two customers dropping or threatening to drop a product.[14] Tr. 1098, 1136–37, 1193–95, 1207; *Eastman Kodak Co. v. Image Tech. Servs., Inc.*, 504 U.S. 451, 473 (1992) (looking to "the actual market behavior revealed in the record"). The Exchanges have the data needed to perform such an overall analysis and could have presented it if it were favorable to their position, but they did not. The only relevant evidence of "actual market behavior revealed in the record," therefore, shows that the vast majority of the Exchanges' subscribers do not switch or stop buying in the face of significant price increases. *Supra* Part I.A; *see also* Tr. 143–44, 149–50 (Brooks agreeing that NYSE Arca does not experience significant customer attrition in response to fee increases and does not have "a volatile customer base"), 753 (Ordover agreeing that "the fee increases that Nasdaq implemented" did not produce "losses that were very large").

3. Nor do the Exchanges' data showing that some customers buy depth-of-book data from fewer than all exchanges establish that alternative depth-of-book data products significantly

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[13] That customer—Bluefin—dropped the NYSE Arca Integrated Feed, not ArcaBook. Tr. 72, 146. And Brooks had never even heard of Bluefin before it left. Tr. 72–73, 112, 135.

[14] That such threats can be entirely idle is shown by a complaint by the CEO of [redacted], who threatened that if Nasdaq did not lower its fees he would push his users "to the lower cost or free alternative options." Ordover ¶ 24. Not only did Nasdaq fail to lower its fees, it raised them by 50%, and yet [redacted] continued subscribing. Tr. 654–55, 760–64.

constrain the Exchanges' fees. *See* Initial Decision 36. To the contrary, the fact that the vast majority of depth-of-book data customers buy multiple exchanges' data *refutes* the claim that the products are substitutes. *See* Tr. 336 (in 75% of months examined, Nasdaq customers also bought another depth-of-book product), 781 (80% of Nasdaq depth-of-book customers also buy ArcaBook). "If the products were substitutes, there would be no reason why so many subscribers would find it necessary to purchase both." Donefer ¶ 71; *see* Tr. 1253–55.

That a minority of customers buy only one depth-of-book data product does not establish substitution, because it does not speak to "switches between products, and certainly not in response to price changes." Tr. 1305; *see* Tr. 350–52. It thus says nothing about the relevant question. *See* Evans ¶ 50. "That a given customer chooses to purchase, for example, depth-of-book data from NASDAQ but not from NYSE Arca says nothing about whether that customer is willing to substitute NYSE Arca's data for NASDAQ's data in response to a small but significant increase in the price of NASDAQ's data, which is the test used in antitrust economic analysis." Evans ¶ 51; *see* Tr. 1253–55, 1304–09; *Mobil*, 676 F.3d at 1102; *FTC v. Whole Foods Mkt., Inc.*, 548 F.3d 1028, 1038 (D.C. Cir. 2008); *FTC v. H.J. Heinz Co.*, 246 F.3d 708, 718 (D.C. Cir. 2001); *Horizontal Merger Guidelines* § 4.1.2. A trader might, for example, have a strategy that focuses on a single exchange. Tr. 924, 1011. The only way to know as an economic matter whether the products are substitutes is to observe how buyers respond to changes in the products' relative price. Tr. 1307–09. The Exchanges' data do not address that question and are thus irrelevant.[15] *See* Tr. 353 ("we did not look at changes because of price changes").

[15] Indeed, both Exchanges' economists conceded these data were offered only to disprove that all market participants must buy all depth-of-book products. Tr. 344–45, 349, 782. But that is a straw man; SIFMA has never claimed that all market participants must buy all depth-of-book products. Tr. 223–24, 816. Rather, SIFMA claims—and the Exchanges have now conceded—that access to all depth-of-book products is essential for many market participants. And this just

4. Equally misplaced is the Chief ALJ's assertion that "the Exchanges implement their depth-of-book prices out of concern for losing subscribers to substitutes." Initial Decision 34. All of the evidence the Chief ALJ cited is consistent with the behavior of a firm that has significant market power. Even monopolists consider how customers will respond to price increases to determine the profit-maximizing price. Tr. 1210–11. The Chief ALJ's contrary conclusion rests on the "myth that a monopolist can charge any price it wants." *Advo, Inc. v. Phila. Newspapers, Inc.*, 51 F.3d 1191, 1203 (3d Cir. 1995). "That, of course, is not true; an exclusive seller will raise prices only to the point where the higher price is not more than offset by a decrease in quantity demanded." *Id.* Thus, "the demand curve constrains the behavior of all sellers, even monopolists." *Id.*; *see* Tr. 764; Evans ¶¶ 10, 32, 36, 45 n.51. In other words, "[e]ven a complete monopolist can seldom raise his price without losing some sales." *Fortner*, 394 U.S. at 503. Moreover, the Exchanges' subjective "concerns" should be given no weight. "[W]hat ultimately matters is what customers in fact do when price goes up." Tr. 1138. "If customers believe[d] that these products were, in fact, good substitutes, when price went up, they would substitute." *Id.* The "overwhelming" evidence shows that "by and large, they do not." Tr. 1135.

Nor does the supposedly "limited number of fee increases" support the Chief ALJ's conclusion. Initial Decision 34. In the first place, the Chief ALJ downplayed the history of frequent fee increases. Between 2009 and 2014, for example, NYSE Arca went from charging professional subscribers $0 to $30 to $40 per month, and from charging an access fee of $0 to $750 to $2,000. Evans ¶ 59. And in 2013, NYSE Arca created an entirely new $4,000 per month fee for internal nondisplay usage and quickly increased that fee to $5,000 per month in 2014.

