



HEALTHY MARKETS
TRANSPARENCY & TRUST

October 23, 2018

Via Electronic Mail (rule-comments@sec.gov)

Brent J. Fields
Secretary
Securities and Exchange Commission
100 F Street, NE
Washington, DC 20549-1090

Re: File No. 4-729, Comments For Consideration Before the SEC's Roundtable on Market Data and Market Access

Dear Mr. Fields:

Healthy Markets Association appreciates the opportunity to offer our comments for consideration at the Commission's Roundtable on Market Data and Market Access. We appreciate the Commission's willingness to explore these complex issues, and thank you for your renewed interest in ensuring that exchanges' filings comply with the requirements of the Securities Exchange Act of 1934 and Commission rules.

We urge the Commission to take bold action to address the deeply-rooted structural problems with market data, including its content, how it is collected, how it is paid for, how it is distributed, and how it is overseen.¹

¹ Unfortunately, both "public" and "private" data are non-competitive markets. U.S. Dep't of the Treasury, *A Financial System That Creates Economic Opportunities: Capital Markets*, 64, Oct. 2017, (recommending that "the SEC also recognize that markets for SIP and proprietary data feeds are not fully competitive. The SEC has the authority under the Exchange Act to determine whether the fees charged by an exclusive processor for market information are "fair and reasonable," "not unreasonably discriminatory," and an "equitable allocation" of reasonable fees among persons who use the data."), available at <https://www.treasury.gov/press-center/press-releases/Documents/A-Financial-System-Capital-Markets-FINAL-FINAL.pdf>. As we wrote in our Market Data Report, "[t]he regulatory framework that once oversaw non-profit, mutualized trading platforms has proven ill-equipped to circumscribe the abuses arising from the pricing power enjoyed by US equity exchanges." Healthy Markets Association, *US Equity Market Data – How Conflicts of Interest Overwhelm an outdated Regulatory Model & Market Participants*, Nov. 2017, at 6, available at <https://www.healthymarkets.org/new-products/market-data-how-conflicts-overwhelm-an-outdated-regulatory-model/> ("Healthy Markets Association Market Data Report").



Amongst other actions, we urge the Commission to:

- Scrutinize all exchange filings for compliance with the Exchange Act's obligations;
- Adopt several reforms to address the governance, costs, quality, and oversight of the public market data stream; and
- Clarify that exchanges' provision of historical market data must comply with the Exchange Act's obligations.²

About Healthy Markets Association

The Healthy Markets Association is an investor-focused not-for-profit coalition working to educate market participants and promote data-driven reforms to market structure challenges. Our members, who range from a few billion to hundreds of billions of dollars in assets under management, have come together behind one basic principle: Informed investors and policymakers are essential for healthy capital markets.³

Our members rely on public market data to effectuate their business and manage their compliance obligations each and every day. The conflicts of interest, complexity, and costs of market data impact our members directly and indirectly.

Introduction

Since before the Securities and Exchange Commission was born, the process for disseminating "market data" -- information concerning quotations for and transactions in equity securities and options -- has been viewed as a central component to fair and efficient trading. It has also been a source of controversy. In recent years, the market for US equity "market data" has essentially taken two very separate paths. On one path, there is public information, which is provided through the Securities Information Processors (SIPs). This "public" market data provides the bedrock for the regulatory apparatus surrounding the trading markets.

On the other path, there is selective, private information, which is provided by market venues (who also happen to be self-regulatory organizations, SROs). The "private"

² In this letter, we revise and renew our requests from our recent rulemaking petition with the Commission. Letter from Tyler Gellasch, Healthy Markets Association to Jay Clayton, SEC, Jan. 17, 2018, available at <https://www.sec.gov/rules/petitions/2018/petn4-717.pdf> ("Healthy Markets Petition").

³To learn more about Healthy Markets or our members, please see our website at <http://healthymarkets.org>.

market data is typically used by market participants to inform trading decisions, and may be, in certain circumstances, required for regulatory purposes.

This dual structure has created significant risks, conflicts of interest, and costs for market participants. In recent years, the costs for increasingly essential “private information,” including connectivity and data, have increased dramatically.

The regulatory framework that once oversaw non-profit, mutualized trading platforms has proven ill-equipped to circumscribe the abuses arising from the pricing power enjoyed by US equity exchanges. In the pages that follow, we examine the history of market data, highlight some of the most troubling aspects of the current system, and offer some recommendations to improve the regulation of, and reduce the conflicts of interest in, market data.

Background on the Public Market Data Stream

Creation and Purpose

The creation of the public market data streams was multifaceted.⁴ In the early 1970s, it became clear that the government needed to step into the markets to provide a mechanism to consolidate information and accountability across a myriad of trading venues, and the Commission began outlining the contours of a “central market system for listed securities.”⁵

By 1972, the creation of a consolidated system for the provision of essential market data was a significant priority for the Commission.⁶ As then-SEC Chairman William J.

⁴ The public market data stream essentially operates through the CTA/CQ Plan and the Unlisted Trading Privileges (UTP) Plan (collectively, the “Plans”).

⁵ See, e.g., *Interpretive Release Relating to the Securities Exchange Act of 1934 and General Rules and Regulations Thereunder*, Sec. and Exch. Comm’n, 37 Fed. Reg. 5286 (March 14, 1972) available at <https://cdn.loc.gov/service/ll/fedreg/fr037/fr037050/fr037050.pdf> (“In order to maximize the depth and liquidity of our markets, so that securities can be bought and sold at reasonably continuous and stable prices, and to insure that each investor will receive the best possible execution of his order, regardless of where it originates, it is generally agreed that action must be taken to create a single central market system for listed securities.”) (emphasis added).

⁶ 37 Fed. Reg. 5286, at 5287 (“Implementation of a nationwide disclosure or market information system to make universally available price and volume in all markets and quotations from all market makers.”); see also, *Id.*, at 5287 (“Technological means must be found to bring together promptly transactional information from all markets and, if feasible, to present it on a single tape.”); see also *Id.*, at 5287 (“In addition to developing a composite transactional tape, steps must be taken to implement a composite quotation system. The technology and hardware for such a system are said to be available, and any remaining regulatory problems should be promptly worked out so that the system can attain its objective

Casey explained at the time, the proposal "will for the first time give us truly nationwide disclosure of prices and volume in listed stocks, and provide the basis for a truly national market in which investors will know where they can get the best price."⁷ This was the conceptual justification for the creation of the NMS Plans that followed.

Less than a year after the SEC proposal, on March 2, 1973, the New York, American, Midwest, Pacific and PBW Stock Exchanges and the National Association of Securities Dealers, Inc. filed with the Commission a "consolidated tape plan."⁸ The Commission responded with numerous recommended adjustments to the plan to ensure proper oversight,⁹ particularly to ensure that the plan would have proper governance and provide transparency to public amendments. A revised plan was submitted to the Commission on April 17, 1974.¹⁰

On May 17, 1974, the SEC declared the revised CTA Plan effective.¹¹ Shortly thereafter, Congress adopted the 1975 Amendments to the Securities Exchange Act of 1934 to enshrine into the law the "national market system" contemplated by the SEC interpretive release from a few years earlier.¹² The CQ Plan was established in 1980.¹³

With the 1975 Amendments, Congress declared that consolidating market data "would form the heart of the national market system."¹⁴ The Securities and Exchange Commission was explicitly empowered to create the national market system and oversee the communications systems that would disseminate consolidated market

of providing quotations which are truly comparable, notwithstanding the different assumptions on which they may be based.").

⁷ Remarks of William J. Casey, Chairman, Sec. and Exch. Comm'n, before the Economic Club of New York, Mar. 8, 1972 (summarized at SEC News Digest, 72-45 (Mar. 9, 1972), *available at* <https://www.sec.gov/news/digest/1972/dig030972.pdf>). A copy of the remarks as prepared for delivery are *available at* <https://www.sec.gov/news/speech/1972/030872casey.pdf>.

⁸ *New York, American, Midwest, PBW, and Pacific Coast Stock Exchanges and NASD: Notice of Receipt of Plan*, Sec. and Exch. Comm'n, 38 Fed. Reg. 6443, *available at* <https://cdn.loc.gov/service/ll/fedreg/fr038/fr038046/fr038046.pdf>. A copy of the original plan and attached proposed articles of association are attached hereto as **Exhibit 1**.

⁹ See *Notice of Commission Comments on Consolidated Tape Plan Filed Pursuant to Rule 17a-15 Under the Securities Exchange Act of 1934*, Sec. and Exch. Comm'n, Rel. No. 10218, June 13, 1973, attached as **Exhibit 2**.

¹⁰ See Letter from Michael Tobb, Midwest Stock Exchange to George Fitzsimmons, SEC, Apr. 17, 1974 (attaching *Plan Submitted Pursuant to Rule 17a-15 of the Securities and Exchange Commission Under Securities Exchange Act of 1934*, April 17, 1974). Letter and revised plan are attached hereto as **Exhibit 3**.

¹¹ 39 Fed. Reg. 17799.

¹² Pub. L. No. 94-29, 89 Stat. 97 (1975), *available at* <https://www.gpo.gov/fdsys/pkg/STATUTE-89/pdf/STATUTE-89-Pg97.pdf>.

¹³ 45 Fed. Reg. 6521.

¹⁴ H.R. Rep. No. 94-229, 94th Cong., 1st Sess. 93 (1975).

information.¹⁵

Under this “national market system,” the Plan Participants were required to act jointly to provide market participants with access to a consolidated stream of market information for actively traded US equities and options. This stream of information was intended to be relatively “real-time,” so that quote and trading information from any exchange would be distributed to the broader market participants as soon as reasonably possible. The goal was to ensure that the “the public [has] access to a highly reliable source of information that is fully consolidated from all the various market centers that trade a particular security.”¹⁶

Today, the SIP feeds “disseminate[] and calculate[] critical regulatory information including the National Best Bid and Offer (NBBO), and Limit Up Limit Down (LULD) price bands among other important regulatory information such as short sale restrictions, and regulatory halts.”¹⁷

By most “normal” standards, the time delay, or latency between when a quote is sent by an exchange and disseminated to market participants via the SIP data feeds, is very short, and has been getting noticeably shorter.

For the NYSE-related feeds (Tapes A and B), for example, since 2006, the average quote latency declined from an average of 800 milliseconds to less than 0.13 milliseconds as of August 2018.¹⁸ The message capacity has also increased

¹⁵ *Concept Release: Regulation of Market Information Fees and Revenues*, Sec. and Exch. Comm’n, 64 Fed. Reg. 70613 (Dec. 17, 1999), available at <https://www.gpo.gov/fdsys/pkg/FR-1999-12-17/pdf/99-32471.pdf> (“1999 Concept Release”). Although the Commission had already initiated and deemed effective the CTA Plan by 1975, the Congressional action was deemed by some as necessary to remove ambiguities and clearly outline the roles and authorities of the SEC and the Plan Participants. In particular, the SEC was explicitly empowered to oversee the governance and costs associated with the provision of this governmental function. This ran directly counter to assertions made by some Plan Participants at the time that their “intellectual property” rights over the data would otherwise grant them exclusive, unfettered control (including pricing power) over the data. Not only did Congress reject that assertion, Congress further ensured that the Commission had broad authority to regulate - including overseeing the costs for - the provision of data by exchanges that is not subject to the Plans.

¹⁶ See, 1999 Concept Release, 64 Fed. Reg. at 70615.

¹⁷ Unlisted Trading Privileges Plan, available at <http://utpplan.com/> (UTP Plan).

¹⁸ *Key Operating Metrics of Tape A&B U.S. Equities Securities Information Processor (CTA SIP)*, CTA Plan, available at [https://www.nyse.com/publicdocs/ctaplan/notifications/trader-update/Q2%202018%20CTA%20SIP%20%20Subscribers%20Metrics%20Report%20\(Aug-2018%20SIP%20Feeds\).pdf](https://www.nyse.com/publicdocs/ctaplan/notifications/trader-update/Q2%202018%20CTA%20SIP%20%20Subscribers%20Metrics%20Report%20(Aug-2018%20SIP%20Feeds).pdf) (examining average latency) (last viewed Oct. 19, 2018). Prior to 1Q13, message latency was measured beginning with the time-stamped by CTS/CQS, to the time that processing the message was completed. Beginning in 1Q13 message latency began measuring with the time-stamp taken as an inbound message arrived at the network entrance to CTS/CQS, to the time-stamp taken as the outbound message arrives at the network

dramatically to 4.5 million per second for the quote feed and 1.05 million per second for the trade feed.¹⁹

Despite these seemingly impressive statistics, the “public” SIP data feeds are still persistently slower and offer less information than is available through the private data feeds and connectivity offerings sold by the exchanges.²⁰ This is despite the Commission’s declaration that consolidated real-time dissemination of information is “the principal tool for enhancing the transparency of the buying and selling interest in a security, for addressing the fragmentation of buying and selling interest among different market centers, and for facilitating the best execution of customers’ orders by their broker-dealers.”²¹

That’s not close to what the public market data stream is doing now.

While the public market data stream is facially inadequate for effective time-sensitive trading strategies and transaction cost analysis, it nevertheless provides important information for both competitive and regulatory purposes.²² As a result, market participants rely on both the public and private market data to stay competitive and fulfill their regulatory obligations.²³

exit from the environment. Interestingly, it seems that as soon as additional capacity is added to the SIPs, that capacity is rapidly utilized. At times, the SIPs have become overwhelmed with data, which has increased latencies of the SIPs. Some have speculated that this phenomenon may be an intentional strategy to increase the latency of the SIP for exploitive trading opportunities. See, e.g., *The Quote Stuffing Trading Strategy*, Nanex, Aug. 15, 2014, available at <http://www.nanex.net/aqck2/4670.html>.

¹⁹ *Key Operating Metrics of Tape A&B U.S. Equities Securities Information Processor (CTA SIP)*, CTA Plan, available at [https://www.nyse.com/publicdocs/ctaplan/notifications/trader-update/Q2%202018%20CTA%20SIP%20%20Subscribers%20Metrics%20Report%20\(Aug-2018%20SIP%20Feeds\).pdf](https://www.nyse.com/publicdocs/ctaplan/notifications/trader-update/Q2%202018%20CTA%20SIP%20%20Subscribers%20Metrics%20Report%20(Aug-2018%20SIP%20Feeds).pdf) (examining message and trade capacity) (last viewed Oct. 19, 2018).

²⁰ A delay is introduced by the very nature of the additional distances to travel, hardware, and formatting requirements needed for the central processor to consolidate quotations. This could be mitigated somewhat, including by distributing the collection and processing to the different data centers.

²¹ 1999 Concept Release.

²² Notably, in 1980, the Commission adopted the Vendor Display Rule, which requires any vendor or broker to provide the NBBO, including top of book size. 17 CFR § 242.603(c). The rule was created so that investors would not be provided misleading or narrow views of the best trading price of a security. The Vendor Display Rule effectively mandates that brokers become forced consumers of the SIP data feeds. Meanwhile, the fees for the SIP feeds--despite their relative inferiority to the private market data feeds--are significant and rising.

²³ Healthy Markets Association Market Data Report.

Public Market Data Stream Revenues for Exchanges

The public market data stream operates through NMS Plans, which govern all aspects of how the information is collected, packaged, and distributed. These Plans also govern:

- fees that can be charged to fulfill the requirements of the plans (commonly referred to as “tape fees”) and the revenues that are then redistributed back out to the exchanges (commonly referred to as “tape revenues”); and
- the ownership of the information distributed pursuant to the Plans.²⁴

Essentially, these “tape fees” are costs borne by market participants for the receipt of market data. Tape fees in excess of the costs of operations are then divided up amongst the exchanges on the basis of a complex formula.

The Plan Participants receive substantial revenues from these fees.

In the first approved CTA Plan from 1974,²⁵ neither the Plan Participants nor the Commission were certain that the new system would even cover its own costs. If there were net revenues, the first \$1,120,000 for Network A was to be distributed to NYSE, with any remaining revenues distributed to the other Plan Participants according to their “annual shares.”²⁶ Losses were to be borne by NYSE.²⁷ Detailed costs and revenues for the Plan each year were to be audited, and shared with Plan Participants and the SEC.²⁸ They have never been broadly available to the public.

Today, the public market data system is a significant source of revenues for the Plan Participants, who are now mostly for-profit exchanges. In fact, the “distributed revenues” (aka “profits”) for the exchanges from these plans have grown dramatically, and now constitute a very significant source of revenues for the firms. It is also a very high margin business.²⁹ In fact, the last time operating expenses were published in 1998, the

²⁴ See 1999 Concept Release, 64 Fed. Reg. at 70615 (noting that the Commission has determined that “the practical effect of comprehensive federal regulation of market information is that proprietary interests in this information are subordinated to the Exchange Act’s objectives for a national market system.”).

²⁵ Note that the Plan was approved *prior to* the passage of the 1975 Amendments to the Exchange Act.

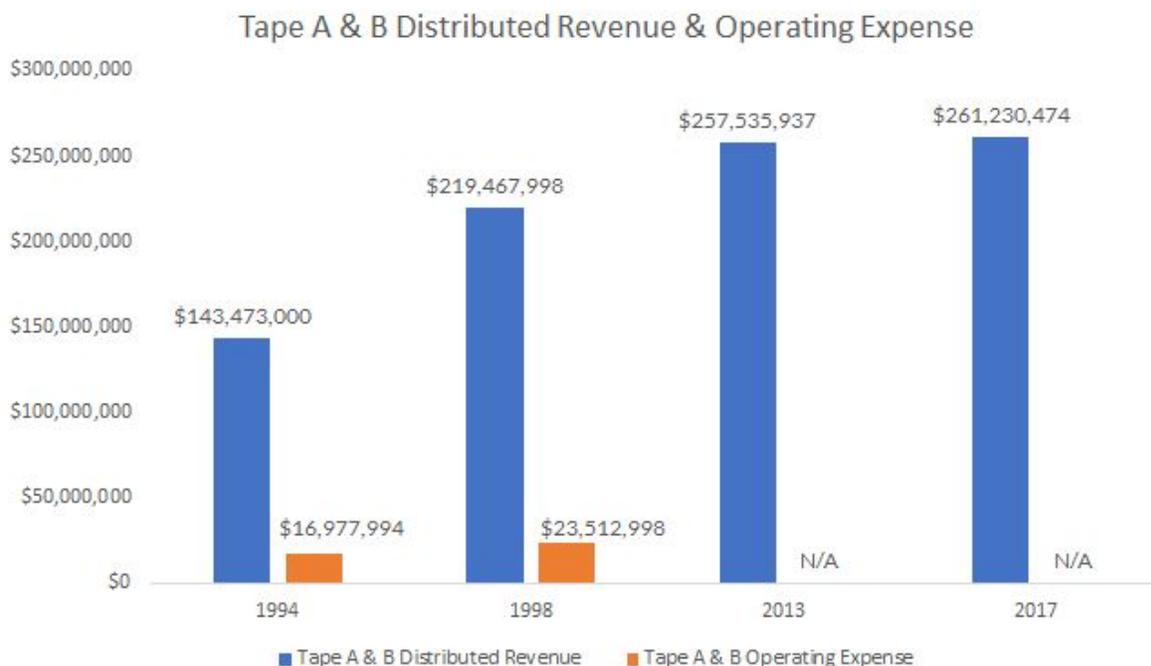
²⁶ **Exhibit 3**, at 48.

²⁷ **Exhibit 3**, at 48-49.

²⁸ **Exhibit 3**. Unfortunately, this information has only been made public very sporadically, and on a remarkably incomplete basis. However, in early 2018, the CTA Plan began to publicly report, for the first time, some limited revenue information on a quarterly basis. We are greatly appreciative of this modest step towards transparency.

²⁹ The costs for the Plans are not generally public. However, we have reason to believe that the profit margins are in excess of 90%.

profit margin was in excess of 89%.



While costs of operations are not regularly disclosed, distributed revenues have been publicly disclosed since early 2018.³⁰ These revenues are around \$100 million per year per major exchange family. These new disclosures provide, on a quarterly basis, distributed revenues based on both quotes and trading. For example, in the first half of 2018, excluding TRF revenues, the family of exchanges for:

- Nasdaq received about \$55 million;
- Intercontinental Exchange received about \$52 million; and
- Cboe received about \$51 million.

While the Plans may not have initially been designed to generate significant revenues for Plan Participants, they clearly do now. In fact, in 2005, the Commission explicitly contemplated significant changes to the Plans, including forcing them to run at cost.³¹

³⁰ We are grateful for this expanded transparency. However, without actual cost information or other details, we find that these disclosures still leave significant questions outstanding. See *Tape A Quote and Trade Revenue Distributed to Participants*, CTA Plan, available at <https://www.nyse.com/publicdocs/ctaplan/notifications/trader-update/Q2%202018%20CTA%20Financial%20Disclosure.pdf> (last viewed Oct. 18, 2018); see also *Trade and Quote Revenue Distributed to Participants*, UTP Plan, available at http://utpplan.com/DOC/UTP_Revenue_Disclosure_Q22018.pdf (last viewed Oct. 19, 2018).

³¹ Reg NMS Adoption, at 37504.

Despite expressing sympathy to market participants forced to pay the high fees, the Commission ultimately declined to take action, in part due to concerns that the dramatic reductions in exchange revenues could undermine their abilities to perform their self-regulatory functions, or even their abilities to operate.³² We question whether these justifications are appropriate today.³³

Plan Governance and Conflicts of Interest

All but one of the voting Plan Participants are for-profit exchanges. Further, because each of the three dominant exchange families (i.e., Intercontinental Exchange, Cboe, and Nasdaq) controls several registered exchanges, they have dramatically more control than either the remaining independent exchange or the primary regulator, FINRA. For example, the current CTA/CQ Plan Participants are:

Intercontinental Exchange Exchange Family	Chicago Board Options Exchange Family	Nasdaq Exchange Family	Independent
<ul style="list-style-type: none"> ● NYSE National, Inc. ● New York Stock Exchange LLC ● NYSE Arca, Inc. ● NYSE American LLC ● Chicago Stock Exchange, Inc. 	<ul style="list-style-type: none"> ● Cboe BYX Exchange, Inc. ● Cboe BZX Exchange, Inc. ● Cboe EDGA Exchange, Inc. ● Cboe EDGX Exchange, Inc. ● Cboe Exchange, Incorporated 	<ul style="list-style-type: none"> ● Nasdaq ISE LLC ● Nasdaq BX, Inc. ● Nasdaq PHLX, Inc. ● The Nasdaq Stock Market LLC 	<ul style="list-style-type: none"> ● Financial Industry Regulatory Authority, Inc. ● Investors Exchange LLC

³² Reg NMS Adoption, at 37504 (“If the Commission were to limit market data fees to cover only Plan costs, SRO funding would have been cut by \$393.7 million in 2004. Given the potential harm if vital SRO functions are not adequately funded, the Commission believes that the level of market data fees is most appropriately addressed in a context that looks at SRO funding as a whole.”).

³³ Further, we question the wisdom of the current revenue distribution formula. Put simply, dividing a pot of “excess” revenues derived from performing a governmental function seems at odds with the public policy purpose of the data feed. Also, we note that the allocation formula may lead to perverse incentives and behavior that may be detrimental to the operation of fair and efficient markets, as well as burdens on competition. We note that Nasdaq has recently proposed to revise this formula in a way that unsurprisingly would likely increase Nasdaq’s portion of the overall “excess” distributed revenues. *Promoting Transparency: Nasdaq Market Data Proposals*, Nasdaq, (2018) available at https://business.nasdaq.com/media/Market_Data_Policy_Statement_tcm5044-65695.pdf (“Policymakers and stakeholders today should consider anew how to allocate SIP revenues in a way that strengthens “lit” quotes and rewards behavior that increases market quality, tightens spreads, deepens quotes, and holds accountable for best execution the nearly 40 percent of trades that occur off-exchange”) (“Nasdaq 2018 Proposal”).

Nevertheless, until recently, that skewed voting structure would ultimately have little impact on Plan Participant decisions because Plan’s decisions were typically made by unanimous vote of the Plan Participants. In recent years, the CTA Plan has modified its procedures to permit votes by less than unanimity.³⁴ This severely limits the ability of FINRA or an independent exchange to block CTA Plan actions, arguably granting much greater power to the dominant exchange operators. Some market participants, including the SEC’s Equity Market Structure Advisory Committee, have recommended further revising the voting allocations of the NMS Plans.³⁵

Put simply, for-profit exchanges are effectively setting the rules and costs for other market participants, with very little oversight.³⁶ There are several distinct conflicts of interest in the administration of the public market data stream, but perhaps the greatest two are that

- the exchanges that oversee the government-mandated public market data process are competing directly with that public data by selling their own data and connectivity offerings;³⁷ and

³⁴ *Notice of Filing and Immediate Effectiveness of the Twentieth Substantive Amendment to the Second Restatement of the CTA Plan and Fourteenth Substantive Amendment to the Restated CQ Plan*, Sec. and Exch. Comm’n, 79 Fed. Reg. 60555 (October 7, 2014) (modifying the Plan “(a) to change the vote required under both the CTA Plan and the CQ Plan to amend the capacity planning process from a unanimous vote to the affirmative vote of a majority of all Participants entitled to vote, (b) to change the voting requirement needed to reduce a fee under both the CTA Plan and the CQ Plan from unanimity to the affirmative vote of two-thirds of all Participants entitled to vote, and (c) to change the voting requirement needed to establish a new fee or to delete an existing fee under the CQ Plan from unanimity to the affirmative vote of two-thirds of all Participants entitled to vote.”) *available at* <https://www.gpo.gov/fdsys/pkg/FR-2014-10-07/pdf/2014-23849.pdf>.

³⁵ See, e.g., *Recommendations Regarding Enhanced Industry Participation in Certain SRO Regulatory Matters*, Sec. and Exch. Comm’n, Equity Market Structure Advisory Committee, June 10, 2017, *available at* <https://www.sec.gov/spotlight/emsac/emsac-trading-venues-regulation-subcommittee-recomendation-61016.pdf>.

³⁶ See Remarks of Hon. Daniel M. Gallagher, *Market 2012: Time for a Fresh Look at Equity Market Structure and Self-Regulation*, Oct. 4, 2012, *available at* <https://www.sec.gov/news/speech/2012-spch100412dmghtm>; see also, Remarks of Hon. Robert J. Jackson, Jr., *Unfair Exchange: The State of America’s Stock Markets*, Sept. 19, 2018, *available at* <https://www.sec.gov/news/speech/jackson-unfair-exchange-state-americas-stock-markets> (“Unfair Exchange”).

³⁷ See, e.g., *Unfair Exchange*.

- the exchanges set the prices -- and thus their own profits -- for what are essentially public utility products that market participants are effectively compelled to buy.³⁸

These risks of these conflicts of interest on market participants are dramatically exacerbated by the facts that details of the costs and revenues impacted have never been publicly disclosed³⁹ and (until very recently) the vast majority of changes are implemented with effectively no regulatory scrutiny.⁴⁰

Market participants and trade groups have expressed concerns about these conflicts to the Plan Participants and the Commission for years.⁴¹

One of the most direct conflicts of interest is that the exchanges effectively control the public market data stream while also competing with it. As described elsewhere, the public market data stream -- which only includes top-of-book information on a time-delayed basis -- is generally considered insufficient for most firms' trading and analytical purposes.

One area where the public and private data streams may directly compete could be for compliance with the Vendor Display Rule, which currently requires brokers to provide their customers with the prices from the public market data stream. Rule 603 of Regulation NMS requires that if information processors and broker-dealers provide market information for an NMS stock in the context in which a trading or order-routing decision can be implemented, that processor or broker-dealer must provide a

³⁸ Healthy Markets Association Market Data Report.

³⁹ Notably, the CTA/CQ Plan and UTP Plan began providing limited data on distributed revenues in early 2018.

⁴⁰ Healthy Markets Association Market Data Report. As discussed elsewhere in this letter, the Commission appears to be changing this process to better scrutinize filings for their compliance with the Exchange Act. See, *Order of Summary Abrogation of the Twenty-Third Charges Amendment to the Second Restatement of the CTA Plan and the Fourteenth Charges Amendment to the Restated CQ Plan*, Sec. and Exch. Comm'n, May 1, 2018, available at <https://www.sec.gov/rules/sro/nms/2018/34-83148.pdf> and *Order of Summary Abrogation of the Forty-Second Amendment to the Joint Self-Regulatory Organization Plan Governing the Collection, Consolidation and Dissemination of Quotation and Transaction Information for Nasdaq-Listed Securities Traded on Exchanges on an Unlisted Trading Privileges Basis*, Sec. and Exch. Comm'n, May 1, 2018, available at <https://www.sec.gov/rules/sro/nms/2018/34-83149.pdf>.

⁴¹ See, e.g., Letter from Christopher Nagy and Richard Urian, TD Ameritrade, to Elizabeth M. Murphy, SEC, Jan. 28, 2011 available at <https://www.sec.gov/rules/petitions/2011/petn4-623.pdf> (petitioning the Commission for market data regulatory reforms); see also, SIFMA, *Taking Stock of Equity Market Structure Priorities*, May 1, 2018, available at <https://www.sifma.org/resources/news/taking-stock-of-equity-market-structure-priorities/> ("We have repeatedly argued for governance reform in NMS Plans to include direct voting representation by industry representatives.").

consolidated market quotation.⁴² While flawed, this requirement ensures that those making order routing and trading decisions have a comprehensive view of the top-of-book at the market trading centers.

But, as the SIP fees have risen, some market participants and exchanges have stepped in to suggest that the rule's requirement could be fulfilled with other products. For example, in late 2018, Nasdaq proposed that the SEC "clarif[y] the Vendor Display Rule to give broker-dealers clarity, choice, and flexibility on their use of SIP feeds and alternative data products."⁴³

While not explicit, it appears that Nasdaq is proposing that brokers be permitted to use Nasdaq's own Basic data product instead of the SIPs to fulfill their requirements under the Vendor Display Rule. Importantly, the SEC denied a similar request by BATS just a few years ago.⁴⁴ If the SEC were to agree with Nasdaq's proposal, the result would be that all of the revenues for the firms making the switch would accrue to Nasdaq, as opposed to being divided amongst the Plan Participants. And that says nothing of the fact that the product is less capable of fulfilling the intended public policy purpose of the Vendor Display Rule.⁴⁵ With relatively high public market data stream costs, market participants seeking to lower their data costs may also be eager to switch to the cheaper -- although arguably inferior -- private data product.

Even one Plan Participant has expressed concerns regarding the conflicted nature of the Operating Committee and the lack of any policies, procedures or understanding by Plan Participants at managing conflicts.⁴⁶ These conflicts appear to have become more acute in recent years. The presence of FINRA and the diversity of exchange ownership have long served as a check on individual exchanges' efforts to exploit their privileged

⁴² 17 CFR 242.603.

⁴³ *Promoting Transparency: Nasdaq Market Data Proposals*, Nasdaq, (2018) available at https://business.nasdaq.com/media/Market_Data_Policy_Statement_tcm5044-65695.pdf.

⁴⁴ The SEC denied BATS Global Markets, Inc. request to offer the BATS One feed in lieu of a consolidated quotation. Letter from Stephen Luparello, SEC, to Eric Swanson, BATS Global Markets, July 22, 2015, available at <https://www.sec.gov/divisions/marketreg/mr-noaction/2015/bats-one-072215-vendor-display.pdf>; see also, Letter from Eric Swanson, BATS Global Exchange, to Stephen Luparello, SEC, Feb. 25, 2015, available at <https://www.sec.gov/divisions/marketreg/mr-noaction/2015/bats-one-072215-vendor-display.pdf>.

⁴⁵ See, *Market Data Feeds: Nasdaq Basic*, Nasdaq, available at <https://business.nasdaq.com/intel/GIS/Nasdaq-Basic.html> (noting that the information contained in the feed is "[b]ased on liquidity within the Nasdaq market center, as well as trades reported to the FINRA Trade Reporting Facility® (TRF®) operated in partnership with FINRA/Nasdaq TRF®") (last viewed Oct. 17, 2018). The begged question about trading information on other exchanges is, of course, unanswered.

⁴⁶ See, John Ramsey, *This is No Way to Run the U.S. Stock Market*, Bloomberg, Mar. 20, 2018, available at <https://www.bloomberg.com/view/articles/2018-03-20/this-is-no-way-to-run-the-u-s-stock-market> (reflecting the views of the Chief Regulatory Policy Officer of IEX).

position as both fee setters and revenue recipients of the Plans. But this check has been diminished in recent years. That's because (1) three exchange operators have come to own the vast majority of Plan Participants, and (2) the voting requirements for Plan changes have been lowered.

In 2014, just after a new competitor had announced its intentions to become an exchange,⁴⁷ the then-existing Plan Participants amended the Plan to lower the voting requirements for a number of changes from unanimous voting requirements to a two-thirds voting requirement, or even a simple majority.⁴⁸

The change allows the dominant exchange operators (*i.e.*, Intercontinental Exchange (ICE), Chicago Board Options Exchange (Cboe), and Nasdaq), which hold numerous exchange licenses, to effectively exercise much greater control over the Plans. For example, with its acquisition of the Chicago Stock Exchange, ICE has five votes, as does Cboe. Nasdaq has four votes. The only other votes would go to FINRA and Investors Exchange (IEX), each of which would have only one vote.

Plan Participants may be incentivized to form voting blocks that could benefit themselves, potentially to the detriment of other Plan Participants, other market participants, or even the markets themselves.⁴⁹

Put simply, Plan Participants effectively control the allocations of costs and retained revenues. This could be done in a way that promotes fair and efficient markets, and promotes competition, or it might also be done in a way that stifles competition, while entrenching and protecting existing Plan Participants' business models.

Unfortunately, the current Plan governance model demands the impossible: executives of for-profit entities must subordinate their obligations to their shareholders to the public

⁴⁷ See Joanna Slater, *IEX Founder Brad Katsuyama aims to change how U.S. stock markets function*, The Globe and Mail, Aug. 17, 2014, available at <https://www.theglobeandmail.com/report-on-business/international-business/us-business/iex-founder-brad-katsuyama-aims-to-change-how-us-stock-markets-function/article20089498/>.

⁴⁸ 79 Fed. Reg. 60555.

⁴⁹ In January of 2005, Nasdaq had just completed a two-phased private placement of shares as its exchange application was nearing approval. In that same month, nearly immediately following the successful private placement, the CTA participants dramatically increased charges to become a participant member. Again, a longstanding policy that had been in place since the plans inception in 1974 was altered just prior to a new exchange joining the club. SEC release No. 34-51012; 70 FR, 3075 available at: <https://www.gpo.gov/fdsys/pkg/FR-2005-01-19/pdf/E5-172.pdf>. Nasdaq's exchange status was approved shortly thereafter and Nasdaq joined the plan at the then higher published rate.

interest. Simply tweaking the governance procedures or processes, or revising the Advisory Committee's membership, will never cure this irreconcilable tension.⁵⁰

Other market participants, including broker-dealers, investment advisers, and asset owners are not given any votes in the governance of the public market data stream.⁵¹ In an effort to help ensure that their concerns were at least heard, in 2005, the SEC directed the creation of an Advisory Committee for the CTA Plan, similar to what had already been used by the UTP Plan. The Commission mandated that the Advisory Committee include

at least one representative must be selected from each of the following five categories: (1) a broker-dealer with a substantial retail investor customer base; (2) a broker-dealer with a substantial institutional investor customer base; (3) an ATS; (4) a data vendor; and (5) an investor. Each Plan participant also will have the right to select one additional member to the advisory committee that is not employed by or affiliated with any Plan participant or its affiliates or facilities.⁵²

The committee has no votes, but it does have (1) a forum to voice concerns to the Plan Participants, (2) the right to attend CTA Plan general session meetings, and (3) access to materials provided to the Plan Participants.⁵³

The Advisory Committee has predictably focused on the Plan Participants' conflicts of interest. For example, the Advisory Committee, raised the issue for discussion not less

⁵⁰ This tension appears to play out in numerous contexts involving several NMS Plans. For example, as we have detailed in our November 2017 testimony before Congress, the conflicted nature of for-profit regulators has resulted in significant delays and complications in the effort to develop another important regulatory tool, the consolidated audit trail ("CAT"). Statement of Tyler Gellasch, Healthy Markets Association, Hearing on Implementation and Cybersecurity Protocols on the Consolidated Audit Trail Before the House Financial Services Committee, Subcommittee on Capital Markets, Securities and Investment, Nov. 30, 2017, available at <https://financialservices.house.gov/uploadedfiles/hhrq-115-ba16-wstate-tgellasch-20171130.pdf>.

