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April 4, 2011

Ms. Elizabeth M. Murphy Secretary Securities and Exchange Commission 100 F. Street, N.E. Washington, D.C. 20549-1090

Re: Suspension of Proposed "Platform Pricing" Proposal

Release No. 34-63796, File No. SR-NASDAQ-2011-10

Dear Ms. Murphy:

The NASDAQ Stock Market LLC ("NASDAQ") submits this letter in support of its proposal to lower prices for depth-of-book market data and for execution services ("the Proposed Rule"). The Securities and Exchange Commission ("Commission") temporarily suspended the Proposed Rule, thereby delaying the effectiveness of the price reductions. As explained in detail in the initial proposal, the Proposed Rule "is an attempt by NASDAQ to compete to attract retail investors' orders" in an environment in which alternative trading systems with lower regulatory costs have attracted retail order flow to dark platforms and away from traditional "lit" exchanges. The proposed discount is itself *prima facie* evidence of intense market competition. It is highly irregular for regulators to block price reductions, particularly those targeted to benefit retail investors.

The underlying fees for NASDAQ depth-of-book market data and execution services are not in dispute; those fees will survive whether NASDAQ's Proposed Rule is approved or

See Exchange Act Release No. 34-63796 (Jan. 28, 2011); 76 Fed. Reg. 6,165 (Feb. 3, 2011) (order temporarily suspending SR-NASDAQ-2011-010) ("Suspension Order").

See Exchange Act Release No. 34-63745 (Jan. 20, 2011); 76 F.R. 4970 (Jan. 27, 2011) (Notice of Filing and Immediate Effectiveness of SR-NASDAQ-2011-010) ("Proposed Rule") at 1-2.

See Findings Regarding The Market Events Of May 6, 2010, Report Of The Staffs Of The CFTC And SEC To The Joint Advisory Committee On Emerging Regulatory Issues, September 30, 2010, at 56.

disapproved. The sole question posed by the Commission's suspension is whether two separate differential discounts—each approved by the Commission previously—can be structured as a single discount with two elements: in other words, can NASDAQ offer a discount to members that consume high volumes of non-professional market data and simultaneously provide high volumes of liquidity?

Specifically, NASDAQ's proposal contains two price reductions, both of which differentiate between user groups and both of which the Commission has previously approved. *First*, NASDAQ proposes to lower fees for depth-of-book market data that NASDAQ members provide to non-professional users; there is no discount offered for market data provided to professional users. The data discount is also volume-based; the more data provided to non-professional users, the greater the discount offered. The Commission has for many years approved pricing that differentiates between professional and non-professional market data users as well as pricing that differentiates between low volume and high volume users. *Second*, NASDAQ proposes to lower execution prices by increasing liquidity provider rebates for members that provide a high level of liquidity. Again, the Commission has long approved pricing that differentiates between low volume and high volume liquidity providers.

The Securities Industry and Financial Markets Association ("SIFMA") and NetCoalition submitted a comment letter opposing the price reductions ("SIFMA Comment"). That comment misunderstands both the nature of the Proposed Rule and why the Commission temporarily suspended it. SIFMA devotes nearly its entire comment letter to challenging NASDAQ's underlying fees for depth-of-book data and execution services rather than addressing the price discount that NASDAQ proposes here. As explained in detail below, SIFMA's comment is based entirely on the mistaken assertion that NASDAQ exercises "monopoly" power in the sale of market data and on a misreading of the D.C. Circuit's recent decision in *NetCoalition v. Securities and Exchange Commission*, 615 F.3d 525 (D.C. Cir. 2010). SIFMA is notably silent on the particular concerns that motivated the Commission to temporarily suspend the Proposed Rule—namely, whether the proposed discount is a "tying arrangement" that might render it not equitable or fair, or unreasonably discriminatory.⁴

This is not surprising because the proposed discount is not a tying arrangement at all. Rather, it is an attempt by NASDAQ to provide incentives to its best customers—who are courted aggressively by NASDAQ's competitors—to purchase two NASDAQ products in high volumes and to use market data discounts as a "carrot" to attract additional retail order flow to the exchange. The empirical evidence, described below, demonstrates that even if it were fairly characterized as a tying arrangement, the intensely competitive nature of the marketplace would remove any concern about the proposal. The proposed reduction in market data costs is but one of many competitive tools—including an attractive trading platform, liquidity rebates, and customer service—that exchanges employ in their competitive efforts to attract order flow. These competitive forces ensure that NASDAQ's pricing proposal is equitable, fair, and not

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⁴ Proposed Rule Change at 4.

Statement of Randall Hopkins of NASDAQ Stock Market LLC ("Hopkins Statement") at ¶¶ 3-5 (Apr. 4, 2011).

unreasonably discriminatory, because NASDAQ would be punished quickly in the competitive marketplace by the loss of trading volume if it deviated from such an approach.

I. NASDAQ's "Platform Pricing" Proposal Is Procompetitive And Consistent With The Purposes Of The Exchange Act.

This proposal is for a discount—specifically, a discount on fees that NASDAQ currently charges for its depth-of-book data products to member firms that service non-professional investors and direct a certain volume of order flow each month to the exchange.⁶ Moreover, this proposal is for a discount on prices that the Commission has already concluded is "fair and reasonable."

This proposed discount is driven by the intense competition for order flow among traditional exchanges and ATS's, and is one of many strategies that exchanges can use to secure order flow through competitive pricing, discounts, and rebates on linked products. The proposed discount has the additional benefit of promoting the broad distribution of market data by providing a lower price to customers that distribute the data to their users. Discounts driven by competition, such as in the Proposed Rule, are good for consumers and good for the marketplace as a whole. Because these discounts are procompetitive and promote the broad distribution of market data, the Commission ought to encourage exchanges to offer them.

SIFMA and NetCoalition have provided no reason to conclude otherwise. Despite their conclusory assertions regarding NASDAQ's supposed "regulatory monopoly" over market data and "[s]upracompetitive pricing," they nowhere explain how NASDAQ's discounts could possibly constitute an exercise of monopoly power or harm competition in any segment of the marketplace. Although the Commission's regulatory mandate does not overlap perfectly with the antitrust laws, where the issue before the Commission is the extent to which an exchange's pricing practices are subject to competitive forces, the tools developed by the courts interpreting the antitrust laws provide a useful framework upon which the Commission can draw. For example, the courts have developed an extensive body of law for determining the extent to which a firm has the power to set prices free from the constraints of competition. And the courts have provided extensive guidance regarding the extent to which various pricing practices are likely to be beneficial to competition and consumers or, on the other hand, destructive of competition and harmful to overall consumer welfare. As discussed below, an assessment of the evidence

See Proposed Rule Change at 8-9.

⁷ See, e.g., Order Approving Proposed Rule Change, Release No. 34-46843, 67 Fed. Reg. 70,471, 70,472 (Nov. 18, 2002).

⁸ SIFMA Comment at 2-3.

The Commission has repeatedly rejected SIFMA's "regulatory monopoly" canard. SIFMA members can route orders to 13 national securities exchanges, to FINRA, and to 40 other ATS venues that are exchanges in everything but name. It is abundantly clear that no SIFMA member is compelled to send orders to NASDAQ or to any exchange.

relating to NASDAQ and the current pricing proposal in light of the doctrines developed under the antitrust laws demonstrates clearly that (a) NASDAQ faces intense competition, which constrains NASDAQ's pricing, and (b) NASDAQ's proposed discount will benefit consumers and has no realistic probability of harming competition or reducing consumer welfare.

Courts have been justifiably wary of claims that offering discounts is somehow evidence of monopolistic or anticompetitive behavior. Indeed, "the Supreme Court has urged great caution and a skeptical eye" when dealing with a claim that a firm has unfairly discounted its products. That is because "[l]ow prices benefit consumers regardless of how those prices are set, and so long as they are above predatory levels, they do not threaten competition." The Commission should likewise take a skeptical eye toward the commenters' objection to NASDAQ's proposal to provide a discount to customers in a competitive marketplace.

The Commission should likewise be skeptical about the commenters' objection to NASDAQ's proposal to provide a discount to customers in a competitive marketplace.

A. NASDAQ is not a monopolist in the sale of market data.

While the commenters argue that NASDAQ's fee proposals should be subject to a heightened standard of review because NASDAQ supposedly has a "monopoly" in the sale of market data, the commenters offer nothing but a bare assertion that NASDAQ is a monopolist. ¹³ That assertion flies in the face of the marketplace evidence.

SIFMA does not even attempt to analyze the markets in which NASDAQ competes, which is an essential step in determining whether a firm has monopoly power.¹⁴ For this reason alone, the commenters' contentions about monopoly power should be rejected out-of-hand. The

See, e.g., Brooke Group Ltd. v. Brown & Williamson Tobacco Corp., 509 U.S. 209, 224 (1993) ("discouraging a price cut and forcing firms to maintain supracompetitive prices . . . does not constitute sound antitrust policy"); Cargill, Inc. v. Monfort of Col., Inc., 479 U.S. 104, 116 (1986) ("The kind of competition that Monfort alleges here, competition for increased market share, is not activity forbidden by the antitrust laws. It is simply, as petitioners claim, vigorous competition. To hold that the antitrust laws protect competitors from the loss of profits due to such price competition would, in effect, render illegal any decision by a firm to cut prices in order to increase market share. The antitrust laws require no such perverse result, for it is in the interest of competition to permit dominant firms to engage in vigorous competition, including price competition." (internal quotations and citations omitted)).

¹¹ Concord Boat Corp. v. Brunswick Corp., 207 F.3d 1039, 1060 (8th Cir. 2000).

¹² Atlantic Richfield Co. v. USA Petroleum Co., 495 U.S. 328, 340 (1990).

SIFMA Comment at 2.