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provides an *explanation* for why buyers do not substitute. What ultimately matters in determining whether competition constrains the Exchanges' prices is the *fact* that customers do not substitute, not the reason why they do not. Tr. 1107, 1137–38, 1266–67.

SIFMA-380; 78 Fed. Reg. 21668 (Apr. 11, 2013); 79 Fed. Reg. 54315 (Sept. 11, 2014); *see also* SIFMA-378. And the Chief ALJ likewise ignored the pricing strategies of both Exchanges to identify new uses of depth-of-book data and then either to impose new fees for those uses or to expand an existing fee to cover those uses. Tr. 43, 585–91. More importantly, the number of fee increases does not shed any light on whether the Exchanges have significant market power. The question is whether customers have substitutes to which they can turn to prevent an exchange from charging supracompetitive prices. And the answer depends on how customers respond to price changes, not on how often the Exchanges change their prices.

In sum, the Chief ALJ's conclusion that depth-of-book data products from different exchanges are a "significant competitive force" that constrains the Exchanges' fees is contrary to the record evidence and lacks a reasoned basis. The evidence overwhelmingly shows that depth-of-book data products from different exchanges are *not* substitutes and that, as a result, the Exchanges have significant market power over their depth-of-book data prices.

II. The Initial Decision Erred In Concluding That Shifts In Order Flow And Threats Of Shifting Order Flow Provide A Significant Competitive Force In The Pricing Of The Exchanges' Depth-Of-Book Data.

The Initial Decision's second determination is likewise incorrect: competition for order flow does not significantly constrain the Exchanges' depth-of-book data prices. The "lack of support in the record" for this proposition led the D.C. Circuit to reject the order flow theory in *NetCoalition I.* 615 F.3d at 541. There the "record include[d] statements from NYSE Arca and other exchanges to support" the theory. *Id.* But such "self-serving views of the regulated entities," the court concluded, "provide little support to establish that significant competitive forces affect their pricing decisions." *Id.* Neither did isolated "anecdotes" prove that order-flow competition constrains exchanges to price depth-of-book data competitively. *Id.*

The same sort of self-serving statements and isolated anecdotes, however, remain the only basis in the record for the Chief ALJ's determination that "[s]hifts in order flow and threats of shifting order flow provide a significant competitive force in the pricing of the Exchanges' depth-of-book data." Initial Decision 37. That erroneous conclusion rests primarily on a single anecdote in which a single customer on a single occasion tried—and failed—to use the prospect of shifting order flow to halt or reverse a Nasdaq fee increase. Neither that anecdote nor any other evidence shows that competition for order flow has put significant or sustained downward pressure on depth-of-book data prices, let alone constrained the Exchanges to price the data competitively. To the contrary, undisputed economic evidence shows that intense competition for order flow gives the Exchanges the incentive to charge *higher* fees for depth-of-book data, for which they face less competition. And the record bears this out: during a time when order-flow competition was intensifying, the Exchanges repeatedly imposed "naked price increases" on the very firms they claim have leverage over data prices due to the order flow they control.

A. The Initial Decision erred in rejecting evidence that traders' ability to shift order flow away from a major exchange in response to its market-data fees is limited by both commercial realities and regulatory obligations.

1. There is no dispute that exchanges compete to attract trades. *See NetCoalition I*, 615 F.3d at 539 ("No one disputes that competition for order flow is 'fierce.'"). The mere existence of this competition, however, says nothing about whether an exchange's need to attract order flow significantly constrains its market-data prices. *See id.* at 541. The Exchanges argued, and the Chief ALJ agreed, that such a constraint exists because trading firms can "punish" an exchange for excessive depth-of-book data fees by shifting their order flow to other trading venues. Initial Decision 37–38. The record, however, does not support that conclusion. Rather, the evidence shows that legal and commercial constraints significantly limit traders' ability to

shift order flow in response to market-data fees. And there is no evidence that any such limited ability to shift order flow significantly constrains the Exchanges' depth-of-book data fees.

As Professor Donefer explained, traders have limited practical ability to shift their order flow away from a major exchange in response to market-data fees because doing so would hurt the quality of their trade execution (the percentage of orders that clear and at what prices). Donefer ¶¶ 69–70. Broker-dealers owe their customers a duty of best execution under both FINRA rules and state agency law, and their customers—particularly institutional investors who trade in large size—use sophisticated techniques to monitor the quality of trade execution and will move their business elsewhere if the quality falters. *Id.* ¶¶ 67, 70; Tr. 931–32, 947–48, 1039–40, 1049–50. To further assist customers in assessing execution quality, the Commission in fact recently proposed "to require additional disclosures by broker-dealers to customers about the routing of their orders." SEC, Disclosure of Order Handling Information, Release No. 34-78309, at 1. And even traders acting on their own behalf would incur a significant cost in forgone profits if they routed their orders away from the exchange that offered the most profitable trading opportunities because they objected to the exchange's market-data fees. Tr. 1202 ("making the decision that you're not going to go to a whole exchange and look for the best deal possible, which might be on that exchange, that's a costly decision for you to make").

As a result, routing orders away from "large source[s] of liquidity" like the Exchanges based on their market-data fees is "not sustainable," Tr. 1039, and could place the trader in violation of best-execution obligations. *See* FINRA Regulatory Notice 15-46, at 6 (providing that "an order routing inducement, such as receipt of payment for order flow, cannot be allowed to interfere with a broker-dealer's duty of best execution," and that "a firm's routing decisions

should not be unduly influenced by a particular venue's fee or rebate structure"); Tr. 641 ("best execution ... restrict[s] FINRA members from directing order flow in certain ways").