⁵¹ There are notably significant interests to expanding the roles of other market participants in the governance of NMS Plans. See., e.g., Sec. and Exchange Commission, Equity Market Structure Advisory Committee, Subcommittee on Trading Venues Regulation, Recommendations Related to Trading Venues Regulation, Apr. 19, 2016, available at <https://www.sec.gov/spotlight/emsac/emsac-trading-venues-subcommittee-recommendations-041916.pdf>.

⁵² Regulation NMS, Sec. and Exch. Comm'n, 70 Fed. Reg. 37496, 37568 (Jun 29, 2005) ("Reg NMS Adoption"), available at <https://www.sec.gov/rules/final/34-51808fr.pdf>.

⁵³ Reg NMS Adoption, at 37561, n.591.

than three times in 2016.⁵⁴ and again in 2017.⁵⁵

Unfortunately, the Advisory Committee itself is not immune to concerns regarding its governance and conflicts of interest. Some of this has to do with its membership.⁵⁶ For example, a 2017 CTA Plan filing negatively impacted one data vendor that was not on the Advisory Committee, but was nevertheless supported by a competitor that would seemingly benefit from the change.⁵⁷ The competitor happened to be represented on the Advisory Committee. This gives rise to the appearance of a conflict of interest, and is potentially anti-competitive. Similarly, we note that the Advisory Committee's retail representative ceased his services shortly before a 2018 filing (that has since been abrogated) that would have increased costs for some large retail brokers.⁵⁸

⁵⁴ See Summary of CTA/UTP General Session of June 8, 2016, available at <https://www.nyse.com/publicdocs/ctaplan/notifications/trader-update/Summary%20of%2006-8-16%20CTA-UTP%20General%20Session%20-%20FINAL.pdf>; Summary of CTA/UTP General Session of Sept. 8, 2016, available at <https://www.nyse.com/publicdocs/ctaplan/notifications/trader-update/Summary%20of%20CTA-UTP%20General%20Session%20for%2009-08-16%20-%20Final.pdf>; Summary of CQ/CTA/UTP General Session of Nov. 16, 2016, available at https://www.nyse.com/publicdocs/ctaplan/notifications/trader-update/20161116_Summary_CTA-UTP_General_Session.pdf.

⁵⁵ See Summary of CQ/CTA/UTP General Session of May 25, 2017, available at <https://www.nyse.com/publicdocs/ctaplan/notifications/trader-update/Summary%20of%2005-25-17%20CTA-UTP%20General%20Session%20-%20FINAL.pdf> (noting that the "informal" document was subject to revision and approval of the Plan Participants).

⁵⁶ Reg NMS Adoption, at 37503-37504; see also, Consolidated Tape Association, Advisory Committee, available at <https://www.ctaplan.com/advisory-committee>, (identifying Advisory Committee members as: Kerry Baker Relf (Thomson Reuters), Thomas J. Jordan (Jordan & Jordan), Bill Conti (Goldman Sachs), Edmund Flynn (Morgan Stanley), Patti Sachs (Citigroup), Ann Neidenbach (Convergex), Melissa Hinmon (Glenmede Investment Management, LP), Hubert De Jesus (Blackrock), and Paul O'Donnell (Morgan Stanley)) (last visited April 6, 2018).

⁵⁷ Bloomberg, which did not have a representative on the Advisory Committee was directly negatively impacted by the change and filed objections to it. Thomson Reuters, who had a representative on the Advisory Committee, would have benefited from the change. Interestingly, after Bloomberg and others (including Healthy Markets) objected, this filing was withdrawn. *Notice of Filing and Immediate Effectiveness of the Twenty-Fourth Charges Amendment to the Second Restatement of the CTA Plan and the Fifteenth Charges Amendment to the Restated CQ Plan*, Sec. and Exch. Comm'n, Sept. 18, 2018, available at <https://www.sec.gov/rules/sro/nms/2018/34-84194.pdf>.

⁵⁸ See *Notice of Filing and Immediate Effectiveness of the Twenty-Third Charges Amendment to the Second Restatement of the CTA Plan and the Fourteenth Charges Amendment to the Restated CQ Plan*, Sec. and Exch. Comm'n, Rel. No. 34-82937, Mar. 23, 2018, <https://www.sec.gov/rules/sro/nms/2018/34-82937.pdf> (proposing changes to the entireprise cap of the CTA/CQ Plan) ("2018 Filing"); *Order of Summary Abrogation of the Twenty-Third Charges Amendment to the Second Restatement of the CTA Plan and the Fourteenth Charges Amendment to the Restated CQ Plan*, Sec. and Exch. Comm'n, Rel. No. 34-83148, May 1, 2018, available at <https://www.sec.gov/rules/sro/nms/2018/34-83148.pdf> (abrogating the proposed change to the CTA/CQ Plan).

While five of its members must be in the designated categories, each Plan Participant can also name an additional member. These “appointed” members may dominate the committee’s membership and may also have loyalties and business interests that may conflict with sound governance practices. This concern may be exacerbated if Advisory Committee members remain on the committee for extended periods of time,⁵⁹ or if the leadership of the committee does not rotate.

It also appears as though the Plan Participants have come to use the Advisory Committee as a potential shield against arguments and challenges to Plan amendments and decisions.⁶⁰ The Advisory Committee was established to provide guidance and allow firms to submit their views, but that should never be viewed as a substitute for the Commission’s judgement or subjecting the Plan’s actions to the public comment process.

While the Advisory Committee seemed like a good step when created, with the absence of conflict policy and robust oversight, its utility has been extremely limited. Further, since its creation, it has not led to notable improvements in the Plans governance or conflicts of interest. nor aided in achieving consensus, as the Commission had originally hoped.⁶¹

Background on Private Market Data Streams

With the advent of electronic trading, the amount of market information and the speed with which it could be relayed from exchanges to market participants became increasingly important, and the SIP feeds no longer contained all of the relevant

⁵⁹ Notably, the original governance policy for the Advisory Committee suggests that members shall serve two-year terms. Nevertheless, some Advisory Committee Members have served much, much longer. Additionally, some members of the Advisory Committee appear to not necessarily be representative of the allotted role. For example, a consulting firm representative serves as the investor representative, even though we might suggest a pension plan representative could be more representative of an “investor.”

⁶⁰ See, e.g., 78 Fed. Reg. 44984, at 44985 (wherein the Plan Participants recommend “that STANY speak with the Advisory Committee and incorporate their views into any future comment letter.”).

⁶¹ See Reg NMS Adoption, at 37561 (“In many respects, the Commission agrees with the concerns expressed by commenters regarding administration of the Plans. Nevertheless, it is reluctant at this point to require more intrusive changes to Plan governance that might interfere with effective Plan operations. The Plans fulfill significant operational functions with respect to the systems that deliver consolidated data to the public on a daily basis. Moreover, improved governance structures at the SRO level also should contribute to improved governance of the Plans through their selection and guidance of SRO representatives on the Plan operating committees. The Commission therefore believes that the Governance Amendment represents a useful first step toward improving the responsiveness of Plan participants and the efficiency of Plan operations.”). We at Healthy Markets think it’s past time for the Commission to take the second step towards addressing this issue.

information--or operated quickly enough--to support a competitive trading operation.⁶² As speed and volume of information became increasingly valuable to traders, exchanges stepped up to provide a dizzying array of products to offer more data more quickly.⁶³

For example, in 2001, NYSE began offering the predecessor to its key proprietary depth-of-book data feed. In the years since its introduction, the percentage of orders covered by that feed has increased, while the time horizons have compressed from providing snapshots of the order book once every ten seconds, to every five seconds, to every second, to nearly real time.⁶⁴ But this information doesn't cover all trades. Nor does it cover the information for other NYSE-related exchanges. Thus, if a firm wanted all relevant historical information from the NYSE family of exchanges, it would now have to consider acquiring a number of NYSE's proprietary data feeds from all of its operating exchanges.⁶⁵

NYSE Family Data Feeds⁶⁶

NYSE	NYSE American	NYSE Arca	NYSE National
NYSE Integrated	NYSE American Integrated	NYSE Arca Integrated	NYSE National Integrated

⁶² As the Treasury Department has explained, despite the creation of the SIP data feeds, “venues [are permitted] to sell additional non-core data at additional cost. This has allowed venues to make considerable revenue as a provider of additional data not provided to the SIPs (such as depth of book and odd-lot orders), and by delivering that information more quickly than SIPs are able to deliver the consolidated feed.” Treasury Capital Markets Report, at 63.

⁶³ Exchanges provide significant other relevant information beyond just order book depth, such as dividend information or short interest. The dynamics and impacts of these fees appear to be similar in nature, but because of their less-critical role in regulation and trading activity for the majority of market users, the impacts are significantly less pronounced. That said, the fees and offerings for these types of products also seems to be rising.

⁶⁴ This feed is now called NYSE OpenBook Ultra.

⁶⁵ Many proprietary trading firms and other market participants currently utilize the “NYSE Integrated” feed, which weighs in at an effective cost of \$7,500 per month in Access Fees, plus \$20,000 in Non-Display Fees, plus \$70 per user Subscriber Fees. Additionally, assuming a trader also wants the data at all three main exchange data centers, the subscriber would also need to pay another \$200 Multiple Data Feed fee. Both NYSE Arca and NYSE American have similar fees. If a hypothetical trading firm with 10 traders were to want this access from NYSE, NYSE Arca, and NYSE American, the total cost would be a whopping \$50,000 per month--before entering the first trade. See, *NYSE PDP: Market Data Pricing*, NYSE, effective Jan. 1, 2018 (unavailable for duplication due to copyright limitations). We do not understand why a data pricing table that should be subject to comprised of transparent, regulated fees is somehow prohibited from reproduction.

⁶⁶ NYSE Exchange Data, Real-Time Data, NYSE, available at <https://www.nyse.com/market-data/real-time>, (last viewed Oct. 22, 2018).

NYSE OpenBook Ultra	NYSE American OpenBook Ultra	NYSE ArcaBook	
NYSE OpenBook Aggregated	NYSE American OpenBook Aggregated		
NYSE BBO	NYSE American BBO	NYSE Arca BBO	NYSE National BBO
NYSE Trades	NYSE American Trades	NYSE Arca Trades	NYSE National Trades
NYSE Order Imbalances	NYSE American Order Imbalances	NYSE Arca Order Imbalances	

These feeds each provide slightly different information, depending upon the user’s needs. For a market participant utilizing the depth of book information, for example, she would likely want the OpenBook Ultra, Trades, and Order Imbalances feeds. On the other hand, a participant more focused on top of book information would use the BBO, Trades, and Order Imbalances feeds.

The additional private market data and connectivity costs can be thought of as falling into three categories: (1) Physical (including colocation, cross-connects, and port fees), (2) Logical, and (3) Market Data (including access fees and non-display fees). Each of these buckets may contain a different set of “offerings” and costs. For example, over the last several years, Nasdaq has had offerings for:

- Cabinet, standard 4kW
- Physical Port, 10G Port (A-Side)
- Physical Port, 10G Port (B-Side)
- Physical Port, 10G Ultra Port (A-Side)
- Physical Port, 10G Ultra Port (B-Side)
- Logical Port, Nasdaq ITCH
- Logical Port, BX ITCH
- Logical Port, PSX ITCH
- Market Data, Access Fee, TotalView
- Market Data, Access Fee, BX TotalView
- Market Data, Access Fee, PSX TotalView
- Market Data, Internal Distribution, TotalView
- Market Data, Internal Distribution, TotalView FPGA
- Market Data, Internal Distribution, BX TotalView
- Market Data, Internal Distribution, PSX TotalView



- Market Data, Non Display Fee, TotalView
- Market Data, Non Display Fee, BX TotalView
- Market Data, Non Display Fee, PSX TotalView⁶⁷

The fees for these offerings may run from a few hundred dollars up to tens of thousands of dollars per month.

All major broker-dealers, trading venues, and proprietary trading firms consume proprietary data and connectivity products offered by the exchanges. Nevertheless, some broker-dealers and trading venues still rely upon the public market data streams for pricing and matching securities trades.⁶⁸

If a broker dealer or other market participant were to rely upon the public market data stream for order generating or routing decisions, for example, that firm would be trading at a systemic temporal and informational disadvantage to other market participants using the private data feeds. It may route or execute at a price based on a snapshot in time that is stale. And, if the market information has changed in the interim, the consumers of the private feeds are more likely to be aware of that. Those more up-to-date and informed traders may systematically profit from trading against less-informed traders. In some instances, firms have even developed business models for trading on the pricing differences based on the time delays between the SIP feeds and the various private feeds, as well as between the different private feeds.⁶⁹

In addition to competitive pressures, regulatory pressures (i.e., the duty of best execution) also drive broker-dealers and investment advisers into utilizing the private market data feeds. The Financial Industry Regulatory Authority (FINRA) imposes

⁶⁷ This high-level summary ignores some significant specific fees as a Multi-Member Pass Thru fees, or the distinctions between per server fees from Nasdaq and the Enterprise Level Non-Display Fees.

⁶⁸ The specifics of which data feeds brokers and execution venues utilize is an important one. For example, when BATS Exchange's Bill O'Brien inaccurately stated in a CNBC interview that the venue matched trades using information provided by the proprietary data feeds, the company was pressured by the New York Attorney General to issue a correction. Rob Wile, *BATS Exchange Forced To Retract Statement Its President Made On CNBC*, Business Insider, Apr. 4, 2014, available at <http://www.businessinsider.com/bats-forced-to-retract-presidents-statement-from-cnbc-tussle-2014-4>.

Best execution guidance from FINRA released in 2015 suggests that if brokers do not subscribe to the private data feeds or use them for their own trading or routing decisions, then the brokers do not necessarily need to utilize the feeds for their customers to satisfy their best execution obligations. FINRA Rule 5310; see also, FINRA 2015 Guidance, n. 12.

⁶⁹ See, e.g., *In the Matter of Citadel Securities, LLC*, Exch. Act Rel. No. 79790, (Jan. 13, 2017), available at <https://www.sec.gov/litigation/admin/2017/33-10280.pdf> ("Citadel Settlement"); see also, Treasury Capital Markets Report, at 63.

detailed, increasingly prescriptive expectations on broker-dealers, designed to ensure that they fulfill their best execution obligations.⁷⁰

These expectations include that brokers will routinely evaluate routing decisions and execution venues (including those where they don't necessarily trade) for best prices. And while regulators don't currently require brokers to subscribe to the faster, higher-quality proprietary data feeds, regulators do require brokers that use the feeds to make their routing and trading decisions to also use those feeds for their trading quality evaluations.⁷¹

Further, the imposition of new rules regarding "best execution" under the Markets in Financial Instruments Directive II (MiFID II), which came into effect on January 3, 2018, required firms subject to it (including many US broker-dealers) to engage in significantly greater analyses and reporting than is currently required under US rules.⁷²

US regulators are focusing on best execution obligations, and have already focused on the discrepancy between the public and private data feeds as a potential basis for enforcement action. In fact, in early 2017, the Commission settled an enforcement action against Citadel Securities LLC in part because Citadel fraudulently stated that it was providing the "best available" prices to its broker-dealer customers, when it was measuring those prices off of the SIP data feeds, even when it knew from the private data feeds that better prices were available.⁷³

Put simply, broker-dealers, proprietary traders, and market makers know that they must have the information contained on the private feeds and faster connectivity to be commercially competitive, and perhaps to comply with their regulatory obligations. So these costs are unavoidable for them. Investment advisers and asset owners are both direct and indirect consumers of private market data and connectivity products. Indirectly, their broker-dealer service providers likely utilize private market data to make

⁷⁰ FINRA, *Guidance on Best Execution Obligations in Equity, Options and Fixed Income Markets*, Reg. Notice 15-46, (2015), available at http://www.finra.org/sites/default/files/notice_doc_file_ref/Notice_Regulatory_15-46.pdf ("FINRA 2015 Guidance").

⁷¹ FINRA Rule 5310; see also, 2015 FINRA Guidance, n. 12, ("For example, a firm that regularly accesses proprietary data feeds, in addition to the consolidated SIP feed, for its proprietary trading, would be expected to also be using these data feeds to determine the best market under prevailing market conditions when handling customer orders to meet its best execution obligations.").

⁷² See, Accenture, *Best Execution: Helping financial firms effectively manage their MiFID II obligations*, (2016), available at https://www.accenture.com/t20160607T023241Z_w_us-en/acnmedia/PDF-21/Accenture-Best-Execution-Helping-Financial-Firms-Manage-MiFIDII-Obligations-v2.pdf#zoom=50.

⁷³ Citadel Settlement.

their trading decisions. The fees incurred by their brokers are thus likely to be passed through as an implicit cost for the investment adviser.

But investment advisers are also increasingly likely to directly consume private market data, mostly as a result of the rise in sophisticated transaction cost analysis (TCA). To perform modern TCA, advisers and asset owners look at not just commission rates and other explicit costs, but also implementation costs. Many firms believe that in order to do this effectively, they need details regarding both the handling of their own orders, but also a comprehensive view of the marketplace within which that order routing occurs.⁷⁴

The Citadel Settlement makes it clear that regulators are aware of the difference between the NBBO as viewed from the SIP and the NBBO as it may be constructed from the consolidation of the private data feeds. And those differences may illustrate dramatically different trading costs for investors.

This may have a major impact on non-displayed execution venues, such as broker-owned alternative trading systems (ATSs). One recent study, using data from one investment adviser, highlighted the differences in how the latencies between the data feeds may impact ATS pricing and executions.⁷⁵ The study looked at midpoint peg orders based on the NBBO, as constructed on the private data feeds at the time of the execution, and compared those to the prices received at execution.⁷⁶ This study found that some ATSs executed at the far side of the market or worse nearly 25% of the time, and that 3 dark pools had more than 5% of their executions for mid-point peg orders outside the NBBO.⁷⁷ Put simply, instead of receiving execution prices at the midpoint of the spreads, as viewed in as close to real time as possible (from the private data feeds), the investor received far worse prices a significant percent of the time.

These findings raise significant questions about some brokers' compliance with their best execution obligations, but also with the efficacy of the regulatory framework's reliance on the SIP as being the source for the NBBO. Worse, it's nearly impossible to detect these execution quality concerns without the exchanges' private market data.

Importantly, exchange private market data feeds may also include information obtained by an exchange as a result of its regulatory status, for example, information related to corporate actions of issuers listed on the exchange. While the collection of the data may

⁷⁴ Healthy Markets Association Market Data Report, at 18.

⁷⁵ Jeff Alexander, Linda Giordano, and David Brooks, *Dark Pool Execution Quality: A Quantitative View*, 2015 ("Dark Pool Execution Quality").

⁷⁶ *Dark Pool Execution Quality*.

⁷⁷ *Dark Pool Execution Quality*.

be made pursuant to the exchange’s oversight of listings on its exchange, and subject to its rulebook, the governance of the data feeds distributing this information may not be subject to the exchange rule filing and SEC approval process. In this way, the governmental function of the listing exchange supervision gives rise to a potential source of private profit that is not well-regulated by the Commission.⁷⁸

Changes to Public and Private Market Data Streams and the Standards of Review

The Commission is obligated to review filings by the exchanges (including those for the public market data stream, which are submitted by the exchanges) and determine that those filings are consistent with the Exchange Act.⁷⁹ Those requirements include, among other items, that an exchange’s rules:

- “provide for the equitable allocation of reasonable dues, fees, and other charges;”⁸⁰
- not be “designed to permit unfair discrimination”;⁸¹
- “not impose any burden on competition not necessary or appropriate in furtherance of the purposes of” the Act;⁸² and
- be designed “to protect investors and the public interest.”⁸³

The burden is on the exchange making a filing to establish that its’ filing complies with the Exchange Act.⁸⁴ Further, to satisfy the Administrative Procedures Act, “the agency

⁷⁸ We note that the Exchange Regulatory Improvement Act (H.R. 3555), 115th Cong. (2018) may further limit the ability of the Commission to effectively oversee these products. For that reason, we are deeply concerned with that legislation.

⁷⁹ See *Susquehanna Int’l Grp., LLP v. SEC*, 866 F.3d 442 (D.C. Cir. 2017) (“The SEC “shall approve” a self regulatory organization’s proposed rule change only “if it finds that such proposed rule change is consistent with” provisions of the Exchange Act.”).

⁸⁰ 15 U.S.C. § 78f(b)(4).

⁸¹ 15 U.S.C. § 78f(b)(5).

⁸² 15 U.S.C. § 78f(b)(8).

⁸³ 15 U.S.C. § 78f(b)(5).

⁸⁴ 17 CFR 240.19b-4 (Item 3 entitled “Self-Regulatory Organization’s Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change”). Further, the instructions to this rule demand that the filing ““should be sufficiently detailed and specific to support a finding that the proposed rule change is consistent with [those] requirements.”). *Id.*

must examine the relevant data and articulate a satisfactory explanation for its action including a ‘rational connection between the facts found and the choice made.’”⁸⁵

This is not an easy task. In 2017, the securities exchanges and FINRA made over 1500 filings with the Commission, hundreds of which related to market data and connectivity. Nevertheless, the difficulty in wading through the massive volume of filings does not relieve the Commission of its legal obligation.⁸⁶

The Commission has typically simply forwarded proposed amendments for public comment. Most receive no or few comments. And the vast majority become effective without any affirmative reviews, analyses, or determinations by the Commission.

This longstanding practice of effectively rubber-stamping market data filings appears to be coming to an end, however. First, on May 1, 2018, for the Commission abrogated a CTA/CQ filing⁸⁷ and analogous UTP filing,⁸⁸ on the grounds that the amendments were not adequately supported.⁸⁹ This appears to have been a result of the DC Circuit’s 2017 admonition to the Commission that the agency must review, analyze, and make determinations regarding SRO filings.⁹⁰ Since May, the only CTA/CQ and UTP Plan

⁸⁵ *Motor Vehicle Mfrs. Ass’n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983) (quoting *Burlington Truck Lines, Inc. v. United States*, 371 U.S. 156, 168 (1962)).

⁸⁶ *Susquehanna Int’l Grp., LLP*, (“We do not reach them because, as Petitioners also argue, the SEC’s Order approving the Plan fails in a more basic respect: the Commission did not itself “find[]” or “determin[e],” that the Plan met any of those requirements. Instead, the SEC effectively abdicated that responsibility...”)(citations omitted).

⁸⁷ *Order of Summary Abrogation of the Twenty-Third Charges Amendment to the Second Restatement of the CTA Plan and the Fourteenth Charges Amendment to the Restated CQ Plan*, Sec. and Exch. Comm’n, May 1, 2018, available at <https://www.sec.gov/rules/sro/nms/2018/34-83148.pdf> (declaring that “[t]he Commission is concerned that the information and justifications provided by the Participants are not sufficient for the Commission to determine whether the Amendment is consistent with the Act.”).

⁸⁸ *Order of Summary Abrogation of the Forty-Second Amendment to the Joint Self-Regulatory Organization Plan Governing the Collection, Consolidation and Dissemination of Quotation and Transaction Information for Nasdaq-Listed Securities Traded on Exchanges on an Unlisted Trading Privileges Basis*, Sec. and Exch. Comm’n, May 1, 2018, available at <https://www.sec.gov/rules/sro/nms/2018/34-83149.pdf> (declaring that “[t]he Commission is concerned that the information and justifications provided by the Participants are not sufficient for the Commission to determine whether the Amendment is consistent with the Act”).

⁸⁹ The Healthy Markets Association had previously objected to those filings, and appears to have been relied upon by the Commission in its abrogation orders. See, e.g., Letter from Tyler Gellasch, Healthy Markets Association, to Brent J. Fields, Sec. and Exch. Comm’n, Apr. 11, 2018, available at <https://www.sec.gov/comments/sr-ctacq-2017-04/ctacq201704-3420092-162185.pdf> (re CTA/CQ Plan Amendment); see also Letter from Tyler Gellasch, Healthy Markets Association, to Brent J. Fields, Sec. and Exch. Comm’n, Apr. 30, 2018, available at <https://www.sec.gov/comments/s7-24-89/s72489-3535818-162321.pdf> (re UTP Plan).

⁹⁰ *Susquehanna Int’l Grp., LLP*.

amendments have been to change names and addresses of the Plan Participants and withdraw a previously-filed, controversial amendment.⁹¹

Next, on September 17, 2018, the Commission issued orders suspending and initiating proceedings to disapprove connectivity fee increases by BOX Exchange LLC,⁹² Miami International Securities Exchange (MIAX),⁹³ and MIAX PEARL LLC (MIAX PEARL).⁹⁴ Healthy Markets had objected to each filing on the basis that the proposed change was insufficiently supported.⁹⁵ In each case, the Commission made it clear that it wanted the exchange to further specify how the filing was consistent with the Exchange Act and the Commission's submission requirements (which place the burden on the exchange to establish that the filing is consistent with the Exchange Act).⁹⁶ While MIAX and MIAX

⁹¹ *Notice of Filing and Immediate Effectiveness of the Twenty-Fourth Charges Amendment to the Second Restatement of the CTA Plan and the Fifteenth Charges Amendment to the Restated CQ Plan*, Sec. and Exch. Comm'n, Sept. 18, 2018, available at <https://www.sec.gov/rules/sro/nms/2018/34-84194.pdf> (withdrawing 2017 amendments to which Healthy Markets, SIFMA, Bloomberg, and others had objected).

⁹² *Suspension of and Order Instituting Proceedings to Determine Whether to Approve or Disapprove a Proposed Rule Change to Amend the Fee Schedule on the BOX Market LLC Options Facility to Establish BOX Connectivity Fees for Participants and Non-Participants Who Connect to the BOX Network*, Sec. and Exch. Comm'n, Rel. No. 34-84168, Sept. 17, 2018, available at <https://www.sec.gov/rules/sro/box/2018/34-84168.pdf> (BOX Suspension Order).

⁹³ *Suspension of and Order Instituting Proceedings to Determine Whether to Approve or Disapprove a Proposed Rule Change to Amend the Fee Schedule Regarding Connectivity Fees for Members and Non-Members*, Sec. and Exch. Comm'n, Rel. No. 34-84175, Sept. 17, 2018, available at <https://www.sec.gov/rules/sro/miix/2018/34-84175.pdf>.

⁹⁴ *Suspension of and Order Instituting Proceedings to Determine Whether to Approve or Disapprove a Proposed Rule Change to Amend the Fee Schedule Regarding Connectivity Fees for Members and Non-Members*, Sec. and Exch. Comm'n, Rel. No. 34-84177, Sept. 17, 2018, available at <https://www.sec.gov/rules/sro/pearl/2018/34-84177.pdf>.

⁹⁵ Letter from Tyler Gellasch, Healthy Markets Association, to Brent J. Fields, SEC, Aug. 23, 2018, available at <https://www.sec.gov/comments/sr-box-2018-24/srbox201824-4258035-173056.pdf> (re BOX filing); Letter from Tyler Gellasch, Healthy Markets Association, to Brent J. Fields, SEC, Sept. 4, 2018, available at <https://www.sec.gov/comments/sr-miix-2018-19/srmiix201819-4300775-173209.pdf> (re MIAX filing); and Letter from Tyler Gellasch, Healthy Markets Association, to Brent J. Fields, SEC, Sept. 4, 2018, available at <https://www.sec.gov/comments/sr-miix-2018-19/srmiix201819-4300775-173209.pdf> (re MIAX PEARL filing).

⁹⁶ See, e.g., BOX Suspension Order, at 4-5.

PEARL have subsequently withdrawn their filings,⁹⁷ BOX has determined to contest the matter before the Commission.⁹⁸

Then, on October 16, 2016, the Commission took two separate actions to further enhance its oversight of market data. First, it decided a long-running legal action by SIFMA against fee hikes filed by NYSE and Nasdaq.⁹⁹ Nasdaq and NYSE had imposed fees many years ago, which SIFMA had challenged. After years of legal wrangling (both at the Commission and in federal court), the Commission determined:

Because we find that the exchanges fail to meet their burden to demonstrate that the fees are fair and reasonable and not unreasonably discriminatory, we set aside the challenged fees. We do not, by our findings here, conclude that the fees are not fair and reasonable. Rather, the factual record submitted and the theories based on that record put forward by the exchanges are insufficient to support a finding that the fees at issue meet the statutory test.¹⁰⁰

At the same time, the Commission separately determined to remand more than 400 additional exchange filings that had been contested by SIFMA and Bloomberg in the years the original case had been pending.¹⁰¹ In taking this unprecedented step, the Commission explained

We remand these challenges to the respective exchanges so that they can consider the impact of the SIFMA Decision, as well as SIFMA's and Bloomberg's contentions that the challenged rule changes should be set aside under Exchange Act Section 19. Upon remand, the exchanges

⁹⁷ *Notice of Withdrawal of a Proposed Rule Change to Amend the Fee Schedule Regarding Connectivity Fees for Members and Non-Members*, Sec. and Exch. Comm'n, Rel. No. 34-84398, Oct. 10, 2018, available at <https://www.sec.gov/rules/sro/miax/2018/34-84398.pdf>; *Notice of Withdrawal of a Proposed Rule Change to Amend the Fee Schedule Regarding Connectivity Fees for Members and Non-Members*, Sec. and Exch. Comm'n, Rel. No. 34-84397, Oct. 10, 2018, available at <https://www.sec.gov/rules/sro/pearl/2018/34-84397.pdf>.

⁹⁸ *Petition for Review of Order Temporarily Suspending BOX Exchange LLC's Proposal to Amend the Fee Schedule on BOX Market LLC*, Sec. and Exch. Comm'n, Rel. No. 34-168, Sept. 26, 2018, available at <https://www.sec.gov/rules/sro/box/2018/box201824-petition.pdf>.

⁹⁹ *In the Matter of the Application of SIFMA*, Sec. and Exch. Comm'n, Rel. No. 34-84432, Oct. 16, 2018, available at <https://www.sec.gov/litigation/opinions/2018/34-84432.pdf> (SIFMA Challenge Opinion).

¹⁰⁰ SIFMA Challenge Opinion, at 2.

¹⁰¹ *In the Matter of the Applications of SIFMA and Bloomberg*, Rel. No. 34-84433, Oct. 16, 2018, available at <https://www.sec.gov/litigation/opinions/2018/34-84433.pdf> (SIFMA and Bloomberg Challenge Opinion).

shall develop or identify fair procedures for assessing the challenged rule changes as potential denials or limitations of access to services, as required under Exchange Act Section 6(b)(7). We direct the exchanges to footnotes 68-69 and 109 of the SIFMA Decision and accompanying text, which reference the exchanges' legal obligation to provide notice and an opportunity to be heard to those involved, to develop a record, and to "explain their conclusions, based on that record, in a written decision that is sufficient to enable us to perform our review."¹⁰²

It is unclear what, if any, additional information will be provided by the exchanges in response to the Commission's order. Already, the exchanges have indicated that they intend to continue the battle in federal court.

In some ways, we understand the exchanges' concerns. Their obligations to establish that their filings are consistent with the Exchange Act have existed for decades, and yet the Commission has rarely enforced them. To be clear, thousands of exchange filings have been made and implemented, despite almost none of them providing sufficient information or analysis to establish their compliance with the Exchange Act.

Increased Complexity, Profits, and Consequences

Over the past 15 years, the complexity of public and private market data, as well as total costs for market access and connectivity for market participants has skyrocketed.

Public Market Data Stream

In the more than four decades since the CTA Plan was first approved by the Commission, the Plans have been amended dozens of times.¹⁰³ Some of the amendments have been to account for changes in technology and expectations,¹⁰⁴ while others re-adjust who pays how much for what,¹⁰⁵ while others address who receives

¹⁰² SIFMA and Bloomberg Challenge Opinion, at 2.

¹⁰³ A brief summary of some selected Plan amendments is attached hereto as **Exhibit 4**.

¹⁰⁴ See, e.g., Approval of an Amendment to the Consolidated Tape Plan Establishing Non-Professional Fees, Sec. and Exch. Comm'n, 48 Fed. Reg. 53616 (Nov. 28, 1983) (establishing "non-professional fees"), available at <https://cdn.loc.gov/service/ll/fedreg/fr048/fr048229/fr048229.pdf>.

¹⁰⁵ See, e.g., 2017 Filing.

how much revenues or pay costs for what.¹⁰⁶

The Commission has expressly acknowledged that one of its “most important responsibilities is to preserve the integrity and affordability of the consolidated data stream.”¹⁰⁷ If measured by the complexity and costs associated with public market data, the Commission has struggled to fulfill this responsibility.

In the decades since the Plans were adopted, over the course of dozens of amendments, the complexity and costs of market data have skyrocketed. Rather than simply charging for the data, the CTA actually now charges different amounts for firms of different sizes, and charges different rates depending upon how data may arguably be utilized.¹⁰⁸ We are not aware of any of these filings being subjected to any specific scrutiny for compliance with the Exchange Act, as required (and articulated by the DC Circuit).¹⁰⁹

For example, the fees for Tape A include:

- Access Fees (four levels ranging from \$750.00 to \$1,750.00, based upon direct or indirect access);
- Redistribution Fees (\$1,000.00 per account);
- Professional/Internal Device Fees (from \$19.00 to \$45.00 per unit, depending on the number of units);
- Non-Professional User Fees (\$1.00 per unit);
- Quote Packet Fees (\$0.0075 per quote);
- Broker-Dealer Enterprise Cap (which allows for unlimited dissemination of real-time data by the enterprise for \$686,400 per month);
- Ticker Display on TV Fees (\$2.00 per 1,000 households, up to a maximum of \$125,000.00);
- Non-Display Use Fees (\$2,000.00 for each of Last Sale, Bid-Ask, for each of three categories);
- Multiple Feed Charges (\$200 for each of Last Sale and Bid-Ask); and

¹⁰⁶ See, e.g., *Consolidated Tape Association; Notice of Filing of Sixteenth Substantive Amendment to the Restated Consolidated Tape Association Plan and Twentieth Substantive Amendment to the Consolidated Quotation Plan*, Sec. and Exch. Comm’n, 58 Fed. Reg. 50984 (Sept. 29, 1993) (establishing formal process for cost allocations for new Plan Participants), available at <https://cdn.loc.gov/service/ll/fedreg/fr058/fr058187/fr058187.pdf>.

¹⁰⁷ Reg NMS Adoption, at 37503.

¹⁰⁸ See, e.g., October 2014 Filing, at 60536; see also 2017 Filing, at 55130.

¹⁰⁹ *Susquehanna Int’l Grp., LLP v. SEC*, 866 F.3d 442 (D.C. Cir. 2017).

- Late Fees/Clearly Erroneous Charges (\$2,500.00).¹¹⁰

Each of the Plans has a similar fee schedule.¹¹¹ Further, the complexity within each of these categories is staggering, and may be shift over time. For example, a recently withdrawn 2017 filing to which we had objected could be characterized as a re-definition of what constituted “display” or “non-display” use.¹¹²

While the complexity of the fee structures and definitions have risen over time, the transparency of the filings has decreased. By way of example, the Plan was once amended because AT&T increased its charges to \$160.00, and thus the Plan passed through those charges.¹¹³ Today, we see no such transparency with fee changes and very little appears to be “pass through” costs. Instead, the changes appear to be more about expanding or preserving the “distributed revenues,” as can easily be seen in both the recently withdrawn 2017 Filing and the recently abrogated 2018 Filings to which we

¹¹⁰ Consolidated Tape Association, Fee Schedule for Network A, Effective Jan. 2015, *available at* <https://www.nyse.com/publicdocs/ctaplan/notifications/trader-update/CTA%20Network%20A%20Pricing%20-%20Jan%201%202015.pdf>.

¹¹¹ See, Consolidated Tape Association, Fee Schedule for Network A, Effective Jan. 2015, *available at* <https://www.nyse.com/publicdocs/ctaplan/notifications/trader-update/CTA%20Network%20A%20Pricing%20-%20Jan%201%202015.pdf> (for Tape A); Consolidated Tape Association, Fee Schedule for Network B, Effective Jan. 2015, *available at* <https://www.nyse.com/publicdocs/ctaplan/notifications/trader-update/CTA%20Network%20B%20Pricing%20-%20Jan%201%202015.pdf> (for Tape B); UTP Plan Administration: Data Policies, October 2017, *available at* <http://www.utpplan.com/doc/DataPolicies.pdf> (for Tape C); and Options Price Reporting Authority, Fee Schedule, *available at* https://www.opradata.com/pdf/fee_schedule.pdf (for OPRA).