See, e.g., Heerwagen v. Clear Channel Commc'ns, 435 F.3d 219, 229 (2d Cir. 2006) ("a plaintiff claiming monopolization is obligated to establish the relevant market because the power to control prices or exclude competition only makes sense with reference to a particular market").

commenters simply assert that NASDAQ is a monopolist, apparently because NASDAQ's market data products are not identical to other exchanges' data products. ¹⁵ The courts, however, have overwhelmingly rejected the argument that a firm is a monopolist in its own product simply because that product is differentiated from other firms' products. As the Supreme Court has explained, "where there are market alternatives that buyers may readily use for their purposes, illegal monopoly does not exist merely because the product said to be monopolized differs from others." A firm that offers a differentiated product is not a monopolist if its product is "reasonably interchangeable by consumers for the same purposes." In *NetCoalition*, the D.C. Circuit adopted this approach, explaining that the test for market competitiveness is whether there "exists a 'reasonably interchangeable' substitute in the same market." ¹⁸

Here, the evidence shows overwhelmingly that a broad set of customers of NASDAQ's data products view them to be reasonably interchangeable with other exchanges' data products, and that NASDAQ competes intensely with other exchanges for the sale of its data products. ¹⁹ As set forth by Drs. Ordover and Bamberger, in June 2008 NASDAQ launched two proprietary "Last Sale" data products. In each case, the terms included subscription rates and an "enterprise cap" rate designed for Web portals. The enterprise cap rate for customers who purchased both products was \$150,000. The majority of NASDAQ's sales were at the cap level. In early 2009, BATS offered an alternative product (BATS PITCH data) as a "free" alternative to the NASDAQ Last Sale products. Also early in 2009, NYSE Arca announced the launch of a competitive product with an enterprise price of \$30,000 per month. In response, in April 2009, NASDAQ combined the two Last Sale products into one and reduced the enterprise cap to \$50,000—a reduction of \$100,000 per month in response to these competitive offerings.

Similarly, Drs. Ordover and Bamberger explained that in late 2009, a member notified NASDAQ that in the absence of a fee reduction for "non-displayed use" of depth data, the member would move order flow from NASDAQ to a competing platform. After meeting with the member and analyzing the potential loss of trading volume, NASDAQ sought and obtained SEC approval for an Enterprise License for non-displayed use of certain depth data.²⁰

¹⁵ SIFMA Comment at 2.

¹⁶ See, e.g., United States v. E.I. duPont de Nemours & Co., 351 U.S. 377, 394 (1956).

Id. at 395; see also, e.g., Town Sound & Custom Tops, Inc. v. Chrysler Motors Corp., 959 F.2d 468, 479 (3d Cir. 1992) (rejecting argument that Chrysler cars constitute a single-brand market). Moreover, evidence that some customers may have a preference for one supplier's differentiated product does not support defining a market limited to one firm's products. See, e.g., Tanaka v. Univ. of S. Cal., 252 F.3d 1059, 1065 (9th Cir. 2001).

¹⁸ NetCoalition, 615 F.3d at 542.

Statement of Janusz Ordover and Gustavo Bamberger, File No. SR-NASDAQ-2011-010 (Dec. 29, 2010) ("Ordover/Bamberger Report"), at ¶¶ 24, 26-27, 29.

See Release No. 61,700 (March 12, 2010); 75 Fed. Reg. 13,172 (March 18, 2010) (approving SR-NASDAQ-2010-034). Of course, the Enterprise License is available to all data users that qualify for it by its terms.

The dynamic and intense nature of competition for the sale of data products is amply illustrated by the high rate of customer losses and gains experienced by NASDAQ. For example, in 2010 NASDAQ lost 68 customers for depth-of-book data—nearly half of the customers to which it sold depth-of-book data in 2009—and added more than twice that number of new customers in the same period. See infra at 19. Similarly, the evidence shows that individual customers have reduced their users of NASDAQ depth-of-book data by as much as 86 percent in a year. See id. This evidence plainly shows that customers can and do readily switch from one provider of data products to another. And it eviscerates any conclusory assertion that NASDAQ is a monopolist merely because the data in its products may be differentiated from other exchanges' data products.²¹

In addition, the courts have recognized that where two products are linked, competition in a primary market can prevent the exercise of market power over the linked product. For example, in SMS Systems Maintenance Services v. Digital Equipment Corp., the court rejected an argument that a seller of computer equipment was a monopolist in the sale of aftermarket servicing of its equipment, because the manufacturer constantly competed for new equipment customers and its behavior in the aftermarket could influence customer purchases in the competitive equipment market.²² The court explained that "[u]nless the evidence shows that the manufacturer can exert raw power in the aftermarket without regard for commercial consequences in the foremarket, the aftermarket is not [a] relevant market" that can be subject to monopoly power.²³

See, e.g., Town Sound, 959 F.2d at 480 (a properly defined antitrust market "includes actual or potential competitors who may take business away from each other"; rejecting claim that Chrysler had monopoly power where "Chrysler cars compete vigorously with many other companies' automobiles").

¹⁸⁸ F.3d 11, 16-17 (1st Cir. 1999) ("[T]]he naked fact that a manufacturer has a high percentage of the market for servicing its own products does not mean that it can raise the price of services or parts with impunity in that market. Reputation is important to a firm that constantly competes for new customers, and a manufacturer's behavior in the aftermarket probably will be scrutinized by customers shopping for the firm's products in the primary market. If the firm has a bad reputation, that will prompt potential customers to go elsewhere. Moreover, such a firm eventually will suffer defections from its installed base as well, for firms concerned with the long term cannot afford to bite the hands that feed them. Under such circumstances, it ordinarily captures the reality of the marketplace to envision a firm's behavior in the aftermarket as having a direct effect on the 'cross-elasticity of demand' with respect to its products in the primary market." (internal quotations and citations omitted)).

Id. at 17; see also, e.g., Queen City Pizza v. Domino's Pizza, 124 F.3d 430, 437, 440 (3d Cir. 1997) (rejecting an argument that Domino's was a monopolist in an alleged market "for ingredients, supplies, materials and distribution services used in the operation of Domino's stores," because, inter alia, the "franchisees could assess the potential costs and economic risks" of the franchise relationship at the time they entered into the relationship and "the franchise transaction . . . was subjected to competition at the pre-contract stage").

SIFMA argues that "platform" competition should not be considered in evaluating the competitive forces that constrain NASDAQ's pricing of its data products because "market data is a fixed cost of trading," which supposedly would prevent a trader from switching from platform to platform for particular trades if it had already paid a monthly fee for data from a particular platform. This argument simply ignores the nature of competition among trading platforms. The evidence shows that customers can, and frequently do, switch their trading volume from platform to platform, including in response to the total costs of trading on a particular platform. The evidence also demonstrates that NASDAQ does, in fact, compete for order flow by enhancing the quality of its data products and/or lowering the price of its data products. Indeed, the purpose of the proposed price discount is to enable NASDAQ to engage in precisely this type of competition.

SIFMA's claim that market data is a "fixed cost" is flawed in several respects. First, it vastly overstates the level of monthly fees paid by particular users, which are hardly of a level that could meaningfully lock investors into an undesirable trading platform. NASDAQ depth-of-book data is inexpensive by any measure. For a fee of \$15 per month, data distributors can provide non-professional users access to full depth of book data for all securities traded on NASDAQ. This equates to seventy five cents per trading day, two-tenths of a penny per minute, \$0.002 per month per stock quoted or traded on NASDAQ, or \$0.00000006 per trading message contained in NASDAQ's depth-of-book feeds. Moreover, many non-professional users benefit from a much lower rate than \$15, due to usage fee caps for distributors. For the six biggest distributors of non-professional NASDAQ depth-of-book, the average rate in January was \$10.38, which covers distribution to 109,015 users. Respectively.

Second, even if these modest fees could be viewed as locking customers into the NASDAQ platform for a month, nothing would prevent customers from switching to another platform—and, importantly, redirecting trading volume—at the end of any given month.²⁹ SIFMA's own expert concedes this point, as he asserts that once a month is over, customers may

²⁴ SIFMA Comment at 5.

See Ordover/Bamberger Report at ¶¶ 12, 14, 24, 28-29. For example, BATS Trading began trading on January 27, 2006. By June 2008, it accounted for 7.5 percent of trading in NYSE-listed stocks and 10.3 percent of trading in NASDAQ-listed stocks. *Id.* ¶ 14. The evidence collected by Drs. Ordover and Bamberger also shows that exchanges and other trading plat forms compete with each other on pricing, such as when NYSE Euronext changed its prices in 2007 to compete more effectively with rival trading platforms. *Id.* ¶ 24. *See also supra* at 5.

See id. at \P 26, 29. See also supra at 5.

Hopkins Statement at ¶ 11.

²⁸ *Id.* at ¶ 12.

Reply Statement of Janusz Ordover and Gustavo Bamberger, File No. SR-NASDAQ-2011-010 (Apr. 4, 2011) ("Ordover/Bamberger Rebuttal Report"), at ¶¶ 5, 18-19.

stop making trades on an exchange if market data is too expensive.³⁰ Plainly, no rational exchange would risk losing order flow for the ephemeral benefit of exploiting traders who might not switch until the end of a month because of a small monthly fee.

B. There is no basis for SIFMA's demand that NASDAQ justify its price for data in relation to its costs.

Based on the fiction that NASDAQ is a monopolist, SIFMA would require NASDAQ to prove that it is subject to competitive forces by comparing its prices for data products to "the cost of 'collecting and distributing' market data." There is no basis in economics, competition law, or the Commission's precedents for this proposed requirement.

