

July 12, 2001

TO: Joel Seligman, Chairman SEC Advisory Committee on Market Information  
Annette Nazareth, Director SEC Division of Market Regulation  
Members, SEC Advisory Committee on Market Information

FROM: Carrie Dwyer  
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RE: Burdens of Market Data Administration

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### INTRODUCTION AND PURPOSE

On March 19, 2001 the SEC staff submitted a memorandum to the Advisory Committee on Market Data titled *Administration of the CTA/CQ Plan and the Nasdaq/UTP Plan* (“SEC Staff Memo”). It is a short, very high-level description of market data administration at the Plan level that relies exclusively on submissions made by the New York Stock Exchange (“NYSE”) and Nasdaq as Plan Administrators.<sup>1</sup> The purpose of this paper is to go beyond the exchanges’ very basic descriptions to document and cite actual practices in market data administration, based on Schwab’s experience, as well as prior findings of the Securities Industry Association in its White Paper<sup>2</sup> and the Financial Information Services Division (“FISD”) of the Software & Information Industry Association in its recent memo to this Advisory Committee.<sup>3</sup>

A final report from this Advisory Committee discussing the administrative and cost structures of the current market data system must be based on factual findings. To be credible, any recommendations for reform should take into account and address elements of the current system that impose unnecessary burdens on efficiency, competition, and the National Market System goal of widespread availability of market data on reasonable and non-discriminatory terms. Below, we discuss the following aspects of market data administration from the perspective and experience of a broker-dealer and retail investors: (i) policy issues left to the contracting process and Plan Administrator discretion, (ii) the burdens of contract administration, (iii) the exchanges’ prior approval requirement for all uses of market data; (iv) burdensome fee and user classifications; and (v) business uncertainties resulting from the use of pilot programs. The root cause of each issue discussed in this memorandum is the exchanges’ treatment of market data as their own proprietary, licensable, revenue-generating product.

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<sup>1</sup> Appendix A attached to this paper provides a brief organizational overview of the Plans.

<sup>2</sup> See SIA/Arthur Andersen White Paper on Market Data Pricing (June 1999) (“SIA White Paper”).

<sup>3</sup> See Memorandum from Michael Atkin to Joel Seligman and the Advisory Committee dated March 28, 2001 (“FISD Memo”).

**I. Significant Policy Issues Left to a Contract Process Subject to the Plan Administrator’s Discretion**

As the FISD Memo correctly notes, “the market data contract is the principal document governing what vendors, redistributors and subscribers can and cannot do with” data they receive from the exchanges through the market data Plans (CTA, Nasdaq, and OPRA).<sup>4</sup> The FISD has found that the market data contract between a Plan and a broker-dealer or vendor covers “220 individual policy-related questions” (emphasis added) that may be categorized under the following headings:

- Definition of Market Data
- Market Data Content and Supply
- Policies on Contracts
- Rights to and Restrictions on the Use of Market Data - Vendors
- Rights to and Restrictions on the Use of Market Data - Subscribers (e.g., online retail investors)
- System Descriptions (i.e., Exhibit A requirements)
- Exchange Fees Applicable
- Device/User Query Based Fees to be Applied in Various Contexts
- Billing and Payment Requirements
- Reporting Requirements
- Audit Requirements.<sup>5</sup>

The FISD’s categorization work shows that the core issues surrounding the market data debate and the work of the Advisory Committee are the subject of monopoly-imposed contract, not regulation or SEC oversight. Items such as claimed ownership of market data, restrictions on using basic market data, requiring broker-dealers to reveal competitively-sensitive technology plans in Exhibits to the contracts, requiring individual investors to become market data licensees subject to legalese contracts as a condition for direct access to market data, and even the very definition of “market data” itself are left to the contract negotiation and administration process.

Given the complexity and ambiguity under the Plans’ contracts, it is not accurate to suggest that vendor contracts and practices under them are routine, uniform, and non-controversial.<sup>6</sup> As the FISD Memo states, “Understanding and translating the complex policies of multiple exchanges is not a simple process.”<sup>7</sup> For example, the contracts themselves do not

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<sup>4</sup> FISD Memo at 3.