¹¹² *Notice of Filing and Immediate Effectiveness of the Twenty-Second Charges Amendment to the Second Restatement of the CTA Plan and the Thirteenth Charges Amendment to the Restated CQ Plan*, Sec. and Exch. Comm’n, Rel. No. 34-82071, Nov. 14, 2017, *available at* <https://www.sec.gov/rules/sro/nms/2017/34-82071.pdf> (“2017 Filing”); *Notice of Filing and Immediate Effectiveness of the Twenty-Fourth Charges Amendment to the Second Restatement of the CTA Plan and the Fifteenth Charges Amendment to the Restated CQ Plan*, Sec. and Exch. Comm’n, Rel. No. 34-84194, Sept. 18, 2018, *available at* <https://www.sec.gov/rules/sro/nms/2018/34-84194.pdf> (providing notice of the withdrawal). Notably, this filing was withdrawn after the Commission had issued an order staying the filing in July 2018. *In the Matter of the Application of SIFMA and Bloomberg*, Sec. and Exch. Comm’n, Rel. No. 34-83755, July 31, 2018, *available at* <https://www.sec.gov/litigation/opinions/2018/34-83755.pdf>.

¹¹³ *Notice of Filing and Immediate Effectiveness of Sixteenth Charges Amendment to the Restated Consolidated Tape Association Plan*, Sec. and Exch. Comm’n; 59 Fed. Reg. 61361 (November 30, 1994), *available at* <https://www.gpo.gov/fdsys/pkg/FR-1994-11-30/html/94-29463.htm>.

have previously objected.¹¹⁴ Put simply, the public market data stream is being tweaked and Exchange Act is being used to preserve exchanges' profit margins.

Of course, some of these distinctions and various fees came into existence for facially justifiable reasons. The distinctions between user types (professional versus non-professional) was added for the specific purpose to “lower the cost of current market information to the public investor, and thus enable vendors using various newly developing services aimed at the individual investor...to offer current market information to a broader range of investors than ever before.”¹¹⁵ Obviously, this was a laudable goal at the time.

However, today there is little difference between the information provided to a professional user versus information provided to a non-professional user, and yet this classification has dramatic impacts on costs to market participants and revenues for the Plan Participants.

For decades, market participants have been pleading for simplification. And as far back as 2009, even the Plan Participants suggested that “eliminating the manner-of-data-usage charges will modernize the CTA and CQ fee schedules and allow all vendors and users to use data as they see fit.”¹¹⁶ In 2013, following requests by the Advisory Committee to simplify the plans and associated fee structures,¹¹⁷ the CTA went so far as to start simplifying charges.¹¹⁸ Thus, in 2013 Plan Participants sought to

¹¹⁴ See 2017 Filing and 2018 Filings; see also *Consolidated Tape Association; Notice of Filing of the Thirteenth Charges Amendment to the Second Restatement of the Consolidated Tape Association Plan and Seventh Charges Amendment to the Restated Consolidated Quotation Plan*, Sec. and Exch. Comm'n, 74 Fed. Reg. 59999, 60000 (Nov. 19, 2009) (“In addition to establishing separate access fees for Network A and Network B, it is the intention of the Participants **to set the new access fees at levels that will offset the revenues that the Participants anticipate they will lose as a result of eliminating the program classification fees.** The Participants' goal is to eliminate the program classification fees and reset access fees in a revenue-neutral manner and simplify and modernize the fee schedule while offering vendors and end-users greater choice and flexibility in the receipt and use of market data.”)(emphasis added), available at <https://www.gpo.gov/fdsys/pkg/FR-2009-11-19/pdf/E9-27745.pdf>. We also note that, initially, there were significant questions about whether the CTA Plan would generate sufficient revenues to cover costs. See e.g., **Exhibit 3**, at 48-49.

¹¹⁵ *Receipt and Temporary Summary Effectiveness of an Amendment to Establish Non-Professional Fees: Consolidated Quotation Plan*, Sec. and Exch. Comm'n, 48 Fed. Reg. 34551, at 34552 (July 29, 1983), available at <https://cdn.loc.gov/service/ll/fedreg/fr048/fr048147/fr048147.pdf>.

¹¹⁶ 74 Fed. Reg. at 60000.

¹¹⁷ 78 Fed. Reg. 44984.

¹¹⁸ See, e.g., *Consolidated Tape Association; Notice of Filing and Immediate Effectiveness of the Sixteenth Charges Amendment to the Second Restatement of the CTA Plan and Eighth Charges Amendment to the Restated CQ Plan*, Sec. and Exch. Comm'n, 78 Fed. Reg. 17946 (March 25, 2013), available at <https://www.gpo.gov/fdsys/pkg/FR-2013-03-25/pdf/2013-06730.pdf>; see also 78 Fed. Reg. 44984.

compress the current 14-tier Network A device rate schedule into just four tiers, consolidate the Plans' eight fee schedules into one, update that fee schedule, and realign the Plans' charges more closely with the services the Plans provide (collectively, the "Fee Changes"), without materially changing the revenues the current fee schedules generate.

119

Unfortunately, the complexity has arguably gotten worse. This fee complexity has persisted even though it may render the fees assessed arbitrary, discriminatory, and inconsistent. By CTA's own admission, "new technologies and new innovations have made it difficult to place data uses into the existing program classifications in a manner that is consistent and equitable for all."¹²⁰

Contracts for the provision of market data with the Plan Participants have also become incomprehensibly complex and ill-defined, leading to frequent disputes regarding the definitions and enforceability of the terms. Plan Participants have at times asserted broad authority to define ambiguous terms and appropriate classifications. For example, an exchange may tell vendors to review "LinkedIn" profiles to determine whether a customer is a "professional," but then retroactively overrule the vendor's determinations anyways. The professional versus non-professional classification has become so muddled that today, a gas station owner that opens an account for his personal trading in the name of his gas station is considered a professional.¹²¹ These concerns were exactly what vendors feared years ago when the CTA amended the vendor agreement.

122

Private Market Data Streams

The complexity and costs to market participants for the private market data streams are significant and rising quickly. According to one independent, low latency firm, the costs

¹¹⁹ 78 Fed. Reg. 44984.

¹²⁰ 74 Fed. Reg. 59999, at 60000.

¹²¹ See CTA, *Nonprofessional Subscriber Policy*, ("For example, if an individual who owns a business called Joe's Gas Station receives market data for personal, non-business use through a market data account that has Joe's Gas Station as the account holder, the vendor must report the individual as a Professional Subscriber because the account is not in a natural person's name."), *available at* <https://www.ctaplan.com/publicdocs/ctaplan/notifications/trader-update/Policy%20-%20Non-Professional%20Subscribers%20-%20CTA.pdf>.

¹²² *Joint Industry Plan; Filing and Immediate Effectiveness of Amendments to the Consolidated Tape Association Plan and to the Consolidated Quotation Plan*, Sec. and Exch. Comm'n, 55 Fed. Reg. 37276 (September 10, 1990), *available at* <https://www.govinfo.gov/content/pkg/FR-1990-09-10/pdf/FR-1990-09-10.pdf>.

of the private data and connections to BATS, NYSE, and Nasdaq have risen from around \$70,000 per month on June 1, 2012 to around \$190,000 per month today.¹²³

The costs have come from “new” or “enhanced” features, but also from just simple rate hikes. For example, in 2012, Nasdaq offered a standard 10G connection for \$5,000 per month. To avoid failures, many firms typically would pay for redundant connections, making the costs \$10,000 per month. By 2014, the prices for two standard 10G connection had increased to \$20,000 per month. Then Nasdaq upgraded its network to offer a faster alternative. Instead of simply offering its clients the performance improvement, it branded the faster connection “10G Ultra” and offered it for \$15,000 per month per connection. Any firm wanting redundancy would have to pay \$30,000 per month--a 300% increase from just a couple years earlier. Similarly, high-speed connectivity to the former-BATS exchanges has increased for a single connection from \$2500 per month, to \$4000, to \$6000, to \$7000, to now \$7500 per month--since 2012.

¹²⁴ To avoid the risks (and losses) of trading on stale information, traders who could afford to pay, simply paid for these astronomical increases.

The costs have also come from simple hikes to data fees. In January 2017, Nasdaq filed to increase the monthly fees for Nasdaq Level 2 data.¹²⁵ Nasdaq’s Level 2 product provides the exact same “top of book” information that it transmits to the SIP, but also includes additional levels of depth and quote information. In its filing, Nasdaq immediately increased the fee from \$9 to \$14 per month for non-professional subscribers (a 55% increase) and from \$60 to \$70 for professional subscribers (a 16% increase). Why were non-professional subscribers subject to a price increase that is 39% greater than the increase for professional subscribers? Again, there is no justification in the proposal as to why one group of investors was treated differently than another group of investors for the same data. Additionally, Nasdaq provided virtually no disclosure regarding the reasoning or rationale for the fee increase.

Of course, this only covers the exchanges’ governance of their proprietary data products to the extent they may be covered by Commission rules. Interestingly, the exchanges seem to have taken very different views on historical market data. Suppose, for example, that a small non-profit were to want the information contained in the

¹²³ These figures are dramatically lower than many trading firms, who often have to pay significant “per user” fees.

¹²⁴ As previously described, many firms need redundant connections, meaning that the true cost for market participants went from \$5000 per month to \$15,000 per month.

¹²⁵ *Notice of Filing and Immediate Effectiveness of Proposed Rule Change to Amend the Exchange’s Data Fees at Rule 7023*, Sec. and Exch. Comm’n, Rel. No. 34-79863, Jan. 23, 2017, available at <https://www.sec.gov/rules/sro/nasdaq/2017/34-79863.pdf>.

proprietary data feeds of NYSE so that it -- and academics affiliated with it -- could conduct studies of the markets. The market data would be on a significant time-delayed basis; such as two days. Suppose further a third-party that has already purchased the data would be willing to provide you with the data. They can't. Their licensing agreement with NYSE prevents it.

In fact, NYSE may not let you use the data at any price. Or it may charge \$12,500/month for the right to use the data. Or it may give you (or its own affiliate¹²⁶) the right to use the data for free. NYSE has argued that it can -- in contravention of the Exchange Act -- discriminate between customers. We understand that NYSE does, in fact, provide this data to customers of its affiliate for free, while separately charging third parties significant fees for the historical data. Even worse, NYSE requires that any third-party vendors identify their customers to NYSE--effectively using its oversight authority to obtain information that could be used by NYSE to identify the vendor's customers so that it may underbid them. These potential practices place direct burdens on competition for the distribution and use of historical market data.

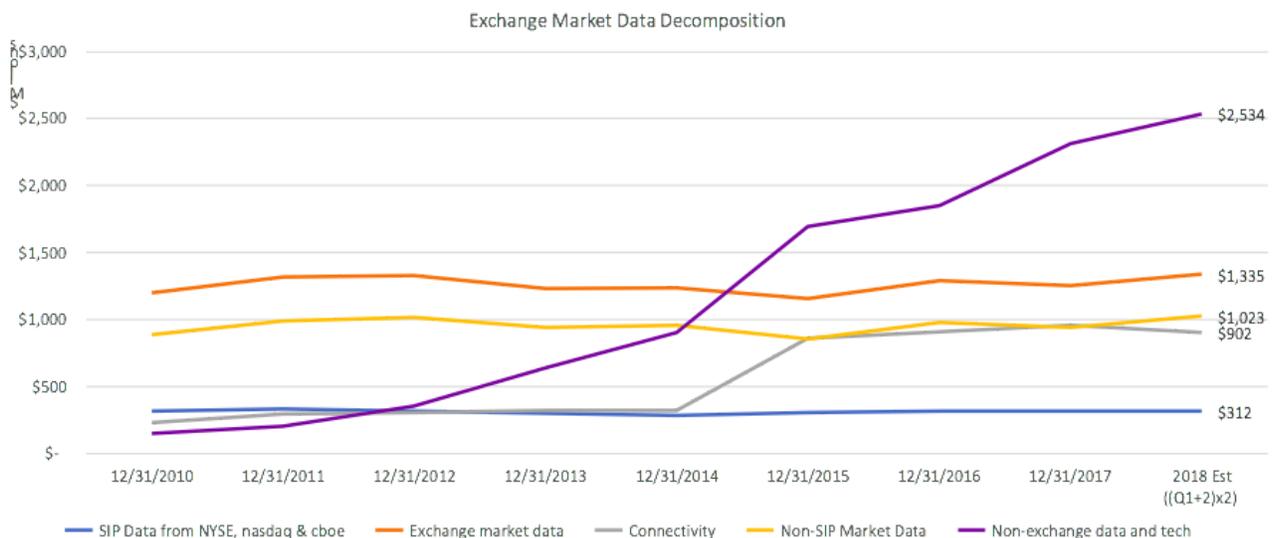
While NYSE's provision of the data in real-time is plainly subject to the contours of the governing filings with the Commission, the exchange has apparently taken the controversial position that it is not bound by any of the Exchange Act requirements regarding competition, discrimination, reasonable fees, or equitable allocations of fees, and the like for the provision of the same data one day later.¹²⁷

The Commission must also recognize that market data revenues have become key components of most exchanges' business models. As competition for order flow intensified, and the incumbents lost market share, the exchanges determined to focus their businesses on revenue streams that were stickier; and particularly market data. Each of the major exchange families has spent years marketing its "technology" and "data" offerings.

¹²⁶ See, e.g., ICE Data Services, available at <https://www.theice.com/market-data>.

¹²⁷ Notably, other exchanges do not seem to take this position. Contrast, *Historical Use of Real-Time NYSE Proprietary Data Products Policy*, NYSE, Sept. 2014, available at https://www.nyse.com/publicdocs/nyse/data/Policy-HistoricalUseofReal-TimeNYSEProprietary%20Data%20Products_PDP.pdf and attached as **Exhibit 5** ("If a vendor of real-time proprietary NYSE Market Information would like to redistribute this data externally at a later time, the vendor must contract with NYSE directly for such use and pay the relevant fee."). The "relevant fee" is not defined in this document or elsewhere, and appears to be entirely subject to NYSE's discretion. By way of background, when Healthy Markets Association approached NYSE about obtaining historical data through a third party that already possessed it, the exchange offered very different prices for the rights to use the data over time. At the same time, we are aware of market participants receiving the rights to the data for free from another NYSE affiliate.

It is generally impossible to clearly identify the overall amount of exchange revenues attributable to public and private market data streams. However, collectively, the exchanges' market data and connectivity products appear to comprise approximately 53% of the revenues for the dominant three exchange families.¹²⁸ While data revenues outstrip transactional revenues, not all data revenues align with traditional US equity market data business lines. In fact, it is extremely difficult to identify this information, in part because the exchanges do not generally disclose that information. The chart below attempts to dissect market data revenues from the three dominant exchange families.



*Non-SIP Exchange Data Revenues are corporate data revenues reported by ICE(NYSE), NASDAQ, and Cboe (Bats) and **does** include foreign and non-equities products, including: futures, options, FX, and fixed income related data revenues as well as data generated based on the sale of index products. Non-market Data, Data & Technology Revenues include Index data, data sold to corporates (Nasdaq Corporate Solutions), Reference & Pricing Data (ICE Data Services (Interactive Data)), and Other revenues. Cboe/BATS data for years 2010-16 is annual data divided by four for quarterly rates.¹²⁹

In addition, with the new revenue-related disclosures from the Plans, we can see that SIP-related revenues are significant, but not a massive contributor to revenues for the firms. We also note the massive rise in exchange connectivity revenues, largely coming in 2015.

In addition to just the labyrinth of products, there appears to be some perverse incentives created by these fees that may negatively impact market participants and

¹²⁸ Email from Larry Tabb, TABB Group, to Tyler Gellasch, Oct. 19, 2018.

¹²⁹ TABB Equity Digest Q2-2018, TABB Group, Oct. 4, 2018, available at <https://research.tabbgroup.com/report/v16-042-tabb-equity-digest-q2-2018>.

markets overall. For example, since the adoption of Regulation NMS, exchanges have multiplied, even though many have remarkably similar business models. Excess “distributed revenues” and proprietary market data and connectivity revenues appear to be artificially incentivizing the creation and maintenance of a large number of exchanges, thus creating unnecessary market fragmentation.

Thus, aside from simply being an unnecessary tax on investors and other market participants, the excess fees that exchanges reap from their role in this key government function appear to be creating some of the more concerning aspects of current market structure: complexity, costs, and fragmentation.

Similarly, while regulators and market participants have spent the last several years focusing on concerns with order routing incentives paid by (and disincentives paid to) exchanges, there seems to be a significant relationship between these incentives and market data. In particular, at times, rebates paid may -- and frequently do -- exceed transaction fees paid--meaning that the exchange is simply losing money on that trade. Assuming the exchanges are rational actors seeking to remain financially solvent, then those payments must be made using revenues derived elsewhere: most likely, market data. Further, to the extent that those rebates are paid to one set of firms, and paid for by revenues collected from a different set of market participants, market data fees may be seen as a net wealth transfer to not only the exchanges, but to certain “favored” market participants. Unfortunately, due to a lack of transparency into the pricing tiers of the exchanges, we do not know to whom these “benefits” may be most directly accruing.

The connection between market data revenues and order routing incentives is significant, and undeniable. In fact, several market observers,¹³⁰ including Healthy Markets, have argued that the Commission should better control for potential changes in market data fees in its proposed transaction fee pilot because those fees could be used as alternative order routing incentives that may undermine the pilot’s efficacy.

As if to underscore this point, in their early public remarks following the release of the SEC’s transaction fee pilot proposal, executives from at least one exchange expressly suggested that the exchange family may seek to maintain significant order routing incentives by tying those incentives to market data prices. Similarly, in its October 2, 2018 comment to the transaction fee pilot, NYSE offered an “alternative pilot” that would

¹³⁰ See, e.g., Remarks of J.W. Verret, Associate Professor of Law, George Mason University Antonin Scalia Law School, Rethinking Exchange Regulation, Sept. 19, 2018, *available at* <https://masonlec.org/events/rethinking-exchange-regulation-remarks-by-sec-commissioner-robert-j-jackson-jr/>.

include “a moratorium on any fee increases for existing market data products, connectivity services and co-location.”¹³¹

Given these complex relationships between market data revenues and other practices, we urge the Commission to think about reform proposals carefully. It may well be that changes to data and connectivity revenues may lead to changes in other services , as well as rebates and fees offered on trading by an exchange.¹³²

Market Data Regulatory Reform Proposals and Considerations

Over the past twelve months, the Commission has received petitions from a broad spectrum of market participants and their trade associations urging the agency to reform the regulatory framework for market data. These include:

- Alternative Investment Management Association¹³³
- Bloomberg LP¹³⁴
- Citadel Securities¹³⁵
- Citigroup Global Markets Inc.¹³⁶
- Clearpool Group, Inc.¹³⁷
- Consumer Federation of America¹³⁸
- E*TRADE Financial Corporation¹³⁹
- FIA Principal Traders Group¹⁴⁰

¹³¹ Letter from Stacey Cunningham, NYSE, to Brent J. Fields, SEC, at 3, Oct. 2, 2018, *available at* <https://www.sec.gov/comments/s7-05-18/s70518-4470779-175854.pdf>.

¹³² In this regard, we believe that the Commission should enhance its scrutiny of exchange pricing tiers. See generally, Letter from Tyler Gellasch, Healthy Markets Association, to Brent J. Fields, SEC, Oct. 12, 2018, *available at* <https://www.sec.gov/comments/sr-nyse-2018-40/srnyse201840-4510950-175996.pdf> (objecting to a set of NYSE pricing tier changes).

¹³³ Letter from Richard Baker, MFA, and Jiri Krol, AIMA, to Brent J. Fields, SEC, Aug. 22, 2018, *available at* <https://www.sec.gov/rules/petitions/2018/petn4-728.pdf> (MFA/AIMA Petition).

¹³⁴ Letter from Bloomberg, et al, to Brent J. Fields, SEC, Dec. 6, 2017, *available at* <https://www.sec.gov/rules/petitions/2017/petn4-716.pdf> (“Patomak Petition”).

¹³⁵ Patomak Petition.

¹³⁶ Patomak Petition.

¹³⁷ Patomak Petition.

¹³⁸ Letter from Micah Hauptman, Consumer Federation of America, to Hon. Jay Clayton, SEC, Feb. 16, 2018, *available at* <https://www.sec.gov/comments/4-717/4717-3119941-161916.pdf> (expressing support for Healthy Markets Petition).

¹³⁹ Patomak Petition.

¹⁴⁰ See Letter from Joanna Mallers, FIA PTG, to Brent J. Fields, SEC, Sept. 17, 2018, *available at* <https://www.sec.gov/comments/4-728/4728-4363334-174430.pdf> (expressing support for MFA/AIMA Petition).



HEALTHY MARKETS
TRANSPARENCY & TRUST

- Fidelity Investments¹⁴¹
- Healthy Markets Association¹⁴²
- Hudson River Trading LLC¹⁴³
- IMC¹⁴⁴
- Investors Exchange LLC (IEX)¹⁴⁵
- Interactive Brokers Group¹⁴⁶
- ITG, Inc.¹⁴⁷
- Managed Funds Association¹⁴⁸
- MFS Investment Management¹⁴⁹
- Morgan Stanley & Co. LLC¹⁵⁰
- RBC Capital Markets¹⁵¹
- The Charles Schwab Corporation¹⁵²
- Scottrade, Inc.¹⁵³
- Sun Trading LLC¹⁵⁴
- Susquehanna International Group, LLP¹⁵⁵
- TD Ameritrade, Inc.¹⁵⁶
- Tower Research Capital¹⁵⁷
- T. Rowe Price Associates, Inc.¹⁵⁸
- UBS Securities LLC¹⁵⁹
- The Vanguard Group, Inc.¹⁶⁰
- Virtu Financial, Inc.¹⁶¹

¹⁴¹ Patomak Petition.

¹⁴² Healthy Markets Petition.

¹⁴³ Patomak Petition.

¹⁴⁴ Patomak Petition.

¹⁴⁵ Patomak Petition.

¹⁴⁶ Patomak Petition.

¹⁴⁷ Patomak Petition.

¹⁴⁸ MFA/AIMA Petition.

¹⁴⁹ Patomak Petition.

¹⁵⁰ Patomak Petition.

¹⁵¹ Patomak Petition.

¹⁵² Patomak Petition.

¹⁵³ Patomak Petition.

¹⁵⁴ Patomak Petition.

¹⁵⁵ Patomak Petition.

¹⁵⁶ Patomak Petition.

¹⁵⁷ Patomak Petition.

¹⁵⁸ Patomak Petition.

¹⁵⁹ Patomak Petition.

¹⁶⁰ Patomak Petition.

¹⁶¹ Patomak Petition.



While the detailed requests for each petition vary somewhat, the sheer diversity of the market participants and organizations urging for reforms sends a powerful message--the system is broken.

Taking a step further back, all of the concerns highlighted seem to stem from a few core issues:

- First, the public market data stream does not fulfill the public purpose originally outlined by Congress and the Commission.
- Second, the public market data stream is a public utility that is not governed as a public utility. Instead, it is governed exclusively by a handful of direct beneficiaries of its revenues who are also directly competing with the public market data stream.
- Third, exchanges have monopolistic pricing powers with respect to their own market data and connectivity-related offerings.
- Fourth, until extremely recently, the Commission has not generally exercised its authority to ensure that exchanges' market data and connectivity filings (including for the public or private market data streams) are consistent with the Exchange Act.

We urge the Commission to address these core issues comprehensively.

Focusing on one specific concern may not lead to long-term beneficial results. For example, in response to many of the perceived abusive fees for the public market data stream, many market participants have advocated for granting CTA/CQ and UTP Plan voting powers to brokers and perhaps other market participants. But this proposal leaves many questions unanswered. For example, would those other participants be given minority voting powers, or would they be able to have a controlling majority? Giving brokers a vote that could be easily overridden would not solve the perceived problem. Could they revise what is required to be included in the public market data streams? For example, why doesn't the SIP include depth-of-book information?

While we think adding other types of voting members may keep the costs from continuing to climb for market participants (as long as they have adequate voting powers), are we confident that simply adding more for-profit entities will lead to the best public policy result? Could their addition simply lead to chronic under-investment and further expansion of the already significant value gap between the private market data streams and the public ones? What would that mean for investors? Would that serve

the public interest in having a public market data stream?

Rather than simply adding diversity to the voting authorities over the Plans, we urge the Commission to carefully consider what purpose it wants the public market data stream to serve. In theory, the public market data stream could be expanded and improved, and the private data streams could be prohibited or prohibited from including information contained within public data. If so, what should the mechanism for that look like?

Similarly, some have argued for a “competing SIP” model.¹⁶² While we are confident that there could be increased efficiencies in consolidating and distributing the data, we do not think that this is the core problem. The core problem is the exchanges’ abilities to control access to the data in the first place. Why would a technology firm get into the business of trying to offer a competing SIP when it would have effectively no comfort regarding the costs of its input data? Even worse, wouldn’t the exchanges still likely have structural and temporal advantages as a result of basic geography and physics? These are challenges that are not easily overcome.

Recommendations

Healthy Markets recommends that the Commission take aggressive action to utilize its existing authority (and seek guidance from Congress, where necessary) to rationalize and improve the regulatory framework for market data and connectivity.

Enhance Reviews of All Exchange Filings

The Commission should require justification of data, connectivity, and fee changes for both public and private feeds, and thoroughly review all such changes for consistency with the Exchange Act, including that the filings

- “provide for the equitable allocation of reasonable dues, fees, and other charges;”¹⁶³
- not be “designed to permit unfair discrimination”;¹⁶⁴

¹⁶² See, e.g., *Report of the Advisory Committee On Market Information: A Blueprint For Responsible Change*, Sec. and Exch. Comm’n, Sept. 14, 2001, available at <https://www.sec.gov/divisions/marketreg/marketinfo/finalreport.htm> (recommending consideration of competing public data consolidators, while also recommending retention the Vendor Display Rule).

¹⁶³ 15 U.S.C. § 78f(b)(4).

¹⁶⁴ 15 U.S.C. § 78f(b)(5).

- “not impose any burden on competition not necessary or appropriate in furtherance of the purposes of” the Act;¹⁶⁵ and
- be designed “to protect investors and the public interest.”¹⁶⁶

To fulfill these requirements, the Commission should require dramatically increased transparency of market data and connectivity-related products, including details regarding the numbers and types of users impacted (and not impacted), the relative advantages and disadvantages of the products, cost information, the expected impacts of the changes on competition between exchange members and other product purchasers, the expected impacts on availability of key market data, the expected impacts on orders and executions, the expected impacts on overall market quality, and other such information as the Commission deems appropriate. These considerations are not just legal, but economic.¹⁶⁷

Importantly, the Commission’s consideration of these factors should not hinge on whether objections are lodged by market participants. With hundreds of filings each year, market participants are all-too-often simply overwhelmed, and cannot be expected to dedicate the significant resources necessary to remind the agency to do its statutorily-mandated job.¹⁶⁸ Further, the Commission should consider modifications to its instructions for exchange filing submissions to more directly line up with each of the Exchange Act requirements.¹⁶⁹

¹⁶⁵ 15 U.S.C. § 78f(b)(8).

¹⁶⁶ 15 U.S.C. § 78f(b)(5).

¹⁶⁷ We agree with Commissioner Jackson’s recent calls for the Commission to establish an Office of Competition Economics within the agency’s Division of Economic Research and Analysis to better assist the Commission with assessing the competitive impacts of these and other determinations by the Commission. Remarks by Hon. Robert J. Jackson, Jr., *Competition: The Forgotten Fourth Pillar of the SEC’s Mission*, Oct. 11, 2018, available at <https://www.sec.gov/news/speech/speech-jackson-101118>.

¹⁶⁸ While we were pleased by the Commission’s recent determination to remand more than 400 filings to the exchanges for additional review, we noted that those only comprised filings to which private participant objections had previously been lodged with the Commission. Upon review, we are not persuaded that these filings are, in any material respect, objectively more or less deficient than those to which objections were not formally lodged. Based upon our review of thousands of exchange rule filings since our September 2015 launch, we believe the vast majority fail to provide sufficient facts and analyses with which to establish that they are compliant with the Exchange Act. By taking the approach it has to date, the Commission has essentially outsourced the responsibility to make its own determinations to only the small subset of market participants that are sufficiently sophisticated and well-funded to identify concerning filings and raise salient objections. The Commission should be focused on protecting all market participants from exchange practices that violate the Exchange Act, not just the largest.

¹⁶⁹ See, e.g., 17 CFR 240.19b-4 (Item 3 entitled “Self-Regulatory Organization’s Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change”).

Public Market Data Stream Governance, Costs, Quality, and Oversight

As an initial matter, we believe that the Commission would be well-served to work with Congress to eliminate the NMS Plans and restore these governmental functions to where they belong--the government.

Further, and to the extent that Congressional action may take some time, we urge the Commission to implement the following changes;

Governance

- Eliminate “one vote per exchange registration” and replace with “one vote per exchange group”.
- Include equitable voting representation from investment advisers, broker-dealers, and data vendors.
- Establish clear conflicts of interest identification and management provisions and enforcement mechanisms for both Operating Committee and Advisory Committee members.

Costs

- Expressly acknowledge the governmental function of the SIP data feeds, and so require exchanges to return all revenues in excess of expenses incurred to operate and maintain the SIP data processing. The distribution formula for excess revenues should be eliminated.
- Simplify pricing models within the SIP to eliminate the need to count end users, accounts or terminals, and eliminate the distinctions between professionals and non-professionals. Discrimination between types of users and uses should be heavily disfavored.

Quality

- Improve the relative value of the SIP feeds by expanding the information to include order depth-of-book and auction information.
- Minimize the time discrepancies between when market participants may receive information from the private data feeds and the SIP feeds.

- Examine the appropriateness of exchanges selling faster private data feeds that contain information included within the slower SIP feeds.
- Consolidate the various plans and tapes so that the “consolidated” public data stream is, in fact, consolidated.

Oversight

- Increase the transparency of public market data revenue collection and costs so that the public is aware of both on a quarterly basis.¹⁷⁰
- Establish clear parameters for market data audits by exchanges or their representatives, including conflicts of interests and rights of appeals for impacted parties.
- Clarify that rule filing requirements apply to all data derived from an exchange’s role in the national market system and marketed to anyone, including a data vendor, whether by the exchange or an affiliate and that standards for market data filings apply.
- If competing SIPs are permitted, establish protections to mitigate conflicts of interest and abuses that may be created by differences between the SIPs.

Clarify That Exchanges’ Provision of Historical Data Must Comply with the Exchange Act

NYSE has apparently taken the position that it may offer its historical private data in ways that are facially inconsistent with the clear mandates of the Exchange Act. We urge the Commission to directly clarify that exchanges’ distribution, sales, and other treatment of historical private data must comply with the exchanges’ broader obligations under the Exchange Act (e.g., that they be non-discriminatory, not unduly burden competition, reasonable, etc.).

Conclusion

The market data regime is deeply flawed. At its root, we have “for-profit” “market regulators” tasked with setting out the rules, and regulating their own profits. Exchanges

¹⁷⁰ We appreciate the enhanced transparency of “distributed revenues,” but urge the Commission to go much further. Without greater transparency into costs, the public cannot effectively evaluate the extent to which these data streams are being used as economic rent capturing vehicles for the exchanges, as opposed to serving their intended purposes: to provide high-quality, real-time information.



have, not surprisingly, used their positions in the markets--including their monopolistic powers over market data--to maximize their profits. These practices have harmed market participants and the markets overall. It is time to end them.

Exchanges should not be permitted to continue exploiting their privileged position in the markets to impose what amounts to little more than massive private taxes on all market participants.

Healthy Markets thanks you for the opportunity to appear before the Commission at the Roundtable on Market Access and Market Data, and looks forward to working with the agency and other market participants to improve the regulatory framework for market data.

Sincerely,

A handwritten signature in black ink, appearing to read "Tyler Gellasch", written in a cursive style.

Tyler Gellasch
Executive Director

Cc: Brett Redfearn, Director of the Division of Trading and Markets

Exhibit 1

PLAN SUBMITTED PURSUANT TO
RULE 17a-15 OF SECURITIES
AND EXCHANGE COMMISSION
UNDER SECURITIES EXCHANGE
ACT OF 1934

The undersigned hereby submit to the Securities and Exchange Commission (SEC), for filing pursuant to SEC Rule 17a-15, the following plan for the dissemination on a current and continuous basis of last sale prices relating to completed transactions in Eligible Securities, as herein defined, registered or admitted to unlisted trading privileges on a national securities exchange. The term "Plan" as used herein shall mean the following plan as from time to time amended in accordance with the provisions hereof.

I. Purpose of Plan. The purpose of the Plan is to enable the undersigned, through joint procedures as provided in paragraph (b) of Rule 17a-15, to comply with the requirements of said Rule.

II. Parties. (a) The parties to the Plan are as follows:

American Stock Exchange, Inc. (AMEX),
a registered national securities
exchange having its principal place
of business at 86 Trinity Place,
New York, N.Y. 10006

Midwest Stock Exchange, Inc. (MSE), a registered national securities exchange having its principal place of business at 120 South La Salle Street, Chicago, Illinois 60603

National Association of Securities Dealers, Inc. (NASD), a registered national securities association having its principal place of business at 1735 K Street, N. W., Washington, D. C. 20006

New York Stock Exchange, Inc. (NYSE), a registered national securities exchange having its principal place of business at 11 Wall Street, New York, N. Y. 10005

Pacific Stock Exchange, Inc. (PSE), a registered national securities exchange having its principal place of business at 618 South Spring Street, Los Angeles, California 90014

PBW Stock Exchange, Inc. (PBW), a registered national securities exchange having its principal place of business at 17th Street and Stock Exchange Place, Philadelphia, Pennsylvania 19103

(b) By subscribing to and submitting the Plan for filing with the SEC, the undersigned parties (hereinafter referred to collectively as the "Participants", or individually as a "Participant") agree to comply to the best of their ability with the provisions of the Plan.

(c) The Participants agree that any other national securities exchange and any broker or dealer

required to file a plan with the SEC pursuant to Rule 17a-15 (hereinafter referred to collectively as "other reporting parties", or individually as an "other reporting party") may provide in such plan that last sale prices reflecting transactions in Eligible Securities effected on such exchange or by such broker or dealer may be furnished and disseminated through the facilities and in accordance with and subject to the terms, conditions and procedures of the Plan, provided such other reporting party executes the contract referred to in Section IV(c) hereof. In order to best promote the objectives of SEC Rule 17a-15, the Consolidated Tape Association, referred to in Section III below, will actively solicit the cooperation of each other reporting party to report its last sale prices reflecting transactions in Eligible Securities to the Processor (as defined below) for inclusion on the consolidated tape in accordance with the Plan.

III. Administration of Plan. (a) A Consolidated Tape Association (CTA) will be created for the purpose of administering the Plan. The Articles of Association of CTA (the Articles) will be executed by each of the Participants and may be signed by any other

national securities exchange which is not exempt from the provisions of Rule 17a-15. The membership of CTA will consist of eight individual voting members and an indefinite number of individual non-voting members as provided in the Articles. The affirmative vote of at least five of its eight voting members shall be necessary for any action taken by CTA. (A copy of the Articles without attachments is attached to the Plan as Exhibit A.) CTA will be primarily a policy-making body as distinguished from one engaged in operations of any kind. CTA, directly or by delegating its functions to individuals, committees established by it from time to time, or others, will administer the Plan and will have the power and exercise the authority conferred upon it by the Plan as described herein. Within the areas of its responsibilities and authority, decisions made or actions taken by CTA pursuant to the Articles will be binding upon each Participant (without prejudice to the rights of such Participant under Section III(e) below) unless such Participant has withdrawn from the Plan in accordance with Section XIII hereof.

(b) Any proposed amendment to the Plan may be formulated by CTA and filed with the SEC on behalf of all Participants, except that, unless authorized by Section III(c) below, no proposed amendment to the Plan may

be filed with the SEC by CTA if it is objected to in writing by any Participant which reported to the Processor (as defined below) 51% or more of the last sale prices reported on the ticker tape disseminated over either Network A or Network B (as defined below) during the preceding twelve calendar months, including any portion of such twelve month period occurring prior to commencement of Phase II, as referred to in Section V(f) hereof.

(c) CTA shall have the authority to formulate and file with the SEC from time to time, on behalf of all Participants, notwithstanding the objection of any particular Participant, an amendment to the Plan with respect to any matter set forth in the following sections of the Plan:

Section V(c)

Section V(d)

[other sections may be added]

(d) In its administration of the Plan, CTA shall have the authority to develop procedures and make administrative decisions necessary to facilitate operation of the consolidated tape in accordance with the provisions of the Plan and to monitor compliance therewith.