Contrary to the commenters' proposed approach, the courts have recognized that "it is always treacherous" to try to infer the existence of monopoly power based on a comparison of a firm's prices and costs.³² As an initial matter, a comparison of price to "the cost of 'collecting and distributing' market data," as the commenters propose, would have no meaning whatsoever to a determination of whether NASDAQ possesses monopoly power if that test were understood only to include marginal costs, rather than also take account of NASDAQ's substantial *fixed costs*.³³ And while evidence of a supracompetitive price in relation to *total* costs may satisfy a theoretical definition of monopoly power, it is rarely possible to determine what an "excessive" or "supracompetitive" rate of return might be. As Judge Posner has explained, "there is not even a good economic theory that associates monopoly power with a high rate of return."³⁴ These difficulties are particularly pronounced with respect to products (such as NASDAQ's data products) that are characterized by a high ratio of fixed to variable costs and where the fixed costs are spread between multiple linked products.³⁵

For this reason, the courts generally assess whether a firm has monopoly power not through the price-cost analysis proposed by SIFMA, but rather by evaluating the set of reasonably interchangeable products (market definition), the suppliers' shares of the market, the existence of barriers to entry, and other factors that permit an assessment of whether the alleged

David S. Evans, Response to Ordover and Bamberger's Statement Regarding NASDAQ's Proposed Rule Change Concerning the Pricing of Depth-of-Book Data, File No. SR-NASDAQ-2011-010 (Mar. 21, 2001) ("Evans Response"), at 12 n.24; 16 n.30.

³¹ SIFMA Letter at 3.

See, e.g., Blue Cross & Blue Shield v. Marshfield Clinic, 65 F.3d 1406, 1411-12 (7th Cir. 1995) ("a reasonable finder of fact cannot infer monopoly power just from higher prices . . . and it is always treacherous to try to infer monopoly power from a high rate of return"); In re Remeron Direct Purchaser Antitrust Litig., 367 F. Supp. 2d 675, 683 (D.N.J. 2005).

See, e.g., William M. Landes & Richard A. Posner, *Market Power in Antitrust Cases*, 94 Harv. L. Rev. 937, 939 (1981) ("When the deviation of price from marginal cost . . . simply reflects certain fixed costs, there is no occasion for antitrust concern.").

Marshfield Clinic, 65 F.3d at 1412.

³⁵ See Ordover/Bamberger Report at ¶¶ 19-21, 45-50.

monopolist has the ability to control prices and exclude competition.³⁶ As discussed above, the evidence of this nature shows that NASDAQ is subject to intense competitive pressures from other exchanges, which precludes a conclusion that NASDAQ is a monopolist in the sale of any of the products at issue here.

C. The proposed discount is not a "tying arrangement" and presents no threat of harm to competition or consumers.

NASDAQ's pricing proposal is not a tying arrangement. Moreover, even if the proposal could fairly be deemed a tying arrangement, the proposal does not give rise to any meaningful risk of harm to competition, consumers, or the efficient function of the markets at issue here. The courts have extensively analyzed tying arrangements in the context of the antitrust laws, and in doing so they have recognized that tying arrangements can often have procompetitive benefits and enhance consumer welfare. As the Supreme Court has explained, "[i]t is clear . . . that every refusal to sell two products separately cannot be said to restrain competition. . . . Buyers often find package sales attractive; a seller's decision to offer such packages can merely be an attempt to compete effectively." Therefore the courts have circumscribed the situations in which tying arrangements should be prohibited as being anticompetitive. This analysis demonstrates that the concerns expressed under antitrust law in relation to certain types of tying arrangements do not apply to NASDAQ's proposal.

The Supreme Court has explained that a tying arrangement is "an agreement by a party to sell one product [the tying product] but only on the condition that the buyer also purchases a different (or tied) product, or at least agrees that he will not purchase that product from any other supplier." The potential competitive harm from a tying arrangement arises from "the seller's

[&]quot;Where evidence indicates that a firm has in fact profitably [raised prices substantially above the competitive level,] the existence of monopoly power is clear. Because such direct proof is only rarely available, courts more typically examine market structure in search of circumstantial evidence of monopoly power. Under this structural approach, monopoly power may be inferred from a firm's possession of a dominant share of a relevant market that is protected by entry barriers." *United States v. Microsoft Corp.*, 253 F.3d 34, 51 (D.C. Cir. 2001) (citations omitted); see also Heerwagen, 435 F.3d at 227 (courts generally rely on indirect evidence because direct evidence of monopoly power is "often difficult or impossible to prove"); In re Remeron, 367 F. Supp. 2d at 680 n.7 ("although not explicitly forbidding a direct evidence approach, the Third Circuit has emphasized the importance of establishing monopoly power by the traditional market definition approach, i.e. first defining a relevant market by product interchangeability or crossprice elasticity of demand and then determining monopoly power therein by evaluating market share").

³⁷ Jefferson Parish Hosp. Dist. No. 2 v. Hyde, 466 U.S. 2, 11-12 (1984).

Ill. Tool Works Inc. v. Indep. Ink, Inc., 547 U.S. 28, 35 (2006) (explaining that "[o]ver the years, . . . this Court's strong disapproval of tying arrangements has substantially diminished," and noting that the Court has therefore "reject[ed] the application of a per se rule that all tying arrangements constitute antitrust violations").

³⁹ N. Pac. Ry. Co. v. United States, 356 U.S. 1, 5-6 (1958).

exploitation of its control over the tying product to force the buyer into the purchase of a tied product that the buyer either did not want at all, or might have preferred to purchase elsewhere on different terms."

These concerns do not arise from NASDAQ's pricing proposal. As an initial matter, there is no tie. Customers are not required to purchase a tied product from NASDAQ. Nor are they required to forgo purchases of any product from any competitor. NASDAQ is continuing to offer all of its products separately, at prices approved by the Commission as fair and reasonable. In these circumstances, there is no tying arrangement and the concerns sometimes associated with such arrangements do not arise. As the Supreme Court recognized more than half a century ago, "where the buyer is free to take either product by itself, there is no tying problem even though the seller may also offer the two items as a unit at a single price." "41"

Moreover, even if NASDAQ's proposal were presumed (contrary to the evidence) to require purchasers who trade on NASDAQ's platform to purchase NASDAQ's data (or vice versa), there is no evidence to support a conclusion that competition in any market would be harmed by such a requirement. Under antitrust law, it is well established that tying arrangements should not be universally condemned, because they may have substantial procompetitive effects that benefit consumers. Accordingly, absent proof that a tying arrangement creates foreclosure in the tied product market, the courts do not condemn tying arrangements under the antitrust laws. There is no evidence of any such effects here.

To the contrary, the evidence discussed above shows robust competition between NASDAQ and other platforms with respect to all of its products. And if NASDAQ's competitors saw that they were losing customers by virtue of NASDAQ's discount, those competitors could seek to offer discounts of their own or otherwise enhance their product offerings. This is the essence of competition, and the benefits to consumers from such competition are obvious. Indeed, the only parties that might conceivably be harmed by NASDAQ's proposed pricing are NASDAQ's competitors if customers find NASDAQ's proposed discount attractive. That is not the sort of harm that the Commission should be acting to prevent.⁴⁴

⁴⁰ Jefferson Parish, 466 U.S. at 12.

N. Pac. Ry., 356 U.S. at 6 n.4; accord Jefferson Parish, 466 U.S. at 12.

⁴² *Ill. Tool*, 547 U.S. at 35-36, 46.

⁴³ See id.; Jefferson Parish, 466 U.S. at 13-14, 16.

See, e.g., Brunswick Corp. v. Pueblo Bowl-O-Mat, Inc., 429 U.S. 477, 488 (1977) (where the defendant's conduct allegedly harmed competitors, but the harm was caused by more vigorous competition, it would be "inimical to the purposes of [the antitrust] laws" to permit the allegedly harmed competitors to have standing to sue under a theory that was "designed to provide them with the profits they [only] would have realized had competition been reduced").

D. The commenters' expert acknowledges that there is nothing anticompetitive about the proposed discount.

Tellingly, SIFMA's expert implicitly acknowledges that there is nothing anticompetitive about the Proposed Rule itself, because it is "on its face" a discount. Dr. Evans nonetheless speculates that there could possibly be anticompetitive effects in the future if NASDAQ were to raise the "non-discounted" price of its depth-of-book products to supracompetitive levels. *Id.* But any such fee proposal would itself be subject to review by the Commission and should be considered only if and when it is proposed. The mere possibility that NASDAQ may raise its fees at a later time is hardly reason to disapprove a rule that will benefit investors by lowering prices.

II. Differential Pricing In Response To Competitive Market Conditions Does Not Unreasonably Discriminate Between Market Participants.

The Commission has for many years accepted multiple pricing structures that result in differential pricing that permits exchanges to charge less to customers that contribute more:

- *Volume tiers:* Equity and options pricing has long included volume tiers that provide discounts to the heaviest liquidity providers, highly capitalized broker/dealers or takers;
- Fee caps: Many exchanges have fee caps and enterprise licenses that favor heavy users of a system over other users;
- **Professional vs. Non-professional data recipients:** Different recipients pay different fees for the same market data based upon their status;
- *Equity Investors:* The Commission has accepted the sale and purchase of equity ownership in exchanges predicated upon incentives for continued order flow provision;
- *Directed Participants:* Several exchanges have programs differentiating between participants that accepted directed orders and those that do not;
- Order Capacity Differentiation: The options exchanges have differentiated between retail customers and professional customers, broker/dealers clearing in the "Firm" range at the Options Clearing Corp, broker/dealers registered as market makers, away market makers, early-adopting market makers, and many others; and
- *Order Handling Methods:* The Commission has permitted price differentiation based on whether an order is processed manually versus electronically.

Before reversing this history of prudent price differentiation, the Commission is obligated to perform an in-depth analysis of the justifications for and impacts of existing price differentiation, and to distinguish through principle why existing differentiation is permitted but NASDAQ's

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Evans Report at 20 n.35.

proposed differentiation is not.

The Suspension Order states that the Commission has expressed concern about exchanges favoring participants in its own exchange over participants in other exchanges. ⁴⁶ The Suspension Order, drafted by the Staff pursuant to delegated authority, cites only one Commission order ostensibly expressing such concern. That order is unavailing for several reasons. First, the proposal under review there did not even attempt to favor participants in its own exchange over participants in other exchanges; any statement on that issue was dicta. Second, that proposal did not involve a differential price discount of any sort. Third, that case did not involve the attempted linking of discounts for purchasers of market data and execution services.