2. The Exchanges offered and the Chief ALJ cited no persuasive response to this evidence. She did not even acknowledge the practical commercial constraints on routing orders away from a major exchange based on its market-data fees.[16] And she wrongly dismissed FINRA Regulatory Notice 15-46 because it states that an exchange's fees should not "*unduly* influenc[e]" routing decisions. Initial Decision 41 n.45. Contrary to the Chief ALJ's characterization, SIFMA did not "clai[m] that traders *cannot* shift order flow due to best execution." *Id.* at 40 (emphasis added). Rather, SIFMA claimed that best execution *limits* traders' ability to shift order flow in response to market-data fee increases. The FINRA Notice confirms exactly that. And the Commission itself recently emphasized that order-routing decisions should not be influenced by the "conflict of interest [that] may exist between the broker-dealer's duty of best execution and its own direct economic interest." SEC, Disclosure of Order Handling Information, Release No. 34-78309, at 30–31.

In rejecting SIFMA's evidence, the Chief ALJ relied primarily on one anecdote in which [redacted] diverted order flow in an unsuccessful effort to deter Nasdaq from imposing a major depth-of-book data fee hike. Initial Decision 41.[17] But the [redacted] anecdote does not show that

[16] The mere theoretical fact that order flow is "portable" does not mean that traders can use their order-routing decisions to exert pressure on depth-of-book data fees. Obviously order flow is "portable" in the sense that it can be moved based on which trading venue offers the best chance of execution at the best price. Tr. 1170. This is what makes competition for order flow possible, and these are the factors—not the price of market data—that drive order-routing decisions.

[17] The Chief ALJ also noted that some *retail* brokers route their orders through wholesalers. Initial Decision 41. But this says nothing about the institutional and proprietary traders that the Exchanges claim have "leverage" over depth-of-book data fees due to their order flow. Tr. 937–39 ("for institutions, [an] entirely different ball game exists for best execution and quality of execution metrics"). There is no evidence that these firms could feasibly abandon a major exchange to protest market-data fees. *See* SEC, Disclosure of Order Handling Information,

traders can effectively shift order flow to exert leverage over market-data fees. First of all, even if the [redacted] anecdote supported the Exchanges' order flow theory—which it does not—a single anecdote is far from sufficient to establish that the ability to shift order flow constrains data fees. *See* Evans ¶ 68; Tr. 1195. Indeed, the fact that, between them, the two major national securities exchanges were able to identify only *one* instance of a customer shifting order flow in response to market-data fees speaks volumes. *See* Tr. 156 (Brooks admitting he was not aware of a single NYSE Arca customer that "shifted order flow because of Depth-of-Book data pricing"), 653–54 (Albers admitting that other customers never diverted order flow). If the link between order flow and market-data pricing were as direct and powerful as the Exchanges theorize, they surely would have been able to provide more than a single anecdote to support their theory.[18]

In any event, the [redacted] anecdote *confirms* that traders have limited ability to shift order flow to exert pressure on market-data fees. Nasdaq itself recognized that [redacted] was harming itself by diverting orders.[19] Tr. 645 (Albers admitting that [redacted] was "shooting themselves in the foot" by diverting orders away from Nasdaq); NQ-507 at 3 ([redacted] is

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Release No. 34-78309, at 26 (FINRA rules requiring exercise of reasonable diligence to determine best market for execution require considering number of markets checked).

[18] Although the relevant data are in the Exchanges' exclusive possession, neither Exchange presented any systematic evidence showing that changes in their depth-of-book data fees affect their order flow. The only effort either Exchange made in that regard was a purported "regression" analysis by NYSE Arca's experts, which they claimed showed that the 2009 ArcaBook fee increase caused NYSE Arca to lose order flow. This "regression" was thoroughly discredited, Evans ¶¶ 60–62; Tr. 1321–27, and the Chief ALJ correctly found that it supports only "the limited finding that NYSE Arca's market share of trading volume materially declined in the six months following its initial pricing of ArcaBook." Initial Decision 40. That is trivially true but irrelevant: it says nothing about whether the fee increase *caused* NYSE Arca's decline in trading volume, which began before the fee increase and simply continued thereafter.

[19] The anecdote thus confirms that [redacted] had no substitutes to which it could turn—if [redacted] could have simply switched to another provider or dropped Nasdaq's data, it would not have needed to "shoot itself in the foot" in an (unsuccessful) effort to lower the price. *See* Tr. 800 ("Maybe they already had the other Depth product. So where could they go.").

"willing to route away from us *at a cost to them* to make this point") (emphasis added). Likewise, [redacted] statement that it would divert order flow without impacting its best-execution obligations does not mean that best-execution obligations imposed no constraints on its ability to divert order flow. Rather, it simply recognizes that [redacted] could reroute its own *proprietary* orders—as opposed to customer orders—without affecting its best-execution obligations to its customers (but at a cost to itself). The statement thus confirms—as Nasdaq's own witnesses agreed, Tr. 641, 720—that traders' best-execution obligations limit their ability to route customer orders away from an exchange based on its market-data fees. *See* Tr. 1039. And, as discussed further below, [redacted] actions did not persuade Nasdaq to lower the price.