(e) No action or inaction by CTA shall prejudice any Participant's right to present its views to the SEC or any other person with respect to any matter relating to the consolidated tape or to seek to enforce its views in any other forum it deems appropriate.

IV. Central Processor. (a) The Securities Industry Automation Corporation (SIAC) shall be initially engaged to serve as the recipient and processor (Processor) of last sale prices reported to it for inclusion in the consolidated tape. The Processor shall perform such services in accordance with the provisions of the Plan and subject to the administrative oversight of CTA.

(b) The following information concerning SIAC has been supplied by NYSE and AMEX to the other Participants and accepted by them as the basis for their selection of SIAC as the initial Processor. SIAC was formed as a jointly owned subsidiary of NYSE and AMEX in 1972 for the purpose of planning, developing and operating data processing,

computer, automation and communications facilities for the two exchanges and others in the securities industry. Substantially all of the computer, data processing and communications equipment of the two exchanges together with most of the personnel involved in the planning, development and operation thereof were transferred to SIAC. At present SIAC has a total personnel complement of approximately 1,000 and its projected budget for 1973 is approximately \$38 million. The Development Group of SIAC, which is responsible for technical planning, specification, design and implementation of new systems and enhancement of existing systems and providing technical support for new projects, has over 200 employees, most of whom are professional or technical people, and its anticipated budget for 1973 is over \$6-1/2 million.

In the past the only nationwide ticker networks for the dissemination of last sale prices in securities have been operated by NYSE and AMEX. Both of these ticker networks have been in existence for many years and a great amount of experience and technical capability has been developed in connection with the operation of these networks. Substantially all of the personnel who have had experience in the planning, development and operation of such networks are now SIAC employees. Large

amounts of money have been invested by both NYSE and AMEX over a period of many years in the development of their ticker systems. During the past two years, both exchanges have undertaken major new automation projects which have involved very sizable expenditures and include the development of new and expanded ticker operations to meet anticipated increases in volume reporting requirements. These projects were only partially completed at the time of the formation of SIAC, and they have been taken over by SIAC for the purpose of final implementation.

One of the principal functions of each exchange is conducting appropriate monitoring and surveillance of trading in its market. A highly reliable and readily available data base is essential in the performance of this function. Developing and maintaining such a data base is most easily and efficiently accomplished as a natural consequence of the total system for the collection, processing, validating and dissemination of last sale prices. By using the facilities of SIAC for processing last sale prices received from all reporting parties, such a data base can be maintained and information can be made available therefrom to all Participants and the SEC for use in monitoring and surveillance functions as well as for operating the consolidated tape. Developing this

capacity within an entity, such as SIAC, which is subject to SEC oversight as the subsidiary of national securities exchanges, would seem highly desirable and clearly consistent with the public interest.

In addition it is essential to maintain adequate back-up facilities to assure that there is the least possible interruption in the flow of market information to broker-dealers and the investing public. In connection with the current operation of nationwide ticker networks by NYSE and AMEX, it has been considered necessary to develop and maintain duplicate computer facilities to assure the appropriate back-up capability. SIAC has this back-up capability, developed at substantial cost, and thus is in a position to avoid serious interruptions in the flow of market information.

Moreover, as described in Section XI hereof, SIAC will be providing its services in connection with the operation of the consolidated tape at cost. Thus the securities industry should realize substantial economies in disseminating the consolidated tape. As provided in Section XI, the Participants will share in net income derived from the consolidated tape.

For the above reasons, it is felt that the selection of SIAC as the Processor of last sale prices for

inclusion on the consolidated tape will avoid duplication of facilities and unnecessary costs, and will prove advantageous not only to the Participants but to all broker-dealers and their customers who are expected to benefit from the consolidated tape.

(c) Each Participant and each other reporting party furnishing last sale information to the Processor for inclusion in the consolidated tape will do so pursuant to a contract with the Processor which, among other things, will obligate the reporting party during the life of the contract to furnish its last sale prices with respect to all Eligible Securities to the Processor by means of a remote terminal or computer (or by other means acceptable to CTA and the Processor) and in a format acceptable to CTA and the Processor. A copy of each form of such contract is attached hereto as Exhibit B. The reporting party will agree to report last sale prices relating to Eligible Securities to the Processor as promptly after the time of execution as practical and in accordance with Section VII hereof. The contract with the Processor will also authorize the Processor to process all last sale prices furnished to it, to validate such information in accordance with Section V(d) hereof, to sequence reports of last sale prices received on the basis of the time received by the Processor (labelling as late all reports that are so

designated when received by it) and to transmit such consolidated information in accordance with Section VIII hereof. The contract between a Participant and the Processor will also contain provisions for the reimbursement of the Processor as provided in Section XI hereof. In the case of reporting parties other than the Participants, the contract will provide that the reporting party is to be bound by the provisions of the Plan and all decisions and directives of CTA in administering the Plan. Each contract with the Processor will also contain appropriate indemnification provisions indemnifying the Processor and each of the other parties reporting last sale information to the Processor with respect to any liability, loss, claim, cost, damage or expense incurred or threatened as a result of the last sale price furnished to the Processor by the indemnifying party.

(d) The contracts between SIAC and the Participants shall be for an initial term of five years after full implementation of the consolidated tape (Phase II as described in Section V(f) hereof), provided that, if CTA shall determine that SIAC has failed to perform its functions in a reasonably acceptable manner in accordance with the provisions of the Plan or that its reimbursable

expenses have become excessive and are not justified on a cost basis, then each such contract shall be terminated at such time as may be determined by CTA. In the event of any such determination by CTA, any contract between SIAC and any other reporting party providing for such reporting party to furnish its last sale information to SIAC for inclusion in the consolidated tape shall also terminate at the same time. In any event, during the fifth year from the date of commencement of Phase II, CTA shall undertake a review of the question of whether SIAC should continue as the Processor, or should be replaced, at or after the expiration of such fifth year. In making such review, consideration shall be given to such factors as experience, technological capability, quality and reliability of service, relative costs, back-up facilities and regulatory considerations. After the expiration of the five-year period from the date of commencement of Phase II, CTA shall periodically (at least every two years) undertake a similar review as to whether the organization then acting as the Processor should be continued in such capacity or should be replaced. Replacement of SIAC as the Processor, other than for cause as provided in the first sentence of this Section IV(d), shall require an amendment to the

Plan adopted and filed as provided in Section III(b) hereof.

(e) Whenever any Participant ceases to be subject to the Plan or whenever any other reporting party ceases to be subject to a plan filed under Rule 17a-15 which provides for the reporting of last sale prices to the Processor, the contract between the Processor and such Participant or other reporting party shall be terminated.

V. Consolidated Tape. (a) NYSE has for many years operated leased private wire facilities for the purpose of disseminating on a current and continuous basis last sale prices of transactions in securities effected on the NYSE. Similarly, AMEX has for many years operated leased private wire facilities for the purpose of disseminating on a current and continuous basis last sale prices of transactions in securities effected on the AMEX. It is the expectation of the Participants that the consolidated tape will be implemented by utilizing such existing wire facilities, modified as required, for the dissemination of all last sale prices included in the consolidated tape pursuant to the provisions of the Plan as follows:

(i) All last sale prices reported to the Processor (regardless of the market where the

transaction is executed) relating to Eligible Securities registered on NYSE shall be disseminated over the wire facilities presently carrying NYSE last sale prices (hereinafter referred to as "Network A");

(ii) All last sale prices reported to the Processor (regardless of the market where the transaction is executed) relating to Eligible Securities registered or admitted to unlisted trading privileges on AMEX or to Eligible Securities registered on MSE, PCSE, PBW or on any other principal national securities exchange as defined in Section VI hereof (except securities also registered on NYSE) shall be disseminated over the wire facilities presently carrying AMEX last sale prices (hereinafter referred to as "Network B").

Such last sale prices shall also be transmitted to Vendors and others in accordance with the provisions of Section VIII hereof.

(b) Each last sale price relating to a completed transaction in an Eligible Security reported to the Processor by any Participant or other reporting market shall be

in the following format:

- volume, in round lots, involved in the transaction;
- stock symbol of the Eligible Security;
- price at which transaction was executed.

Technical specifications describing both the computer-to-computer and manual reporting of last sale prices to the Processor are being developed by technical representatives of the Participants and the Processor, and following approval thereof by CTA will be furnished to the SEC for its information.

(c) The following types of transactions are not to be reported for inclusion on the consolidated tape (although appropriate messages may be printed on the consolidated tape relating to such transactions in accordance with the manual referred to in Section IX):

- transactions which are part of a primary distribution by an issuer or of a registered secondary distribution (other than "shelf distributions") or of an unregistered secondary distribution effected off the floor of an exchange pursuant to a plan filed with the SEC by such exchange under SEC Rule 10b-2
- transactions made in reliance on Section

4(2) of the Securities Act of 1933

- transactions where the buyer and seller have agreed to trade at a price unrelated to the current market for the security; e.g., to enable the seller to make a gift
- odd lot transactions
- the acquisition of securities by a broker-dealer as principal in anticipation of making an immediate exchange distribution on an exchange
- purchases by an issuer of its own securities off the floor of an exchange at a time when bids or purchases on an exchange would not be permitted under the guidelines set forth in proposed SEC Rule 13e-2
- purchases of securities off the floor of an exchange pursuant to a tender offer
- purchases or sale of securities effected upon the exercise of an option pursuant to the terms thereof or the exercise of any other right to acquire securities at a pre-established consideration unrelated to the current market

CTA shall have the authority, with the consent of the SEC,

to exclude additional types of transactions from the consolidated tape.

(d) The stock symbol, volume and price of each last sale price received by the Processor shall be validated for proper format. If the format is incorrect such last sale price will be rejected and the reporting market will be so notified. It shall be the responsibility of the reporting market to correct the format of such last sale price and again transmit it to the Processor. If the elapsed time between time of execution and time of retransmission to the Processor significantly exceeds the limit specified by CTA pursuant to Section VIII(a) hereof, such last sale price shall be designated by the reporting market as late. In addition, each Participant and each other reporting party shall validate each last sale price reported by it, for "price reasonableness" in accordance with the following procedures:

(i) CTA shall from time to time establish the price tolerances to be applied in validating last sales price reported to the Processor.

(ii) Price reasonableness validation will be measured against (a) the last previous price for such security reported by the particular Participant or other reporting party, or (b) the last previous price for such security reported on the consolidated tape, or (c) both of the foregoing, as

such Participant or other reporting party may determine.

(iii) Each Participant or other reporting party may incorporate in its procedures the capability of over-riding or bypassing the price reasonableness validation standard with respect to any particular transaction.

(iv) In addition, the Processor shall perform a price reasonableness validation with respect to each last sale price received by it in accordance with price tolerances established by CTA. Such validation shall be designed only to determine gross errors resulting from faulty transmission of the last sale price from the Participant or other reporting party to the Processor.

(e) The Processor shall transmit over Network A or Network B, as the case may be, in the sequence in which received, all last sale prices received that have not been rejected by the validation process. Each such last sale price, except those reflecting transactions reported by NYSE and AMEX, shall be accompanied by the appropriate alphabetic symbol identifying the market of execution. Reports of last sale prices generated over both Networks A and B will be transmitted at a rate of 900 characters per minute (135 Baud) for ticker display purposes.

The question of whether the Vendors referred to in Section VIII should receive consolidated last sale prices by means of a high speed line permitting them to receive this information on a current basis, regardless of any delay in the dissemination of this information over Network A or Network B, will be considered by the Participants and will be subject to an amendment to the Plan adopted and filed as provided in Section III(b) hereof.

(f) The proposed schedule for implementation of the consolidated tape is as follows:

(i) A pilot phase of the consolidated tape (Phase I), as described in Section XII hereof, is scheduled to commence no later than twenty weeks following the date the Plan is approved by the SEC, and is scheduled to continue for approximately twenty weeks thereafter;

(ii) Full implementation of the consolidated tape (Phase II) is scheduled to commence within forty weeks following the date the Plan is approved by the SEC.

(g) During the development of the Plan, the Participants have discussed the questions of (i) disseminating the consolidated tape for display purposes on two

ticker tapes reflecting last sale prices in all Eligible Securities based on an alphabetical listing thereof and (ii) identification of the market of execution when reporting last sale prices on the consolidated tape. These matters have been resolved in accordance with the foregoing provisions of this Section V. However, after full implementation of the consolidated tape, CTA shall continue to re-examine such questions periodically, but any changes in the consolidated tape of this nature will require an amendment to the Plan pursuant to Section III(b) hereof.

VI. Eligible Securities. (a) For the purposes of the Plan, Eligible Securities shall mean:

(1) Any common stock or warrant registered or admitted to unlisted trading privileges on any principal national securities exchange (as hereinafter defined) which meets all of the following requirements on the date Phase I is commenced:

(i) the number of shares of such stock or the number of such warrants publicly held (exclusive of holdings of officers, directors, controlling shareholders or other family or concentrated holdings) exceeds 175,000;

(ii) the total number of public holders exceeds 600 and the number of public holders of at least 100 shares or warrants exceeds 400;

(iii) the aggregate market value of such shares or warrants publicly held (exclusive of management and concentrated holdings) is more than \$500,000; and

(iv) the issuer of such security has total assets of at least \$2,000,000 (as reported in its audited financial statements for its latest fiscal year).

(2) After the date on which Phase I is commenced, any common stock or warrant which becomes registered on any principal national securities exchange and which on the effective date of such registration meets all of the following requirements:

(i) the issuer of such security has net tangible assets of at least \$3,000,000;

(ii) the issuer of such security has reported net income of at least \$300,000 after all charges, including income taxes, for the fiscal year immediately preceding such registration and net income before income taxes and extraordinary charges and credits of at least \$600,000 for such fiscal year (unless such issuer has satisfied the principal national securities exchange on which such security

becomes registered that it may reasonably expect current annual net income of \$750,000 after all charges including income taxes);

(iii) the number of shares of such stock or the number of such warrants publicly held (exclusive of holdings of officers, directors, controlling shareholders or other family or concentrated holdings) exceeds 300,000, including at least 150,000 of such shares or warrants held in lots of 100 to 500;

(iv) the total number of public holders exceeds 900, and the number of public holders of at least 100 shares of warrants exceeds 600 (among which at least 500 holders must hold lots of 100 to 500); and

(v) in the case of a common stock, the shares have sold at a minimum of \$4 per share for a reasonable period of time prior to such registration, and the aggregate market value of such stock publicly held exceeds \$2,000,000.

(3) Any right admitted to trading on a principal national securities exchange which entitles the holder thereof to purchase or acquire a share or shares of an Eligible Security, provided that both the right and

the Eligible Security to which it relates are admitted to trading on the same principal national securities exchange.

(b) Standards will be established defining Eligible Securities as related to preferred stocks, ADRs and debt issues to the extent deemed necessary, which standards will be uniform as to all principal national securities exchanges, and will be filed as an amendment to the Plan.

(c) A security shall cease to be an Eligible Security whenever (A) in the case of a common stock or warrant such security shall fail to meet any of the requirements included in subparagraphs (i), (ii) or (iii) of paragraph (1) of subsection (a) of this Section VI for a period of not less than 180 consecutive days, or (B) in the case of a preferred stock, such security shall fail to meet any of the standards established pursuant to subsection (b) of this Section VI for a period of not less than 180 consecutive days, or (C) whenever the issuer of such security is unable to demonstrate that it has total assets of at least \$2,000,000, or (D) such security has been suspended from trading on any principal national securities exchange because the issuer thereof is in liquidation or is in bankruptcy or similar type proceedings, or (E) such security is

no longer registered or admitted to trading on any principal national securities exchange.

(d) For the purposes of defining Eligible Securities a principal national securities exchange shall be deemed to include (1) each of the exchanges which is a Participant in this Plan, and (2) any other national securities exchange which during the latest calendar year reported aggregate dollar volume of trading on such exchange amounting to at least one half of one percent (.50%) of the total aggregate dollar volume of trading on all registered national securities exchanges (as compiled and published by the SEC in its Annual Report), provided such exchange shall have filed a plan with the SEC pursuant to Rule 17a-15 providing for the dissemination of last sale price information in accordance with the Plan.

(e) Each principal national securities exchange shall, promptly following commencement of Phase I, furnish CTA with appropriate data concerning all securities traded on such exchange which are believed to meet the above requirements for inclusion on the consolidated tape as Eligible Securities. Thereafter each principal national securities exchange shall furnish CTA with data concerning securities listed on such exchange

which are to be included in the future as Eligible Securities on the consolidated tape. Each principal national securities exchange may from time to time be required by CTA to furnish it with data concerning Eligible Securities traded on such exchange to determine whether or not such securities continue to meet the requirements for inclusion as Eligible Securities on the consolidated tape. If CTA shall question whether or not any security meets the requirements for inclusion on the consolidated tape as an Eligible Security, such security shall not be so included until CTA is satisfied that it meets the above requirements for Eligible Securities. If CTA shall have determined that any security fails to meet the requirements for continued reporting on the consolidated tape, such security shall be excluded until CTA is satisfied that it meets the above requirements for inclusion as an Eligible Security.

VII. Collection and Reporting of Last Sale Data.

(a) The NYSE, AMEX, MSE, PSE and the PBW will each collect and report to the Processor all last sale prices to be reported by it relating to transactions in Eligible Securities taking place on its floor. In addition, the NASD shall collect from its members all last sale prices

to be included in the consolidated tape relating to transactions in Eligible Securities not taking place on the floor of a national securities exchange and shall report all such last sale prices to the Processor in accordance with the provisions of subsection (b) of this Section VII. It will be the responsibility of each Participant and each other reporting party, as defined in Section II(c) hereof, to (i) report all last sale prices in Eligible Securities as promptly as possible, (ii) establish and maintain collection and reporting procedures and facilities such as to assure that under normal conditions not less than 90% of such last sale prices will be reported within that period of time (not in excess of one and one-half minutes) after the time of execution as may be determined by CTA from time to time in light of experience, and (iii) designate as "late" any last sale price not collected and reported in accordance with the above-referenced procedures or as to which the reporting party has knowledge that the time interval after the time of execution is significantly greater than the time period referred to above. CTA shall seek to reduce the time period for reporting last sale prices to the Processor as conditions warrant.

(b) The NASD will develop and adopt rules governing the reporting of last sale prices in Eligible

Securities to be reported by its members to the Processor for inclusion on the consolidated tape. Such rules shall (i) specify the NASD member having responsibility for reporting each particular transaction, (ii) be designed to avoid duplicate reporting of transactions on the consolidated tape, and (iii) specify procedures for determining the price to be reported with respect to each particular transaction. After such rules have been adopted by the NASD, a description thereof will be filed as an amendment to the Plan. Such amendment is to be filed prior to the commencement of Phase I.

(c) The last sale price reflecting a transaction in an Eligible Security reported by any Participant or any other reporting party, which last sale price is established by a report back from any other market due to a "split order" execution (i.e., an execution in two markets when the specialist or market-maker in the market first receiving the order agrees to execute a portion of it at whatever price is realized in another market to which the balance of the order is forwarded for execution) shall, when reported to the Processor, be identified by use of an appropriate symbol (as determined by CTA), and shall be shown on the consolidated tape with such symbol.

(d) Each Participant and each other reporting party shall prepare and submit to CTA (and furnish to the

SEC for its information, but not as part of the Plan) prior to commencement of Phase I, a description of the procedures by which it intends to collect and report to the Processor last sale prices in Eligible Securities to be reported by it pursuant to the Plan. Thereafter, any material revisions to such procedures shall be promptly reported to CTA (and similarly furnished to the SEC).

VIII. Dissemination of Consolidated Tape.

(a) The last sale prices as consolidated by the Processor, relating to Eligible Securities registered on the NYSE, shall be disseminated over Network A and to the Vendors who may from time to time have contracts, executed by NYSE on behalf of all Network A Participants, permitting such Vendors to input such stream of data into their computers and develop a data base therefrom which is to be used for the purpose of responding to specific inquiries received from approved interrogation devices located in the offices of approved subscribers. Vendors will not be permitted to retransmit on a continuous basis the consolidated last sale prices received by them. The term "Vendor" as used in the Plan shall include any person (other than the Processor) engaged in the business of disseminating to brokers and dealers or others on a real time or other current basis,

reports of transactions in Eligible Securities, whether or not such dissemination includes all such reports disseminated by the Processor.

NYSE will also, on behalf of all Network A Participants, enter into appropriate agreements with Vendors permitting them to attach to Network A in the offices of approved subscribers any approved devices for the purpose of displaying last sale prices disseminated over Network A.

NYSE will also, on behalf of all Network A Participants, enter into appropriate agreements with news services and others permitting such recipients of last sale prices disseminated over Network A to compile and disseminate stock tables, or to otherwise use such prices in an appropriate manner in their own business, such as pricing their securities portfolios.

(b) The last sale prices as consolidated by the Processor relating to all Eligible Securities other than those to be disseminated over Network A, shall be disseminated over Network B and to the Vendors who may from time to time have contracts, executed by AMEX on behalf of all Network B Participants, permitting such Vendors to input such stream of data into their computers and develop a data base therefrom which is to be used for the purpose of responding to specific inquiries

received from approved interrogation devices located in the offices of approved subscribers. Vendors will not be permitted to retransmit on a continuous basis the consolidated last sale prices received by them.

AMEX will also, on behalf of all Network B Participants, enter into appropriate agreements with Vendors permitting them to attach to Network B in the offices of approved subscribers any approved devices for the purpose of displaying last sale prices disseminated over Network B.

AMEX will also, on behalf of all Network B Participants, enter into appropriate agreements with news services and others permitting such recipients of last sale prices disseminated over Network B to compile and disseminate stock tables or to otherwise use such prices in an appropriate manner in their own business, such as pricing their securities portfolios.

(c) All Vendors, all devices marketed by Vendors (whether of the interrogation type which is not dependent upon Network A or B or the tape display type which is connected to the appropriate Network) and all forms of contracts or agreements referred to in subsection (a) or (b) of this Section VIII (unless attached in approved form as an exhibit to this Plan) shall be approved by CTA and the last sale prices as consolidated by the Processor shall not be

furnished to any party except pursuant to a contract or agreement in form approved by CTA. All decisions to terminate prior approvals or to amend forms of contracts or agreements shall be made by CTA. Except as hereinafter provided, all actions of CTA approving, disapproving or terminating prior approval of Vendors or devices will be final and conclusive on all participants and other reporting parties. Any Vendor, proposed Vendor or terminated Vendor aggrieved by any final decision of CTA may petition the SEC for review of such CTA decision in accordance with the rules and regulations of the SEC. Notwithstanding the provisions of this subsection (c) no contract with any Vendor shall be approved by CTA or entered into on behalf of the Participants if it is inconsistent with or in derogation of any other provision of the Plan.

(d) Every subscriber receiving the last sale prices being disseminated by NYSE over Network A immediately prior to full implementation of the consolidated tape, whether by way of a ticker tape or tape display device in the office of such subscriber or through an interrogation device located in such office, shall be eligible to receive in the same manner the consolidated last sale prices to be disseminated over Network A under the Plan upon signing an agreement, substantially in the form attached hereto as Exhibit C, with NYSE acting on

behalf of all Network A Participants. Every subscriber receiving the last sale prices being disseminated by AMEX over Network B immediately prior to full implementation of the consolidated tape whether by way of a ticker tape or tape display device in the office of such subscriber or through an interrogation device located in such office, shall be eligible to receive in the same manner the consolidated last sale prices to be disseminated over Network B under the Plan upon signing an agreement, substantially in the form attached hereto as Exhibit C, with AMEX acting on behalf of all Network B Participants. Thereafter, every new subscriber to the consolidated tape who is to receive consolidated last sale prices reported over Network A, whether by way of a ticker tape or tape display device in the office of such subscriber or through an interrogation device located in such office, shall submit an application therefor to NYSE and shall execute an agreement, substantially in the form attached hereto as Exhibit C, with NYSE acting on behalf of all Network A Participants; and every new subscriber who is to receive consolidated last sale prices reported over Network B, whether by way of a ticker tape or tape display device in the office of such subscriber or through an interrogation

device located in such office, shall submit an application therefor to AMEX and shall execute an agreement, substantially in the form attached hereto as Exhibit C, with AMEX acting on behalf of all Network B Participants.

(e) Whenever either NYSE or AMEX initially determines not to approve the application of any proposed subscriber or to terminate its approval of any subscriber, the matter will be referred to CTA for final decision before any action is taken. CTA may disapprove the application of any proposed subscriber or terminate any subscriber to the consolidated tape whenever it shall determine that (i) such disapproval or termination is necessary or appropriate in the public interest or for the protection of investors, or (ii) such subscriber has breached any agreement pursuant to which he receives consolidated last sale prices over Network A or Network B. Any disapproved applicant or terminated subscriber aggrieved by any such final decision of CTA may petition the SEC for review of such CTA decision in accordance with the rules and regulations of the SEC.

(f) As referred to above, in order to conserve tape capacity and to help prevent or deter tape lateness, the last sale prices of transactions in Eligible Securities effected on the NYSE or the AMEX will not be accompanied by

any symbol identifying the market of execution when disseminated over Network A or Network B. (The absence of any such identifying symbol will itself serve to identify the market of execution as either NYSE or AMEX.) Notwithstanding the foregoing, every form of contract with a Vendor relating to any approved interrogation device through which a subscriber is able to obtain any consolidated tape shall provide that either (i) such interrogation device shall display the last sale price as disseminated over Network A or Network B, as the case may be, accompanied by a symbol identifying the market of execution, or (ii) such interrogation device shall be capable of displaying the last sale price of each reporting market and, when specifically interrogated to display the last sale price reported to the Processor by any particular reporting market, shall do so in such fashion that the interrogator will be informed of the market in which the displayed last sale price occurred.

IX. Format of all Information to be Shown on Consolidated Tape. The format of all information to be shown on the consolidated tape will be reflected in a manual developed by technical representatives of the Participants and the Processor, and the initial form of such manual is being furnished to the SEC herewith for its information, but not as part of

the Plan. CTA shall have the authority to review the format of such information and make changes therein from time to time as it deems necessary for the efficient operation of the consolidated tape. Notwithstanding the foregoing, CTA shall not have the authority to change the format of any such information in any manner which is inconsistent with or in derogation of any provision of the Plan. A copy of the aforementioned manual, as amended from time to time, will be made available to the SEC and on request to Vendors and other interested parties.

X. Operational Matters. (a) Whenever the primary market for any Eligible Security, in the exercise of its regulatory functions, halts or suspends trading in such Security because such primary market has determined (i) that there are matters relating to such Security or the issuer thereof which have not been adequately disclosed to the public, or (ii) that there are regulatory problems relating to such Security which should be clarified before trading therein is permitted to continue, such primary market shall promptly notify each other Participant which conducts trading in such Security and the Processor, by wire or voice communication, of such halt or suspension and of the reasons therefor. During the period of any such halt or suspension in trading in any Eligible Security by the primary market therefor, the consoli-

dated tape shall not include any reports of last sale prices in such Security, but each Participant which continues to conduct trading in such security during the period of any such halt or suspension shall continue to report to the Processor the last sale prices reflecting transactions in such security occurring during such period for the purpose of maintaining a record thereof. Simultaneously with, or promptly following, the commencement of trading in any Eligible Security, trading in which has been so halted or suspended by the primary market therefor, such primary market shall promptly notify each of the other Participants which conduct trading in such Security and the Processor, by wire or voice communication, of such fact. After the close of the market or at some other appropriate time on the date such halt or suspension is terminated, the Processor shall include on the consolidated tape the last sale prices which were reported to it during such halt or suspension with respect to such Security. Nothing herein shall be deemed to prevent any Participant which is not the primary market for any particular Eligible Security to halt or suspend trading in such Security for any reason deemed adequate by it and any such Participant which so halts or suspends trading shall promptly notify each other Participant which conducts trading in such Security, by wire or voice communication, of such halt

or suspension and of the reasons therefor. In addition each Participant which is not the primary market in any particular Eligible Security shall use its best efforts to notify promptly the primary market for such Security whenever it has knowledge of any matter relating to such Security or the issuer thereof which has not been adequately disclosed to the public or whenever it has knowledge of a regulatory problem relating to such Security which it believes should be brought to the attention of the primary market to assist in determining whether or not trading in such Security in the primary market should be halted or suspended.

Whenever any Participant halts or suspends trading in an Eligible Security traded through the facilities of such Participant because of current market conditions relating to the trading of such Security on the Floor of such Participant, it may notify the Processor and request the Processor to disseminate a message to that effect on the consolidated tape. In such case, the Participant requesting the dissemination of such message shall, if reasonably practicable, notify each of the other Participants which conduct trading in such Security, by wire or voice communication, of such trading halt or suspension and the reasons therefor. During such trading halt or suspension, the Processor shall continue to include any reports of last sale prices in such Security received from other Participants on the consolidated tape.

For the purposes of this Section X the primary market for any Eligible Security shall be that Exchange Participant in whose market the greatest number of transactions in such Eligible Security reported on the consolidated tape, during the preceding six month period (or such shorter period if the Security has not been reported on the consolidated tape for a full six-month period), has taken place.

(b) The hours during which the consolidated tape will reflect on a current basis reports of last sale prices of Eligible Securities shall be established by amendment to the Plan adopted and filed as provided in Section III(b) hereof prior to the implementation of Phase II. If this matter is not resolved in a manner satisfactory to each Participant prior to the implementation of Phase II, such Participant may withdraw from the Plan pursuant to the second paragraph of Section XII hereof.

XI. Financial Matters.

(a) It is the intention of the Participants in general to share the income and expenses of the consolidated tape to be disseminated over Network A and Network B pro rata on the basis of the number of last sale prices reported by each Participant to the Processor, with due regard, however, to the costs incurred by each

Participant and the Processor in connection with the development of the consolidated tape. The details of this financial arrangement will be supplied as an amendment to the Plan, but such arrangement shall not become effective as to any Participant until and unless a ruling or rulings by the Internal Revenue Service have been received which are satisfactory to counsel for such Participant.

(b) Charges to subscribers, Vendors and others for the privilege of receiving current consolidated last sale prices disseminated over Network A following commencement of Phase II shall initially be the same as the charges imposed for the privilege of receiving the last sale prices of NYSE disseminated over Network A immediately preceding the commencement of Phase II. Charges to subscribers, Vendors and others for the privilege of receiving current consolidated last sale prices disseminated over Network B following commencement of Phase II shall initially be the same as the charges imposed for the privilege of receiving the last sale prices of AMEX disseminated over Network B immediately preceding the commencement of Phase II. Such charges as in effect at the commencement of Phase II will be furnished to CTA and the SEC. Any additions, deletions or modifications in any such charges following the

commencement of Phase II shall be established by amendment to the Plan adopted and filed as provided in Section III(b) hereof.

XII. Phase I Pilot Program. The Participants recognize that operating or technical problems may result from the generation of a consolidated tape as described in the foregoing provisions of the Plan. In particular, the receipt of last sale prices from a number of different market centers and the reporting of those prices on a consolidated tape in the sequence in which received by the Processor may result in sequencing problems. In order to determine whether or not there will, in fact, prove to be a sequencing problem and in order to identify other possible operating or technical problems, the Participants have agreed to conduct a pilot phase of the consolidated tape (Phase I) as provided in this Section XII.

During Phase I the Participants and CTA, with the cooperation of the Processor, will analyze and evaluate the operation of Phase I, including any user reaction they may receive and any problems that may appear. Following such analysis and evaluation the Participants will attempt in good faith to agree on a resolution of any such problems and on any necessary amendments to the Plan, so that full implementation of the consolidated tape as described in

41

the foregoing provisions of the Plan may commence within 40 weeks after the Plan is approved by the SEC. If the Participants are unable to agree on these matters, the areas of disagreement will be reported to the SEC and any Participant shall have the right to withdraw from the Plan and from CTA, notwithstanding the provisions of Section XIII requiring any Participant seeking to withdraw from the Plan to give not less than 6 months written notice of its intention to do so.

Phase I will incorporate into the stream of last sale prices disseminated by the NYSE, the last sale prices of transactions occurring on the MSE, the PSE and the PBW in 15 selected common stocks listed and registered on the NYSE and traded on one or more of the MSE, the PSE and the PBW. (The MSE, the PSE and the PBW, for purposes of this Section XII are collectively referred to as "pilot participants", and each is individually referred to as a "pilot participant". In addition, provided the description of reporting procedures referred to in Section VII(b) hereof has been furnished and has become a part of the Plan prior to the implementation of Phase I, the NASD shall also be a "pilot participant".) The 15 common stocks to be selected for inclusion in the Phase I will be selected by the pilot participants which are national securities exchanges and will include at least 10 of the most active dually-traded issues.

Phase I is expected to operate for up to twenty weeks. During Phase I each pilot participant which is a national securities exchange will report to the Processor each last sale price occurring on the reporting exchange in any of the 15 stocks chosen for Phase I. During such period the NASD (provided it is a pilot participant) will collect from each of four of its members registered with it as "market makers" each last sale price reflecting a transaction in any of such 15 stocks effected by such market maker, whether as broker or dealer, and will report all such information collected to the Processor. (In order to avoid duplicate reporting, if one market maker effects a transaction during Phase I in any of the 15 selected stocks with another of the participating market makers, the selling market maker shall report the transaction.) The last sale price reports received by the Processor from each pilot participant will be merged into and reported on the NYSE last sale price ticker network and will be identified as to the market of execution.

The Processor will receive last sale price reports with respect to the 15 selected stocks during Phase I by extracting them from the existing ticker transmissions provided by each pilot participant which is a national

securities exchange. The NASD will report last sale prices to the Processor by means of a printer. In the event of disruption of any such transmission, last sale prices will be reported to the Processor by each pilot participant by means of voice communication over a private telephone line or by a private line teletypewriter circuit. In any event each pilot participant agrees that any last sale price reported to the Processor more than one and one-half minutes after the time of execution of the transaction being reported will be labeled as "late" when reported to the Processor so that it may be designated on the consolidated tape as being a late report.

During Phase I the Processor will receive the last sale reports from each pilot participant and will time stamp each such report as received. Each pilot participant which is a national securities exchange reporting last sale prices during Phase I shall time stamp each transaction reported in accordance with its current practices. NASD members reporting transactions through NASD as referred to above during Phase I shall prepare a time stamp record of the time of execution of each transaction reported. All such time stamped records shall be available upon request to assist in the evaluation of Phase I.

Last sale prices received from pilot participants by the Processor during Phase I, in addition to being time

stamped as received, will be assigned the appropriate alphabetic symbol designating the reporting market, will be visually checked to be sure volume in round lots has been reported and the correct symbol for one of the 15 selected stocks has been included in the report and that a price has also been reported. When this has been done the last sale report will be recorded into machine-readable format and will thereupon be promptly introduced into the last sale data stream then being disseminated over the NYSE ticker network, and to vendors. It is expected that the average elapsed time between receipt of the last sale price report from a pilot participant and its introduction into the last sale ticker data stream will approximate 30 seconds. Each pilot participant will be allowed one and one-half minutes after the time of execution within which to furnish the last sale report to the Processor in order that the total elapsed time between execution and dissemination over the NYSE ticker network (absent any tape lateness) will be a maximum of two minutes.

During Phase I the correction message formats currently in use with respect to the NYSE ticker network will continue to be applied to any error, cancellation or correction message required to be transmitted. It will be the responsibility of each reporting source to identify

any trade previously reported by it which it wishes to have corrected or cancelled on the consolidated tape.

The last sale reports received during Phase I from any pilot participant will appear on the consolidated tape in a format similar to that presently in use on the NYSE ticker network except that (1) each such report will be accompanied by the appropriate alphabetic symbol identifying the market of execution, which indentifying symbol will follow and be separated from the stock symbol by a letter dot; and (2) because of system programming currently in use at the Processor, each such report as it appears on the consolidated tape shall be preceded and followed by six dots.

The tape deletion modes currently in use with respect to the NYSE ticker will be continued during Phase I. These modes will not affect in any way the last sale price reports received from any pilot participant and such reports will continue to be printed in full, including the market of execution identifier, during any period when tape deletion modes are in effect.

The last sale price reports received from any pilot participant during Phase I will not be included in the calculation of the NYSE Market Index nor will they affect the NYSE market Data System, stock range or volume data records maintained within such System.