<sup>5</sup> *Id.*

<sup>6</sup> *But see* SEC Staff Memo at 2, 3.

<sup>7</sup> FISD Memo at 4.

address new technologies, special situations, creative new applications, and the resulting conflicts in interpretation.<sup>8</sup> This enables the Plan Administrators significant latitude to exercise discretion to address – or choose not to address – the problems and issues confronting vendors and broker-dealers.

**II. Burdens of Contract Administration**

According to the FISD, broker-dealer and vendor attempts to comply with the Plans’ rules and contract provisions

often involve multiple organizations and people within those organizations – contracts, entitlement systems, billing and reporting, IT development, and sales – who all need to understand the practical side of market data rules. The lack of knowledge, breakdowns in internal communications, and priority conflicts can all contribute to compliance errors or unintentional mistakes, which can result in significant financial liability.<sup>9</sup>

To the FISD’s credit, it has created an “Exchange Contract Guide” to help broker-dealers and vendors navigate the labyrinth of market data contract administration. The Exchange Contract Guide, however, is a 60-page, 4 column spreadsheet which itself proves the significant burdens placed on those who have no choice but to contract with the exchanges through the Plan Administrators in order to make the most basic market data (best bid, offer, last sale) available to investors.

The SIA’s study on market data found that market data administrative responsibilities for broker-dealer firms “are substantial” in terms of both system and staff resources, due to the multiple contracts, system description submissions (Exhibit A), the need to track multiple market data services and vendors, and the need to reconcile monthly invoices.<sup>10</sup> Particularly burdensome are the facts that there is no consolidated or uniform contract, much of the information the exchanges require is technical in nature requiring the firms to allocate technical staff to market data issues, and when firms use multiple data sources or vendors or merge with another firm they must resubmit their exhibits and reconcile invoices in an attempt to receive credits for overpayments.<sup>11</sup>

Schwab’s own experience is consistent with the SIA’s findings. At Schwab we have over twenty employees who spend some portion of their time working on exchange market data administration and issues. The annual person hours required for all aspects of market data administration translates into the equivalent of six and one quarter full-time positions. In addition, Schwab has built or purchased and maintains 25 different processes or systems to count, track, report, and pay for market data that the exchanges disseminate. All together,

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<sup>8</sup> See *id.*

<sup>9</sup> *Id.*

<sup>10</sup> SIA White Paper at 17-18.

<sup>11</sup> *Id.* At 18.

exchange market data administration in terms of personnel expense, employee support, and systems resources costs Schwab approximately \$1,000,000 per year.

The contract administration muddle is even difficult for the Plan Administrators' own staff to deal with at times. As a case in point, recently one Plan Administrator replaced Schwab's long-time account representative. The person newly assigned to Schwab's account handles dozens of others. This transition created difficulties since the administrative duties associated with Schwab's account are highly complex. As a result, Schwab's market data team has had to address previously settled questions about existing contract terms and market data practices. The loss of institutional knowledge and lack of transparency regarding the contracting process causes redundant administrative efforts and the need to re-visit issues. This highly inefficient system imposes significant administrative costs on broker-dealers and vendors.

### **III. The Exchanges' Prior Approval Requirement for All Uses of Market Data**

The FISD has described the exchanges' market data business model as a "prior approval model" that "starts with the premise that no one is allowed to do anything with data until it is approved in advance by the exchange."<sup>12</sup> The centerpiece of the exchanges' prior approval model is the so-called "Exhibit A." This addition to every broker-dealer contract with the Plans requires a detailed description of the following types of information: how a firm will use the market data, the type of services the firm provides, the firm's technology for distributing and displaying market data, record-keeping relating to submitting reports to the Plan Administrators on usage, and how a firm monitors its internal users (e.g., customer service representatives in branch offices or call centers), market data terminals, and entitlements.<sup>13</sup> Because every firm is different, there is a different Exhibit A for each market data contract.

As part of the contracting process and, in particular with respect to Exhibit A, the Plan Administrators require a great deal of confidential and competitively sensitive information from broker-dealers about their products, systems, and operations. Firms must undergo the Exhibit A approval process each time they add a new market data product and also upon request of an Administrator at any time (e.g., when an Administrator sees something on a Web site and seeks further explanation.) In addition, the Administrator has significant latitude with respect to the information it may request, some of which may be highly sensitive. For example, the Plans require firms to collect and make available to the Administrators information about a firm's customers (the market data "subscribers") regarding customer employment status and job function. Many would question the appropriateness of requiring disclosure of this private information as a condition of individual investor access to real time quotations.