SIFMA also contends that the proposed discount unfairly favors retail over professional investors. Their comment concludes, without meaningful analysis, that this differential price is "unreasonably discriminatory" and thus in violation of the Exchange Act. However, contrary to SIFMA's proposed approach, under which differential pricing should apparently be condemned automatically without any analysis of its purpose or effects, the Commission, courts, and commentators have long recognized that differentiation in the prices, terms, and conditions of sale can enhance competition and ultimately result in lower prices for consumers, and therefore should only be precluded where there is evidence of harm to competition. Such evidence is entirely missing here.

Contrary to SIFMA's proposed approach, it is broadly recognized by courts and commentators that over-deterrence of differential pricing is likely to be harmful to competition and consumers. For example, in *Brooke Group*, the Supreme Court explained that the Robinson-Patman Act "condemns price discrimination only to the extent that it threatens to injure competition," that "Congress did not intend to outlaw price differences that result from or further the forces of competition," and that the statute should be "construed consistently with broader policies of the antitrust laws." Similarly, Professor Herbert Hovenkamp, the co-author of the leading treatise on antitrust law, has stated that overbroad enforcement of the prohibition against price discrimination in the Robinson-Patman Act may discourage procompetitive price differences. In particular, he explained that differential pricing "resulting from an upstream firm's unilateral pricing decisions must enjoy a very strong presumption that [it is] socially beneficial and not 'anticompetitive' in any economically acceptable sense of that term." Thus, a supplier should be able to reward more aggressive dealers by giving them price discounts and

Suspension Order at 5.

⁴⁷ SIFMA Comment at 8-9.

⁴⁸ See 15 U.S.C. § 78k-1(c)(1)(D).

⁴⁹ 509 U.S. at 220.

H. Hovenkamp, Antitrust Law ¶ 2342b (2d ed. 2006); H. Hovenkamp, *The Robinson-Patman Act and Competition: Unfinished Business*, 68 Antitrust L.J. 125, 127 (2000).

rebates to increase the competitiveness of its distribution system and volume of sales.⁵¹ Prof. Hovenkamp cautioned that all buyers would suffer from a broad prohibition against selective price cuts, because sellers would likely respond to such a prohibition by not making any price cuts at all to avoid the cost of extending them to all buyers.⁵² Such conduct would contribute to price rigidity and effectively establish a price floor,⁵³ and it would also facilitate or help maintain price coordination.⁵⁴

These concerns were echoed by the Antitrust Modernization Commission ("AMC"), a bipartisan blue-ribbon panel created by Congress in 2004 to study and report to the President and Congress on the state of antitrust enforcement in the United States. The AMC's Report and Recommendations, which were issued in 2007, cautioned strongly against aggressive enforcement against differential pricing, explaining that there were "many legitimate, procompetitive reasons" for differential pricing. ⁵⁵ For example, the AMC found that volume discounts can allow sellers to achieve certain scale economies in production ⁵⁶ and facilitate new entry when the seller can selectively offer its products to large buyers at prices that are lower than those charged by incumbent competitors. ⁵⁷ In addition, sellers can use volume discounts to introduce their products to new customers or to reward distributors for high sales and aggressive promotion of their products. ⁵⁸ Overall, the AMC's Report concluded that a broad prohibition against differential pricing would be detrimental to consumers because it would discourage price discounts that midstream buyers can pass on to consumers. ⁵⁹

For many of these reasons, the Commission historically has permitted differential pricing in the sale of market data products, except in those limited instances in which such pricing would interfere with the operation of the national market system—for example, by providing quicker access to some market participants of the "top of book" data that broker dealers are required to access pursuant to their duty of best execution. With respect to the "depth of book" data at

⁵¹ Id.; H. Hovenkamp, Testimony on Robinson-Patman Act, Antitrust Modernization Commission, at 8 (June 2, 2005), at http://govinfo.library.unt.edu/amc/commission_hearings/pdf/Hovenkamp.pdf (last visited on Apr. 2, 2011).

⁵² H. Hovenkamp, Antitrust Law ¶ 2340b.

American Bar Association, Comments of the Section of Antitrust Law of the American Bar Association in Response to the Antitrust Modernization Commission's Request for Public Comment Regarding Robinson-Patman Act Study Issues 7-8 (Apr. 2006).

⁵⁴ H. Hovenkamp, Antitrust Law ¶ 2340b.

Antitrust Modernization Commission, Report and Recommendations ("AMC Report"), at 318-320, *at* http://govinfo.library.unt.edu/amc/report_recommendation/chapter4.pdf (last visited on Apr. 2, 2011).

⁵⁶ *Id.* at 319.

⁵⁷ *Id.* at 320.

⁵⁸ *Id.*

⁵⁹ AMC Report at 318-319.

⁶⁰ See Regulation NMS, 70 Fed. Reg. 37,496, 37,569 (June 29, 2005).

issue in the Proposed Rule, however, the Commission has determined that "market forces, rather than regulatory requirements," should dictate the quantity and type of data purchased by investors.⁶¹

In the same spirit, the Commission has acknowledged that exchanges can offer different prices to "particular classes of subscribers" based on market conditions such as "their economic circumstances and their need for and use of . . . information." Indeed, the Commission has previously approved or cited favorably to differential pricing between retail and non-retail investors, including with respect to the very depth-of-book products at issue here. Far from undermining the purposes of the Exchange Act, the Commission found that such differential pricing "provide[s] an opportunity for many investors to have access to the enhanced data provided by these services, which should help to increase transparency."

In short, the circumstances in which the Commission or courts might seek to prohibit differential pricing are not present here. There is no evidence that the proposed discount would impair the functioning of the national market system⁶⁵ or otherwise result in predatory prices or threaten to injure competition among exchanges or customers.⁶⁶ Indeed, any of the exchanges that compete with NASDAQ could choose to respond to the proposed pricing by NASDAQ by offering its own discounts on its data products (whether bundled or unbundled), which would enhance competition and benefit consumers. This competition is precisely why the Proposed Rule differentiates based on type of investor and amount of order flow: it is a response to competition for retail order flow from trading platforms such as BATS Exchange and Direct Edge.⁶⁷ Consistent with the Commission's past precedent, it is not "unreasonably discriminatory" to provide a discount in response to the price sensitivities of a particular segment of the market; rather, it is the essence of competition.

Simply put, investor protection is furthered by the lowering of prices as a result of robust competition, not by a regulatory paradigm that enforces price rigidity and uniformity while looking askance at attempts to reduce prices. As Congress and the Commission both recognize, nothing is more important to fostering a national market system than competition—and few things are more important to competition than the ability to quickly alter prices or other terms to respond to competition or win a significant new customer. Price rigidity and uniformity are

Id. at 37,567; see also id. at 37,597 ("efficiency is promoted when broker-dealers may choose to receive (and pay for) additional market data based on their own internal analysis of the need for such data").

See Concept Release, Regulation of Market Information Fees and Revenues, 64 Fed. Reg. 70,613, 70,630 (Dec. 17, 1999).

⁶³ See Order, 67 Fed. Reg. at 70,472; see also Concept Release, 64 Fed. Reg. at 70,630-31.

⁶⁴ Order, 67 Fed. Reg. at 70,472.

⁶⁵ 70 Fed. Reg. at 37,569.

⁶⁶ Brooke Group, 509 U.S. at 220, 224.

⁶⁷ See Proposed Rule Change at 3-4.

signs of a stagnant market, not a vibrant one; regulation of differential pricing should be reserved to anticompetitive conduct that impedes the objectives of the securities laws.

III. The D.C. Circuit's Decision In *NetCoalition* Provides Broad Discretion To The Commission To Rely On Competitive Forces To Determine Whether Fees Are "Fair And Reasonable."

In their submission, SIFMA and NetCoalition rely on a misreading of the D.C. Circuit's *NetCoalition* decision—arguing that NASDAQ must submit evidence on the marginal costs of collecting and distributing market data to prove that the Proposed Rule is "fair and reasonable." That is incorrect.

It was the intent of Congress in creating the national market system to rely on competitive forces, where possible, to set the price of market information. Indeed, the Commission has already considered and rejected a cost-of-service ratemaking approach to setting market data fees, adopting an approach that relies on "market forces, rather than regulatory requirements," to determine the prices of depth-of-book products. As an Advisory Committee appointed by the Commission to review market data issues explained, "the 'public utility' cost-based ratemaking approach is resource-intensive, involves arbitrary judgments on appropriate costs, and creates distortive economic incentives."

The Commission's rejection of cost-based ratemaking in favor of reliance on market forces mirrors the experience of other federal agencies that have come to reject cost-of-service ratemaking as a cumbersome and impractical process that stifled, rather than fostered, competition and innovation. It also mirrors the approach generally followed for assessing market power under the antitrust laws—that is, using a structural or "market definition" approach, rather than becoming entangled with elusive proof of supracompetitive pricing through cost-based analysis. The control of the cost-based analysis.

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See Conference Report, H.R. Rep. No. 94-229, 94th Cong., 1st Sess. 92 (1975), at 92 ("It is the intent of the conferees that the national market system evolve through the interplay of competitive forces as unnecessary regulatory restrictions are removed.").

⁶⁹ Regulation NMS, 70 Fed. Reg. 37,496, 37,566-37,568 (Jun. 29, 2005).

Report of the Advisory Committee on Market Information: A Blueprint for Responsible Change, at § VII.D.3 (SEC Sept. 14, 2001). See also Stephen G. Breyer, Analyzing Regulatory Failure: Mismatches, Less Restrictive Alternatives, and Reforms, 92 Harv. L. Rev. 547, 565 (1979) ("insofar as one advocates price regulation . . . as a 'cure' for market failure, one must believe the market is working very badly before advocating regulation as a cure. Given the inability of regulation to reproduce the competitive market's price signals, only severe market failure would make the regulatory game worth the candle.").