During Phase I, the consolidated tape prepared as above outlined will, as indicated, be distributed over the ticker network of NYSE. In addition, it will be furnished to all of the other parties who presently receive continuous last sale prices from NYSE, including the Vendors who supply approved subscribers with a variety of interrogation devices which, among other things, on inquiry, display the last sale price at the time of inquiry in a specific stock. While it is recognized that Rule 17a-15 requires each last sale report displayed by an interrogation device to identify the market place where the transaction was executed, the Participants understand that a majority of the inquiry devices presently installed in the field are not capable of displaying the alphabetic symbol identifying the market of execution which will be included on the consolidated tape. To the extent that inquiry devices presently in the field are capable or can be made capable of displaying this information without additional cost to the subscriber, the Vendors will be requested to do so in order that, to the greatest extent practicable, Rule 17a-15 will be complied with even during Phase I. During Phase I the Participants and CTA will investigate the steps that will have to be taken in order that the market of execution may be displayed in all inquiry devices in the field.

The cost of any necessary modifications or replacements as estimated by the Vendors will be considered as will the proposed means of collecting or absorbing such cost

It may be that during Phase I those inquiry devices which are not capable of displaying the market identifier symbol included on the consolidated tape will, when responding to a request for the last sale price in any of the 15 stocks consolidated in Phase I, display the last sale price of that security as reported by the NYSE.

When implemented, the consolidated tape during Phase I will include only those last sale prices reported to the Processor reflecting transactions executed during the hours of trading on the NYSE.

It is anticipated that a pilot of Phase I of the consolidated tape will also be conducted with respect to Network B using selected securities duly traded on AMEX and on one or more of the other Participants.

XIII. Withdrawal. Any Participant may withdraw from the Plan as provided in Section XII or may withdraw from the Plan at any time on not less than six months prior written notice to each of the other Participants and to the Processor; provided, that, in case of withdrawal on not less than six months' notice, such withdrawing Participant shall remain liable for, and shall pay upon demand, its portion of the Processor's costs of developing the consolidated tape.

XIV. Counterparts. This Plan may be executed by the Participants in any number of counterparts, no one of which need contain all of the signatures of all the Participants, and as many of such counterparts as shall together contain all of such signatures shall constitute one and the same instrument.

AMERICAN STOCK EXCHANGE, INC.

By /s/ Paul Kolton

MIDWEST STOCK EXCHANGE, INC.

By /s/ Michael E. Tobin

NATIONAL ASSOCIATION OF SECURITIES
DEALERS, INC.

By /s/ Gordon S. Macklin

NEW YORK STOCK EXCHANGE, INC.

By /s/ James J. Needham

PACIFIC STOCK EXCHANGE, INC.

By /s/ Thomas P. Phelan

PBW STOCK EXCHANGE, INC.

By /s/ Thomas W. L. Cameron

ARTICLES OF ASSOCIATION
OF
CONSOLIDATED TAPE ASSOCIATION

ARTICLE I

NAME

The name of the Association created hereby shall be the CONSOLIDATED TAPE ASSOCIATION (CTA).

ARTICLE II

PURPOSES

The CTA shall administer the plan attached hereto as Exhibit A (such plan, as the same may be amended from time to time, is herein referred to as the Plan) in accordance with the provisions of the Plan, which has been filed with the Securities and Exchange Commission (the SEC) by each of the national securities exchanges and the national securities association executing these Articles pursuant to Rule 17a-15 promulgated by the SEC under the Securities Exchange Act of 1934, as amended. By action taken as provided in Article III, CTA may also amend the Plan from time to time, but only to the extent and subject to the limitations expressed in the Plan. Each national securities exchange and the national securities association executing these Articles is sometimes referred to herein as a Signatory.

ARTICLE III

THE MEMBERSHIPSection 1.

Each security, the last sale prices of which under the Plan are eligible for inclusion in the consolidated tape to be disseminated over either Network A or Network B (as defined in the Plan), is referred to herein as an Eligible Security.

During the period ending five years after the date of full implementation of the consolidated tape following completion of the Phase I pilot program provided for in the Plan, the New York Stock Exchange, Inc. and the American Stock Exchange, Inc. shall each appoint two individual representatives, each of whom shall thereupon become a voting member of CTA. During such period the Midwest Stock Exchange Inc., the Pacific Stock Exchange, Inc., the PBW Stock Exchange, Inc. and the National Association of Securities Dealers, Inc. shall each appoint one representative who shall thereupon become a voting member of CTA. After such five year period, and thereafter at the beginning of each calendar year, the Signatory which reported to the Processor under the Plan the greatest number of last sale price reports included over Network A during the last two preceding calendar years and the Signatory which reported to such Processor the

greatest number of last sale price reports included in the consolidated tape disseminated over Network B during the last two preceding calendar years shall each appoint two individual representatives, each of whom shall thereupon become a voting member of CTA for the succeeding calendar year. After the end of such five year period, and thereafter at the beginning of each calendar year, each of the four Signatories which reported to the Processor under the Plan the next greatest number of last sale price reports included in the consolidated tapes disseminated over both Network A and Network B during the last two preceding calendar years shall each appoint one representative who shall thereupon become a voting member of CTA for the succeeding calendar year.

By accepting his appointment each representative selected as above provided shall be deemed thereby to agree to serve as a voting member of CTA in accordance with these Articles and to use his best efforts to administer the Plan in accordance with its provisions.

Section 2.

Each Signatory is authorized to name a permanent alternate for any voting member designated by it and in the absence of such member, the alternate shall have all of the rights of the member he represents at any meeting

of CTA. Each of the Signatories shall have the right to designate a substitute for any such alternate in the event the alternate is unable to attend a meeting of CTA and any such substitute shall have all of the rights of the alternate for whom he is substituting at any such meeting.

Section 3.

Any Signatory other than a Signatory whose designee is then a voting member of CTA may appoint an individual representative to serve as a non-voting member of CTA. Each such representative shall be entitled to receive notice of all meetings of CTA and to attend and participate in any discussions at any such meeting, but shall not be entitled to vote on any matter.

ARTICLE IV

VOTING

Each voting member of CTA shall have one vote on all matters coming before CTA. Five voting members shall be sufficient to constitute a quorum for the transaction of any business at any meeting of CTA and any action taken by the affirmative vote of five voting members present at such meeting shall be deemed to be the action of CTA. Action taken by the voting members of CTA other than at a meeting shall be deemed to be the action of CTA provided

it is taken by affirmative vote of all the then voting members and, if taken by telephone or telegraph, such action is confirmed in writing by each such member within one week of the date such action is taken.

ARTICLE V

OFFICERS

Section 1.

The officers of CTA shall consist of a Chairman and an Executive Secretary and such other officers, having such duties and responsibilities, as may be deemed appropriate by the voting members.

Section 2.

The Chairman of CTA shall be chosen from among the voting members by the vote of not less than five voting members cast at a meeting of CTA. He shall preside at all meetings of CTA and, notwithstanding his selection as Chairman, shall have the right to vote on all matters. The Chairman shall serve for such term as may be designated at the time of his selection, but in no case shall his term exceed a period of one year from the date of his selection.

Section 3.

The Executive Secretary of CTA may, but need not be, a member of CTA and shall maintain the records of the

CTA, keep minutes of meetings, send notices of meetings and have such other duties and responsibilities as may be assigned to him by the voting members.

ARTICLE VI

MEETINGS

Section 1.

The Chairman may call a meeting of CTA at any time on his own motion.

Section 2.

The Executive Secretary of CTA shall call a special meeting of the members whenever requested to do so by three or more of the voting members.

Section 3.

Notice of a regular meeting of CTA shall be in writing and shall be mailed or delivered to each member at the address designated by him for such purpose at least one week prior to the date of the regular meeting. Notice of a special meeting of CTA shall be given to each member at such address by telephone or telegram at least two days prior to the date of the special meeting. Notwithstanding the provisions of this Section, action can be taken by CTA without a meeting as provided in Article IV.

ARTICLE VII

RULES

Section 1.

CTA may adopt and amend such rules from time to time as the voting members deem appropriate consistent with the purposes of CTA as provided in Article II and the Plan.

Section 2.

Any rules or stated policies proposed to be adopted by CTA shall be promptly forwarded to all Signatories not less than three weeks prior to adoption, unless in each instance such requirement has been waived by all of the Signatories.

ARTICLE VIII

AMENDMENTS TO ARTICLES OF ASSOCIATION

By written instrument executed by all of the Signatories then entitled to designate voting members of CTA these Articles may be amended in any manner deemed appropriate and consistent with the Plan. CTA may be terminated at any time by written instrument so executed.

No Signatory then entitled to designate a voting member of CTA may withdraw from CTA on less than six months' prior written notice delivered to each of the other Signatories and to the SEC (unless it shall have withdrawn from

the Plan pursuant to Section XII thereof).

IN WITNESS WHEREOF, these Articles of Association
have been executed as of the day of , 1973
by each of the Signatories hereto.

Exhibit 2

SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

SECURITIES EXCHANGE ACT OF 1934
Release No. 10218/June 13, 1973

NOTICE OF COMMISSION COMMENTS ON-CONSOLIDATED TAPE PLAN
FILED PURSUANT TO RULE 17a-15 UNDER THE SECURITIES
EXCHANGE ACT OF 1934 (File No. S7-433).

The Securities and Exchange Commission has announced that it has sent a letter of comment to the sponsors of the consolidated tape plan jointly filed by the New York, American, Midwest, Pacific and PBW Stock Exchanges and the NASD on March 2, 1973, pursuant to Rule 17a-15 under the Securities Exchange Act of 1934, providing for reporting of prices and volume of completed transactions with respect to securities registered on exchanges.

The text of the letter follows:

American Stock Exchange, Inc.
Midwest Stock Exchange, Inc.
National Association of Securities Dealers, Inc.
New York Stock Exchange, Inc.
Pacific Stock Exchange, Inc.
PBW Stock Exchange, Inc.

Dear Sirs:

This is in response to the plan jointly filed with the Commission on March 2, 1973 (the "Joint Plan" or the "Plan"), pursuant to Rule 17a-15 under the Securities Exchange Act of 1934. As you know, the Plan cannot become effective unless the Commission, having due regard for the maintenance of fair and orderly markets, the public interest and the protection of investors, declares the Plan, with whatever changes are deemed necessary or appropriate by the Commission, to be effective. In so doing, the Commission may impose such terms and conditions relating to the provisions of the Plan and amendments thereto as it may deem necessary or appropriate. The changes suggested by the comments which follow appear to be either necessary or appropriate, but we would welcome your response, no later than July 10, 1973, to any requested change which raises self-regulatory problems.

The Commission has reviewed the Joint Plan and all public comment letters received in response to a request for comments on the Plan. Comment is specifically reserved as to all exhibits, related documents and portions of the Joint Plan not part of the original filing; including

the exhibits and related documents with respect to the Plan jointly filed with the Commission on March 29, 1973. We have the following comments on the Plan:

Amendments to the Plan. In adopting Rule 17a-15 the Commission intended to make unmistakably clear its determination to exercise its authority and responsibility to oversee the development and administration of a composite last sale reporting system designed to protect the interest of the public. For this reason, the Rule provides the Commission with considerable flexibility in varying the terms of any plan filed thereunder.

Implicit in the Commission's authority to pass upon a plan's terms necessarily would be the rights not only to approve subsequent proposed changes therein but also to initiate such changes. Thus, we believe that Section III(b) of the Plan, relating to amendment procedures, should be modified to provide a means for the Commission to require any amendment to the Plan it may deem necessary or appropriate. Of course; the Consolidated Tape Association (the "CTA") and members of the public would be free to provide their views on any amendment requested by the Commission. Accordingly, the following language, should be added at the end of Section III(b):

In addition, the SEC may require any amendment to the Plan which it deems necessary or appropriate for the maintenance of fair and orderly markets, the public interest or the protection of investors. A copy of any amendment proposed to be required by the SEC, and a statement of the reasons underlying the proposal, shall be filed with the CTA no less than 45 days prior to the date on which it is proposed such amendment take effect. The effectiveness of the amendment shall be automatic, but the SEC may modify, withdraw or postpone the effectiveness of any amendment requested by it, in accordance with the foregoing standards.

We also note that the Joint Plan's amendment procedures do not specify when amendments thereto proposed by the CTA would become effective, nor do they provide a procedure whereby the Commission can satisfy its oversight responsibilities with respect to any proposed amendments to the Plan.

Accordingly, a new subsection (d) should be added to Section III (redesignating existing subsections (d) and (e) as (e) and (f), respectively) to read as follows:

(d) Any amendment filed with the Commission by the CTA pursuant to this Section shall take effect upon the 45th day after the filing of a copy thereof with the Commission, or upon such earlier or later date as the Commission may determine, unless prior to that time the Commission disapproves or requests modification of such amendment as may be necessary or appropriate for the maintenance of fair and orderly markets, the public interest or the protection of investors.

We also suggest the addition of a provision that would permit, upon specific request by the CTA, an expedited approval procedure for amendments of a technical or ministerial nature. Such a provision might provide for CTA to certify to the Commission that an amendment is of such a nature and, if the Commission's staff concurs, for such amendments to be declared effective by the Commission or by the staff pursuant to delegated authority.

Section III(c) of the Plan states in brackets (on the last line of page 5) that "other sections may be added" to the list of sections which may be amended notwithstanding the objection of any particular Participant. This quoted phrase should be deleted and any appropriate sections added to the list. Subsequent additions of course may be effected by amendment.

In addition, the Plan refers in various places to documents that will be submitted to the Commission for its "information". In view of the material nature of all specifications and other material related to the Plan, such items should be deemed to be part of the Plan itself and subject to the Commission's approval. As noted above, an accelerated review procedure will be provided by the Commission upon request in appropriate cases for amendments relating to matters of a technical or ministerial nature.

Evaluation of Performance by Processor. Section IV(d) of the Plan presently provides for CTA review during the

fifth year from the date of commencement of Phase II of the question of whether the Securities Industry Automation Corporation ("SIAC") should continue as the "processor" under the Joint Plan. It also provides that after the expiration of the initial five-year period CTA will periodically undertake a similar review (at least every two years). We believe that an effective program to monitor SIAC's performance would require that such a review occur annually. Appropriate changes in the Plan to reflect this modification should be made. In addition, in order to afford the Commission an opportunity to evaluate the processor's performance, as required by its oversight role, a new subsection (e) should be added (redesignating existing subsection (e) as (f)) to read as follows:

Within 30 days after the commencement of any review by CTA of the Processor's performance, CTA shall file with the Commission a copy of a report prepared by it, including any minority views, evaluating such performance and setting forth its recommendations with respect thereto.

Contracts with Processor. As indicated above, it is essential that the Commission exercise its oversight authority with respect to the consolidated tape in a diligent and vigorous manner. Obviously, from time to time it may become necessary in the public interest for the Commission, by means of amendment to the Joint Plan, to alter the manner in which the tape is operated.

To reconcile the desirability of preventing frustration of the contractual expectations of any person or entity which enters into an agreement with any processor of the tape with the Commission's obligation to preserve the freedom to exercise its authority, the Commission believes that a new subsection (g) should be added to Section IV of the Plan to read as follows:

The Processor's contracts and agreements with Participants and other reporting parties, independent vendors, subscribers and others shall by their terms be subject at all times to the Federal securities laws and the rules and regulations thereunder.

High-Speed Transmission. Section V(e) of the Plan leaves unresolved the question of whether independent vendors should receive consolidated last sale prices by means of a high-speed line permitting them to receive this information on a current basis, regardless of any delay in the dissemination of the information on the consolidated tape itself. This would enable them to maintain continually updated information in their data bases used to supply last sale information by means of interrogation terminals. A periodic message could be displayed on the tape to warn viewers it is delayed, so that they could utilize interrogation equipment where real-time market information is essential.

No valid reason has been presented to the Commission which would justify delaying the data utilized by interrogation devices solely because the tape may be running late. Accordingly, the second paragraph of Section V(e) (at the top of page 19) should be deleted, and a new paragraph should be inserted in its place to read as follows:

In addition to the data transmitted for ticker display purposes, each recipient of last sale data shall be entitled to receive from the Processor any or all of the last sale data generated by the Processor pursuant to the Plan on a real time basis via a high speed line, for purposes of on-line surveillance, display by means of interrogation or monitoring equipment or any other legal purpose other than transmission for ticker display purposes.

Eligibility Criteria. Section VI(a) of the Plan establishes eligibility criteria to determine (i) which of those securities listed on an exchange on the date Phase I is commenced shall be qualified for dissemination pursuant to the Plan (the "grandfather" standards), and (ii) which of those securities which list subsequent to such date shall be so qualified (the "permanent" standards). In our review of the Plan we have studied these criteria with particular care.

The Commission believes that the limitation of eligible securities to those listed on a principal national securities exchange is inappropriate because, in our view, eligibility criteria should be based on the characteristics of individual securities rather than on those of the exchanges on which they are listed. We have been provided no valid regulatory or other basis upon which such a distinction could be supported. Accordingly, Section VI(d) of the Plan should be deleted and the word "principal" removed from all references to national securities exchanges. The reference to Section VI which appears in Section V(a)(ii) also should be deleted.

On the other hand, in the Commission's opinion, the present character of the existing nationally distributed tapes would be altered considerably if the Plan's proposed eligibility standards are not raised, at least for the initial stages of the tape's operation. Although dissemination of trades in a host of securities listed "solely" on small exchanges could prove to be a beneficial by-product of the consolidated tape's development, we are quite concerned that investors seeing Network B of the the consolidated tape for the first time might be misled to believe that all securities reported thereon are at least capable of meeting the listing (or at least the delisting) standards of the American Stock Exchange ("Amex"), as at present. Accordingly, we believe that for the time being the permanent standards contained in Section VI(a)(2) should be applied to issues listed on the date Phase I commences and the present Amex listing standards should be applied to all issues listed after that date.

As a further criterion for a security's inclusion on the consolidated tape, we think it important to require that at least 25% of the reported transactions in that security be executed on an exchange. Such a requirement should ensure that the investing public is not misled, since we believe there exists a justifiable expectation that the securities to be reported on the consolidated tape will be securities in which a substantial portion of trades takes place on an exchange.

Limitations on Retransmission. Subsections (a) and (b) of Section VIII of the Plan state that independent vendors "will not be permitted to retransmit on a continuous basis the consolidated last sale prices received by them." This language could be interpreted to preclude retransmission for "monitoring" services, to satellite computers for interrogation purposes and for other valid uses, although we doubt that such a broad construction of the prohibition was ever intended. To ensure that an unnecessarily sweeping prohibition is not created, the words "for purposes of producing a continuous, moving ticker display" should be added after the word "them" on the fourth line from the bottom of page 28 and after the same word on the fourth line on page 30.

Market Identification. Section VIII(f) of the Plan sets forth the standards for independent vendors' interrogation devices with respect to the market identification requirement of Rule 17a-15. It also purports to specify what kinds of non-complying interrogation equipment will be acceptable.

We believe it is the responsibility of the Commission to determine whether particular interrogation equipment is able to provide market identification in compliance with Rule 17a-15 and, if not, on what basis the use of non-complying equipment will be permitted. Accordingly, all of the language in subsection (f) after the parenthesis on line 4 of page 34 should be deleted.

In addition, the Commission believes that a distinct designation should be provided for trades executed by broker-dealers who are not members of any exchange or the NASD and who are required by Rule 17a-15 to report their transactions in listed securities.

Trading Halts and Suspensions. Section X(a) of the Plan sets forth the consolidated tape's procedures for coordinating trading halts and suspensions. In order to coordinate more effectively the regulation of trading activity in multiple markets we believe that if any participant halts or suspends trading in a security for regulatory reasons it should be

required promptly to notify SIAC, the Commission (as already required by Rule 12d2-1 under the Securities Exchange Act) and each of the participants which trades that security. In addition, we believe that in order to ensure maximum coordination in such cases the Processor should continue to include on the consolidated tape last sale prices in such a security received from other participants until the Commission itself acts to suspend or halt trading in that security. The requirement of prompt notification to the Commission will enable the Commission to act expeditiously with respect to trading halts and suspensions. Accordingly, the references in Section X(a) to the "primary market" for a security are no longer necessary and should be deleted.

Trading Hours. Section X(b) of the Plan states that the consolidated tape's hours of operation will be established by an amendment to the Plan. It appears to the Commission that the question of hours of operation is too significant to be left unresolved at this stage of the development of the consolidated tape.

In view of the importance of disclosing promptly as many trades in listed securities as feasible, and in the absence of a showing of good cause for limiting the consolidated tape's hours of operation to the hours of operation of the major exchanges in the East, the Commission believes that the consolidated tape should operate as long as a national securities exchange is open, consistent with the Commission's normal business hours. Accordingly, existing Section X(b) should be deleted, and a new Section X(b) should be inserted in its place to read as follows:

The consolidated tape will reflect on a current basis reports of last sale prices of eligible securities as long as a national securities exchange is open, consistent with the Commission's normal business hours.

In this connection, some procedure also should be provided whereby the consolidated tape would be activated some time prior to the opening of the exchanges so that all trades which took place subsequent to the prior day's close of the tape, and before the opening of the exchanges, would be reported in proper sequence.

User Reaction to Phase I. Section XII, providing for a pilot program (Phase I), refers to the "user reaction to Phase I." Inasmuch as the Joint Plan represents a firm commitment by its sponsors to comply with a regulatory requirement duly imposed by the Commission, we assume that user reaction will be considered by the Joint Plan's sponsors only as a means to reflecting problems concerning, and effecting improvements to, the consolidated tape.

Withdrawal Procedures. Section XIII sets forth the procedures for withdrawal from the Joint Plan. Since parties other than the Joint Plan's sponsors undoubtedly will act in reliance on the provisions of the Joint Plan (and in fact may have done so already), Commission permission should be obtained before any participant is allowed to withdraw, in order to prevent undue hardship. Accordingly, the following language should be inserted after the word "may" in the first line of Section XIII: "petition the Commission for permission to". In addition, the word "to" should be substituted for the word "may" in the second line of Section XIII. Finally, the phrase "in the manner described in Section XIII" should be added following "CTA", but before the comma, in the sixth line on page 41.

Technical Matters.

1. On a number of occasions members of the Commission's staff have requested that copies of SIAC's charter, by-laws and any other constituent documents be submitted to the Commission as part of the Plan. We request that this be done promptly.

2. Section V(d) refers to Section VIII(a) as setting forth time limits for reporting transactions to the processor. It appears that the appropriate reference should be Section VII(a).

3. Section VIII(a) defines vendors in terms of persons engaged in "disseminating" reports of completed transactions. Inasmuch as this definition appears not to include those manufacturers of terminal or display equipment who do not own or lease transmission networks, which we believe were intended to be included, the words "or displaying" should be added after the word "disseminating" on the second line from the bottom of page 28.

Before closing, I should like to state on behalf of the Commission that we recognize the extremely difficult task with which you have been confronted. In moving towards development of a central market system we are all necessarily operating without the benefit of precedent to guide us. In addition, it is apparent that in your efforts you have been faced with the need to reconcile a wide range of conflicting interests and points of view. You should be congratulated for having taken an initial but significant step toward achievement of a goal which I believe we all share. I look forward to your continued cooperation as our work progresses.

For the Commission.

Sincerely yours,

Hugh F. Owens
Senior Commissioner

As indicated in Securities Exchange Act Release No. 10026 (March 5, 1973), announcing the receipt of the plan, the Commission will afford the plan's sponsors an opportunity to respond to the Commission's comments no later than July 10, 1973, and any such response will be made publicly available. All interested persons may submit written comments with respect to the Commission's letter. All comments should be submitted by July 10, 1973 and should be directed to: Secretary, Securities and Exchange Commission, 500 North Capitol Street, Washington, D.C. 20549 and should refer to File No. S7-433.

By the Commission.

Ronald F. Hunt
Secretary

Exhibit 3

RECEIVED
OFFICE OF THE SECRETARY

MIDWEST STOCK EXCHANGE

APR 22 1974

57-433-1

INCORPORATED

120 South LaSalle Street Chicago, Illinois 60603

Office of the President
Telephone (312) 368-2561

April 17, 1974

Mr. George A. Fitzsimmons
Secretary
Securities and Exchange Commission
500 North Capitol Street
Washington, D. C. 20549

Dear Mr. Fitzsimmons:

We are submitting for filing pursuant to SEC Rule 17a-15 a revised composite tape plan ("Plan"). With this joint filing and previous and accompanying comments made by Participants to the Plan and other interested parties, we are hopeful the Commission can make final modifications it deems appropriate and declare the Plan effective.

It will be apparent from a review of the Plan that some ambiguities remain and that a number of entirely new considerations have been raised which could not be settled in the time frame set by the Commission. (See pages 67, 68). In the balance of this letter we have set out our understanding of some unclear areas covered by the Plan. This understanding is based upon advice, discussion and explanation provided by staff of the Commission and representatives of the New York Stock Exchange and the American Stock Exchange, among others. Our comments are essentially directed to portions of the Plan which have been revised from the Plan jointly filed on March 2, 1973. To the extent that the comments we made at that time in our letter of March 1, 1973 addressed to former Chairman Cook (copy attached), have not resulted in changes to the Plan, we reaffirm those earlier comments.

Amendments to the Plan

The Commission noted in its letter of March 8, 1974 commenting upon the Plan, that it has determined not to require inclusion of language making explicit the Commission's authority to initiate changes to the Plan. It is apparent that the CTA structure is such that Participants other than the NYSE and AMEX must rely upon the Commission actively exercising its powers of review and initiation to ensure a fair field of competition.

April 17, 1974

-2-

Consequently, should the Commission seek legislation in this area to clarify or expand its powers, we would support its efforts.

High Speed Transmission

The Commission noted in its March 8, 1974 letter, as it had indicated in its letter of June 13, 1974; its determination that the Plan should be amended to reflect that the transmission of last sale data utilized by interrogation devices will not be delayed because the tape may be running late. You will recall that we supported this concept in our March 1, 1973 letter and we indicated the importance of our receiving real time last sale information for surveillance and other purposes. Since the language suggested by the Commission and adopted in the Plan does not specifically provide that Participants are to receive real time transaction data from vendors, we expressed some concern to staff of the Commission and to the NYSE and AMEX at a meeting held on April 9, 1974 in Washington, D. C.

Historically, NYSE and AMEX, for competitive reasons have prevented vendors from programming interrogation machines on our Floor to display bid-ask quotations. Our concern was that an attempt might be made by the NYSE or AMEX to similarly prevent other Participants from receiving real time last sale information. However, Mr. Frank Palamera, Executive Vice President of the NYSE, in response to a direct question posed by our Kenneth I. Rosenblum at the April 9 meeting in Washington, D. C. responded that: ". . . the NYSE has no intent to prevent other Participants from getting high speed line last sale data". We accept that declaration as answering our concern and we are moving ahead with the other Participants to implement the high speed line.

Eligibility Criteria

Undoubtedly, the language suggested by the Commission on pages 7 and 8 of its March 8 letter is a more equitable approach than Chapter VI of the Plan. Nevertheless, since AMEX could not accept the Commission's language, we acceded to their redraft to preserve the concept of a CTA. This particular area will require effective Commission oversight to ensure a fair field of competition for future listings.

Hours of Operation

The Plan reflects the Commission's determination that the consolidated tape should operate as long as a national securities exchange is open. Moreover, language has been included (pages 39, 40) to "equitably allocate" the additional expenses generated among those Participants which are open during periods when other Participants are closed. In this area as well as virtually all other financial areas, we must rely upon determinations as to

April 17, 1974

-3-

revenues, expenses, allocations and computations as made by NYSE, AMEX or SIAC, with an opinion by a firm of independent public accountants that such determinations have been reported in accordance with the understanding among the Participants. To date a broad range of figures have been reported by NYSE as possible costs associated with reporting trades on the consolidated tape after they close. Discussions will continue on these costs to determine among other things whether expenses will be equitably allocated and whether the possible benefits to certain of the Participants warrant the projected costs. Obviously, we have signed the Plan based upon our assumption that these costs as well as other costs, expenses and revenues enumerated in Financial Matters (Chapter XI) have been or will be equitably allocated. We do not mean to suggest in any way that there has been, or will be, an inequitable allocation. Rather, we merely indicate that we really have no way of knowing at this stage.

Withdrawal Procedures

At the Participants' April 9 meeting in Washington, D. C., AMEX presented issues for resolution by CTA which had never been raised before -- neither prior to signing the Plan submitted by the Commission on March 2, 1973 nor at any time since. Obviously, these matters could not be resolved on a timetable consistent with that ordered by the Commission. Accordingly, these matters have been reserved for future consideration and resolution (page 67). Moreover, the Plan provides for a "painless withdrawal", with certain commitments, if a Participant is not satisfied with the resolution of these matters. Again, we have signed the Plan with the hope of finally getting a consolidated tape operational. We would like to point out, however, that there is no objective reason to write in a special withdrawal privilege for AMEX based upon issues raised over a year after submission of an agreed-upon Plan.

Thank you for the opportunity to present our views.

Yours truly,



Michael E. Tobin

MET/nmg
attachments

ccs: Chairman Ray Garrett, Jr.
Commissioners Evans, Loomis, Pollack and Sommer

April 17, 1974

PLAN SUBMITTED PURSUANT TO
RULE 17a-15 OF SECURITIES
AND EXCHANGE COMMISSION
UNDER SECURITIES EXCHANGE
ACT OF 1934

The undersigned hereby submit to the Securities and Exchange Commission (SEC), for filing pursuant to SEC Rule 17a-15, the following plan for the dissemination on a current and continuous basis of last sale prices relating to completed transactions in Eligible Securities, as herein defined, traded on a national securities exchange. The term "Plan" as used herein shall mean the following plan as from time to time amended in accordance with the provisions hereof.

I. Purpose of Plan. The purpose of the Plan is to enable the undersigned, through joint procedures as provided in paragraph (b) of Rule 17a-15, to comply with the requirements of said Rule.

II. Parties. (a) The parties to the Plan are as follows:

American Stock Exchange, Inc. (AMEX),
a registered national securities
exchange having its principal place
of business at 86 Trinity Place,
New York, New York 10006

Midwest Stock Exchange, Inc. (MSE),
a registered national securities
exchange having its principal place
of business at 120 South La Salle
Street, Chicago, Illinois 60603

National Association of Securities Dealers, Inc. (NASD), a registered national securities association having its principal place of business at 1735 K Street, N.W., Washington, D. C. 20006

New York Stock Exchange, Inc. (NYSE), a registered national securities exchange having its principal place of business at 11 Wall Street, New York, New York 10005

Pacific Stock Exchange, Inc. (PSE), a registered national securities exchange having its principal place of business at 618 South Spring Street, Los Angeles, California 90014

PBW Stock Exchange, Inc. (PBW), a registered national securities exchange having its principal place of business at 17th Street and Stock Exchange Place, Philadelphia, Pennsylvania 19103

(b) By subscribing to and submitting the Plan for filing with the SEC, the undersigned parties (hereinafter referred to collectively as the "Participants", or individually as a "Participant") agree to comply to the best of their ability with the provisions of the Plan.

(c) The Participants agree that any other national securities exchange and any broker or dealer required to file a plan with the SEC pursuant to Rule 17a-15 (hereinafter referred to collectively as "other reporting parties", or individually as an "other reporting party") may provide in such plan that last sale prices reflecting transactions in Eligible Securities

effected on such exchange or by such broker or dealer may be furnished and disseminated through the facilities and in accordance with and subject to the terms, conditions and procedures of the Plan, provided such other reporting party executes the contract referred to in Section IV(c) hereof. In order to best promote the objectives of SEC Rule 17a-15, the Consolidated Tape Association, referred to in Section III below, will actively solicit the cooperation of each other reporting party to report its last sale prices reflecting transactions in Eligible Securities to the Processor (as defined below) for inclusion on the consolidated tape in accordance with the Plan.

III. Administration of Plan. (a) A Consolidated Tape Association (CTA) will be created for the purpose of administering the Plan. The Articles of Association of CTA (the Articles) will be executed by each of the Participants and may be signed by any other national securities exchange which is not exempt from the provisions of Rule 17a-15. The membership of CTA will consist of eight individual voting members and an indefinite number of individual non-voting members as provided in the Articles. The affirmative vote of at least five of its eight voting members shall be necessary for any action taken by CTA. (A copy of the Articles without attachments is attached to the Plan as Exhibit A.) CTA will be primarily a policy-making body as distinguished from one engaged in operations

of any kind. CTA, directly or by delegating its functions to individuals, committees established by it from time to time, or others, will administer the Plan and will have the power and exercise the authority conferred upon it by the Plan as described herein. Within the areas of its responsibilities and authority, decisions made or actions taken by CTA pursuant to the Articles will be binding upon each Participant (without prejudice to the rights of such Participant under Section III(e) below) unless such Participant has withdrawn from the Plan in accordance with Section XIII hereof.

(b) Any proposed amendment to the Plan may be formulated by CTA and filed with the SEC on behalf of all Participants, except that, unless authorized by Section III(c) below, no proposed amendment to the Plan may be filed with the SEC by CTA if it is objected to in writing by any Participant which reported to the Processor (as defined below) 51% or more of the last sale prices reported on the ticker tape disseminated over either Network A or Network B (as defined below) during the preceding twelve calendar months, including any portion of such twelve month period occurring prior to commencement of Phase II, as referred to in Section V(f) hereof.

(c) CTA shall have the authority to formulate and file with the SEC from time to time, on behalf of all

Participants, notwithstanding the objection of any particular Participant, an amendment to the Plan with respect to any matter set forth in the following sections of the Plan:

Section V(c)

Section V(d)

(d) In its administration of the Plan, CTA shall have the authority to develop procedures and make administrative decisions necessary to facilitate operation of the consolidated tape in accordance with the provisions of the Plan and to monitor compliance therewith.

(e) No action or inaction by CTA shall prejudice any Participant's right to present its views to the SEC or any other person with respect to any matter relating to the consolidated tape or to seek to enforce its views in any other forum it deems appropriate.

IV. Central Processor. (a) The Securities Industry Automation Corporation (SIAC) shall be initially engaged to serve as the recipient and processor (Processor) of last sale prices reported to it for inclusion in the consolidated tape. The Processor shall perform such services in accordance with the provisions of the Plan and subject to the administrative oversight of CTA.

(b) The following information concerning SIAC has been supplied by NYSE and AMEX to the other Participants and accepted by them as the basis for their selection o .

SIAC as the initial Processor. SIAC was formed as a jointly owned subsidiary of NYSE and AMEX in 1972 for the purpose of planning, developing and operating data processing, computer, automation and communications facilities for the two exchanges and others in the securities industry. Substantially all of the computer data processing and communications equipment of the two exchanges together with most of the personnel involved in the planning, development and operation thereof were transferred to SIAC. At present SIAC has a total personnel complement of approximately 850 and its projected budget for 1974 is approximately \$37 million. The development function within SIAC is responsible for technical planning, specification, design and implementation of new systems and enhancement of existing systems and provides technical support for new projects. Over 200 employees, most of whom are professional or technical people, work for the function and its anticipated budget for 1974 is over \$10 million.

In the past the only nationwide ticker networks for the dissemination of last sale prices in securities have been operated by NYSE and AMEX. Both of these ticker networks have been in existence for many years and a great amount of experience and technical capability has been developed in connection with the operation of these networks. Substantially all of the personnel of NYSE and AMEX who were experienced in the planning, development and operation of such networks were transferred to SIAC

following its formation. Large amounts of money have been invested by both NYSE and AMEX over a period of many years in the development of their ticker systems. During the two years prior to the formation of SIAC, both exchanges had undertaken major new automation projects which involved very sizable expenditures and included the development of new and expanded ticker operations to meet anticipated increases in volume reporting requirements. These projects were only partially completed at the time of the formation of SIAC, and they have been taken over by SIAC for the purpose of final implementation.

One of the principal functions of each exchange is conducting appropriate monitoring and surveillance of trading in its market. A highly reliable and readily available data base is essential in the performance of this function. Developing and maintaining such a data base is most easily and efficiently accomplished as a natural consequence of the total system for the collection, processing, validating and dissemination of last sale prices. By using the facilities of SIAC for processing last sale prices received from all reporting parties, such a data base can be maintained and information can be made available therefrom to all Participants and the SEC for use in monitoring and surveillance functions as well as for operating the consolidated tape. Developing this capacity within an

entity, such as SIAC, which is subject to SEC oversight as the subsidiary of national securities exchanges, would seem highly desirable and clearly consistent with the public interest.