Moreover, the record does not support the Chief ALJ's claim that "[redacted] appears to have pulled order flow for well over two years." Initial Decision 41. As an initial matter, the only evidence she cited is an exhibit that Nasdaq produced for the first time on the last day of trial, with no prior notice to SIFMA, and without having previously produced the underlying data. *See* NQ-619; Tr. 1195–98. Although Nasdaq's expert report relied on the [redacted] anecdote, it did not cite, and Nasdaq did not otherwise produce, any evidence that [redacted] "divert[ed] substantial trading volume." Ordover ¶ 36; *see* Evans ¶ 69 (criticizing Professor Ordover's reliance on the [redacted] anecdote because he "present[ed] no evidence that there was any significant and long-lasting diversion of order flow"). And Professor Ordover testified that he believed "it was a temporary diversion of order flow." Tr. 795. Likewise, Albers did not know how much order flow was moved, for how long, or when it came back. Tr. 643. Particularly given the prominence of the [redacted] anecdote in the case, Nasdaq's springing of this exhibit on the last day of trial, just hours before the record closed, in circumstances where SIFMA had no opportunity to respond, was fundamentally unfair and highly prejudicial. The exhibit should have

been excluded, and the Commission should not consider it. *See In re Application of John Edward Mullins*, Release No. 34-66373, 2012 WL 423413, at *15 & n.65 (SEC Feb. 10, 2012) (late evidence inadmissible for precluding fair opportunity for verification).

In any event, ascribing any long-term change in [redacted] order volume to Nasdaq's market-data fees is both unsupported and implausible. Unsupported because the drop in volume between June 2012 and March 2015 does not necessarily represent orders [redacted] "diverted" based on data fees. Order volume "goes up and down all the time," Tr. 203, "for a variety of reasons unrelated to the cost of depth-of-book data," Ordover ¶ 41, and the record contains no evidence that depth-of-book fees, rather than broader market factors, such as the loss of confidence in Nasdaq caused by the failed Facebook IPO in May 2012, or other [redacted]-specific issues, caused a long-term change in volume.[20] The conclusion is implausible, moreover, because [redacted] dip was not isolated: Nasdaq volume *marketwide* fell sharply in June 2012, NQ-DEMO-3, and did not recover for more than two years, *id.*; Tr. 678 ("NASDAQ and its associated exchanges have actually lost shares ... all the way down to the end of 2014"). This context goes directly to the weight and integrity of Exhibit 619 and the conclusions that Nasdaq argues flow from it, and would have been the core of SIFMA's cross-examination—had not the late introduction of the exhibit unfairly deprived SIFMA of that opportunity.

Apart from the [redacted] anecdote, neither the Chief ALJ nor the Exchanges identified any other instance in which a customer actually pulled order flow in response to market-data fees.[21] The Chief ALJ cited a handful of alleged threats to do so. Initial Decision 38. But there is

[20] The only evidence speaking to this point was Dr. Evans's testimony that [redacted] told him that [redacted] "was only able to pull [order flow] for a short period of time" because "it was just costing [redacted] too much." Tr. 1192–93.

[21] Nasdaq claimed that [redacted] *sent* order flow to it in response to a market-data fee cap. Initial Decision 38. But any additional order flow was likely in response to Nasdaq's Investor

no evidence that these were credible threats, or that they would have materially affected the Exchanges' order flow if they were carried out. Given that the Exchanges could identify only one customer who actually pulled order flow, despite supposedly hearing such threats "all the time," Tr. 539, these alleged threats provide no substantial evidence that traders can and do freely shift their order flow away from major exchanges in an effort to discipline market-data fees.

B. The Initial Decision erred in rejecting evidence that intense competition for order flow has led to higher, not lower, depth-of-book data fees.

The Initial Decision further erred in concluding that competition for order flow imposes a significant competitive constraint on the price of market data. There is no evidence that the limited ability traders have to shift order flow in response to market-data fees significantly constrains the Exchanges' pricing, let alone constrains the Exchanges to price the data at the competitive level. *See NetCoalition I*, 615 F.3d at 541 (deeming the failure of proof on this point even "more problematic" than the failure to prove that depth-of-book data fees significantly affect order flow). To the contrary, both economic theory and the record evidence indicate that intense competition for order flow leads the Exchanges to charge *higher* prices for depth-of-book data, because their data products are more profitable than trade executions.

1. Two facts are not in dispute: *First,* there is intense competition for order flow because there are many venues for executing transactions. Evans ¶ 26; Hendershott & Nevo ¶ 36; Ordover ¶ 7. In economic terms, this means the Exchanges face relatively elastic demand for executing trades. Evans ¶ 9 ("A higher elasticity of demand generally reflects the availability of

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Support Program, which provided rebates to customers for posting orders. Tr. 633; NQ-503; SIFMA-358. The fee cap did not persuade [redacted] to continue routing orders to Nasdaq, so Nasdaq promptly raised the cap from $325,000 to $500,000. Tr. 469–70, 523–24, 603, 636, 1043. This anecdote does not show that traders shift order flow based on market-data fees. Tr. 1046. (The large swings in the fees also are "not consistent with a market in which NASDAQ's prices are being significantly constrained by the existence of substitutes." Evans ¶ 70.)

alternative products that consumers can substitute in response to a price increase."). *Second,* the Exchanges face relatively inelastic demand for their depth-of-book data products. *Id.* ¶ 39; Tr. 310, 753. Inelastic demand results from a product having few or no substitutes. Evans ¶ 39.

This constellation of facts is economically significant. The undisputed economic theory presented by Dr. Evans holds that when a firm sells two products, one with elastic demand (order flow) and the other with inelastic demand (depth-of-book data), the firm "will tend to charge more for products that have more inelastic demand as a result of having fewer substitutes and less competition." *Id.* ¶ 21; *see id.* ¶ 24 ("multi-product firms tend to impose lower prices on products that have more elastic demand and higher prices on products that have more inelastic demand"). As a result, an "exchange would tend to price depth-of-book data products high and use the profits from the data to enable it to charge low transaction execution prices." *Id.* ¶ 26.