⁷¹ See, e.g., Elizabethtown Gas Co. v. FERC, 10 F.3d 866, 870 (D.C. Cir. 1993).

⁷² See supra at 8 n.33.

In *NetCoalition*, the D.C. Circuit rejected SIFMA and NetCoalition's argument that the Exchange Act requires the Commission to employ cost-based ratemaking to determine whether proposed fees are "fair and reasonable." To the contrary, the D.C. Circuit blessed the Commission's decision to rely on "competitive forces" in approving a proposed rule—as long as it has a "reasoned basis" for doing so. SIFMA and NetCoalition simply ignore the D.C. Circuit's stamp of approval on market-based methods for determining the reasonableness of fees.

Although *NetCoalition* also acknowledged that cost data could be relevant in determining reasonableness, it did not require the submission of such data in every case; for example, it acknowledged submission of cost data may be inappropriate where there are "difficulties in calculating the direct costs . . . of market data." That is the case here, as shown in NASDAQ's expert reports, due to the fact that the fixed costs of market data production are inseparable from the fixed costs of providing NASDAQ's trading platform, and the marginal costs of market data production are minimal or even zero. ⁷⁶

Moreover, the D.C. Circuit allowed that the Commission could substantiate rules based on "alternative indicator[s] of competitiveness," as long as the evidence in the record supported it. For example, *NetCoalition* specifically contemplated that an exchange could rely, as NASDAQ does here, on the "total platform' theory whereby market data and trade executions are 'joint products' with 'joint costs' at each trading 'platform,' or exchange." The D.C. Circuit merely rejected the fee schedule submitted by NYSE Arca in support of its ArcaBook depth-of-book product because, on the record in that case, there was insufficient evidence that competitive forces constrained the price. ⁷⁹

In short, SIFMA and NetCoalition mistake the D.C. Circuit's flexible, market-based analysis in which cost data may be relevant for a rigid requirement that exchanges submit the "costs of collecting and distributing market data" in support of every proposal. And they mistakenly assume that the reference in *NetCoalition* to "costs of collecting . . . market data" can only refer to *marginal cost*, rather than the *fixed costs* associated with maintaining a platform for order execution—which is essential to creating and collecting the raw data that NASDAQ incorporates into its depth-of-book products. Thus, fixed platform costs *are* costs of "collecting"

⁷³ NetCoalition, 615 F.3d at 534.

⁷⁴ *Id.* at 544.

⁷⁵ *Id.* at 539 (internal citation omitted).

See Ordover/Bamberger Report at ¶ 19 & n.8; Ordover/Bamberger Rebuttal Report at ¶¶ 21-22.

NetCoalition, 615 F.3d at 539.

⁷⁸ *Id.* at 542 n.16.

⁷⁹ See id. at 544.

⁸⁰ *Id.* at 537.

market data.⁸¹ SIFMA and NetCoalition's mandatory "marginal cost" analysis is not what *NetCoalition* requires, does not make sense as a matter of economics, and is not supported by the purposes underlying the Exchange Act or the Commission's past practice.

IV. Because There Is A Reasoned Basis For Concluding That The Proposed Rule Is Procompetitive, It Satisfies The D.C. Circuit's Decision In *NetCoalition*.

Under a proper reading of *NetCoalition*, there can be no doubt that NASDAQ's proposed discount is fair and reasonable. As an initial matter, in holding that the Commission could rely on market forces to determine whether data fees are reasonable, the D.C. Circuit cited favorably to the Commission's prior approval of NASDAQ's depth-of-book products. The reasonableness of NASDAQ's fees, in other words, has already been determined by the Commission and is not at issue. All that is at issue is the reasonableness of NASDAQ's proposed *discount* on its previously-filed, currently effective fees. For the reasons stated in Parts I and II, *supra*, because the discount itself does not raise any anticompetitive concerns, the Proposed Rule should be approved under *NetCoalition* without further analysis.

But even assuming that NASDAQ needs to show in this filing that market forces constrain the previously-approved, non-discounted prices of its data fees, the evidence in the record here more than satisfies the *NetCoalition* standard. None of the concerns that led the D.C. Circuit to find the evidentiary record lacking in *NetCoalition* apply here.

First, whereas in NetCoalition the Court said the Commission had provided no explanation as to why it did not consider the marginal cost of data products in determining whether competition adequately constrained the price of fees, the D.C. Circuit suggested that the "joint products" theory set forth by NASDAQ's experts could provide the needed answer. 83 Indeed, that explanation applies here. An exchange's execution services and market data products are "joint products" that share common costs, because "every execution of a trade automatically produces another potential product, namely information about that trade (such as the price and quantity traded)." Because the costs of providing execution services and market data are not unique to either of the provided services, there is no meaningful way to allocate those costs among the "joint products"—and any attempt to do so would result in inherently arbitrary cost allocations. 85

Critically, Dr. Evans agrees in his report that "[m]arket data are a byproduct of the trading process"—thus implying that joint costs underlie both the operation of a trading platform and the production of market data.⁸⁶ Moreover, Dr. Evans does not dispute that, because of the

⁸⁴ Ordover/Bamberger Report at ¶ 19.

⁸¹ Ordover/Bamberger Rebuttal Report at ¶¶ 6-7.

NetCoalition, 615 F.3d at 537.

⁸³ *Id.* at 542 n.16.

⁸⁵ See id. at ¶ 19 n.8.

⁸⁶ See Evans Response at 4; Ordover/Bamberger Rebuttal Report at ¶ 4.

high fixed costs associated with the joint production of market data and trading, market data products cannot be priced at marginal cost.⁸⁷ Rather, Dr. Evans merely speculates that it is possible that the price of one joint product, market data, could "cross-subsidize" the costs of the other, execution services.⁸⁸

But Dr. Evans has admitted in other academic writings that there are examples of competitive "two-sided markets" where joint products are sold at asymmetrical prices to recover the joint costs of providing a product or service—such as a newspaper that serves both advertisers and readers. In such markets, "profits may be maximized by highly asymmetric pricing in which one group is served at a price close to or even below marginal cost, and most or all gross margin is earned by serving the other group." Dr. Evans's suggestion that, even in competitive industries, some products may be sold at *below marginal cost* to recover joint costs of production stand in stark contrast to his conclusion here that asymmetric pricing in execution services and market data is evidence of "cross-subsidization" and anticompetitive behavior. ⁹¹

Moreover, Dr. Evans's speculation about "cross-subsidization" is not evidence, and any attempt by the Commission to prove that theory would require undertaking the impossible task of allocating joint costs of production between NASDAQ's market data and execution services. ⁹² The Commission should decline the invitation to do so. ⁹³

Second, unlike in NetCoalition, there is substantial evidence in the current record that the market for depth-of-book data products is fluid and robust, and specifically that consumers of

⁸⁷ Ordover/Bamberger Rebuttal Report at ¶¶ 6-7.

⁸⁸ Evans Response at ¶ 21.

⁸⁹ See Ordover/Bamberger Rebuttal Report at ¶ 24.

⁹⁰ *Id*.

The Commission itself has tolerated pricing below marginal cost, as is the case when an exchange offers a liquidity rebate (negative price) that exceeds the execution fee charged (positive price). Several exchanges have operated in this "inverted" pricing model in an attempt to attract order flow.

⁹² Ordover/Bamberger Rebuttal Report at ¶ 22-23.

While Dr. Evans asserts that his theory of "cross-subsidies" is empirically verified by his belief that "trading venues use revenue from consolidated tape data to compete for order flow," that is incorrect. Evans Response at 17. To the contrary, the practice of "market data revenue sharing," in which exchanges shared revenue from core data with their members, has all but vanished from the marketplace. NASDAQ, for example, diminished its market data revenue sharing program when it became an exchange in 2006 and eliminated it altogether in 2008. See Notice of Filing and Immediate Effectiveness of a Proposed Rule Change Modifying Pricing for Nasdaq Members Using the Nasdaq Market Center, Release No. 34-57924, 73 Fed. Reg. 33,477 (June 12, 2008). This is a reflection of a competitive environment in which fees for both core and non-core data have consistently declined in real, and often in absolute, terms.

NASDAQ's depth-of-book product have different data needs, subscribe at different levels, and are sensitive to changes in price. Dr. Evans's claim that NASDAQ exercises monopoly power over the price of market data based on his "understanding" that depth-of-book data is "essential information" for certain traders is nothing more than mere speculation. Rather, the evidence plainly shows that competitive forces exercise significant constraints on the price that exchanges can charge for market data.

For example, there is substantial turnover in customers for NASDAQ's depth-of-book products. At the end of 2009, NASDAQ had 145 clients that purchased depth-of-book data for internal purposes. In 2010, NASDAQ lost 68 of those clients (*i.e.*, 47 percent of its year-end customer count) and added another 179. During 2009, NASDAQ lost 38 clients and added another 60. If it were "essential" for traders to have access to NASDAQ's data, one would not expect this degree of turnover.

In addition, NASDAQ charges distributors of its depth-of-book products a monthly \$1,000 "distributor fee" and a monthly "usage fee" of \$70 per month per professional or corporate subscriber. NASDAQ internal distribution clients can reduce the amount of information they purchase by reducing the number of subscribers who receive the data feed. *See id.* For example, over the last year, a "Bulge Bracket" firm that purchased NASDAQ depth-of-book data reduced its number of subscribers by 86 percent (from 341 to 56). Similarly, a major "Buy Side" firm that purchased NASDAQ depth-of-book data reduced its number of subscribers by 60 percent (from 327 to 132). Again, if it were "essential" for traders to purchase depth-of-book data, one would not expect this year-to-year variation.