In addition it is essential to maintain adequate back-up facilities to assure that there is the least possible interruption in the flow of market information to broker-dealers and the investing public. In connection with the current operation of nationwide ticker networks by NYSE and AMEX, it has been considered necessary to develop and maintain duplicate computer facilities to assure the appropriate back-up capability. SIAC has this back-up capability, developed at substantial cost, and thus is in a position to avoid serious interruptions in the flow of market information.

Moreover, as described in Section XI hereof, SIAC will be providing its services in connection with the operation of the consolidated tape at cost. Thus the securities industry should realize substantial economies in disseminating the consolidated tape. As provided in Section XI, the Participants will share in net income derived from the consolidated tape.

For the above reasons, it is felt that the selection of SIAC as the Processor of last sale prices for inclusion on the consolidated tape will avoid duplication of facilities and unnecessary costs, and will prove

advantageous not only to the Participants but to all broker-dealers and their customers who are expected to benefit from the consolidated tape.

(c) Each Participant and each other reporting party furnishing last sale information to the Processor for inclusion in the consolidated tape will do so pursuant to a contract with the Processor which, among other things, will obligate the reporting party during the life of the contract to furnish its last sale prices with respect to all Eligible Securities to the Processor by means of a remote terminal or computer (or by other means acceptable to CTA and the Processor) and in a format acceptable to CTA and the Processor. A copy of each form of such contract is attached hereto as Exhibit B. The reporting party will agree to report last sale prices relating to Eligible Securities to the Processor as promptly after the time of execution as practical and in accordance with Section VII hereof. The contract with the Processor will also authorize the Processor to process all last sale prices furnished to it, to validate such information in accordance with Section V(d) hereof, to sequence reports of last sale prices received on the basis of the time received by the Processor (labelling as late all reports that are so designated when received by it) and to transmit such consolidated information in accordance with Section VIII hereof. The contract between a Participant

and the Processor will also contain provisions for the reimbursement of the Processor as provided in Section XI hereof. In the case of reporting parties other than the Participants, the contract will provide that the reporting party is to be bound by the provisions of the Plan and all decisions and directives of CTA in administering the Plan. Each contract with the Processor will also contain appropriate indemnification provisions indemnifying the Processor and each of the other parties reporting last sale information to the Processor with respect to any liability, loss, claim, cost, damage or expense incurred or threatened as a result of the last sale price furnished to the Processor by the indemnifying party.

(d) The contracts between SIAC and the Participants shall be for an initial term of five years after full implementation of the consolidated tape (Phase II as described in Section V(f) hereof), provided that, if CTA shall determine that SIAC has failed to perform its functions in a reasonably acceptable manner in accordance with the provisions of the Plan or that its reimbursable expenses have become excessive and are not justified on a cost basis, then each such contract shall be terminated at such time as may be determined by CTA. In the event of any such determination by CTA, any contract between SIAC and any other reporting party providing for such reporting party to furnish its last sale information to SIAC for inclusion on the consolidated tape also shall terminate at the same time. During the second year from the

date of commencement of Phase II, and thereafter from time to time during such initial five-year term upon the request of any two Participants (but not more frequently than once each year), CTA shall undertake a review of the questions of whether SIAC has failed to perform its function in a reasonably acceptable manner in accordance with the provisions of the Plan and whether its reimbursable expenses have become excessive and are not justified on a cost basis.

(e) During the fifth year from the date of commencement of Phase II, CTA shall undertake a review of the question of whether SIAC should continue as the Processor, or should be replaced, at or after the expiration of such fifth year. In making such review, consideration shall be given to such factors as experience, technological capability, quality and reliability of service, relative costs, back-up facilities and regulatory considerations. After the expiration of the five-year period from the date of commencement of Phase II, CTA shall periodically (at least every two years, or from time to time upon the request of any two Participants but not more frequently than once each year) undertake a similar review as to whether the organization then acting as the Processor should be continued in such capacity or should be replaced. Replacement of SIAC as the Processor, other than for cause as provided in the first sentence of Section IV(d), shall require an amendment to the Plan adopted and

filed as provided in Section III(b) hereof.

(f) Within 90 days after the commencement of any review by CTA of the Processor's performance, CTA shall file with the SEC a copy of a report prepared by it, including any minority views, evaluating such performance and setting forth its recommendations with respect thereto. In addition, the SEC shall be notified immediately upon the commencement of any such review.

(g) Whenever any Participant ceases to be subject to the Plan or whenever any other reporting party ceases to be subject to a plan filed under Rule 17a-15 which provides for the reporting of last sale prices to the Processor, the contract between the Processor and such Participant or other reporting party shall be terminated.

(h) The Processor's contracts and agreements with Participants and other reporting parties shall by their terms be subject at all times to applicable provisions of the Securities Exchange Act of 1934, as amended, and the rules and regulations thereunder.

V. Consolidated Tape. (a) NYSE has for many years operated leased private wire facilities for the purpose of disseminating on a current and continuous basis last sale prices of transactions in securities effected on the NYSE. Similarly, AMEX has for many years operated leased private wire facilities for the purpose of disseminating on a current and continuous basis last sale prices

of transactions in securities effected on the AMEX. It is the expectation of the Participants that the consolidated tape will be implemented by utilizing such existing wire facilities, modified as required, for the dissemination of all last sale prices in Eligible Securities included in the consolidated tape pursuant to the provisions of the Plan as follows:

(i) All last sale prices reported to the Processor (regardless of the market where the transaction is executed) relating to Eligible Securities admitted to dealings on NYSE shall be disseminated over the wire facilities presently carrying NYSE last sale prices (hereinafter referred to as "Network A"):

(ii) All last sale prices reported to the Processor (regardless of the market where the transaction is executed) relating to Eligible Securities admitted to dealings on AMEX, MSE, PCSE, PBW or on any other national securities exchange (except securities also admitted to dealings on NYSE) shall be disseminated over the wire facilities presently carrying AMEX last sale prices (hereinafter referred to as "Network B").

Such last sale prices shall also be disseminated to Vendors and others in accordance with the provisions of Section VIII hereof.

(b) Each last sale price relating to a completed transaction in an Eligible Security reported to the Processor by any Participant or other reporting market shall be in the following format:

- stock symbol of the Eligible Security;
- volume, in round lots, involved in the transaction (subject to technical specifications referred to below as from time to time in effect);
- price at which transaction was executed.

Technical specifications describing both the computer-to-computer and manual reporting of last sale prices to the Processor are being developed by technical representatives of the Participants and the Processor, and following approval thereof by CTA will be furnished to the SEC for its information.

(c) The following types of transactions are not to be reported for inclusion on the consolidated tape (although appropriate messages may be printed on the consolidated tape relating to such transactions in accordance with the manual referred to in Section IX):

- (i) transactions which are part of a primary distribution by an issuer or of a registered secondary distribution (other than "shelf distributions") or of an unregistered secondary distribution effected off the floor of an exchange

- (ii) transactions made in reliance on Section 4(2) of the Securities Act of 1933
- (iii) transactions where the buyer and seller have agreed to trade at a price unrelated to the current market for the security; e.g., to enable the seller to make a gift
- (iv) odd lot transactions
- (v) the acquisition of securities by a broker-dealer as principal in anticipation of making an immediate exchange distribution or exchange offering on an exchange
- (vi) purchases by an issuer of its own securities off the floor of an exchange at a time when bids or purchases on an exchange would not be permitted under the guidelines set forth in proposed SEC Rule 13e-2
- (vii) purchases of securities off the floor of an exchange pursuant to a tender offer
- (viii) purchases or sale of securities effected upon the exercise of an option pursuant to the terms thereof or the exercise of any other right to acquire securities at a pre-established consideration unrelated to the current market.

CTA shall have the authority, with the consent of the SEC, to exclude additional types of transactions from the consolidated tape.

(d) The stock symbol, volume and price of each last sale price received by the Processor shall be validated for proper format. If the format is incorrect such last sale price will be rejected and the reporting market will be so notified. It shall be the responsibility of the reporting market to correct the format of such last sale price and again transmit it to the Processor. If the elapsed time between time of execution and time of retransmission to the Processor significantly exceeds the limit specified by CTA pursuant to Section VII(a) hereof, such last sale price shall be designated by the reporting market as late. In addition, each Participant and each other reporting party shall validate each last sale price reported by it, for "price reasonableness" in accordance with the following procedures:

(i) CTA shall from time to time establish the price tolerances to be applied in validating last sale prices reported to the Processor.

(ii) Price reasonableness validation will be measured against (a) the last previous price for such security reported by it, or (b) the last previous price for such security reported on the consolidated tape, or (c) both of the foregoing, as such Participant or other reporting party may determine.

(iii) Each Participant or other reporting party may incorporate in its procedures the capability of over-riding or bypassing the price reasonableness validation standard with respect to any particular transaction.

(iv) In addition, the Processor shall perform a price reasonableness validation with respect to each last sale price received by it in accordance with price tolerances established by CTA. Such validation shall be designed only to determine gross errors resulting from faulty transmission of the last sale price from the Participant or other reporting party to the Processor.

(e) The Processor shall transmit over Network A or Network B, as the case may be, in the sequence in which received, all last sale prices received that have not been rejected by the validation process. Each such last sale price, except those reflecting transactions reported by NYSE and AMEX, shall be accompanied by the appropriate alphabetic symbol identifying the market of execution; provided, however, that all last sale prices collected by the NASD and reported to the Processor shall, when disseminated by the Processor, be accompanied by a distinctive alphabetic symbol distinguishing such last sale prices from those reported by any exchange or other

reporting party, and all last sale prices reported by brokers or dealers required to file a Plan with the SEC pursuant to Rule 17a-15 shall, when disseminated by the Processor, be accompanied by a distinctive alphabetic symbol distinguishing such last sale prices from those reported by the NASD or any exchange. Reports of last sale prices generated over both Networks A and B will be transmitted at a rate of 900 characters per minute (135 Baud) for ticker display purposes.

Consolidated last sale prices shall be made available to the Vendors referred to in Section VIII hereof at the premises of the Processor by means of a high speed line permitting them to receive this information on a current basis, regardless of any delay in the dissemination of this information over Network A or Network B, for the purpose of servicing approved interrogation devices (as that term is defined in Section VIII) located in the offices of approved subscribers, and not for the purpose of furnishing a ticker display.

(f) The proposed schedule for implementation of the consolidated tape is as follows:

(i) A pilot phase of the consolidated tape (Phase I), as described in Section XII hereof, is scheduled to commence no later than twenty weeks following the date the Plan is approved by the SEC, and is scheduled to continue for approximately twenty weeks thereafter;

(ii) Full implementation of the consolidated tape (Phase II) is scheduled to commence within forty weeks following the date the Plan is approved by the SEC.

(g) During the development of the Plan, the Participants have discussed the questions of (i) disseminating the consolidated tape for display purposes on two ticker tapes reflecting last sale prices in all Eligible Securities based on an alphabetical listing thereof and (ii) identification of the market of execution when reporting last sale prices on the consolidated tape. These matters have been resolved in accordance with the foregoing provisions of this Section V. However, after full implementation of the consolidated tape, CTA shall continue to re-examine such questions periodically, but any changes in the consolidated tape of this nature will require an amendment to the Plan pursuant to Section III(b) hereof.

VI. Eligible Securities. (a) For the purposes of the Plan, Eligible Securities shall mean:

(1) Any common stock, long-term warrant or preferred stock registered or admitted to unlisted trading privileges on the NYSE or AMEX on the date Phase II is commenced;

(2) Any common stock, long-term warrant or preferred stock registered or admitted to unlisted trading privileges on any other national securities exchange which, on the date Phase II is commenced, substantially meets the original listing requirements of the NYSE or the AMEX for such securities;

(3) After the date on which Phase II is commenced, any common stock, long-term warrant or preferred stock which becomes registered on any national securities exchange or is admitted to unlisted trading privileges thereon and which at the time of such registration or at the commencement of such trading substantially meets the original listing requirements of the NYSE or the AMEX for such securities, as the same may be amended from time to time;

(4) Any right admitted to trading on a national securities exchange which entitles the holder thereof to purchase or acquire a share or shares of an Eligible Security, provided that both the right and the Eligible Security to the holders of which the right is granted are admitted to trading on the same national securities exchange.

(b) For the purpose of this Section VI the term "common stock" shall be deemed to include shares of any equity security, however designated, registered or admitted to unlisted trading privileges on a national securities exchange as a common stock, including, without limitation, shares or

certificates of beneficial interest in trusts, certificates of deposit for common stock, limited partnership interests and "special stocks". In addition, the term "common stock" shall be deemed to include "American Depository Receipts", "American Depository Shares", "American Shares", or "New York Shares" representing securities of foreign issuers which are considered to be common stocks. For the purposes of this Section VI the term "preferred stock" shall be deemed to include shares of any equity security, however designated, registered or admitted to unlisted trading privileges on a national securities exchange as a preferred stock, whether or not the same may be convertible into another security, including, without limitation, preference stocks, income shares and guaranteed stocks. In addition, the term "preferred stock" shall be deemed to include "American Depository Receipts", "American Depository Shares", "American Shares", or "New York Shares" representing securities of foreign issuers which are considered to be preferred stocks. For the purpose of this Section VI a security shall be deemed to be registered on a national securities exchange if it is traded thereon as an exempted security from the operation of Section 12(a) of the Securities Exchange Act of 1934 by the provisions thereof or of any rule of the SEC thereunder.

(c) A security shall cease to be an Eligible Security whenever, in the case either of a common stock, long-term warrant, right or preferred stock: (A) Such

security does not substantially meet the requirements from time to time in effect for continued listing on the NYSE (as to Network A) or the AMEX (as to Network B); or (B) such security has been suspended from trading on any national securities exchange because the issuer thereof is in liquidation or is in bankruptcy or similar type proceedings; or (C) during the immediately preceding twelve-month period less than 25% of the transactions in that security effected in the United States through brokers or dealers have been executed on national securities exchanges (in the aggregate), provided however that this standard shall not apply to Eligible Securities which have been listed for less than twelve months nor shall it apply to preferred stocks; or (D) such security is no longer registered or admitted to trading on any national securities exchange.

(d) It is recognized that the approval of securities for listing on national securities exchanges involves a substantial element of judgment on the part of exchange officials and that similar judgment is to be applied in determining whether a security should be included on the consolidated tape. The determination as to whether a security substantially meets the criteria set forth in this Section VI for defining Eligible Securities shall be made by the national securities exchange on which such security is registered or admitted to unlisted trading; provided, however, that if such security

is registered or admitted to unlisted trading privileges on more than one national securities exchange, then such determination shall be made by the national securities exchange on which the majority of the transactions in such security were effected during the previous twelve-month period. If the SEC shall find that any such determination is improper, it may require that such security be deemed not to be an Eligible Security for the purposes of the Plan.

(e) Each national securities exchange (other than the NYSE or AMEX) shall, promptly following commencement of Phase I, furnish CTA and the SEC with appropriate data concerning all securities traded on such exchange which are believed to meet the above requirements for inclusion on the consolidated tape as Eligible Securities. Thereafter, each national securities exchange (other than the NYSE or AMEX) shall furnish CTA and the SEC with data concerning securities listed on such exchange which are to be included in the future as Eligible Securities on the consolidated tape. Each national securities exchange may from time to time be required by CTA to furnish it with data concerning Eligible Securities traded on such exchange.

VII. Collection and Reporting of Last Sale Data.

(a) The NYSE, AMEX, MSE, PSE and the PBW will each collect and report to the Processor all last sale prices to be reported by it relating to transactions in Eligible Securities taking place on its floor. In addition, the NASD shall collect from its members all last sale prices

to be included in the consolidated tape relating to transactions in Eligible Securities not taking place on the floor of a national securities exchange and shall report all such last sale prices to the Processor in accordance with the provisions of subsection (b) of this Section VII. It will be the responsibility of each Participant and each other reporting party, as defined in Section II(c) hereof, to (i) report all last sale prices in Eligible Securities as promptly as possible, (ii) establish and maintain collection and reporting procedures and facilities such as to assure that under normal conditions not less than 90% of such last sale prices will be reported within that period of time (not in excess of one and one-half minutes) after the time of execution as may be determined by CTA from time to time in light of experience, and (iii) designate as "late" any last sale price not collected and reported in accordance with the above-referenced procedures or as to which the reporting party has knowledge that the time interval after the time of execution is significantly greater than the time period referred to above. CTA shall seek to reduce the time period for reporting last sale prices to the Processor as conditions warrant.

(b) The NASD will develop and adopt rules governing the reporting of last sale prices in Eligible

Securities to be reported by its members to the Processor for inclusion on the consolidated tape. Such rules shall (i) specify the NASD member having responsibility for reporting each particular transaction, (ii) be designed to avoid duplicate reporting of transactions on the consolidated tape, and (iii) specify procedures for determining the price to be reported with respect to each particular transaction. After such rules have been adopted by the NASD, a description thereof will be filed as an amendment to the Plan. Such amendment is to be filed prior to the commencement of Phase I.

(c) The last sale price reflecting a transaction in an Eligible Security reported by any Participant or any other reporting party, which last sale price is established by a report back from any other market due to a "split order" execution (i.e., an execution in two markets when the specialist or market-maker in the market first receiving the order agrees to execute a portion of it at whatever price is realized in another market to which the balance of the order is forwarded for execution) shall, when reported to the Processor, be identified by use of an appropriate symbol (as determined by CTA), and shall be shown on the consolidated tape with such symbol.

(d) Each Participant and each other reporting party shall prepare and submit to CTA (and furnish to the

SEC for its information, but not as part of the Plan) prior to commencement of Phase I, a description of the procedures by which it intends to collect and report to the Processor last sale prices in Eligible Securities to be reported by it pursuant to the Plan. Thereafter, any material revisions to such procedures shall be promptly reported to CTA (and similarly furnished to the SEC).

VIII. Dissemination of Consolidated Tape.

(a) The last sale prices as consolidated by the Processor, relating to Eligible Securities registered on the NYSE, shall be disseminated over Network A and to the Vendors who may from time to time have contracts, executed by NYSE on behalf of all Network A Participants, permitting such Vendors to input such stream of data into their computers and develop a data base therefrom which is to be used for the purpose of (i) responding to specific inquiries for last sale prices of Eligible Securities disseminated over Network A or (ii) reporting as they occur changes in last sale prices of a limited number of specific Eligible Securities disseminated over Network A. (Any device designed to perform, whether alone or together with other functions, the function described in either clause (i) or (ii), or both, of the preceding sentence is hereinafter referred to as an "interrogation device".) Vendors will not be permitted to retransmit on a continuous basis the

consolidated last sale prices received by them, except as may be incidental to the operation of approved interrogation devices or display devices. The term "Vendor" as used in the Plan shall include any person (other than the Processor) engaged in the business of disseminating or displaying to brokers and dealers or others on a real time or other current basis, reports of transactions in Eligible Securities whether or not such dissemination or display includes all such reports disseminated by the Processor.

NYSE will also, on behalf of all Network A Participants, enter into appropriate agreements with Vendors permitting them to install in the offices of approved subscribers any approved devices for the purpose of displaying last sale prices disseminated over Network A to the office or building in which such subscriber is located. (Any such device is hereinafter referred to as a "display device" or "tape display device".)

NYSE will also, on behalf of all Network A Participants, enter into appropriate agreements with news services and others permitting such recipients of last sale prices disseminated over Network A to compile and disseminate stock tables, or to otherwise use such prices in an appropriate manner in their own business, such as pricing their securities portfolios.

(b) The last sale prices as consolidated by the Processor, relating to all Eligible Securities other than those disseminated over Network A, shall be disseminated over Network B and to the Vendors who may from time to time have contracts, executed by AMEX on behalf of all Network B Participants, permitting such Vendors to input such stream of data into their computers and develop a data base therefrom which is to be used for the purpose of (i) responding to specific inquiries for last sale prices of Eligible Securities disseminated over Network B or (ii) reporting as they occur changes in last sale prices of a limited number of specific Eligible Securities disseminated over Network B. (Any device designed to perform, whether alone or together with other functions, the function described in either clause (i) or (ii), or both, of the preceding sentence is hereinafter referred to as an "interrogation device".) Vendors will not be permitted to retransmit on a continuous basis the consolidated last sale prices received by them, except as may be incidental to the operation of approved interrogation devices or display devices.

AMEX will also, on behalf of all Network B Participants, enter into appropriate agreements with Vendors permitting them to install in the offices of approved subscribers any approved display devices for the purpose of

displaying last sale prices disseminated over Network B to the office or building in which such subscriber is located. (Any such device is hereinafter referred to as a "display device" or "tape display device".)

AMEX will also, on behalf of all Network B Participants, enter into appropriate agreements with news services and others permitting such recipients of last sale prices disseminated over Network B to compile and disseminate stock tables or to otherwise use such prices in an appropriate manner in their own business, such as pricing their securities portfolios.

(c) All Vendors, all devices marketed by Vendors (whether an interrogation device which is not dependent upon Network A or B or a display device which is dependent upon the appropriate Network), all functions of any interrogation device or display device insofar as they display or are based upon last sale prices of Eligible Securities as disseminated by the Processor, and all forms of contracts or agreements referred to in subsection (a) or (b) of this Section VIII (unless attached in approved form as an exhibit to this Plan) shall be required to be approved by CTA and the last sale prices as consolidated by the Processor shall not be furnished to any party except pursuant to a contract or agreement in form approved by CTA. All decisions to

terminate prior approvals or to amend forms of contracts or agreements shall be made by CTA. Except as hereinafter provided, all actions of CTA approving, disapproving or terminating prior approval of Vendors, Vendors' devices, or functions will be final and conclusive on all Participants and other reporting parties. Any Vendor, proposed Vendor or terminated Vendor aggrieved by any final decision of CTA may petition the SEC for review of such CTA decision in accordance with the rules and regulations of the SEC. Notwithstanding the provisions of this subsection (c) no contract with any Vendor shall be approved by CTA or entered into on behalf of the Participants if it is inconsistent with or in derogation of any other provision of the Plan.

(d) Every subscriber receiving the last sale prices being disseminated by NYSE over Network A immediately prior to full implementation of the consolidated tape, whether by way of a ticker tape or tape display device in the office of such subscriber or through an interrogation device located in such office, shall be eligible to receive in the same manner the consolidated last sale prices to be disseminated over Network A under the Plan upon signing an agreement, substantially in the form attached hereto as Exhibit C, with NYSE acting on behalf of all Network A Participants.

Every subscriber receiving the last sale prices being disseminated by AMEX over Network B immediately prior to full implementation of the consolidated tape whether by way of a ticker tape or tape display device in the office of such subscriber or through an interrogation device located in such office, shall be eligible to receive in the same manner the consolidated last sale prices to be disseminated over Network B under the Plan upon signing an agreement, substantially in the form attached hereto as Exhibit C, with AMEX acting on behalf of all Network B Participants.

Thereafter, every new subscriber to the consolidated tape who is to receive consolidated last sale prices reported over Network A, whether by way of a ticker tape or tape display device in the office of such subscriber or through an interrogation device located in such office, shall submit an application therefor to NYSE and shall execute an agreement, substantially in the form attached hereto as Exhibit C, with NYSE acting on behalf of all Network A Participants; and every new subscriber who is to receive consolidated last sale prices reported over Network B, whether by way of a ticker tape or tape display device in the office of such subscriber or through an interrogation device located in such office, shall submit an application therefor to AMEX and shall execute an agreement, substantially in the form

attached hereto as Exhibit C, with AMEX acting on behalf of all Network B Participants.

(e) Whenever either NYSE or AMEX initially determines not to approve the application of any proposed subscriber or to terminate its approval of any subscriber, the matter will be referred to CTA for final decision before any action is taken. CTA may disapprove the application of any proposed subscriber or terminate any subscriber to the consolidated tape whenever it shall determine that (i) such disapproval or termination is necessary or appropriate in the public interest or for the protection of investors, or (ii) such subscriber has breached any agreement pursuant to which he receives consolidated last sale prices. Any disapproved applicant or terminated subscriber aggrieved by any such final decision of CTA may petition the SEC for review of such CTA decision in accordance with the rules and regulations of the SEC.

(f) As referred to above, in order to conserve tape capacity and to help prevent or deter tape lateness, the last sale prices of transactions in Eligible Securities effected on the NYSE or the AMEX will not be accompanied by any symbol identifying the market of execution when disseminated by the Processor. (The absence of any such identifying symbol will itself serve to identify the

market of execution as either NYSE or AMEX.) Except to the extent permitted by an effective exemption granted by the SEC as hereinafter referred to, every form of contract with a Vendor relating to any approved interrogation device through which a subscriber is able to obtain any consolidated last sale price shall provide that, commencing upon the implementation of Phase II, such interrogation device shall be capable of displaying the most recent last sale price as disseminated by the Processor, regardless of the market where such sale took place, accompanied by a symbol identifying the market of execution (except as to the transactions effected on the NYSE or AMEX as referred to above). As to interrogation devices in use on the effectiveness of this Plan which cannot be modified at reasonable cost so as to have the capability of displaying the most recent last sale price as above provided, (a) the SEC may, on application of the Vendor marketing such device and after consulting with the CTA, exempt such Vendor from the provisions of Rule 17a-15, but only with respect to interrogation devices of the type in use on the effectiveness of this Plan, such exemption to continue for such period of time and to be granted on such terms and conditions as the SEC deems necessary or appropriate in the public interest or for the protection of investors and (b) the Vendor shall be permitted to continue to market and

service such interrogation devices provided they display consolidated last sale prices in a manner which satisfies the interpretation of the SEC as published in Securities Exchange Act Release No. 10388 (September 12, 1973). Notwithstanding any such exemption, except to the extent permitted by clause (b) of the preceding sentence, no interrogation device through which a subscriber is able to obtain any last sale price shall be approved unless its method of operation is such that the user of such device is able to identify the particular market which reported any last sale price displayed.

(g) Subject to any exemption granted by the SEC as referred to in Section VIII (f) hereof, each contract or agreement referred to in subsection (a) or (b) of this Section VIII entered into with a Vendor shall provide that such Vendor shall make available to its approved subscribers consolidated last sale prices from all reporting markets in any Eligible Security reported on by such Vendor and shall also provide that such Vendor shall not exclude any last sale prices received from the Processor based upon the market in which a transaction was executed. Every such contract or agreement entered into with any subscriber shall provide that such subscriber shall not exclude any last sale price of any Eligible Security received by it over Network A or Network B or provided to it by a Vendor based upon the

market in which a transaction was executed and each such subscriber shall also agree that any public display of selected last sale prices (that is to say any display that may be seen by customers or prospective customers of the subscriber) must be clearly identified as only reporting selected transactions classified as to size, category of security or other criteria.

(h) All contracts or agreements referred to in subsection (a) or (b) or (d) of this Section VIII shall by their terms be subject at all times to applicable provisions of the Securities Exchange Act of 1934, as amended, and the rules and regulations thereunder.

IX. Format of all Information to be Shown on Consolidated Tape. The format of all information to be shown on the consolidated tape will be reflected in a manual developed by technical representatives of the Participants and the Processor, and the initial form of such manual is being furnished to the SEC herewith for its information, but not as part of the Plan. CTA shall have the authority to review the format of such information and make changes therein from time to time as it deems necessary for the efficient operation of the consolidated tape. Notwithstanding the foregoing, CTA shall not have the authority to change the format of any such information in any manner which is inconsistent with or in derogation of any provision of the Plan. A copy of the aforementioned manual, as amended from time to time,

will be made available to the SEC and on request to Vendors and other interested parties.

X. Operational Matters. (a) Whenever the primary market for any Eligible Security, in the exercise of its regulatory functions, halts or suspends trading in such Security because such primary market has determined (i) that there are matters relating to such Security or the issuer thereof which have not been adequately disclosed to the public, or (ii) that there are regulatory problems relating to such Security which should be clarified before trading therein is permitted to continue, such primary market shall promptly notify each other Participant which conducts trading in such Security and the Processor, by wire or voice communication, of such halt or suspension and of the reasons therefor. During the period of any such halt or suspension in trading in any Eligible Security by the primary market therefor, the consolidated tape shall not include any reports of last sale prices in such Security, but each Participant which continues to conduct trading in such security during the period of any such halt or suspension shall continue to report to the Processor the last sale prices reflecting transactions in such security occurring during such period for the purpose of maintaining a record thereof; provided, however, that

during the period of any such halt or suspension of trading, the SEC may determine that such exclusion of reports from the consolidated tape is no longer necessary for the maintenance of fair and orderly markets, the public interest or the protection of investors and upon being notified by the SEC of such determination, the primary market shall notify the Processor to commence including on the consolidated tape reports of last sale prices which continue to be reported to it during the period of such halt or suspension. Simultaneously with, or promptly following the commencement of trading in any Eligible Security, trading in which has been so halted or suspended by the primary market therefor, such primary market shall promptly notify each of the other Participants which conduct trading in such Security and the Processor, by wire or voice communication, of such fact. After the close of the market or at some other appropriate time on the date such halt or suspension is terminated, the Processor shall include on the consolidated tape the last sale prices (or a summary thereof) which were reported to it during such halt or suspension with respect to such Security and which have not been disseminated by the Processor. Nothing herein shall be deemed to prevent any Participant which is not the primary market for any particular Eligible Security to halt or suspend trading in such Security for any reason deemed adequate by it and

any such Participant which so halts or suspends trading shall promptly notify each other Participant which conducts trading in such Security, by wire or voice communication, of such halt or suspension and of the reasons therefor. In addition each Participant which is not the primary market in any particular Eligible Security shall use its best efforts to notify promptly the primary market for such Security whenever it has knowledge of any matter relating to such Security or the issuer thereof which has not been adequately disclosed to the public or whenever it has knowledge of a regulatory problem relating to such Security which it believes should be brought to the attention of the primary market to assist in determining whether or not trading in such Security in the primary market should be halted or suspended.

Whenever any Participant halts or suspends trading in an Eligible Security traded through the facilities of such Participant because of current market conditions relating to the trading of such Security through the facilities of such Participant, it may notify the Processor and request the Processor to disseminate a message to that effect on the consolidated tape. In such case, the Participant requesting the dissemination of such message shall, if reasonably practicable, notify each of the other Participants which conduct trading in such Security, by wire or voice communication, of such trading halt or suspension and the reasons

therefor. During such trading halt or suspension, the Processor shall continue to include any reports of last sale prices in such Security received from other Participants on the consolidated tape.

For the purposes of this Section X the primary market for any Eligible Security shall be that Exchange Participant in whose market the greatest number of transactions in such Eligible Security reported on the consolidated tape during the preceding six month period (or such shorter period if the Security has not been reported on the consolidated tape for a full six month period) has taken place.

(b) The Processor shall disseminate last sale prices reported to it relating to Eligible Securities during the hours any Participant which regularly reports to the Processor during the full trading day 51% or more of the last sale prices reported over Network A or Network B is open for trading. In addition, the Processor shall disseminate such prices at other times (the "additional period") during which any exchange which is a Participant is open for trading; provided, however, that the Processor shall not disseminate such prices during the additional period unless the Participant or Participants which report prices to the Processor for dissemination during the additional period have agreed to pay all costs and expenses which would not have been incurred in the generation or dissemination of the consolidated tape had the Processor not disseminated

last sale prices reported to it during the additional period, including the cost of operating that portion of the equipment associated with the generation or dissemination of the consolidated tape during the additional period as is utilized for such purpose during such period, such cost to be an allocated portion of the total cost of operating such portion of such equipment during a 22 hour operating day (the total of such costs and expenses being hereinafter referred to as "additional period costs and expenses").

XI. Financial Matters.

(a) The Participants which report last sale prices for dissemination over Network A (the Network A Participants) agree that, commencing on the Commencement Date as hereinafter defined, they and the other reporting parties which are national securities exchanges shall share in the income and expenses of the consolidated tape to be disseminated over Network A (the Network A consolidated tape) in accordance with the following provisions of this subsection (a). (Such Participants and other reporting parties are hereinafter referred to as the Network A Contributors.) For the purposes of this subsection (a), the term "Network A Commencement Date" shall mean the first day of the calendar month first following full implementation under Phase II of the Network A consolidated tape; the term "first calendar year" shall mean the period commencing on the Network A Commencement Date and ending the following December 31; and the terms "calendar year" and "calendar years" shall be deemed to include the

first calendar year as well as each subsequent calendar year.

(i) Each Participant and each other reporting party, as defined in Section II(c), shall be responsible for paying the full cost and expense (without any reimbursement or sharing) incurred by it in collecting and reporting to the Processor in New York City last sale prices of Eligible Securities disseminated over Network A (the Network A Eligible Securities).

(ii) The "Annual Share" of any Network A Contributor reporting last sale prices of Network A Eligible Securities to the Processor shall be determined for each calendar year following the Network A Commencement Date and shall be determined as of the end of such calendar year. The Annual Share of any Network A Contributor shall consist of a fraction, the numerator of which shall be the total number of last sale prices of Network A Eligible Securities reported by such Contributor (excluding corrections) to the Processor after the Network A Commencement Date and disseminated over Network A during the calendar year as of the end of which such determination is being made and the denominator of which shall be the total number of last sale prices of Network A Eligible Securities reported by all Network A Contributors (excluding corrections) to the Processor after the Network A Commencement Date and disseminated over Network A during such calendar year.

(iii) The Processor and/or NYSE shall maintain appropriate records reflecting (a) gross income received by NYSE on behalf of all Network A Contributors from all parties (including subscribers, Vendors and others as referred to in Section VIII) in return for the privilege of receiving after the Network A Commencement Date the consolidated last sale prices of Eligible Securities disseminated over Network A, and (b) all operating expenses attributable to the period following the Network A Commencement Date and associated with the generation or dissemination of the Network A consolidated tape, such expenses to include all costs and expenses (including appropriate overhead costs and all applicable taxes however designated, exclusive of net income taxes) of NYSE or the Processor associated with, relating to, or resulting from, receiving, sequencing, storing, validating and transmitting the reports of consolidated last sale prices of Eligible Securities disseminated over Network A as provided in the Plan, but not to include any cost or expense incurred by NYSE in collecting or reporting to the Processor last sale prices of Network A Eligible Securities as referred to in clause (i), or associated with its market surveillance function.

Operating expenses associated with the generation or dissemination of the Network A consolidated tape shall include two-thirds of the total amount of all costs incurred subsequent to January 1, 1973 by NYSE, AMEX or the Processor in developing and improving the computer software and installing hardware as necessary for the operation of the Network A consolidated tape, the Network B consolidated tape, and the high speed line referred to in Section V(e) hereof, such portion of such total amount being hereinafter referred to as the "Network A software and hardware costs". For the purpose of the foregoing sentence, "computer software" shall include all programs or routines developed to cause computers to perform tasks required for consolidated tape operations and the documentation required to describe and maintain those programs. Computer programs of all classes, for example, operating systems, executive systems, monitors, compilers and translators, assembly routines, and utility programs as well as application programs shall be included. "Installing hardware as necessary" shall include, but shall not be limited to, installation and modification of all communications and computer facilities required to support Network A, Network B or the high speed line referred to in Section V(e) hereof. The Network A software and hardware costs incurred during the period from January 1, 1973 to the Network A

Commencement Date shall be apportioned between the first two calendar years as follows:

(A) operating expenses attributable to the first calendar year shall include an amount equal to the product obtained by multiplying the Network A software and hardware costs incurred during the period from January 1, 1973 to the Network A Commencement Date by a fraction, the numerator of which shall be the number of calendar months in the first calendar year and the denominator of which shall be twelve;

(B) the remainder of the Network A software and hardware costs incurred during the period from January 1, 1973 to the Network A Commencement Date shall be included in operating expenses attributable to the second calendar year.

Operating expenses associated with the generation or dissemination of the Network A consolidated tape shall not include any cost or expense incurred by any Network A Contributor as the result of or in connection with the defense of any claim, suit or proceeding against CTA, the Plan or any one or more Participants, relating to the Plan or the dissemination or generation of the consolidated tape as contemplated by the Plan and all such costs and expenses incurred by any Network A Contributor shall be borne by such Contributor without contribution or reimbursement;

provided, however, that nothing herein shall affect or impair any right of indemnification included in any contract referred to in Section IV(c) hereof.

(iv) From the gross income received by NYSE as referred to in clause (iii) above attributable to any calendar year following the Network A Commencement Date there shall be deducted the total of all operating expenses as referred to in clause (iii) above and attributable to such calendar year. The balance remaining after such deduction shall be the "net income" of the Network A consolidated tape attributable to such calendar year.

The net income of the Network A consolidated tape attributable to each of the first five calendar year following the Network A Commencement Date shall be distributed among the Network A Contributors as follows:

First, the NYSE shall receive the first \$1,120,000 of such net income;

Second, each Network A Contributor shall receive such portion of any remaining balance as is equal to such Contributor's Annual Share as determined for such calendar year.