Thus, economic principles indicate that intense competition for order flow will lead the Exchanges to *raise* depth-of-book data prices. Evans ¶ 57. The reason is simple: "what businesses cares about is profit," Tr. 1295, and the Exchanges make more profit on their data than they do on trade executions, precisely because competition for order flow drives down the profit on trade executions. *See id.* at 1316–20; SIMFA-385; *see also* SIFMA-242 at 21–22 (CEO of NYSE's parent: "the trading of equities is [n]ever going to be wildly profitable for anybody" because "[i]t's highly competitive," but out of it comes a "fabulous ... data business"); Tr. 434, 552 ("revenues and profits from trade execution within NASDAQ ha[ve] declined").

Thus, it may be economically rational for the Exchanges to raise their depth-of-book data fees, even if this means losing some order flow, because the profits they make from the higher data fees are greater than the profits they lose on the order flow. Evans ¶ 60; Tr. 1318–19; SIFMA-142 (showing Nasdaq depth-of-book data profit margins around 85%); SIFMA-318 at 8

(earnings presentation showing Nasdaq profit margins for its Market Services segment, which includes trade executions, around 40%–50%); SIFMA-319 at 3 (Nasdaq's Information Services segment, which includes market data, is its "largest operating profit contributor").

The Exchanges' economists did not dispute this economic analysis. To the contrary, they both conceded that, under their theories, only the *overall* return from trade executions and market data is competitively constrained. Tr. 802 (Ordover: "what matters is the aggregate return"); Hendershott & Nevo ¶ 55 ("exchanges must compete by keeping the overall cost of trading low"). Under this "total platform" theory, an exchange could price depth-of-book data relatively high and trade executions relatively low. Tr. 802 (Ordover agreeing that "Depth-of-Book data prices could be kept high"); NYSE-1 at 153 (Ordover explaining that exchanges may choose to "se[t] relatively high prices for market information"). The Chief ALJ correctly declined to adopt this "total platform" theory, which is inconsistent with the Exchange Act's requirement that *market data* be reasonably priced.[22] But she inexplicably ignored the Exchanges' concessions that competition for order flow does not constrain the price of depth-of-book data on its own.

In sum, there is no sound economic reason to expect that competition for order flow will constrain the Exchanges to price their depth-of-book data products competitively, and ample reason to believe it will lead them to charge higher depth-of-book data fees.

2. In fact, that is precisely what the evidence shows: during a period in which all agree that order-flow competition has been intensifying, depth-of-book data fees have gone up. Evans ¶¶ 58–59. As discussed above, NYSE Arca repeatedly increased its depth-of-book prices between 2009 and 2014. *See supra* at 21. And Nasdaq's own expert agreed that it imposed a "material increase" in 2012 when it created a new $300 monthly subscriber fee for nondisplay

[22] The Exchanges advanced the "total platform" theory to the Commission in the ArcaBook proceeding, but the Commission did not adopt it. *NetCoalition I*, 615 F.3d at 542 n.16.

usage and more than doubled the overall nondisplay fee cap from $30,000 to $75,000. 77 Fed. Reg. at 21127; Tr. 708. This positive relationship between order-flow competition and depth-of-book data fees is inconsistent with the Exchanges' theory that competition for order flow significantly constrains their depth-of-book data fees. Tr. 1068.

Indeed, the significant increases in nondisplay fees directly contradict the Exchanges' theory, because they were targeted specifically at the high-frequency and algorithmic trading firms that the Exchanges claim have leverage over them due to the volume of order flow they control.[23] Tr. 43, 463, 593–94, 602–05. As Albers explained, these were "naked price increases" because the Exchanges were simply increasing the price for high-frequency and algorithmic traders without "giving them any additional content, any additional flexibility in terms of their use." Tr. 603–05. Thus, while these traders may "execute an outsized share of the total trading volume," *NetCoalition I*, 615 F.3d at 541 n.14, the Exchanges have not shown that any limited ability they have to "affect order flow," *id.*, has constrained the Exchanges' depth-of-book data fees. To the contrary, the Exchanges have singled out these firms for their most significant price increases. The proof is in the pudding: in the *one* instance the Exchanges cite in which one of these firms ([redacted]) shifted order flow in an attempt to exert leverage, what was the effect on Nasdaq's depth-of-book data fees? None—Nasdaq did not budge. Tr. 640, 663, 799, 1201.

Against this compelling—and undisputed—evidence showing that customers' control of order flow has not constrained the Exchanges' depth-of-book data fees, the Chief ALJ identified no persuasive evidence to the contrary. The Exchanges' witnesses' self-serving claims that customers have "leverage" in price negotiations, *see* Initial Decision 37, are belied by the objective facts. NYSE Arca could not identify a single customer that shifted order flow because

[23] There are thousands of other customers who either do not make order-routing decisions or do not control large volumes of order flow. The order-flow competition theory is irrelevant to them.

of market-data prices, and Nasdaq identified only one. As the D.C. Circuit explained in rejecting a virtually identical argument in *NetCoalition I*, the Exchanges' "self-serving views ... provide little support to establish that significant competitive forces affect their pricing decisions." 615 F.3d at 541; *see also Helicopter Ass'n Int'l, Inc. v. FAA*, 722 F.3d 430, 435 (D.C. Cir. 2013).

The only examples the Chief ALJ cited of an exchange purportedly limiting its depth-of-book data fees "to attract or maintain order flow" are isolated and trivial. Initial Decision 38, 40 (citing fee caps instituted for [redacted] and Hudson River Trading). One of these caps affected only one customer, Evans ¶ 70, Tr. 456, 469, and the other only two, Tr. 756. Both were short-lived and were quickly replaced by significantly higher fees. Evans ¶¶ 70–71, 74; Tr. 636, 1043, 1348; *supra* at 28 n.21. Neither of these examples nor any other evidence shows that competition for order flow has put significant or sustained downward pressure on the Exchanges' depth-of-book data fees, let alone constrained them to price their depth-of-book data products at the competitive level. The Chief ALJ's contrary conclusion lacks both a reasoned basis and substantial evidence to support it.