There is also variation in subscription levels among users of NASDAQ's data. For example, NASDAQ offers separate subscriptions for depth-of-book information for stocks listed on NASDAQ ("Tape C" information) and for stocks listed on the NYSE and American Stock Exchange ("Tape A/B" information). If certain traders needed to see the entire market before deciding where to execute an order, it would stand to reason that all depth-of-book subscribers would purchase both Tape A/B and C data. But that is not the case: Rather, NASDAQ has about 20 percent more subscribers for its Tape C than for its Tape A/B depth-of-book product, even though the tape A/B product is less expensive, and even though as of February 2011 NASDAQ accounted for 11.9 percent of trading in NYSE-listed stocks. 102

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⁹⁴ Evans Response at 12, 13.

⁹⁵ Ordover/Bamberger Rebuttal Report at ¶ 12; Hopkins Statement at ¶ 7.

⁹⁶ *Id*.

⁹⁷ See id.

⁹⁸ See Ordover/Bamberger Rebuttal Report at ¶ 13.

⁹⁹ See id.; Hopkins Statement at ¶ 8.

¹⁰⁰ See Ordover/Bamberger Rebuttal Report at ¶ 13; Hopkins Statement at ¶ 8.

¹⁰¹ See Ordover/Bamberger Rebuttal Report at ¶ 15; Hopkins Statement at ¶ 10.

¹⁰² See id.

Finally, there is clear evidence that users of NASDAQ's depth-of-book data products are sensitive to changes in price. For example, in October 2003, NASDAQ reduced the price for its "TotalView" depth-of-book product from \$150 to \$70 per month per subscriber (for professional investors). The result was a marked increase in subscriptions to TotalView: From 1,345 professional subscribers in August 2003 to 6,767 in January 2004, an increase of a factor of more than five. This demonstrates that there were a large number of potential buyers who were unwilling to purchase TotalView at \$150 per month but were willing at the price of \$70 per month. This is precisely the type of evidence that the D.C. Circuit found lacking in NetCoalition—"the number of potential users of the data [and] how they might react to a change in price."

Third, the D.C. Circuit expressed concern as to whether competition for order flow could exercise a significant competitive constraint on depth-of-book data fees, because a relatively small percentage of total investors purchase depth-of-book data. Even Dr. Evans, however, ultimately concedes that this competitive constraint exists: "If an exchange sets the monthly price so high that few traders purchase it, then the number of traders placing orders on that exchange for any stock would likely be reduced. One of the costs of setting the subscription price too high is then the loss of order flow revenue." 108

Indeed, the D.C. Circuit suggested that competition for order flow *could* exercise a competitive constraint if it were shown that the small number of depth-of-book data users directed a substantial volume of orders to the exchange. That is the case here. The heaviest users of NASDAQ trade execution services typically purchase data on a "direct access" basis, and also "co-locate" a server in the NASDAQ data center. NASDAQ currently has 104 such customers (including for example, major investment banks and hedge funds). Those customers direct a substantial amount of order flow to the exchange. For example, there are 27 customers who purchase NASDAQ's depth-of-book data at the NASDAQ data center and direct all of their order flow to NASDAQ through that "co-location" center (that is, they do not contribute order flow to NASDAQ through some other location that may or may not purchase depth data). Using this conservative estimate, those 27 customers alone contribute

¹⁰³ See Ordover/Bamberger Rebuttal Report at ¶ 14; Hopkins Statement at ¶ 9.

¹⁰⁴ See id.

¹⁰⁵ See id.

¹⁰⁶ *NetCoalition*, 615 F.3d at 542-43.

¹⁰⁷ See id. at 541 n.14.

Evans Response at 16 n.30 (emphasis added); Ordover/Bamberger Rebuttal Report at ¶ 5.

¹⁰⁹ See 15 F.3d at 541 n.14.

¹¹⁰ See Hopkins Statement at \P 6.

¹¹¹ See id.

approximately 22% of NASDAQ's total volume of order flow—plainly enough to constrain the price that NASDAQ can charge for its market data. 112

Indeed, NASDAQ has also provided the Commission with evidence of this very competitive constraint in practice: In late 2009, NASDAQ reduced the price for "non-displayed use" of depth data after being notified by a member that without a reduction in price, it would take its order book to another exchange. Given the price sensitivities shown by market data customers and described above, there can be no doubt that the loss of depth-of-book consumers would lead to a substantial loss of order flow.

Conclusion

In sum, the Commission should approve NASDAQ's Proposed Rule, because offering a discount on market data products to members who service non-professional investors is eminently "fair and reasonable." By using market data discounts to attract order flow to NASDAQ, the Proposed Rule is a procompetitive response to the recent rise of non-traditional trading platforms, whose share of market volume has increased dramatically in recent years. It is the antithesis of the "monopolistic" pricing strategy that SIFMA and NetCoalition fear. In addition, the evidence in the record plainly shows that the fierce competition for order flow among exchanges and the ready availability of market substitutes exercise significant constraints on the price of market data. Thus, the Commission's suspension should be lifted, and the Proposed Rule should be approved.

Respectfully submitted,

The Hon. Mary L. Schapiro, Chairman

The Hon. Kathleen L. Casey, Commissioner

The Hon. Elisse B. Walter, Commissioner

The Hon. Luis A. Aguilar, Commissioner

The Hon. Troy A. Paredes, Commissioner

Robert W. Cook, Director, Division of Trading and Markets

James A. Brigagliano, Deputy Director, Division of Trading and Markets

cc:

¹¹² See id.

¹¹³ See Ordover/Bamberger Report at ¶ 29.

EXHIBIT A

Reply Statement of Janusz Ordover and Gustavo Bamberger

I. INTRODUCTION.

- 1. We previously filed a statement on behalf of the NASDAQ Stock Market ("NASDAQ") that evaluated the extent to which competitive forces constrain NASDAQ's ability to set prices and terms for "proprietary" data products. We also previously submitted comments in connection with a Notice of Proposed Order Approving Proposal by NYSE Arca, Inc. To Establish Fees for Certain Market Data and Request for Comment, Release No. 34-57917, June 4, 2008 released by the Securities and Exchange Commission ("the Commission"). Our experience and qualifications are summarized in our prior statement.
- 2. Dr. David S. Evans, on behalf of the Securities Industry and Financial Markets Association and NetCoalition, recently filed a response to our prior statement.² Dr. Evans criticizes our prior statement and claims that our conclusions are "not supported by the economics or evidence."³ We have been asked by counsel for NASDAQ to review and evaluate Dr. Evans's response. As we explain in this reply statement, nothing in Dr. Evans's response causes us to change our prior conclusions.
- 3. The rest of this reply statement is organized as follows. In Section II, we show that Dr. Evans agrees with us on several key issues. In Section III, we show that Dr. Evans does not dispute several of our conclusions. In Section IV, we show that Dr. Evans's criticisms of our analysis are flawed.

^{1.} See Statement of Janusz Ordover and Gustavo Bamberger, filed with the Securities and Exchange Commission, Release No. 34-57917, on behalf of NASDAQ Stock Market, August 1, 2008.

^{2.} Dr. David S. Evans, "Response to Ordover and Bamberger's Statement Regarding NASDAQ's Proposed Rule Change Concerning the Pricing of Depth-of-Book Data," March 21, 2001 ("Evans Response").

^{3.} Evans Response, at 2.

II. DR. EVANS AGREES WITH US ON KEY ISSUES.

4. Despite his criticism of our conclusions, Dr. Evans agrees with us on key issues. First, in our prior statement we explained that trade execution services and market data are "joint products" that necessarily involve incurring "joint costs":

Execution services and market data are an example of "joint products." This is because every execution of a trade automatically produces another potential product, namely information about that trade (such as the price and quantity traded). Similarly, depth-of-book information is automatically produced when traders post limit orders on a platform. The production of joint products necessarily involves incurring "joint costs," i.e., costs that are not uniquely incurred on behalf of any one of the services provided by the exchange.⁴

Dr. Evans agrees that "[m]arket data are a byproduct of the trading process." Although Dr. Evans does not comment on the issue of joint costs, his view that market data are a "byproduct" of trading implies that joint costs underlie the production of trade execution services and market data.

- 5. Second, in our prior statement we explained that increases "in the price of proprietary data by a platform can be expected to reduce the volume of trading on that platform, which reduces the profitability of such a price increase and thus constrains the pricing of proprietary information." Dr. Evans criticizes this conclusion in the text of his statement (and we address these criticisms later in this reply statement), but in footnotes to his statement Dr. Evans agrees with our position:
 - "If an exchange sets the monthly price so high that few traders purchase it, then the
 number of traders placing orders on that exchange for any stock would likely be
 reduced. One of the costs of setting the subscription price too high is then the loss of
 order flow revenue."

^{4.} Statement of Janusz Ordover and Gustavo Bamberger, filed with the Securities and Exchange Commission, File No. SR-NASDAQ-2010-174, on behalf of NASDAQ Stock Market, December 30, 2010 ("Ordover and Bamberger"), ¶19.

^{5.} Evans Response, at 4.

^{6.} Ordover and Bamberger, ¶29.

^{7.} Evans Response, at 16, footnote 30.

• "My position here and in my prior Reports does not assume that there is no relationship whatsoever between the pricing of depth-of-book data and the volume of order flow. Some traders may decide not to use a trading venue that declines to make depth-ofbook data available at all or charges an extremely high price for that data."

III. DR. EVANS DOES NOT DISPUTE SEVERAL OF OUR KEY CONCLUSIONS.

Dr. Evans does not dispute several of the key conclusions in our prior statement.

First, we concluded that:

the services provided by a trading platform cannot be priced at marginal cost. Moreover, as we have discussed, execution services and market data are joint products. This does not mean that if one product is regarded as simply a by-product of another activity, it should be priced at a zero. Far from it: insofar as there is demand for that product at a positive price, the price for that product should be positive. Thus, even if information could be produced at zero marginal cost, economic principles mandate that it nevertheless be priced to the willing buyers at a price higher than the associated marginal cost. That is, it is economically appropriate for such information to carry a positive price.⁹

Dr. Evans does not dispute that the services provided by a trading platform cannot be priced at marginal cost.