In the event the net income of the Network A consolidated tape attributable to any of the first five calendar year following the Network A Commencement Date shall be less than

\$1,120,000, there shall be no distribution thereof to any Network A Contributor other than NYSE. In the event such net income attributable to any such calendar year is a negative (below zero) amount, the NYSE shall bear such deficit without contribution from any other Network A Contributor and, for income tax purposes, any net operating loss reflected in such deficit shall be allocated in its entirety to NYSE.

The net income of the Network A consolidated tape attributable to any calendar year subsequent to the fifth calendar year following the Network A Commencement Date shall be distributed among the Network A Contributors according to their respective Annual Shares as determined for such calendar year, except that if with respect to the first calendar year the net income of the Network A consolidated tape distributed to NYSE shall be less than \$1,120,000, then in the sixth calendar year the NYSE shall be entitled to receive from the net income of the Network A consolidated tape attributable to such sixth calendar year, before any distributions to the Network A Contributors based on their respective Annual Shares, an amount equal to the lesser of (A) the difference between the amount of the net income received by NYSE in the first calendar year and \$1,120,000, or (B) the product obtained by multiplying the

net income attributable to the sixth calendar year by a fraction, the numerator of which shall be the difference between the number of calendar months in the first calendar year and twelve and the denominator of which shall be twelve.

In the event the net income of the Network A consolidated tape attributable to any calendar year subsequent to the fifth calendar year following the Network A Commencement Date is a negative (below zero) amount, each Network A Participant shall pay, in cash, promptly following billing therefor, its share of such deficit, such share to be such amount as bears the same relationship to such deficit as such Network A Participant's Annual Share for such calendar year bears to the total of all Annual Shares of all Network A Participants for such calendar year.

If Network A Eligible Securities are disseminated by the Processor during the additional period as defined in Section X(b) hereof, then operating expenses associated with the generation or dissemination of the Network A consolidated tape as referred to in the foregoing provisions of this subsection shall not include any additional period costs and expenses associated with the generation or dissemination of the Network A consolidated tape and all such additional period costs and expenses, as determined by the Processor and/or NYSE,

shall be allocated among the Network A Participants which reported last sale prices of Network A Eligible Securities for dissemination during the additional period on an appropriate pro rata basis and shall be billed to such participants not less frequently than once each calendar year.

The Processor, NYSE and the independent public accountants (hereinafter referred to) shall furnish any information and/or documentation reasonably requested in writing by a majority of the Network A Participants (other than NYSE) in support of or relating to any of the computations referred to in this subsection (a). All revenues, expenses, allocations and computations referred to or required by this subsection (a) shall be reported at least annually to the Network A Participants by a firm of independent public accountants (which may be the firm regularly employed by NYSE or the Processor), and such accountants shall render their opinion that all such revenues, expenses, allocations and computations have been reported in accordance with the understanding among the Network A Participants. A copy of each such report shall also be furnished to the SEC for its

information.

(b) The Participants which report last sale prices for dissemination over Network B (the Network B Participants) agree that, commencing on the Commencement Date, they and the other reporting parties which are national securities exchanges shall share in the income and expenses of the consolidated tape to be disseminated over Network B (the Network B consolidated tape) in accordance with the following provisions of this subsection (b). (Such Participants and other reporting parties are hereinafter referred to as the Network B Contributors.) For the purposes of this subsection (b), the term "Network B Commencement Date" shall mean the first day of the calendar month first following full implementation under Phase II of the Network B consolidated tape; the term "first calendar year" shall mean the period commencing on the Network B Commencement Date and ending the following December 31; and the terms "calendar year" and "calendar years" shall be deemed to include the first calendar year as well as each subsequent calendar year.

(i) Each Participant and each other reporting party, as defined in Section II(c), shall be responsible for paying the full cost and expense (without any reimbursement or sharing) incurred by it in collecting and reporting to the Processor in New York City last sale prices of Eligible Securities disseminated over Network B (the Network B Eligible Securities).

(ii) The "Annual Share" of any Network B Contributor reporting last sale prices of Network B Eligible Securities to the Processor shall be determined for each calendar year following the Network B Commencement Date and shall be determined as of the end of such calendar year. The Annual Share of any Network B Contributor shall consist of a fraction, the numerator of which shall be the total number of last sale prices of Network B Eligible Securities reported by such Contributor (excluding corrections) to the Processor after the Network B Commencement Date and disseminated over Network B during the calendar year as of the end of which such determination is being made and the denominator of which shall be the total number of last sale prices of Network B Eligible Securities reported by all Network B Contributors (excluding corrections)

to the Processor after the Network B Commencement Date and disseminated over Network B during such calendar year.

(iii) The processor and/or AMEX shall maintain appropriate records reflecting (a) gross income received by AMEX on behalf of all Network B Contributors from all parties (including subscribers, Vendors and others as referred to in Section VIII) in return for the privilege of receiving after the Network B Commencement Date the consolidated last sale prices of Eligible Securities disseminated over Network B, and (b) all operating expenses attributable to the period following the Network B Commencement Date and associated with the generation or dissemination of the Network B consolidated tape, such expenses to include all costs and expenses (including appropriate overhead costs and all applicable taxes however designated, exclusive of net income taxes) of AMEX or the Processor associated with, relating to, or resulting from, receiving, sequencing, storing, validating and transmitting the reports of consolidated last sale prices of Eligible Securities disseminated over Network B as provided in the Plan, but not to include any cost or expense incurred by AMEX in collecting or reporting to the Processor last sale prices of

Network B Eligible Securities as referred to in clause (i), or associated with its market surveillance function.

Operating expenses associated with the generation or dissemination of the Network B consolidated tape shall include one-third of the total amount of all costs incurred subsequent to January 1, 1973 by NYSE, AMEX or the Processor in developing and improving the computer software and installing hardware as necessary for the operation of the Network A consolidated tape, the Network B consolidated tape, and the high speed line referred to in Section V(e) hereof, such portion of such total amount being hereinafter referred to as the "Network B software and hardware costs". For the purpose of the foregoing sentence "computer software" shall include all programs or routines developed to cause computers to perform tasks required for consolidated tape operations and the documentation required to describe and maintain those programs. Computer programs of all classes, for example, operating systems, executive systems, monitors, compilers and translators, assembly routines, and utility programs as well as application programs shall be included. "Installing hardware as necessary" shall include, but shall not be limited to, installation and modification of all communications and computer facilities required to support Network A, Network B or the high speed line

referred to in Section V(e) hereof. The Network B software and hardware costs incurred during the period from January 1, 1973 to the Network B Commencement Date shall be apportioned between the first two calendar years as follows:

(A) operating expenses attributable to the first calendar year shall include an amount equal to the product obtained by multiplying the Network B software and hardware costs incurred during the period from January 1, 1973 to the Network B Commencement Date by a fraction, the numerator of which shall be the number of calendar months in the first calendar year and the denominator of which shall be twelve;

(B) the remainder of the Network B software and hardware costs incurred during the period from January 1, 1973 to the Network B Commencement Date shall be included in operating expenses attributable to the second calendar year.

Operating expenses associated with the generation or dissemination of the Network B consolidated tape shall not include any cost or expense incurred by any Network B Contributor as the result of or in connection with the defense of any claim, suit or proceeding against CTA, the Plan or any one or more Participants, relating to the Plan or the dissemination or generation of the consolidated tape as contemplated by the Plan and all such costs and expenses incurred by any Network B Contributor shall be

borne by such Contributor without contribution or reimbursement; provided, however, that nothing herein shall affect or impair any right of indemnification included in any contract referred to in Section IV(c) hereof.

(iv) From the gross income received by AMEX as referred to in clause (iii) above attributable to any calendar year following the Network B Commencement Date there shall be deducted the total of all operating expenses as referred to in clause (iii) above and attributable to such calendar year. The balance remaining after such deduction shall be the "net income" of the Network B consolidated tape attributable to such calendar year.

The net income of the Network B consolidated tape attributable to each of the first five calendar years following the Network B Commencement Date shall be distributed among the Network B Contributors as follows:

First, the AMEX shall receive the first \$200,000 of such net income;

Second, each Network B Contributor shall receive such portion of any remaining balance as is equal to such Contributor's Annual share as determined for such calendar year.

In the event the net income of the Network B consolidated tape attributable to any of the first five calendar years following the Network B Commencement Date shall be less

than \$200,000, there shall be no distribution thereof to any Network B Contributor other than AMEX. In the event such net income attributable to any such calendar year is a negative (below zero) amount, the AMEX shall bear such deficit without contribution from any other Network B Contributor and, for income tax purposes, any net operating loss reflected in such deficit shall be allocated in its entirety to AMEX.

The net income of the Network B consolidated tape attributable to any calendar year subsequent to the fifth calendar year following the Network B Commencement Date shall be distributed among the Network B Contributors according to their respective Annual Shares as determined for such calendar year, except that if with respect to the first calendar year the net income of the Network B consolidated tape distributed to AMEX shall be less than \$200,000, then in the sixth calendar year the AMEX shall be entitled to receive from the net income of the Network B consolidated tape attributable to such sixth calendar year, before any distributions to the Network B Contributors based on their respective Annual Shares, an amount equal to the lesser of (A) the difference between the amount of the net income received by AMEX in the first calendar year and \$200,000, or (B) the product obtained by multiplying

the net income attributable to the sixth calendar year by a fraction, the numerator of which shall be the difference between the number of calendar months in the first calendar year and twelve and the denominator of which shall be twelve. In the event the net income of the Network B consolidated tape attributable to any calendar year subsequent to the fifth calendar year following the Network B Commencement Date is a negative (below zero) amount, each Network B Participant shall pay, in cash, promptly following billing therefor, its share of such deficit, such share to be such amount as bears the same relationship to such deficit as such Network B Participant's Annual Share for such calendar year bears to the total of all Annual Shares of all Network B Participants for such calendar year.

If Network B Eligible Securities are disseminated by the Processor during the additional period as defined in Section X(b) hereof, then operating expenses associated with the generation or dissemination of the Network B consolidated tape as referred to in the foregoing provisions of this subsection shall not include any additional period costs and expenses associated with the generation or dissemination of the Network B consolidated tape and all such additional period costs and expenses, as determined by the Processor and/or the AMEX, shall be allocated among the Network B Participants which reported last sale prices of Network B Eligible Securities for dissemination during the

additional period on an appropriate pro rata basis and shall be billed to such participants not less frequently than once each calendar year.

The Processor, AMEX and the independent public accountants (hereinafter referred to) shall furnish any information and/or documentation reasonably requested in writing by a majority of the Network B Participants other than AMEX in support of or relating to any of the computations referred to in this subsection (b). All revenues, expenses, allocations and computations referred to or required by this subsection (b) shall be reported at least annually to the Network B Participants by a firm of independent public accountants (which may be the firm regularly employed by AMEX or the Processor), and such accountants shall render their opinion that all such revenues, expenses, allocations and computations have been reported in accordance with the understanding among the Network B Participants. A copy of each such report shall also be furnished to the SEC for its information.

(C) Charges to subscribers, Vendors and others for the privilege of receiving current consolidated last sale prices disseminated over Network A following commencement of Phase II shall initially be the same as the

charges imposed for the privilege of receiving the last sale prices of NYSE disseminated over Network A immediately preceding the commencement of Phase II. Charges to subscribers, Vendors and others for the privilege of receiving current consolidated last sale prices disseminated over Network B following commencement of Phase II shall initially be the same as the charges imposed for the privilege of receiving the last sale prices of AMEX disseminated over Network B immediately preceding the commencement of Phase II. Such charges as in effect at the commencement of Phase II will be furnished to CTA and the SEC. Any additions, deletions or modifications in any such charges following the commencement of Phase II shall be established by amendment to the Plan adopted and filed as provided in Section III(b) hereof.

XII. Phase I Pilot Program. The Participants recognize that operating or technical problems may result from the generation of a consolidated tape as described in the foregoing provisions of the Plan. In particular, the receipt of last sale prices from a number

of different market centers and the reporting of those prices on a consolidated tape in the sequence in which received by the Processor may result in sequencing problems. In order to determine whether or not there will, in fact, prove to be a sequencing problem and in order to identify other possible operating or technical problems, the Participants have agreed to conduct a pilot phase of the consolidated tape (Phase I) as provided in this Section XII.

During Phase I the Participants and CTA, with the cooperation of the Processor, will analyze and evaluate the operation of Phase I, including any user reaction they may receive and any problems that may appear. Following such analysis and evaluation the Participants will attempt in good faith to agree on a resolution of any such problems and on any necessary amendments to the Plan, so that full implementation of the consolidated tape as described in the foregoing provisions of the Plan may commence within 40 weeks after the Plan is approved by the SEC. If the Participants are unable to agree on these matters, the areas of disagreement will be reported to the SEC and any Participant shall have the right to withdraw from the Plan and from CTA in the manner described in Section XIII, notwithstanding the provisions

of Section XIII requiring any Participant seeking to withdraw from the Plan to give not less than 6 months written notice of its intention to do so.

Phase I will incorporate into the stream of last sale prices disseminated by the NYSE, the last sale prices of transactions occurring on the MSE, the PSE and the PBW in 15 selected common stocks listed and registered on the NYSE and traded on one or more of the MSE, the PSE and the PBW. (The MSE, the PSE and the PBW, for purposes of this Section XII are collectively referred to as "pilot participants", and each is individually referred to as a "pilot participant". In addition, provided the description of reporting procedures referred to in Section VII(b) hereof has been furnished and has become a part of the Plan prior to the implementation of Phase I, the NASD shall also be a "pilot participant".) The 15 common stocks to be selected for inclusion in Phase I will be selected by the pilot participants which are national securities exchanges and will include at least 10 of the most active dually-traded issues.

Phase I is expected to operate for up to twenty weeks. During Phase I each pilot participant

which is a national securities exchange will report to the Processor each last sale price occurring on the reporting exchange in any of the 15 stocks chosen for Phase I. During such period the NASD (provided it is a pilot participant) will collect from each of four of its members registered with it as "market makers" each last sale price reflecting a transaction in any of such 15 stocks effected by such market maker, whether as broker or dealer, and will report all such information collected to the Processor. (In order to avoid duplicate reporting, if one market maker effects a transaction during Phase I in any of the 15 selected stocks with another of the participating market makers, the selling market maker shall report the transaction.) The last sale price reports received by the Processor from each pilot participant will be merged into and reported on the NYSE last sale price ticker network and will be identified as to the market of execution.

The Processor will receive last sale price reports with respect to the 15 selected stocks during Phase I by extracting them from the existing ticker transmissions provided by each pilot participant which is a national

securities exchange. The NASD will report last sale prices to the Processor by means of a printer. In the event of disruption of any such transmission, last sale prices will be reported to the Processor by each pilot participant by means of voice communication over a private telephone line or by a private line teletypewriter circuit. In any event each pilot participant agrees that any last sale price reported to the Processor more than one and one-half minutes after the time of execution of the transaction being reported will be labeled as "late" when reported to the Processor so that it may be designated on the consolidated tape as being a late report.

During Phase I the Processor will receive the last sale reports from each pilot participant and will time stamp each such report as received. Each pilot participant which is a national securities exchange reporting last sale prices during Phase I shall time stamp each transaction reported in accordance with its current practices. NASD members reporting transactions through NASD as referred to above during Phase I shall prepare a time stamp record of the time of execution of each transaction reported. All such time stamped records shall be available upon request to assist in the evaluation of Phase I.

Last sale prices received from pilot participants by the Processor during Phase I, in addition to being time

stamped as received, will be assigned the appropriate alphabetic symbol designating the reporting market, will be visually checked to be sure volume in round lots has been reported and the correct symbol for one of the 15 selected stocks has been included in the report and that a price has also been reported. When this has been done the last sale report will be recorded into machine-readable format and will thereupon be promptly introduced into the last sale data stream then being disseminated over the NYSE ticker network, and to Vendors. It is expected that the average elapsed time between receipt of the last sale price report from a pilot participant and its introduction into the last sale ticker data stream will approximate 30 seconds. Each pilot participant will be allowed one and one-half minutes after the time of execution within which to furnish the last sale report to the Processor in order that the total elapsed time between execution and dissemination over the NYSE ticker network (absent any tape lateness) will be a maximum of two minutes.

During Phase I the correction message formats currently in use with respect to the NYSE ticker network will continue to be applied to any error, cancellation or correction message required to be transmitted. It will be the responsibility of each reporting source to identify

any trade previously reported by it which it wishes to have corrected or cancelled on the consolidated tape.

The last sale reports received during Phase I from any pilot participant will appear on the consolidated tape in a format similar to that presently in use on the NYSE ticker network except that each such report will be accompanied by the appropriate alphabetic symbol identifying the market of execution, which identifying symbol will follow and be separated from the stock symbol by a separation character.

The tape deletion modes currently in use with respect to the NYSE ticker will be continued during Phase I. These modes will not affect in any way the last sale price reports received from any pilot participant and such reports will continue to be printed in full, including the market of execution identifier, during any period when tape deletion modes are in effect.

The last sale price reports received from any pilot participant during Phase I will not be included in the calculation of the NYSE Market Index nor will they affect the NYSE Market Data System, stock range or volume data records maintained within such System.

During Phase I, the consolidated tape prepared as above outlined will, as indicated, be distributed over the ticker network of NYSE. In addition, it will be furnished to all of the other parties who presently receive continuous last sale prices from NYSE, including the Vendors who supply approved subscribers with a variety of interrogation devices which, among other things, on inquiry, display the last sale price at the time of inquiry in a specific stock. While it is recognized that Rule 17a-15 requires each last sale report displayed by an interrogation device to identify the market place where the transaction was executed, the Participants understand that a majority of the inquiry devices presently installed in the field are not capable of displaying the alphabetic symbol identifying the market of execution which will be included on the consolidated tape. To the extent that inquiry devices presently in the field are capable or can be made capable of displaying this information without additional cost to the subscriber, the Vendors will be requested to do so in order that, to the greatest extent practicable, Rule 17a-15 will be complied with even during Phase I. During Phase I the Participants and CTA will investigate the steps that will have to be taken in order that the market of execution may be displayed in all inquiry devices in the field.

The cost of any necessary modifications or replacements as estimated by the Vendors will be considered as will the proposed means of collecting or absorbing such cost.

It may be that during Phase I those inquiry devices which are not capable of displaying the market identifier symbol included on the consolidated tape will, when responding to a request for the last sale price in any of the 15 stocks consolidated in Phase I, display the last sale price of that security as reported by the NYSE.

When implemented, the consolidated tape during Phase I will include only those last sale prices reported to the Processor reflecting transactions executed during the hours of trading on the NYSE.

AMEX anticipates that a pilot of Phase I of the consolidated tape will also be conducted with respect to Network B using selected securities duly traded on AMEX and on one or more of the other Participants.

XIII. Withdrawal. (a) Any Participant after filing with the SEC its own plan, which plan has been declared effective by the SEC pursuant to Rule 17a-15 may withdraw from the Plan as provided in Section XII hereof, or, after filing with the SEC its own plan, which plan has been declared effective by the SEC pursuant to Rule 17a-15, may withdraw from the Plan at any time on not less than six months prior written notice to each of the other Participants and to the Processor; provided, that, in

case of withdrawal on not less than six months' notice, such withdrawing Participant shall remain liable for, and shall pay upon demand, its portion of the Processor's costs of developing the consolidated tape and any other amounts payable by it pursuant to Section XI hereof.

(b) The Participants agree to use their best efforts to (i) to resolve in a manner satisfactory to each Participant and to the SEC, whether, and if so the manner and extent to which, last sale prices in bonds, options or any other type of security (other than Eligible Securities), or any other instrument, traded at any time in the future on any Participant national securities exchange are to be reported to and disseminated by the Processor, and (ii) to file with the SEC an amendment to this Plan resolving these matters not later than June 7, 1974.

If these matters are not resolved in a manner satisfactory to any Participant as hereinabove provided, such Participant may, notwithstanding the provisions of paragraph (a) of this Section XIII or of Section XII of this Plan, withdraw from this Plan; provided that such withdrawing Participant shall file with the SEC its own plan in accordance with the requirements of Rule 17a-15 on or prior to June 7, 1974, which plan shall include an implementation schedule providing for a commencement date for dissemination of last sale prices pursuant to such plan

which is not later than the scheduled commencement of Phase II under Section V(f) of this Plan.

Any Participant withdrawing from this Plan as provided in this paragraph (b) and giving written notice of such action to each of the other Participants, shall thereafter have no further obligations whatsoever under this Plan or to any of the other Participants, and shall retain all of its rights, privileges and property interests as though such withdrawing Participant had not executed this Plan or any previous version thereof or the Articles of Association of CTA, or participated in the submission of same to the SEC.

XIV. Counterparts. This Plan may be executed by the Participants in any number of counterparts, no one of which need contain all of the signatures of all the Participants, and as many of such counterparts as shall together contain all of such signatures shall constitute one and the same instruments.

AMERICAN STOCK EXCHANGE, INC.

By Richard H. Rudge, President

MIDWEST STOCK EXCHANGE, INC.

Dated: April 17, 1974

By _____

NATIONAL ASSOCIATION OF SECURITIES
DEALERS, INC.

By _____

NEW YORK STOCK EXCHANGE, INC.

By _____

PACIFIC STOCK EXCHANGE, INC.

By _____

PBW STOCK EXCHANGE, INC.

By _____

ARTICLES OF ASSOCIATION
OF
CONSOLIDATED TAPE ASSOCIATION

ARTICLE I

NAME

The name of the Association created hereby shall be the CONSOLIDATED TAPE ASSOCIATION (CTA).

ARTICLE II

PURPOSES

The CTA shall administer the plan attached hereto as Exhibit A (such plan, as the same may be amended from time to time, is herein referred to as the Plan) in accordance with the provisions of the Plan, which has been filed with the Securities and Exchange Commission (the SEC) by each of the national securities exchanges and the national securities association executing these Articles pursuant to Rule 17a-15 promulgated by the SEC under the Securities Exchange Act of 1934, as amended. By action taken as provided in Article III, CTA may also amend the Plan from time to time, but only to the extent and subject to the limitations expressed in the Plan. Each national securities exchange and the national securities association executing these Articles is sometimes referred to herein as a Signatory.

ARTICLE III

THE MEMBERSHIPSection 1.

Each security, the last sale prices of which under the Plan are eligible for inclusion in the consolidated tape to be disseminated over either Network A or Network B (as defined in the Plan), is referred to herein as an Eligible Security.

During the period ending five years after the date of full implementation of the consolidated tape following completion of the Phase I pilot program provided for in the Plan, the New York Stock Exchange, Inc. and the American Stock Exchange, Inc. shall each appoint two individual representatives, each of whom shall thereupon become a voting member of CTA. During such period the Midwest Stock Exchange, Inc., the Pacific Stock Exchange, Inc., the PBW Stock Exchange, Inc. and the National Association of Securities Dealers, Inc. shall each appoint one representative who shall thereupon become a voting member of CTA. After such five year period, and thereafter at the beginning of each calendar year, the Signatory which reported to the Processor under the Plan the greatest number of last sale price reports included over Network A during the last two preceding calendar years and the Signatory which reported to such Processor the

greatest number of last sale price reports included in the consolidated tape disseminated over Network B during the last two preceding calendar years shall each appoint two individual representatives, each of whom shall thereupon become a voting member of CTA for the succeeding calendar year. After the end of such five year period, and thereafter at the beginning of each calendar year, each of the four Signatories which reported to the Processor under the Plan the next greatest number of last sale price reports included in the consolidated tapes disseminated over both Network A and Network B during the last two preceding calendar years shall each appoint one representative who shall thereupon become a voting member of CTA for the succeeding calendar year.

By accepting his appointment each representative selected as above provided shall be deemed thereby to agree to serve as a voting member of CTA in accordance with these Articles and to use his best efforts to administer the Plan in accordance with its provisions.

Section 2.

Each signatory is authorized to name a permanent alternate for any voting member designated by it and in the absence of such member, the alternate shall have all of the rights of the member he represents at any meeting

of CTA. Each of the Signatories shall have the right to designate a substitute for any such alternate in the event the alternate is unable to attend a meeting of CTA and any such substitute shall have all of the rights of the alternate for whom he is substituting in any such meeting.

Section 3.

Any Signatory other than a Signatory whose designee is then a voting member of CTA may appoint an individual representative to serve as a non-voting member of CTA. Each such representative shall be entitled to receive notice of all meetings of CTA and to attend and participate in any discussions at any such meeting, but shall not be entitled to vote on any matter.

ARTICLE IV

VOTING

Each voting member of CTA shall have one vote on all matters coming before CTA. Five voting members shall be sufficient to constitute a quorum for the transaction of any business at any meeting of CTA and any action taken by the affirmative vote of five voting members present at such meeting shall be deemed to be the action of CTA. Action taken by the voting members of CTA other than at a meeting shall be deemed to be the action of CTA provided

it is taken by affirmative vote of all the then voting members and, if taken by telephone or telegraph, such action is confirmed in writing by each such member within one week of the date such action is taken.

ARTICLE V

OFFICERS

Section 1.

The officers of CTA shall consist of a Chairman and an Executive Secretary and such other officers, having such duties and responsibilities, as may be deemed appropriate by the voting members.

Section 2.

The Chairman of CTA shall be chosen from among the voting members by the vote of not less than five voting members cast at a meeting of CTA. He shall preside at all meetings of CTA and, notwithstanding his selection as Chairman, shall have the right to vote on all matters. The Chairman shall serve for such term as may be designated at the time of his selection, but in no case shall his term exceed a period of one year from the date of his selection.

Section 3.

The Executive Secretary of CTA may, but need not be, a member of CTA and shall maintain the records of the

CTA, keep minutes of meetings, send notices of meetings and have such other duties and responsibilities as may be assigned to him by the voting members.

ARTICLE VI

MEETINGS

Section 1.

The Chairman may call a meeting of CTA at any time on his own motion.

Section 2.

The Executive Secretary of CTA shall call a special meeting of the members whenever requested to do so by three or more of the voting members.

Section 3.

Notice of a regular meeting of CTA shall be in writing and shall be mailed or delivered to each member at the address designated by him for such purpose at least one week prior to the date of the regular meeting. Notice of a special meeting of CTA shall be given to each member at such address by telephone or telegram at least two days prior to the date of the special meeting. Notwithstanding the provisions of this Section, action can be taken by CTA without a meeting as provided in Article IV.

ARTICLE VIIRULESSection 1.

CTA may adopt and amend such rules from time to time as the voting members deem appropriate consistent with the purposes of CTA as provided in Article II and the Plan.

Section 2.

Any rules or stated policies proposed to be adopted by CTA shall be promptly forwarded to all Signatories not less than three weeks prior to adoption, unless in each instance such requirement has been waived by all of the Signatories.

ARTICLE VIIIAMENDMENTS TO ARTICLES OF ASSOCIATION

By written instrument executed by all of the Signatories then entitled to designate voting members of CTA these Articles may be amended in any manner deemed appropriate and consistent with the Plan. CTA may be terminated at any time by written instrument so executed.

No Signatory then entitled to designate a voting member of CTA may withdraw from CTA on less than six months' prior written notice delivered to each of the other Signatories and to the SEC (unless it shall have withdrawn from

the Plan pursuant to Section XII or Section XIII(b) thereof).

IN WITNESS WHEREOF, these Articles of Association
have been executed as of the 17 day of April, 1974
by each of the Signatories hereto.

Richard H. Budge

PRESIDENT - AMERICAN STOCK EXCHANGE

Exhibit 4

Type	Amendment #	SEC Date	Federal Register Date	SEC Release No.	FR Page No.	Description/ Significance	Reference Link
CTA Plan Adoption	N/A	5/17/1974	5/20/1974	34-10788	17770	CTA Plan declared effective	https://cdn.loc.gov/service/ll/fedreg/fr039/fr039098/fr039098.pdf
CQ Plan Adoption	N/A	1/22/1980	1/28/1980	34-16518		Permanant creation of the CQ plan.	https://cdn.loc.gov/service/ll/fedreg/fr045/fr045019/fr045019.pdf
Restatement	N/A	5/12/1980	5/20/1980	34-16802	33756	Receipt of Amendments to the CTA Plan to propose changes. Details changes	https://cdn.loc.gov/service/ll/fedreg/fr045/fr045099/fr045099.pdf
Restatement	N/A	7/16/1980	7/24/1980	34-16983	49414	the proposed amendments would (1) reflect the subscription of the Boston Stock Exchange, Inc. and the Cincinnati Stock Exchange, Inc. to the Plan, (2) revise certain aspects of the voting arrangement under the Plan, (3) provide that transactions reported over moving tickers shall not be accompanied by market identifiers, (4) eliminate the requirement that the National Association of Securities Dealers, Inc. ("NASD") file rules governing the reporting of transactions executed in the over-the-counter market	https://cdn.loc.gov/service/ll/fedreg/fr045/fr045144/fr045144.pdf
Temporary approval Charges Amendment	N/A	7/22/1983	7/29/1983	34-20001	34551	Temporary effectiveness to establish a "non professional" category of subscriber fees for market information.	https://cdn.loc.gov/service/ll/fedreg/fr048/fr048147/fr048147.pdf
Charges Amendment	N/A	11/17/1983	11/28/1983	34-20385	53615	CTA established a "non professional" category of subscriber fees for market information offered by the CTA and CQ Plan participants.	53615
Charges Amendment		8/21/1990	9/10/1990	34-28407		Amendment revises the form of vendor/computer input user agreement	https://www.govinfo.gov/content/pkg/FR-1990-09-10/pdf/FR-1990-09-10.pdf
Substantive Amendment	16	9/22/1993	9/29/1993	34-32946	50984	The proposed amendments would establish criteria to aid in the determination of the fee payable by a new entrant into either or both plans	https://cdn.loc.gov/service/ll/fedreg/fr058/fr058187/fr058187.pdf
Charges Amendment First plan	16		11/30/1994	34-35003	N/A	Restating charges due to AT&T raising rates and subsequently will be passed through to vendors and consumers.	https://www.gpo.gov/fdsys/pkg/FR-1994-11-30/html/94-29463.htm
Substantive Amendment First Plan	21	3/28/1995	4/3/1995	34-35543	16901	Filing retroactively applies the "relative message usage percentage" to the allocation of high speed line revenues between networks commencing January 1, 1994. The amendments would also eliminate the requirements that the participants set the high speed line access fee at a level designed to recover the costs of making the high speed line available, and set indirect high speed line access fees at a level that equals one-half of the direct access fees. The actual fees, however, would not be changed at this time.	https://www.gpo.gov/fdsys/pkg/FR-1995-04-03/pdf/95-8091.pdf
Restatement	2	1/17/1996	1/25/1996	34-36725	2321	Second Restatement of the CTA Plan which Incorporates 16 charges and 17th substantive amendments to the first CTA plan and 21 substantive and 6 charges amendment to the first CQ plan.	https://www.gpo.gov/fdsys/pkg/FR-1996-01-25/pdf/96-1182.pdf

Type	Amendment #	SEC Date	Federal Register Date	SEC Release No.	FR Page No.	Description/ Significance	Reference Link
Charges Amendment	1	6/14/1996	6/20/1996	34-37311	31570	Amendment seeks to recover the ticker network expense increases that common carriers have recently imposed on the CTA Plan Participants. The present fees of \$160.00 per connection for Network A and \$130.00 for Network B have been in effect since January, 1995. Since January, 1995, each of the Networks has absorbed a number of increases in common carrier costs.	https://www.gpo.gov/fdsys/pkg/FR-1996-06-20/pdf/96-15772.pdf
Substantive Amendment	1	3/21/1997	3/27/1997	34-38427	14708	This amendment will enable trading in the security to resume ten minutes after the security's primary market notifies the Processor that the requisite information has been adequately disclosed. The Participants believe the increases in the speed of communications have shifted the balance between timeliness and the price discovery. That is, ten minutes, rather than 15 minutes, has become an appropriate period to arrive at a price that reflects an appropriate equilibrium of buying and selling interest. The proposed amendment will allow a stock to open or re-open in a more expeditious manner, while still providing sufficient time for the appropriate pricing of orders	https://www.gpo.gov/fdsys/pkg/FR-1997-03-27/pdf/97-7784.pdf
Charges Amendment	2	10/14/1997	10/22/1997	34-39235	54886	Participants propose to establish a fee of one cent for each real-time "quote packet" that vendors disseminate to subscribers on a pay-for-use basis.	https://www.gpo.gov/fdsys/pkg/FR-1997-10-22/pdf/97-27902.pdf
Charges Amendment	3	11/26/1997	12/5/1997	34-39370	64414	The amendments remove the perquote charge from the CTA and CQ Plan rate schedules and re-establish the Class G program classification charge in a manner identical to its form prior to the September Plan Amendments. The reason for these amendments is to comply with a request of the staff of the Commission's Division of Market Regulation which received an unfavorable comment letter.	https://www.gpo.gov/fdsys/pkg/FR-1997-12-05/pdf/97-31878.pdf
Charges Amendment	4	6/28/1999	7/6/1999	34-41572	36412	The amendments propose (1) to modify the fees payable by vendors of the Network A market information in respect of nonprofessional subscriber services, (2) to introduce pay-for-use rates into the Network A rate schedules following a pilot test that commenced in November 1997, (3) to grant each vendor of a payfor-use service the ability to limit its monthly pay-for-use obligation for each of its customers that qualifies as a nonprofessional subscriber, and (4) to establish an enterprise arrangement pursuant to which broker-dealers would enjoy a maximum monthly obligation of \$500,000 for aggregate monthly Network A market data fees incurred for interrogation services (both displaydevice and pay-per-use) that it provides to its officers, partners and employees and to its nonprofessional, brokerageaccount customers.	https://www.gpo.gov/fdsys/pkg/FR-1999-07-06/pdf/99-16953.pdf

Type	Amendment #	SEC Date	Federal RegisterDate	SEC Release No.	FR Page No.	Description/ Significance	Reference Link
Charges Amendment	5	8/19/1999	8/30/1999	34-41767	47204	The objective of the proposed plan amendments is to encourage the proliferation of those services and the widespread dissemination of Network B market data. The Network B Participants also believe that reductions in the nonprofessional subscriber rates respond to the growing number of broker-dealers and vendors that wish to provide on-line services to their customers, which services may, for example, enable their customers to price portfolios with real-time information and to receive "dynamically updated" services, such as real-time ticker displays. For the nonprofessional subscriber rates (rather than the much higher professional subscriber rates) to apply to any of its subscribers, a vendor must make certain that the subscriber qualifies as a nonprofessional subscriber, subject to the same criteria that have applied since 1985, when the Network B Participants first established a reduced rate for nonprofessional subscribers.	https://www.gpo.gov/fdsys/pkg/FR-1999-08-30/pdf/99-22375.pdf
Substantive Amendment	2	2/18/2000	3/1/2000	34-42444	11102	Currently, Network B uses a Consolidated Subscriber Form that it executes directly with professional subscribers. While the subscriber also executes an agreement with its vendor to receive Network B market data from the vendor (the "Vendor-Subscriber Agreement"), Network B generally bills all subscriber charges directly to the subscriber and collects the fees itself.4 Network B is now proposing to shift the billing and collecting functions to the vendors. As part of that effort, Network B is proposing to amend the CTA and CQ Plans by adding a new Consolidated Subscriber Form to Exhibit D of each Plan.	https://www.gpo.gov/fdsys/pkg/FR-2000-03-01/pdf/00-4851.pdf
Charges Amendment	7	1/12/2001	1/22/2001	34-43841	6719	Currently, CTA Network B charges \$21.50 per month for the first ticker at each customer location and \$13.60 for any additional tickers at that location. This tiered pricing structure is proving difficult for market data vendors to administer in the new vendor billing environment that was recently implemented by CTA Network B.6 To address this problem, CTA Network B is proposing to eliminate the "First Ticker" premium charge. Thus, there would be a single monthly ticker charge of \$13.60 for each customer at each location. The change would result in a cost savings for all Network B ticker subscribers and will make it easier	https://www.gpo.gov/fdsys/pkg/FR-2001-01-22/pdf/01-1804.pdf