III. The Initial Decision Erred In Concluding That The Exchanges' Cost And Profit Margin Data Are Not Required.

The Chief ALJ further erred in disregarding the Exchanges' low costs and extraordinarily high profit margins for their depth-of-book data. Initial Decision 31–33. This evidence bears directly on whether the Exchanges' pricing is subject to significant competitive constraints. As the D.C. Circuit explained, depth-of-book data prices greatly in excess of costs "may be evidence of 'monopoly,' or 'market,' power." *NetCoalition I*, 615 F.3d at 537. That is because "in a competitive market, the price of a product is supposed to approach its marginal cost." *Id.; see id.* ("costs of collecting and distributing market data can indicate ... 'excessive profits' or subsidi[es]"). Concerns about a lack of competition "aris[e] when [a firm] can profitably set

prices well above its costs" for a sustained period. Areeda § 501; *see Interstate Natural Gas Ass'n of Am. v. FERC*, 285 F.3d 18, 31–32 (D.C. Cir. 2002). The D.C. Circuit thus held that the "costs of collecting and distributing market data" are relevant to the competition analysis, *NetCoalition I*, 615 F.3d at 537, as the Chief ALJ recognized at the hearing. Tr. 379–80.

Despite the D.C. Circuit's holding that costs are a relevant "indicator of competitiveness," *NetCoalition I*, 615 F.3d at 539, neither Exchange made any effort to show that its prices are reasonably related to the costs of producing and distributing the data. To the contrary, Nasdaq has consistently achieved depth-of-book profit margins above 80%. SIFMA-142. This is an extremely high margin, Evans ¶ 78, even to Nasdaq's top executives, Tr. 1337 (CFO Shavel characterizing 70% as a high profit margin). And this was not a temporary margin Nasdaq earned while other firms caught up with its technology or business model: since 2006 it has consistently generated these margins. SIFMA-142. Nasdaq touts its high margins both privately and publicly, describing to investors that market data is a high-margin business, whose 70%–80% operating margin represents a "good chunk" of Nasdaq's annual profits. Tr. 1337, 1383; *see* Tr. 1375; SIFMA-317 (Information Services segment is "HIGH MARGIN"), SIFMA-319 at 3 (market data is Nasdaq's "largest operating profit contributor"). At the same time, Nasdaq executives have repeatedly told investors that Nasdaq enjoys these high margins because the market-data business does not "experienc[e] pricing pressure," SIFMA-283 at 19, and has "strong pricing power." SIFMA-298 at 2; SIFMA-319 at 3; SIFMA-386 at 3; Tr. 1384–88.

NYSE Arca, by contrast, produced no cost or margin data in this proceeding, claiming it does not "track costs that are *solely* attributable to the ArcaBook product." Tr. 47 (emphasis added). NYSE Arca's claim that it does not track cost data contradicts its prior representations to the Commission that its "'market data revenues compare favorably to the markets' cost of

producing the data.'" *NetCoalition I*, 615 F.3d at 538 (quoting NYSE-23 at 16). It is also at odds with the position of the Commission before the D.C. Circuit: counsel for the Commission stated he would be "stunned" if NYSE Arca could not ascertain its costs associated with ArcaBook: "whatever [NYSE Arca's] increase[d] discrete cost is[,] they know that." NYSE-47 at 35. In any event, in light of NYSE Arca's stonewalling, and "based on the similarity of the Exchanges' business models," the Chief ALJ correctly concluded that "it is reasonable to assume that NYSE Arca enjoys similar profit margins" to Nasdaq. Initial Decision 32.

The Exchanges' margins are so high in part because they spend so little to collect and distribute the data. The exchanges do not themselves create the data; they simply aggregate information regarding the orders traders place, including data that broker-dealers are required by law to report to them for free. *See* 17 C.F.R. §§ 242.601(b), 242.602(b); Tr. 116. The exchanges' depth-of-book data are simply the buy and sell orders placed by both institutional and millions of retail investors, Tr. 107, who must then purchase that very same data from the exchanges. Other costs are low as well: as compared to $92.6 million in 2014 revenue, SIFMA-142, Nasdaq spends only $2 million annually for research and development and $1 million annually on advertising and marketing for depth-of-book data and 90 other data products. Tr. 391–92, 419, 587, 622. The limited investment required to serve this "not volatile" customer base may be inferred from NYSE Arca's decision, until 2009, to give away this data for free to anyone who wanted it. Tr. 90–92, 150, 339. Little wonder that the Exchanges' executives view this as a "fabulous" business model. SIFMA-242 at 21–22 (CEO of NYSE Arca's parent company contrasting the "fabulous" market-data business with the "highly competitive" trading business).

The Chief ALJ nonetheless gave "little weight"—indeed, *no* apparent weight—to the Exchanges' extraordinarily high profit margins. Initial Decision 33. None of the reasons the

Chief ALJ gave justifies ignoring this evidence, which further confirms that the Exchanges have significant market power over their depth-of-book data fees. Evans ¶ 78.

First, the Chief ALJ improperly dismissed the D.C. Circuit's controlling statement of the law in *NetCoalition I*, asserting that the court "did not *require* cost or profit margin data, but simply stated that such data may be *relevant* in determining market power." Initial Decision 32 (second emphasis added). That is a distinction without a difference. It is a bedrock principle of administrative law that agencies "must examine the *relevant* data" and base decisions "on a consideration of the *relevant* factors." *Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983) (emphases added). Although cost and margin data may need to be treated with care, that is no reason to ignore a relevant factor that is regularly considered by courts, competition authorities, and economists in assessing market power. *See Tejas Power Corp. v. FERC*, 908 F.2d 998, 1004 (D.C. Cir. 1990); Areeda § 501; Tr. 1328–29.