7. Second, we concluded that:

Given that marginal cost pricing is generally not feasible in high fixed cost industries, some deviations from marginal cost pricing are unavoidable. One alternative might be to charge all customers a price equal to average total cost (including a return to capital). It is, however, well known that uniform average cost pricing – that is, charging the same price equal to average cost to all customers – is not socially efficient. In general, economic efficiency in these circumstances requires that customers whose demand is more responsive to price changes pay prices closer to marginal cost as opposed to customers who are less responsive to price changes.¹⁰

Dr. Evans does not dispute that, in high fixed cost industries, charging different prices to different groups of customers based on their responsiveness to price changes is economically efficient.

8. Third, we concluded that:

8. Evans Response, at 12, footnote 24.

10. Ordover and Bamberger, ¶51.

^{9.} Ordover and Bamberger, ¶49 (footnote omitted).

Competitive concerns from a practice of bundling discounts across a range of products may potentially arise when such bundling-cum-discounting is used to foreclose entry (expansion) of rival firms which may not be able to offer an array of products as broad as that offered by the incumbent. In the instant case it is not likely that the combined offer will induce rival exchanges to exit (or become less competitively potent due to a reduction in volume). It is also not likely that the combined offer will have the effect of creating significant barriers to entry or expansion for new exchanges.¹¹

Dr. Evans does not dispute that "bundling" of market data and execution services is not likely to raise competitive concerns.

III. DR. EVANS'S CRITICISMS OF OUR ANALYSIS ARE FLAWED.

A. Dr. Evans's Analysis is Based on Flawed Assumptions.

- 9. Dr. Evans's analysis is based on a flawed assumption about the role of depth-of-book data. Dr. Evans claims that "depth-of-book data from exchanges with substantial liquidity which obviously includes Nasdaq are <u>essential</u> information for those traders who buy them." Dr. Evans also claims that "for traders to identify the exchange that is the optimal exchange on which to place a large trade, they <u>must</u> purchase and review the depth-of-book data of each center of significant liquidity. . . . In short, a broker-dealer cannot ignore the depth-of-book data available from a major trading venue, such as Nasdaq." 13
- 10. Dr. Evans also reports that "he understands" that traders "must" purchase depth-of-book data from multiple trading venues: "[F]or traders to identify the exchange on which the optimal price and volume are offered for a given security, and for an assessment of the likely price of a significant order, <u>my understanding</u> is that they <u>must</u> purchase and review the depth-of-book data from each trading venue with significant liquidity for that security."¹⁴ Dr. Evans

^{11.} Ordover and Bamberger, ¶59.

^{12.} Evans Response, at 12, emphasis added.

^{13.} Evans Response, at 13, emphasis added.

^{14.} Evans Response, at 8, emphasis added.

presents no support for his claim (other than a citation to a comment letter from the Security Traders Association).¹⁵

- 11. The empirical evidence is inconsistent with Dr. Evans's position. For example, as of January 1, 2011, only 7.9 percent of data customers that purchased NASDAQ "real-time" data for internal distribution (such as "Level 2" top-price level data) also purchased depth-of-book data from NASDAQ. As of January 1, 2009, this percentage was almost the same (7.8 percent). Thus, over ninety percent of data customers that purchase real-time market data from NASDAQ do not consider depth-of-book data to be "essential information."
- 12. At the end of 2009, NASDAQ had 145 clients that purchased depth-of-book data for internal purposes. To During 2010, NASDAQ lost 68 of those clients (i.e., 47 percent of its customer count at the end of 2009) and added 179 clients. In 2009, NASDAQ lost 38 clients and added 60. Thus, the year-to-year "churn" in depth-of-book clients is substantial. If depth-of-book data were "essential information" as Dr. Evans claims NASDAQ likely would not lose large numbers of clients. Indeed, the mere fact that some clients stop purchasing the depth-of-book data clearly indicates that such information is not "essential" even to those clients who have purchased such data in the past.
- 13. Each purchaser of depth-of-book information pays a monthly "distributor fee" (e.g., \$1,000 per month for internal distribution) and a monthly "usage fee" per subscriber (e.g., \$70 per month per professional/corporate subscriber). Thus, a client can vary its purchase of depth-of-book data by varying the number of "users" of that information. That is, NASDAQ internal distribution clients that purchase depth-of-book data can, and do, reduce the amount of information they purchase by reducing the number of subscribers who receive the data feed.

^{15.} See Evans Response, at 8-9.

^{16.} Our discussion of NASDAQ data clients is based on information provided by NASDAQ. See Statement of Randall Hopkins of NASDAQ Stock Market LLC.

^{17.} NASDAQ also sells depth-of-book data for clients that distribute it "externally" to, for example, retail customers. Such clients include Bloomberg and Ameritrade.

^{18.} See http://www.nasdagtrader.com/Trader.aspx?id=totalview.

For example, over the last year, a "Bulge Bracket" firm that purchased NASDAQ depth-of-book data reduced its number of subscribers by 86 percent (from 341 to 56). Similarly, a major "Buy Side" firm that purchased NASDAQ depth-of-book data reduced its number of subscribers by 60 percent (from 327 to 132). If depth-of-book data were "essential," it is unlikely that major traders would substantially reduce the number of users with access to that data.

- 14. On August 12, 2003, NASDAQ announced a reduction of the TotalView usage fee for professional investors from \$150 per month to \$70 per month per subscriber, to take effect in October 2003. In August 2003, NASDAQ had 1,345 professional subscribers for TotalView data. By January 2004, the total number of TotalView professional subscribers had increased to 6,767, an increase of a factor of more than five. That is, the depth-of-book data was not purchased by a large number of potential subscribers at a price of \$150 per month but was purchased at a price of \$70 per month. The empirical evidence shows that, for those subscribers, the depth-of-book product was not "essential information" when its price was \$150 per month.
- 15. There is additional empirical evidence that contradicts Dr. Evans's claims of "essentiality." In particular, traders can purchase depth-of-book information for stocks traded on NASDAQ, sometimes referred to as "Tape C" information, i.e., the TotalView product; stocks traded on the New York Stock Exchange and American Stock Exchange, sometimes referred to as "Tape A/B" information, i.e., the "OpenView" product; or both. The price of the Tape A/B product is only \$6 per professional subscriber per month, while the price of the Tape C product is \$70 per professional subscriber per month. NASDAQ accounts for a substantial share of trading in NYSE stocks. If traders "must" have depth-of-book data from each trading venue "with significant liquidity," NASDAQ should have a similar number of Tape C and Tape A/B

^{19.} The fact that NASDAQ charges such different prices for these two depth-of-book products strongly suggests that both products are not "essential" information.

^{20.} In February 2011, for example, NASDAQ accounted for 11.9 percent of trading in NYSE stocks. See http://www.nasdaqtrader.com/trader.aspx?id=marketshare.

subscribers. But NASDAQ has about 20 percent more subscribers for its Tape C than for its Tape A/B depth-of-book product (despite the much lower price for the Tape A/B product).²¹

- B. Dr. Evans's Claim that Competition for Order Flow does not Constrain Depth-of-Book Market Data Pricing is Wrong.
- 16. As we have noted earlier, Dr. Evans agrees that "[i]f an exchange sets the monthly price so high that few traders purchase it, then the number of traders placing orders on that exchange for any stock would likely be reduced."²² Nonetheless, Dr. Evans also claims that "one would not expect pricing for market data to be constrained by competition for order flow."²³
- 17. Dr. Evans's claim appears to be based on his assertion that "[a]n increase or decrease in the monthly subscription fee for depth-of-book data would not change a trader's marginal cost of buying or selling a particular security on a particular exchange."²⁴ Dr. Evans concludes that "[w]hether the monthly subscription price is high or low does not affect, in any way, the decision on where to place an order."²⁵
- 18. Dr. Evans's claim that a change in the price of depth-of-book data does not affect a "trader's marginal cost" is correct only in the narrow sense that <u>after</u> a trader has made the decision to purchase depth-of-book data from a particular exchange, the cost of that data purchase cannot be avoided and is therefore "sunk." But Dr. Evans ignores that traders can, and do, discontinue purchasing depth-of-book data from NASDAQ (and can choose to discontinue purchasing market data on a monthly basis). Indeed, the evidence provided earlier indicates that the demand for subscriptions is highly elastic, i.e., responsive to price.
- 19. When a trader is deciding whether or not to buy depth-of-book data (or discontinue buying it), the data cost is no longer sunk and becomes a "marginal" decision. At

24. Evans Response, at 16.

25. Evans Response, at 16 (emphasis added).

^{21.} This comparison is based on internal and external distribution clients.

^{22.} Evans Response, at 16, footnote 30.

^{23.} Evans Response, at 18.

the point at which a trader makes a decision to purchase (or not) depth-of-book data from an exchange, that decision will be based, at least in part, on the effect that the purchase has on the total cost of trading on one exchange vs. another. Thus, when an exchange is considering what price to charge for its depth-of-book data, it must take into account that an increase in price may lead some traders to forego purchasing the depth-of-book data and reduce trading on the exchange. As we have discussed, Dr. Evans recognizes this constraint on the pricing of market data: "If an exchange sets the monthly price so high that few traders purchase it, then the number of traders placing orders on that exchange for any stock would likely be reduced. One of the costs of setting the subscription price too high is then the loss of order flow revenue."26 Importantly, Dr. Evans fails to acknowledge that a loss in order flow revenues also reduces the value of the depth-of-book data which, in turn, reduces the value of the information from the exchange and thus reduces current and potential clients' willingness to pay for that information. Thus, the increase in the price of information has a magnified effect on the activity on the exchange.