Type	Amendment #	SEC Date	Federal RegisterDate	SEC Release No.	FR Page No.	Description/ Significance	Reference Link
Substantive Amendment	3	7/30/2001	8/6/2001	34-44615	41058	The Participants propose to change the CTA Plan definitions of "Network A Eligible Securities" and "Network B Eligible Securities." The changes would allow a security that is listed on AMEX or another national securities exchange to remain as a Network B Eligible Security in the event that NYSE determines to admit a security that is listed on AMEX to dealings on the basis of unlisted trading privileges ("UTP").	https://www.gpo.gov/fdsys/pkg/FR-2001-08-06/pdf/01-19526.pdf
Charges Amendment	7	7/30/2001	8/6/2001	34-44614	41057	The amendment seeks to establish as a permanent part of the Network A rate schedule a fee applicable to vendors that disseminate a real-time Network A ticker over broadcast, cable or satellite television. The proposed fee is \$2.00 per 1,000 households reached. Each vendor must pay a minimum fee of \$2,000 per month. the Network A Participants will base the bills upon the number of households reached as of the end of the preceding September, as published in the Nielsen Report.	https://www.gpo.gov/fdsys/pkg/FR-2001-08-06/pdf/01-19525.pdf
Substantive Amendment	4	12/18/2002	12/26/2002	34-47030	78832	The Participants propose to introduce a capacity planning process into the Plans. The Participants will engage in the capacity planning process on a semiannual basis. Each Participant will be entitled to use its proportionate share of the final capacity requirements of all Participants and, at no extra cost, of any excess capacity. If the Processor determines that a Participant is using more than its proportionate share of the aggregate capacity and the excess capacity, that Participant may be subject to a fine. The proceeds from any such fine will be distributed to each of the other Participants in accordance with their proportionate shares.	https://www.gpo.gov/fdsys/pkg/FR-2002-12-26/pdf/02-32472.pdf

Type	Amendment #	SEC Date	Federal RegisterDate	SEC Release No.	FR Page No.	Description/ Significance	Reference Link
Substantive Amendment	5	12/23/2003	12/31/2003	34-48987	75661	The proposed amendments would delete the provisions of the Plans that exempt any Participant in the Plans from paying market data fees for the receipt of data on its trading floor for regulation or surveillance or for other specifically approved purposes. The Participants believe that eliminating the Participant Fee Exemptions will eliminate disputes that have arisen among the Participants regarding what constitutes a "trading floor" (as that term is generally understood) and will eliminate a perceived competitive advantage that the Participant Fee Exemptions give Participant markets over non-exchange markets (such as electronic communications networks and other alternative trading systems), over NASD market makers and, in the case of Participants that trade options, over non-Participant options markets.	https://www.gpo.gov/fdsys/pkg/FR-2003-12-31/pdf/03-32181.pdf
Substantive Amendment	6	12/23/2003	12/31/2003	34-48984	75662	Since 1989, NYSE has performed certain administrative functions on behalf of the Network B Administrator. The Participants propose to once again divide the contract-administration function between the Network A administrator (NYSE) (for the receipt and use of Network A market data) and the Network B administrator (Amex) (for the receipt and use of Network B market data). To make the separation of contract functions possible, the amendments propose to replace the Consolidated Vendor Form with two new forms, a "Network A Consolidated Vendor Form" and a "Network B Consolidated Vendor Form."	https://www.gpo.gov/fdsys/pkg/FR-2003-12-31/pdf/03-32182.pdf
Substantive Amendment	7	1/19/2005	1/10/2005	34-51012	3075	The proposed amendments would modify the procedures pursuant to which a new national securities exchange or new national securities association may join the Plans as a new Participant. More specifically, the proposed amendments would modify the process for determining the fees that a new national securities exchange or a new national securities association must pay in order to join the Plans.	https://www.gpo.gov/fdsys/pkg/FR-2005-01-19/pdf/E5-172.pdf
Substantive Amendment	8	6/23/2006	6/30/2006	34-54038	37624	The Eighth Amendment to the CTA Plan would modify the procedures that apply to the Processor's recommencement of dissemination of the last sale price information in a security after the security's listing market declares the end to a regulatory halt in the security.	https://www.gpo.gov/fdsys/pkg/FR-2006-06-30/pdf/06-5905.pdf
Substantive Amendment	9	6/23/2006	6/30/2006	34-54038	37624	The Ninth Amendment to the CTA Plan and the Sixth Amendment to the CQ Plan would add International Securities Exchange, Inc. ("ISE") and the Nasdaq Stock Market LLC ("Nasdaq") as new Participants to the Plans.	https://www.gpo.gov/fdsys/pkg/FR-2006-06-30/pdf/06-5905.pdf

Type	Amendment #	SEC Date	Federal Register Date	SEC Release No.	FR Page No.	Description/ Significance	Reference Link
Substantive Amendment	10	10/11/2006	10/18/2006	34-54588	61517	<p>The Amendments propose to modify the procedures that apply to the entrance into arrangements for pilot test operations and to explicitly exclude pilot test operations from the relevant Plan provisions which require any change in the charges set forth in the Plans to be effected by an amendment.</p> <p>Currently, the Plans permit a network's administrator to enter into arrangements with vendors and other persons for pilot test operations designed to develop, or to permit the development of, new last sale price information services and uses and new quotation information services and uses, as relevant, without the need for agreements with, and collection of charges from, customers of such vendors or other persons. In order to enter into such arrangements, a network administrator, acting on behalf of the Participants, must promptly report the commencement of each arrangement and, upon an arrangement's conclusion, any market research obtained from the pilot test operations to CTA or the Operating Committee, as relevant. The arrangements are exempt from certain provisions in the Plans regarding the form of, and necessity for, agreements with recipients of last sale price and quotation information, as relevant, and the amount and incidence of charges.</p>	https://www.gpo.gov/fdsys/pkg/FR-2006-10-18/pdf/E6-17315.pdf
Charges Amendment	9	7/25/2007	8/1/2007	34-56134	42139	<p>The Ninth Charges Amendment proposes to cap the Broadcast Charge by providing that no entity is required to pay more than the "Television Ticker Maximum" for any calendar month. For months falling in calendar year 2007, the Participants propose that the monthly "Television Ticker Maximum" shall be \$150,000. For each subsequent calendar year, the monthly Television Ticker Maximum would increase by the "Annual Increase Amount."</p> <p>The "Annual Increase Amount" is an amount equal to the percentage increase in the annual composite share volume for the preceding calendar year, subject to a maximum annual increase of five percent. The "Annual Increase Amount" is the same adjustment factor that the Network A rate schedule has long applied to the monthly broker-dealer enterprise fee.</p>	https://www.gpo.gov/fdsys/pkg/FR-2007-08-01/pdf/E7-14839.pdf

Type	Amendment #	SEC Date	Federal RegisterDate	SEC Release No.	FR Page No.	Description/ Significance	Reference Link
Substantive Amendment	11	12/5/2007	12/12/2007	34-56904	70621	<p>The Plan currently requires Participants to include in their transaction reports to the CTA Plan's processor the stock symbol of the Eligible Security, the price at which the transaction was executed, and the volume, in round lots, involved in the transaction.</p> <p>The Eleventh Substantive Amendment proposes to replace the requirement that Participants report each transaction's volume in round lots with a requirement that each Participant Start Printed Page 70622report the actual number of shares for each transaction, exclusive of odd-lots.</p> <p>The Participants believe that reporting transactions in the actual number of shares traded rather than round lots will add greater transparency to the marketplace. The Participants also believe that it remains appropriate to exclude odd lots from CTA trade reporting because the small size of odd-lot trades adds little to marketplace transparency and because the number of odd-lot trades would merely serve to clutter data feeds and make it more difficult for investors to obtain a true view of the markets for Eligible Securities.</p>	https://www.gpo.gov/fdsys/pkg/FR-2007-12-12/pdf/E7-23966.pdf
Charges Amendment	10	1/7/2008	1/14/2008	34-57107	2289	<p>The CTA Plan and the CQ Plan both currently provide, in attached Schedules A-3, for a usage-based, per quote fee for non-professional Network B subscribers. The fee is based on the number of quotes disseminated during a month, and is \$.0075 per quote for the first 20 million quotes, \$.0050 per quote for the next 20 million quotes, and \$.0025 for each additional quote thereafter. This pricing schedule is an alternative to monthly display charges. Vendors may cap at \$1.00 the per-quote-packet charges payable for any month in respect of any customer that qualifies as a non-professional subscriber, regardless of how many quote-packets the customer may receive during the month.</p> <p>Following a pilot program that began on June 1, 2006, the Amendments propose to permanently extend the usage-based, per query pricing schedule to professional Network B subscribers as well. However, the \$1.00 monthly cap described in the preceding paragraph will not apply to such professional subscribers.</p>	https://www.gpo.gov/fdsys/pkg/FR-2008-01-14/pdf/E8-348.pdf

Type	Amendment #	SEC Date	Federal Register Date	SEC Release No.	FR Page No.	Description/ Significance	Reference Link
Substantive Amendment	12	8/13/2008	8/20/2008	34-58358	49225	<p>Currently, both Plans require each Participant to execute most amendments to the Plans before the amendments can be filed with the Commission. The Participants believe that this can result in delays and unwarranted administrative functioning in the context of certain amendments that are of a purely ministerial nature. For that reason, the Participants propose to amend the Plans to permit the submission of Plan amendments to the Commission under the signature of the Chairman of CTA and the CQ Plan Operating Committee, in lieu of requiring each Participants' signature indicating that it has executed the Amendment as required by Section IV(b) of the CTA Plan and Section IV(c) of CQ Plan.</p> <p>The categories of ministerial Plan amendments that the Participants may submit under the signature of the Chairman include amendments to the Start Printed Page 49226 Plans that pertain solely to any one or more of the following:</p> <p>(1) Admitting a new Participant into these Plans;</p> <p>(2) Changing the name or address of a Participant;</p> <p>(3) Incorporating a change that the Commission has implemented by rule and that requires no conforming language to the text of the Plans (e.g., the Commission rule establishing the Advisory Committee);</p> <p>(4) Incorporating a change (i) that the Commission has implemented by rule, (ii) that requires conforming language to the text of the Plans (e.g., the Commission rule amending the revenue allocation formula), and (iii) that a majority of all Participants has voted to approve; [6]</p> <p>(5) Incorporating a purely technical change, such as correcting an error or an inaccurate reference to a statutory provision, or removing language that has become obsolete (e.g., language regarding the Intermarket Trading System Plan).</p>	https://www.gpo.gov/fdsys/pkg/FR-2008-08-20/pdf/E8-19229.pdf
Substantive Amendment	14	10/29/2008	10/23/2008	34-58838	64372	The Amendments propose to add BATS Exchange, Inc. as a new Participant to each Plan.	https://www.gpo.gov/fdsys/pkg/FR-2008-10-29/pdf/E8-25806.pdf

Type	Amendment #	SEC Date	Federal Register Date	SEC Release No.	FR Page No.	Description/ Significance	Reference Link
Substantive Amendment	13	1/12/2009	1/21/2009	34-59230	3659	<p>Network Administrator Fees under the Plans. Section XII ("Financial Matters") of the CTA Plan and Section IX ("Financial Matters") of the CQ Plan each provides that a network's Operating Expenses are to be deducted from the network's Gross Income in determining the amounts that the network's administrator distributes to the Participants. Both Section XII(c)(i) ("Determination of Operating Expenses") of the CTA Plan and Section IX(c)(i) ("Determination of Operating Expenses") of the CQ Plan currently provide that a network's Operating Expenses include all costs and expenses that the network's administrator incurs in "collecting, processing and making available Network A market data."</p> <p>Proposed Revision. The Network A Administrator has informed the Participants that accounting for operating costs is administratively burdensome, especially the allocation of organization overhead costs to the Network A Administrator function. As a result, the Network A Participants have determined that paying the Network A Administrator a fixed fee in exchange for its Network A administrative services would be more efficient.</p> <p>Therefore, the Participants propose to replace their payment to the Network A Administrator of Operating Costs with payment to the Network A Administrator of a fixed fee. (The Participants understand that Nasdaq similarly receives a fixed fee for its performance of administrative functions under the "Joint Self-Regulatory Organization Plan Governing the Collection, Consolidation and Dissemination of Quotation and Transaction Information for Nasdaq-Listed Securities Traded on Exchanges on Unlisted Trading Privileges Basis.")</p> <p>For calendar year 2008, the Network A Participants propose to set the fixed fee at \$6,000,000. This amount will compensate the Network A Administrator for its Network A administrative services during 2008 under both the CTA and CQ Plans.</p> <p>Determination of Operating Expenses. In the case of NYSE as the CTA and CQ Network A Administrator, the Participants deem "Operating Expenses" for any calendar year to equal: (1) The "Annual Fixed Payment" for that year; plus (2) "Extraordinary Expenses."</p> <p>Annual Increases. For each subsequent calendar year the Annual Fixed Payment shall increase (but not decrease) by the percentage increase (if any) in the annual cost-of-living adjustment ("COLA") that the U.S. Social Security Administration applies to the Supplemental Security Income for the calendar year preceding that subsequent year, subject to a maximum annual increase of five percent. For example, if the Social Security Administration's COLA is three percent for calendar year 2008, then the Annual Fixed Payment for calendar year 2009 would increase by three percent to \$6,180,000.</p>	https://www.gpo.gov/fdsys/pkg/FR-2009-01-21/pdf/E9-1021.pdf

Type	Amendment #	SEC Date	Federal RegisterDate	SEC Release No.	FR Page No.	Description/ Significance	Reference Link
Charges Amendment	11	6/19/2009	6/29/2009	34-60154	31076	<p>The Plan currently caps the maximum monthly charge that a broker-dealer is required to pay in respect of the aggregate amount of: (1) Network A display-device charges for devices that the broker-dealer's officers, partners and employees use; plus (2) Network A display-device and per-quote-packet charges that the broker-dealer pays in respect of services that it provides to nonprofessional subscribers that are brokerage account customers of the broker-dealer.[5]</p> <p>Footnote 5 to Schedule A-1 of Exhibit E to the CTA Plan subjects the Enterprise Cap to an automatic annual increase. The automatic annual increase is equal to "the percentage increase in the annual composite share volume for the preceding calendar year, subject to a maximum annual increase of five percent."</p> <p>Through this amendment, the Participants propose to amend the CTA Plan to waive the automatic annual increase in the Enterprise Cap for 2008. As a result, the monthly fee will remain at \$660,000 for 2008, the same amount as for 2007. The waiver applies to the Enterprise Cap only, and not to the "Television Ticker Maximum," also set forth in Footnote 6 to Schedule A-1 of Exhibit E to the CTA Plan. The amendment also proposes to update Footnote 6 by applying the automatic annual increase to the "Television Ticker Maximum," by bringing that monthly fee to \$157,000 for 2008.</p>	https://www.gpo.gov/fdsys/pkg/FR-2009-06-29/pdf/E9-15223.pdf
Charges Amendment	12	7/16/2009	7/27/2009	34-60320	37069	<p>Schedule A-1 of Exhibit E to the CTA Plan sets forth the fees applicable to CTA Network A market data display services. The amendment proposes to delete from that schedule the monthly \$30 nonprofessional subscriber ticker display charge. That charge applied to a nonprofessional subscriber's receipt of a Network A ticker feed from a ticker network that Network A formerly maintained. Network A phased out that ticker network a number of years ago, but the Participants did not delete the charge from the fee schedule once they completed the phaseout. The Network A Participants have not imposed the nonprofessional subscriber ticker fee since then.</p>	https://www.gpo.gov/fdsys/pkg/FR-2009-07-27/pdf/E9-17763.pdf

Type	Amendment #	SEC Date	Federal RegisterDate	SEC Release No.	FR Page No.	Description/ Significance	Reference Link
Charges Amendment	13	11/10/2009	11/19/2009	34-60985	59999	<p>The Plans currently divide the different means of using market data into eight program classifications. The program classification fees payable by vendors and end-users depend on the category of use the vendor or end-user makes of the data and whether the vendor or end-user is using Network A market data or Network B market data, or both. Through the Amendments, the Participants propose to eliminate program classification charges and set separate fees for the receipt of Network A market data and Network B market data.</p> <p>Over time, new technologies and new and innovative notions on how to use market data have made it increasingly difficult to place data uses into the existing program classifications in a manner that is consistent and equitable for all. The Participants have come to believe that it is inherently more equitable for them to charge vendors and end-users for the method of access to the data and the quantity of usage, rather than for the specific purposes (i.e., by program classification) to which vendors and end-users put market data. The Participants believe that eliminating the manner-of-data-usage charges will modernize the CTA and CQ fee schedules and allow all vendors and users to use data as they see fit, without having to worry about whether a new usage would subject them to a new program classification fee. The elimination of program classification charges means that vendors will no longer need to provide detailed explanations of how they use the data or to update Exhibit A to their agreements with the Participants each time they put data to a new use.</p>	https://www.gpo.gov/fdsys/pkg/FR-2009-11-19/pdf/E9-27745.pdf

Type	Amendment #	SEC Date	Federal Register Date	SEC Release No.	FR Page No.	Description/ Significance	Reference Link
Substantive Amendment	15	2/1/2010	2/8/2010	34-61457	6229	<p>Network Administrator Fees under the Plans. Section XII ("Financial Matters") of the CTA and Section IX ("Financial Matters") of the CQ Plan each provides that a network's Operating Expenses are to be deducted from the network's Gross Income in determining the amounts that the network's administrator distributes to the Participants. Section XII(c)(i) ("Determination of Operating Expenses") of the CTA Plan currently provides that a CTA network's Operating Expenses include all costs and expenses "associated with, relating to, or resulting from, the generation, consolidation or dissemination of the CTA's network's last sale price information." Likewise, Section IX(c)(i) ("Determination of Operating Expenses") of the CQ Plan currently provide that a network's Start Printed Page 6230 Operating Expenses include all costs and expenses that the network's administrator incurs in "collecting, processing and making available that CQ network's quotation information."</p> <p>Proposed Revision. The Network B Administrator has noted that accounting for operating costs is administratively burdensome, especially the allocation of organization overhead costs to the Network B Administrator function. As a result, the Network B Participants have determined that paying the Network B Administrator a fixed fee in exchange for its Network B administrative services would be more efficient.</p> <p>Therefore, the Participants propose to replace their payment to the Network B Administrator of Operating Costs with their payment to the Network B Administrator of a fixed fee. (The Network A Administrator similarly receives a fixed fee for its performance of administrative functions under the CTA and CQ Plans and the Participants understand that Nasdaq receives a fixed fee for its performance of administrative functions under the "Joint Self-Regulatory Organization Plan Governing the Collection, Consolidation and Dissemination of Quotation and Transaction Information for Nasdaq-Listed Securities Traded on Exchanges on an Unlisted Trading Privileges Basis.")</p> <p>For calendar year 2009, the Network B Participants propose to set the fixed fee at \$3,000,000. This amount will compensate the Network B Administrator for its Network B Administrative services during 2009 under both the CTA Plan and the CQ Plan.</p> <p>Annual Increase. For each subsequent calendar year, the Network B Participants propose to increase (but not decrease) the amount of the payment by the percentage increase (if any) in the annual cost-of-living adjustment that the U.S. Social Security Administration applies to Supplemental Security Income for the calendar year preceding that subsequent calendar year, subject to a maximum annual increase of five percent. For example, if the Social Security Administration's cost of living adjustment for Supplemental Security Income were to be three percent for calendar year 2010, then the Participants' fixed payment to the Network B Administrator for 2010 would increase by three</p>	https://www.gpo.gov/fdsys/pkg/FR-2010-02-08/pdf/2010-2586.pdf

Type	Amendment #	SEC Date	Federal RegisterDate	SEC Release No.	FR Page No.	Description/ Significance	Reference Link
Substantive Amendment	16	9/14/2010	9/20/2010	34-62912	57309	The amendment proposes to add EDGA Exchange, Inc. and EDGX Exchange, Inc. as new Participants to each Plan.	https://www.gpo.gov/fdsys/pkg/FR-2010-09-20/pdf/2010-23360.pdf
Charges Amendment	14	9/14/2010	9/20/2010	34-62906	57307	<p>The amendment seeks to establish as a permanent part of the Network B rate schedule a tiered fee structure applicable to vendors that disseminate a real-time Network B ticker over broadcast, cable or satellite television ("Television Vendors").</p> <p>The proposed tiered fee structure is identical to the fee structure that the Network B Participants have imposed on Television Vendors for several years as part of an extended pilot program. Currently, Network B had two Television Vendors. The amendment would merely codify the fees as a permanent part of the Network B fee schedule.</p>	https://www.gpo.gov/fdsys/pkg/FR-2010-09-20/pdf/2010-23359.pdf
Charges Amendment	15	9/21/2010	9/28/2010	34-62966	59752	In light of the Network A Participants' experience with the Network A ticker, the Participants have determined to reduce the Television Ticker Maximum. In the amendment, the Participants propose to re-set the Television Ticker Maximum to \$125,000 for calendar months falling in 2010. For calendar months falling in subsequent calendar years, the Participants would impose the Annual Increase Amount to the Television Ticker Maximum. For example, for calendar months falling in 2011, the Participants would increase 2010's \$125,000 monthly Television Ticker Maximum by the Annual Increase Amount.	https://www.gpo.gov/fdsys/pkg/FR-2010-09-28/pdf/2010-24226.pdf
Substantive Amendment	17	10/27/2010	11/2/2010	34-63193	67410	The amendment proposes to add BATS Y-Exchange, Inc. as a new Participant to each Plan.	https://www.gpo.gov/fdsys/pkg/FR-2010-11-02/pdf/2010-27666.pdf
Charges Amendment	16	3/18/2013	3/25/2013	34-69157	17946	The purpose of the Sixteenth Charges Amendment to the CTA Plan and Eighth Charges Amendment to the CQ Plan (collectively, the "Amendments"), is to simplify the Plans' existing market data fee schedules by compressing the current 14-tier Network A device rate schedule into four tiers, by consolidating the Plans' eight fee schedules into one, and by realigning the Plans' charges more closely with the services the Plans provide, without materially changing the revenues the current fee schedules generate. The Participants' goal is to achieve greater simplicity and a reduction of administrative burdens.	https://www.gpo.gov/fdsys/pkg/FR-2013-03-25/pdf/2013-06730.pdf

Type	Amendment #	SEC Date	Federal Register Date	SEC Release No.	FR Page No.	Description/ Significance	Reference Link
Charges Amendment	17	4/5/2013	4/11/2013	34-69318	21648	<p>On March 11, 2013, the Participants filed for immediate effectiveness the Sixteenth Charges Amendment to the Second Restatement of the CTA Plan and the Eighth Charges Amendment to the Restated CQ Plan.[7] These two amendments ("Fee Change Amendments") made a number of changes to the fees payable under the Plans in an effort to achieve greater simplicity and to reduce administrative burdens. Among those fee changes, the Fee Change Amendments combined separate monthly device fees that professional subscribers pay for Network B last sale information under the CTA Plan and for Network B quotation information under the CQ Plan into one monthly fee of \$24.00 per device for both last sale information and quotation information.</p> <p>The Fee Change Amendments stated that the Participants anticipated implementing the proposed fee changes in 2013, without specifying a date. In the notice that the Participants sent to the industry, they specified April 1, 2013, as the date the Fee Change Amendments would be implemented.[8]</p>	https://www.gpo.gov/fdsys/pkg/FR-2013-04-11/pdf/2013-08466.pdf
Charges Amendment	18	5/16/2013	5/22/2013	34-69593	30365	<p>Participants ("Participants") [3] filed with the Securities and Exchange Commission ("Commission") a proposal to amend the Second Restatement of the CTA Plan and Restated CQ Plan (collectively, the "Plans").[4] The amendments ("Reversal Amendments") propose to reverse the fee changes for which the Participants filed in the Sixteenth [5] and Seventeenth [6] Charges Amendments to the CTA Plan and the Eighth [7] and Ninth [8] Charges Amendments to the CQ Plan.</p>	https://www.gpo.gov/fdsys/pkg/FR-2013-05-22/pdf/2013-12163.pdf
Charges Amendment	19	7/19/2013	7/25/2013	34-70010	44984	<p>The amendments ("June Fee Simplification Amendments") respond to requests from industry representatives that sit on the Plans' Advisory Committees that the Participants simplify the Plans' existing market data fee schedules and reduce associated administrative burdens. The Participants first introduced the Fee Changes in the Sixteenth Charges Amendment to the CTA Plan [5] , as modified by the Seventeenth Charges Amendment to the CTA Plan [6] and in the Eighth Charges Amendment to the CQ Plan [7] , as modified by the Ninth Charges Amendment to the CQ Plan [8] (collectively, the "March Fee Simplification Amendments"). On May 10, 2013, the Participants filed Amendments to reverse the Fee Changes introduced in the March Fee Simplification Amendments in the Eighteenth Charges Amendment to the CTA Plan [9] and the Tenth Charges Amendment to the CQ Plan ("Reversal Amendments") [10] . The June Fee Simplification Amendments propose to re-introduce them.</p>	https://www.gpo.gov/fdsys/pkg/FR-2013-07-25/pdf/2013-17860.pdf
Substantive Amendment	18	9/17/2013	9/23/2013	34-70428	58362	<p>This amendment proposes to add odd-lot transactions to the consolidated tape by removing them from Section VI(d)'s list of transactions that are not to be reported for inclusion on the consolidated tape.</p>	https://www.gpo.gov/fdsys/pkg/FR-2013-09-23/pdf/2013-23009.pdf

Type	Amendment #	SEC Date	Federal Register Date	SEC Release No.	FR Page No.	Description/ Significance	Reference Link
Charges Amendment	20	9/25/2014	10/1/2014	34-73214	59337	The proposal represents the twentieth charges amendment to the CTA Plan ("Twentieth Charges Amendment"), and reflects changes unanimously adopted by the Participants. The Twentieth Charges Amendment seeks to impose a late fee ("Late Fee") on a vendor or other data redistributor that fails to submit the results of the required audit of its quote meter system in a timely manner. The amendment proposes to impose a Late Fee of \$3,000 for each month a data redistributor falls behind in submitting the results of the required quote meter audit to the Participants.	https://www.gpo.gov/fdsys/pkg/FR-2014-10-01/pdf/2014-23311.pdf
Charges Amendment	21	10/1/2014	11/7/2014	34-73278	60536	The 2014 Fee Amendments would realign the Plans' charges more closely with the ways in which data recipients consume market data today. Although professional subscriber display device fees still account for a majority of Network A and Network B revenues, the industry's reliance on professional subscriber display devices continues to decline and the gap between professional subscriber device rates and nonprofessional subscriber fees remains large. The proposed fee changes would reduce the rates that professional subscribers pay for each of their display Start Printed Page 60537 devices. To offset the revenue losses attributable to the reduction in professional subscriber device rates, the Participants propose: To establish fees for non-display consumption of market data; to subject firms that receive access to data feeds from extranet providers to direct access fees rather than indirect access fees; to raise the fees payable in respect of firms that receive access to data feeds by means of multiple data feeds; and to raise the fee payable in respect of per-quote services.	https://www.gpo.gov/fdsys/pkg/FR-2014-10-07/pdf/2014-23837.pdf

Type	Amendment #	SEC Date	Federal Register Date	SEC Release No.	FR Page No.	Description/ Significance	Reference Link
Substantive Amendment	20	10/1/2014	10/7/2014	34-73285	60555	In the Participants' view, a majority vote, rather than unanimity is the appropriate requirement for changes to the capacity plan, as it provides greater flexibility to CTA and the CQ Plan's Operating Committee to revise the capacity plan when they find it beneficial to do so. The Participants note that the Nasdaq/UTP Plan subjects changes to capacity planning to a majority vote. Similarly, the Participants view a two-thirds vote, rather than unanimity, as the appropriate requirement to reduce or eliminate an existing fee or to establish a new fee. Both plans subject raising an existing fee to a two-thirds vote and currently subject reducing an existing fee to a unanimous vote. The CTA Plan currently subjects establishing a new fee or eliminating an existing fee to a two-thirds vote. The CQ Plan currently provides for a two-thirds vote to reduce the Network B interrogation device fee, but requires unanimity to reduce other CQ Plan fees or to eliminate a fee. The Amendments Start Printed Page 60556 would harmonize the voting requirements under the two plans in respect of fee-setting. As a result of the proposed Amendments, a two-thirds vote would be required under both plans to establish or increase a fee or to eliminate or reduce a fee. These changes would provide the Participants with greater flexibility in respect of the plans' fee schedule.	https://www.gpo.gov/fdsys/pkg/FR-2014-10-07/pdf/2014-23849.pdf
Substantive Amendment	19	12/31/2014	1/7/2015	34-73971	908	The amendment proposes to reduce from one-and-one-half minutes to 10 seconds the maximum amount of time by which each Participant is required to report trades. In addition to reducing the time frame, the Participants propose to revise the language of the requirement so that it requires the Participants to report "as soon as practicable, but not later than 10 seconds," after the time of execution of the trade. The amendment also proposes to remove the qualifier that called for trade reports to meet the time requirement not less than 90 percent of the time under normal conditions.	https://www.gpo.gov/fdsys/pkg/FR-2015-01-07/pdf/2014-30975.pdf

Type	Amendment #	SEC Date	Federal Register Date	SEC Release No.	FR Page No.	Description/ Significance	Reference Link
Substantive Amendment	22	5/8/2015	5/14/2015	34-74909	27764	<p>Section VI(c) of the CTA Plan specifies that the format for a trade's last sale price information that a Participant reports to the Processor under the CTA Plan shall include the stock symbol, the number of shares and the price of the transaction. Section VI(a) of the CQ Plan provides that each bid and offer that a Participant reports to the Processor under the CQ Plan shall be accompanied by the bid or offer's quotation size or aggregate quotation size.</p> <p>The Amendments propose to add to those requirements that Participants shall also include in reports to the Processor the time of the trade or the quotation.</p> <p>In the case of a Participant that is a national securities exchange, the time of the transaction or quotation is to be reported in microseconds as identified in the Participant's matching engine publication timestamp.</p> <p>In the case of FINRA, the time of a transaction shall be the time of execution that a FINRA member reports to a FINRA trade reporting facility and the time of a bid or offer shall be the quotation publication timestamp that the bidding or offering member reports to the FINRA quotation facility, all in accordance with FINRA rules.</p>	https://www.gpo.gov/fdsys/pkg/FR-2015-05-14/pdf/2015-11621.pdf
Substantive Amendment	23	7/6/2015	7/10/2015	34-75363	39821	<p>Historically, the Plan participants have not applied device fees to devices that receive consolidated volume (i.e., aggregate volume for trades taking place on all market centers under the Plan) in displays that do not also include CTA Plan prices or CQ Plan quotation information. The participants do not plan to change this policy.</p> <p>However, some data redistributors include consolidated volume in displays of unconsolidated last sale prices and/or unconsolidated bid-asked quotes, such as displays of one exchange's trade prices and quotes.</p> <p>Such displays, whether displayed internally or externally, could mislead investors in respect of the nature of the information they are viewing. A significant number of data users receive proprietary trade prices and quotes. Unless the data users understand the content being displayed, they could mistakenly think that they are seeing consolidated trades and quotes because they see consolidated volume without any explanation.</p> <p>To make the displays transparent and less likely to mislead, the Approving Participants have determined to require data redistributors that include consolidated volume in displays of unconsolidated prices and quotes to incorporate into those displays the following statement (or a close iteration of the statement that the network administrator(s) have approved): "Realtime quote and/or trade prices are not sourced from all markets."</p>	https://www.gpo.gov/fdsys/pkg/FR-2015-07-10/pdf/2015-16837.pdf

Type	Amendment #	SEC Date	Federal RegisterDate	SEC Release No.	FR Page No.	Description/ Significance	Reference Link
Substantive Amendment	26	8/26/2016	9/1/2016	34-78701	60394	The amendment to the Plans adds the IEX as a Participant. On June 17, 2016, the Commission issued an order granting IEX's application for registration as a national securities exchange.[6] A condition of the Commission's approval was the requirement for IEX to join the Plans.	https://www.gpo.gov/fdsys/pkg/FR-2016-09-01/pdf/2016-21022.pdf
Charges Amendment	22	3/23/2017	3/28/2017	34-80300	15404	<p>The Participants amended the Plans' fee schedules to establish fees for non-display uses of data and to reduce the device fees assessed on professional subscribers.[5] In so doing, the Participants determined that such a change provided an equitable allocation of fees to the industry that would reflect the value of non-display data usage (subject to the non-display fees) versus display data usage (subject to the lower device fees). At that time, non-display use was defined as consisting of accessing, processing, or consuming real-time Network A or Network B quotation information or last sale price information, whether delivered via direct and/or redistributor data feeds, for a purpose other than in support of a data recipient's display or further internal or external distribution. The Participants established three categories of non-display uses of market data:</p> <p>Category 1 applies when a data recipient makes non-display uses of real-time market data on its own behalf.</p> <p>Category 2 applies when a data recipient makes non-display uses of real-time market data on behalf of its clients.</p> <p>Category 3 applies when a data recipient makes non-display uses of real-time market data for the purpose of internally matching buy and sell orders within an organization.</p>	https://www.gpo.gov/fdsys/pkg/FR-2017-03-28/pdf/2017-06083.pdf
Substantive Amendment	28	7/25/2017	7/31/2017	34-81199	35562	The Amendments effectuate changes that certain Participants have made to their names and addresses, as set forth in Section III(a) of the Plans.	https://www.gpo.gov/fdsys/pkg/FR-2017-07-31/pdf/2017-16000.pdf

Type	Amendment #	SEC Date	Federal RegisterDate	SEC Release No.	FR Page No.	Description/ Significance	Reference Link
Charges Amendment	22	11/14/2017	11/20/2017	34-82071	55130	The Amendments seek to amend the Plans' fee schedule as well as the Non-Display Use Policy to clarify the applicability of the non-display fee, the device fee, and the access fee. The Participants believe that some vendors are mischaracterizing their customers' usage and creating artificial loopholes to avoid the Non-Display Use and access fees pursuant to amendments filed in October 2014 ("2014 Fee Amendments") [4] in an attempt to obtain an advantage over other vendors. The Participants believe that the distinction between the device fees, the Non-Display Use fees, and the access fee was set forth in the 2014 Fee Amendments, and many vendors are fully complying with that distinction. The Participants state that some vendors appear to be ignoring the import of the 2014 Fee Amendments in order to gain an advantage over other vendors, allowing them to profit from new or existing customers by offering them lower fees than such customers could obtain from vendors who apply the 2014 Fee Amendments correctly. The Participants state that the proposed amendment is designed to close this loophole by removing any perceived ambiguity in the 2014 Fee Amendments.[5]	https://www.gpo.gov/fdsys/pkg/FR-2017-11-20/pdf/2017-25027.pdf
Charges Amendment	23	3/23/2018	11/29/2018	34-82937	13539	The Participants are proposing to increase the Enterprise Cap from \$686,400 to \$1,260,000 for Network A and from \$520,000 to \$680,000 for Network B. To make the increase of the Enterprise Cap revenue neutral (from an overall Plan perspective) and fee neutral (from an individual entity [6] perspective), the Participants are proposing to decrease the Per-Quote-Packet Charges for those broker-dealers with 500,000 or more Nonprofessional Subscribers.	https://www.gpo.gov/fdsys/pkg/FR-2018-03-29/pdf/2018-06266.pdf



Historical Use of Real-Time NYSE Proprietary Data Products Policy

This policy applies to the external redistribution at a later time on a historical basis of real-time NYSE Market Information (defined below) in any form. For purposes of this policy, “later time” shall mean after 12am on the day after the day of NYSE’s dissemination of the real-time NYSE Market Information.

As used in this Policy, “NYSE Market Information” refers to NYSE Data Products (as defined in the NYSE Vendor Agreement for PDP Products) or NYSE Market Information (as defined in the NYSE Vendor Agreement for CTCQ), collectively.

Vendors may store and use at a later time real-time proprietary NYSE Market Information within their firm or organization for internal purposes.

Vendors of real-time proprietary NYSE Market Information may not redistribute at a later time real-time Proprietary NYSE Market Information to external users in any form without a specific license from NYSE permitting such use. This policy will apply to all recipients of real-time NYSE Market Information feeds, including those that subscribe for delayed use of the data.

If a vendor of real-time proprietary NYSE Market Information would like to redistribute this data externally at a later time, the vendor must contract with NYSE directly for such use and pay the relevant fee.

The NYSE reserves the right to examine data recipients’ use of real-time NYSE Market Information as set forth in the applicable vendor agreement.

Please contact sales-pdp@theice.com for more information.

This fact sheet is a summary document intended to set forth the highlights of GDP policy, rates, and procedures. Questions and/or circumstances not covered in this document should be referred to NYSE for the determination of applicable fees and procedures.