Second, the Chief ALJ erred in concluding that the Exchanges' high profit margins can be disregarded because they do not reflect the "joint costs" of creating a trading platform and attracting trading volume, such as the "maker" rebates the Exchanges pay to traders who post orders on the exchange. Initial Decision 32. This argument is contrary to both the Exchanges' long-established practice, reflected in their SEC filings, of recording the rebates as an expense of the transaction business, and to the Exchange Act, which does not permit the Exchanges to recover the costs of operating their trading platforms through their market-data fees.

In practice, the Exchanges have always treated the rebate payments exclusively as a cost of the trading business. Tr. 1338, 1340–41, 1376. This makes sense because the rebate is paid only if the order executes, and not simply because the order is posted in the order book and reflected in depth-of-book data. Tr. 32, 1030–31. Moreover, the "maker" rebate is only one half

of the equation—the other half is the execution fee charged to the "taker," which exceeds the rebate, allowing the Exchanges to make a profit on trade executions. Tr. 32, 106, 431, 1371. Nasdaq's CFO Shavel admitted that rebates are "fundamentally related to driving trading activity, not to producing market data." Tr. 1372. Accordingly, Nasdaq has classified the rebates in its SEC filings and to the investing public as expenses of its trading business. Tr. 1369; SIFMA-349 at 12356. Shavel admitted that he has never "said or suggested publicly or anywhere that these expenses are related to [the] market data business." *Id.* at 1375. Nor had he even seen any internal reports to that effect.[24] *Id.* at 1372.

In any event, it is inconsistent with the Exchange Act to allocate an exchange's cost of its trade-execution business to its market-data business. Congress mandated that market data be priced fairly and reasonably to ensure that this critical information is widely disseminated. Congress clearly did not envision that exchanges could become "data shop[s]," Tr. 737, that use their market-data fees to recover the costs of operating the exchange. And the D.C. Circuit held that the cost of "collecting and distributing market data," not the cost of attracting traders or executing orders, is the relevant measure of cost. *NetCoalition I*, 615 F.3d at 537.

But even if it were proper under the Exchange Act to focus on the Exchanges' overall costs and profit margins for their "total platform," the Exchanges still failed to carry their burden because they presented no evidence that their overall return bears a reasonable relationship to their overall costs. Neither Exchange presented any data showing its overall revenues, costs, and profit margins, or any other evidence showing that it is not earning a supracompetitive return

[24] Nasdaq's restructuring of its reporting units in 2013—when Nasdaq segregated the trading and market-data businesses into separate reporting units—further confirms this view, as one hundred percent of the rebates were attributed as costs of trading. Tr. 1366–70; SIFMA-291 at 4 (10-K); SIFMA-349 at 12356 (10-Q). Nasdaq must record rebates as transaction costs because that is how its decisionmakers view the financial data. ASC 280 (segment reporting guidance).

overall. Tr. 1174, 1329. Indeed, Nasdaq touts that it has very large profit margins on trade executions as well as market data. Post-Hearing Br. 40 (citing "operating margins for the trading business ... in the range of 50 to 60%"); *see also* Tr. 1339; Initial Decision 33.

Third, the Chief ALJ wrongly concluded that marginal costs are "of limited value .... in a marke[t] like this." Initial Decision 32. The D.C. Circuit has already held that marginal costs are relevant in precisely this market. *NetCoalition I*, 615 F.3d at 537. And there is no basis to assume that the D.C. Circuit was using an outdated or unrealistic conception of marginal cost under which the Exchanges could not earn a normal rate of return.[25] As the Chief ALJ noted at the hearing, "th[e] decision by the court of appeals was 2010." Tr. 380. And marginal cost need not be defined in the narrow sense urged by the Exchanges' economists, but rather can include a "normal competitive rate of return [that] reflects the risk-adjusted opportunity cost of capital." Evans ¶ 77 n.90; *see* Tr. 728–29, 1172–73; Areeda §§ 501, 504.

Finally, Dr. Evans's testimony that he did "not put much weight on the price cost margin," Initial Decision 33, does not justify disregarding the Exchanges' profit margins. Dr. Evans did not need to put much weight on the price-cost margin because the other evidence of significant market power was so "overwhelming." Tr. 1134–35. But he affirmed that costs and margins are relevant evidence that should be considered in assessing market power, "particularly in this context," Tr. 1070, 1328–29, and that the Exchanges' high profit margins, coupled with their executives' views that those margins reflect the Exchanges' strong "pricing power," further confirm that the Exchanges have significant market power. Evans ¶ 78.

[25] The Exchanges' economists conceded that their opinions conflict with the D.C. Circuit's decision in *NetCoalition I*, which they attempted to dismiss as "misguided," Hendershott & Nevo ¶ 93, and "wrong." Ordover ¶ 51.

IV. The Initial Decision Erred In Concluding That There Is No Substantial Countervailing Basis To Disapprove The Exchanges' Fees.

Finally, the Chief ALJ erred in concluding that there is no substantial countervailing bases to disapprove the Exchanges' fees. Initial Decision 43–44. The Exchanges' fees undermine the Exchange Act's purpose of ensuring the wide availability of market data in order to promote the fairness, efficiency, and transparency of financial markets. *See* 15 U.S.C. § 78k-1(a)(l)(C)(iii) (instructing the Commission to ensure "the availability to brokers, dealers, and investors of information with respect to quotations for and transactions in securities"); S. Rep. No. 94-75, at 3 (1975) (one of the "basic goals of the Exchange Act" is "to assure that dealing in securities is fair and without undue preferences or advantages among investors").