- C. Dr. Evans's Claim that Platform Competition Could Result in the Cross-Subsidization of Trade Execution Fees Ignores that the Provision of Trade Execution Services and Market Data Necessarily Involves Incurring Joint Costs.
- 20. Dr. Evans claims "that inter-platform competition could result in high depth-ofbook data fees cross-subsidizing low trade execution fees."27 Dr. Evans does not define what he means by "high" prices; "low" fees; or "cross-subsidizing." Presumably, Dr. Evans is

26. Evans Response, at 16, footnote 30.

^{27.} Evans Response, at 24. As we discussed in our prior filing, different platforms have chosen different pricing strategies for market data and execution services: "BATS Trading, for example, has chosen an initial strategy of setting low (or zero) prices for market data, midrange prices for executions, and relatively high liquidity rebates." (Ordover and Bamberger, ¶23). Dr. Evans's line of argument implies that BATS is "subsidizing" the "low" price of market data from its trade execution revenues.

suggesting that: (1) depth-of-book fees are high relative to costs; (2) trade execution fees are low relative to costs; and thus (3) trade execution fees are "subsidized."

- 21. This line of argument assumes, however, that "costs" for market data and trade execution fees can be unambiguously measured separately. But as we explained in our prior filing and Dr. Evans agrees with us market data and execution services are joint products, and joint products are produced with joint costs. We also explained that "[i]t is widely accepted that there is no meaningful way to allocate 'common' or 'joint' costs across different joint products. For this reason, 'cost-based' regulation of pricing of market data requires inherently arbitrary cost allocations."²⁸
- 22. Because the production of market data and execution services involves joint costs, Dr. Evans presents no basis for concluding that the price of market data is "high" relative to costs while the price of execution services is "low" relative to costs and "subsidized" by market data revenue. Although Dr. Evans does not explain what he means by "high" depth-of-book fees, perhaps he is taking the position that depth-of-book fees are "high" relative to the marginal cost of the data. But as we have explained (and Dr. Evans did not dispute), the services provided by a trading platform including execution services and market data cannot be priced at marginal cost (or even on the basis of directly attributable costs).
- 23. In general, the prices set by a trading platform are not related in any direct way to "marginal costs." Instead, as we explained in our prior statement,

platforms make simultaneous pricing decisions regarding liquidity rebates, execution fees, and market data fees. Liquidity rebates attract orders that create available liquidity by paying the order submitter a fee when the order executes; execution fees are incurred when an investor's order interacts with available liquidity resulting in a trade; and market data fees pay for access to information about, for example, currently available liquidity and past trades. All of these decisions are made with the goal of

^{28.} Ordover and Bamberger, ¶19, footnote 8. We are, of course, not claiming that there are no costs that can be clearly allocated to one activity or another. Our point is that some costs cannot be allocated and also that these common costs (e.g., the costs of maintaining and operating the trading platform) are substantial.

maximizing profits, or fostering other legitimate business objectives, subject to competitive and regulatory constraints.²⁹

24. Indeed, in prior writings on "two-sided platform" markets, Dr. Evans has taken the position that, even in competitive industries, prices to some consumers often are below marginal cost while prices to other consumers often are above marginal costs. Two-sided platforms, such as newspapers or internet platforms, are analogous to trading exchanges in that they: (1) involve joint costs (e.g., a cost of producing a newspaper that serves both readers and advertisers or maintaining a search platform that serves searchers and advertisers); and (2) selling two or more products at different prices (e.g., a search platform charges nothing for searches and charges a positive price to advertisers). Or. Evans has written that:

all general models of two-sided-platform markets imply that profits may be maximized by highly asymmetric pricing in which one group is served at a price close to or even below marginal cost, and most or all gross margin is earned by serving the other group.

It is important to note that many, if not most, two-sided markets exhibit this sort of asymmetry in pricing and gross margin generation.³¹

Thus, even if the price of market data were above an appropriate measure of cost, evidence of such pricing, by itself, is not evidence that the seller of market data is necessarily exercising market power.

30. Two-sided platforms typically differ from a trading platform that sells exchange services and market data in that a two-sided platform sells its services to two distinct sets of customers (e.g., newspaper readers and advertisers) while trade exchange services and market data often are sold to the same customers (i.e., traders). However, the two-sided platform model applies to a trading platform's trade execution services. In the case of trade execution services, trading platforms often charge a "negative price" to liquidity providers and a "positive price" to traders that remove liquidity.

^{29.} Ordover and Bamberger, ¶20.

^{31.} David S. Evans and Richard Schmalensee, "The Economics of Interchange Fees and Their Regulation: An Overview," Proceedings – Payments System Research Conferences, Federal Reserve Bank of Kansas City, May 2005, 73-120.

Janusz Ordover

Mordower

Gustavo Bamberger

April 4, 2011

EXHIBIT B

Statement of Randall Hopkins of NASDAQ Stock Market LLC

- 1. I, Randall Hopkins, am Senior Vice President at NASDAQ OMX and have managed the market data business at NASDAQ since 2006.
- I am submitting this Statement in support of NASDAQ's Proposed "Platform Pricing" Proposal, Release No. 34-63796.
- 3. NASDAQ competes vigorously with other stock exchanges and alternative trading systems ("ATS's") on a "platform" basis to attract order flow to the exchange and to package and sell the market data (*i.e.*, price and volume information) that results from that order flow. The fierceness of competition for order flow is reflected in the fact that a majority of the shares of NASDAQ-listed stocks are traded on other platforms: By October 2010, for example, only 29.5 percent of NASDAQ-listed securities were traded on NASDAQ.
- 4. Through its current rule proposal, NASDAQ proposes to lower the fees for depth-of-book market data that NASDAQ members provide to non-professional users. The data discount is based on the amount of market data that a member provides to non-professional users as well as the amount of liquidity that the member brings to the exchange.
- 5. The rule proposal is designed to provide an additional benefit in the form of further reduced prices to members that both (a) provide a high level of liquidity to the exchange, and (b) distribute NASDAQ's depth-of-book data to their retail customers. The rule proposal also provides an incentive to members to continue to provide liquidity to NASDAQ, despite competitive incentives to switch their trading activity. These members provide benefits to NASDAQ that go beyond the benefits provided by either (i) customers who distribute NASDAQ's depth-of-book data to retail customers without providing liquidity, or (ii) members who provide liquidity to NASDAQ without distributing its depth-of-book data to retail

customers. Accordingly, it makes sense from a competitive business perspective for NASDAQ to provide a discount aimed specifically at those customers who provide both high levels of liquidity and widely distribute NASDAQ's data products. In essence, NASDAQ is providing especially attractive terms to some of its most important customers and an incentive to continue to remain NASDAQ's most important customers, in response to competitive offers from rival exchanges and trading platforms. Indeed, some of NASDAQ's most valuable clients have threatened to move data subscriptions and/or liquidity to NASDAQ's competitors based on the price of NASDAQ's depth-of-book products. The proposed rule is in part a competitive response to these market signals.

- 6. Not all investors are willing to pay for NASDAQ's depth-of-book data products. For example, as of January 1, 2011, only 7.9 percent of data customers that purchased NASDAQ "real-time" data for internal distribution (such as "Level 1" top-price level data) also purchased depth-of-book data from NASDAQ. As of January 1, 2009, this percentage was 7.8 percent. But those customers who do purchase depth-of-book data contribute a substantial volume of order flow to the exchange. For example, there are 27 TotalView customers that have chosen to "co-locate" a server at the NASDAQ trading center and who direct all of their order flow to NASDAQ via the co-located servers. Those 27 customers alone contribute approximately 22% of NASDAQ's total volume of order flow.
- 7. There is also substantial turnover in the client base for NASDAQ's depth-of-book products. At the end of 2009, NASDAQ had 145 clients that purchased depth-of-book data for internal purposes (as opposed to clients that distribute the data "externally" to, for example, retail customers). During 2010, NASDAQ lost 68 of those clients and added 179 clients. In 2009, NASDAQ lost 38 clients and added 60.

- 8. NASDAQ's internal distribution clients also frequently reduce the number of subscribers who receive their data feed. For example, over the last year, a "Bulge Bracket" firm that purchased NASDAQ depth-of-book data reduced its number of reported subscribers from 341 to 56. Likewise, a major "Buy Side" firm that purchased NASDAQ depth-of-book data reduced its number of reported subscribers from 327 to 132.
- 9. The number of subscribers to NASDAQ's depth-of-book products is highly responsive to changes in price charged for those products. For example, on August 12, 2003, NASDAQ announced a reduction of the TotalView usage fee for professional investors from \$150 per month to \$70 per month per subscriber, effective October 2003. In August 2003, NASDAQ had 1,345 professional subscribers for TotalView data. That number increased to 6,767 by January 2004.
- 10. Consumers of NASDAQ's market data also purchase different levels of subscription from NASDAQ. For example, NASDAQ sells "Tape C" information, *i.e.*, the TotalView product that displays NASDAQ depth-of-book data, for \$70 per professional subscriber per month. NASDAQ sells "Tape A/B" information, *i.e.*, the "OpenView" product that displays depth-of-book data for New York Stock Exchange and American Stock Exchange securities traded on NASDAQ, for only \$6 per professional subscriber per month. NASDAQ has about 20 percent more end-user subscribers for its Tape C than for its Tape A/B depth-of-book product—despite the much lower cost for the Tape A/B product.
- 11. NASDAQ's depth-of-book data products are relatively inexpensive. For example, for a fee of \$15 per month, data distributors can provide non-professional users access to full depth-of-book data for all securities traded on NASDAQ. This equates to seventy five cents per trading day, two-tenths of a penny per minute, \$0.002 per month per stock quoted or

traded on NASDAQ, or \$0.00000006 per trading message contained in NASDAQ's depth-of-book feeds.

12. In addition, many non-professional users benefit from a much lower rate than \$15 for the relevant data, due to usage fee caps for distributors. For example, for the six biggest distributors of non-professional NASDAQ full depth-of-book data, the average rate in January 2011 was \$10.38, which covers distribution to 109,015 users.

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Randall M. Hopkins