Contrary to the Chief ALJ's claim, there is ample evidence that "lower depth-of-book fees would lead to greater transparency, efficiency, and fairness." Initial Decision 44. The evidence shows that high fees cause retail brokers to limit the depth-of-book data products they make available to their retail customers. While retail brokerage firms may purchase several depth-of-book products for professional use, they "must ration the market data products" for their retail customers, by purchasing only one or none for nonprofessional use. Donefer ¶ 62; NYSE-87, -88; Tr. 51–54, 182–86, 351, 399, 570. This puts retail investors at an informational disadvantage compared to institutional investors, high-frequency traders, and others with access to multiple depth-of-book products. Tr. 1056 ("It's a race. ... If you don't have the information and the resources of the others, you're not going to win that race. You're going to lose money.").

Lower depth-of-book data fees, by contrast, would lead to wider dissemination of the data, more transparency, greater efficiency, and a more even playing field. *See* Evans ¶¶ 14–17, 79. As the Exchanges themselves recognize, their products "enhanc[e] market transparency and provid[e] consumers with a complete liquidity picture." SIFMA-159. And as they assert in their

marketing materials, their depth-of-book data products are "required," "indispensable," and "more important than ever" for all "serious traders." SIFMA-118, -121, -128, -129. The Exchanges' decision to set prices beyond the reach of so many investors is at odds with the Exchange Act's purpose of protecting investors and ensuring price transparency for *all* market participants. Under the Exchange Act, access to information is not a luxury good.

The Chief ALJ's only response is to claim that "retail investors do not need depth-of-book data" because "nearly every trade executes at NBBO." Initial Decision 44. That is a non-sequitur. Whether an order executes at the NBBO says nothing about whether the trader used depth-of-book data in placing the order. Donefer ¶ 63; Tr. 124–25, 232. Even if most orders are *executed* at the NBBO, the order size often is larger than the number of shares available at the NBBO *at the time the order is placed.* Donefer ¶ 63. Indeed, according to one study, over one-third of retail orders required more shares than were available at the NBBO when submitted. SIFMA-35 at App. 20, 47. Thus, depth-of-book data are needed to know the prices at which many retail orders will execute; they also help in deciding whether and when to trade, at what price, and what type of order to use. Donefer ¶ 62; Tr. 608–11, 925–26. Consequently, as the Commission recognized in Regulation NMS, "comprehensive trade and quotation information, even beyond the NBBO, is vital to investors." 70 Fed. Reg. 37496, 37559 (June 29, 2005).

Moreover, as the Chief ALJ recognized, it is "plausible" that the high prices paid by professionals for depth-of-book data "ultimately affect costs for investors." Initial Decision 44. As Professor Donefer explained, almost all those who "have investments for ... retirement[,] to send children to school[, or] save to buy a house" use "mutual funds," "exchange traded funds," and "managers" to achieve a good return. Tr. 999–1000. The institutions that invest these funds use depth-of-book data and likely pass on the fees to investors, diminishing their returns. *Id.* at

1002. Thus, "lowering the cost to the institutions will lower the costs of trading and will increase the returns of the investments to all of the people who put their money in to live on when they retire or send their kids to school or whatever they're saving for." *Id.* at 1001.

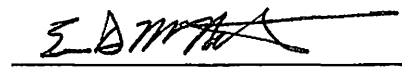
In short, "broad access to real-time market information should be an affordable option for most retail investors, as it long has been for professional investors." 64 Fed. Reg. 70613, 70614 (Dec. 17, 1999). Thus, "[o]ne of the most important functions that the Commission can perform for retail investors is to ensure that they have access to the information they need to protect and further their own interests." *Id.* The Exchanges' depth-of-book data fees undermine this basic purpose of the Exchange Act by creating a two-tiered system in which market participants who can afford to pay the Exchanges' fees have access to complete order books at lightning speed, and those who cannot must make do with the top-of-book data made available at slower speeds through the consolidated feed. Even apart from the absence of significant competitive constraints, this constitutes a substantial countervailing basis to set aside the Exchanges' fees.

CONCLUSION

The Initial Decision erred in concluding that the Exchanges carried their burden of proving that their depth-of-book data fees are constrained by significant competitive forces. The record overwhelmingly shows the opposite—that the Exchanges have significant market power, which they exploit to the detriment of investors, the financial markets, and the public interest. As in *NetCoalition I*, the record discloses neither a reasoned basis nor substantial evidence for finding that the Exchanges' fees are significantly constrained by competition or are otherwise "fair and reasonable." Accordingly, the Commission should reverse the Initial Decision and vacate the Exchanges' fees.

Dated: September 22, 2016

Respectfully submitted,



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UNITED STATES OF AMERICA
before the
SECURITIES AND EXCHANGE COMMISSION

In The Matter of the Application of: SECURITIES INDUSTRY AND FINANCIAL MARKETS ASSOCIATION for Review of Actions Taken by Self-Regulatory Organizations	Admin. Proc. File No. 3-15350 The Honorable Brenda P. Murray, Chief Administrative Law Judge

CERTIFICATE OF SERVICE

I hereby certify that on September 22, 2016, I caused a copy of the foregoing Securities Industry and Financial Markets Association's Opening Brief to be served on the parties listed below via FedEx:

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UNITED STATES OF AMERICA
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SECURITIES AND EXCHANGE COMMISSION

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CERTIFICATE OF COMPLIANCE

Pursuant to Rule 450(d) of the Commission's Rules of Practice, I hereby certify that the foregoing Securities Industry and Financial Markets Association's Opening Brief contains 13,982 words exclusive of the cover page, table of contents, and table of authorities.

Dated: September 22, 2016

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