The prior approval model thus gives the Administrators continuing power to review the products and services of firms. Other than a high-level outline for Exhibit A requirements, there is no information available regarding the basis for rejections or acceptances, making it impossible for firms to determine whether the process is fair and non-discriminatory.

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<sup>12</sup> FISD Memo at 5. This is in contrast to the business model that most of the other exchanges in the world follow, which the FISD describes as "vendor discretion," under which an exchange gives a license to the vendor "to redistribute data without pre-approval." *Id.*

<sup>13</sup> SIA White Paper at 9-10.

The prior approval system also has significant effects on industry competition and fairness. Not only are Plan Administrators (e.g., NYSE and Nasdaq) the “licensors” of market data, they also (i) compete with their “licensee” broker-dealers for order flow, Web site visits, and innovative market data products, and (ii) wield self-regulatory power over them. Proprietary and confidential data the Plan Administrators are able to obtain as part of the contract and Exhibit process because of their monopoly position could be used to disadvantage firms in a competitive or regulatory sense. For example, one Plan Administrator recently asked Schwab to explain how its new StreetSmart Pro® software application relates to order routing decisions and best execution. It is not clear how such information relates to an appropriate market data licensing concern.

#### **IV. Burdensome Fee and User Classifications**

The SEC Staff Memo takes just a few paragraphs to summarize the NYSE and Nasdaq descriptions of how they generate their fee proposals.<sup>14</sup> That brief account does not say whether the exchanges or SEC consider the substantial burdens their fee and user classifications impose on broker-dealers and vendors in terms of record-keeping, tracking, accounting, reporting, systems development, and the review, reconciliation and payment of invoices. The SEC Staff Memo also does not indicate whether the exchanges or SEC consider the substantial burdens that the fee and user classifications impose on retail investors. As a condition to accessing market data through electronic channels, the exchanges require each and every retail investor (numbering in the millions) to submit to classification as a “subscriber,” declare whether they are “professional” or “non-professional,” and sign lengthy, turgid agreements full of legalese.

As the FISD states, the exchanges

use various classification systems to determine the rights to use of market data and fees. For example, there is a distinction between “professional” and “non-professional subscribers for fee determination. In addition, there are distinctions between “vendors,” “sub-vendors,” and “subscribers” as well as distinctions between “internal distribution,” “external redistribution,” and “no redistribution.” These classifications are used to determine contractual obligations, liability, fees and administrative requirements. For each class of user, fees may vary based on how the user applies the data.<sup>15</sup>

In order to discuss in more detail some of the burdensome aspects of market data administration relating to the fee and user classifications, it is necessary to describe briefly the different fees and how accounting for usage varies depending on the method of delivery.<sup>16</sup>

##### **“Professional” Terminal Fees**

These fees are assessed for each source of market data supplied to a firm’s registered representative. The data generally comes through vendors such as Reuters, Bridge and

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<sup>14</sup> SEC Staff Memo at 1, 2.

<sup>15</sup> FISD Memo at 5.

<sup>16</sup> For a summary of the fees themselves, see Appendix B to this paper.

Bloomberg. Schwab also has internal programs that receive the raw data directly from the Plans. Consistent with industry practice, Schwab provides several redundant sources of market data to each registered representative's personal computer or terminal to assure continuity in the event a vendor experiences a technical failure. In addition to these professional terminal fees, wallboards (i.e. moving tickers), access to market data through Schwab by independent investment managers, and customers that can not be classified as "non-professionals" each trigger separate charges.

### **Per-Quote or Per-Subscriber Fees for "Non-Professionals"<sup>17</sup>**

The primary fee structure for firms to make available market data through an online or other electronic channel to retail customers who meet the definition of "non-professional" is per quote or per subscriber. The per quote fee ranges from \$.0075 to \$.0025 per quote, while the per subscriber fee is \$1.00 per month per Plan. *See* Appendix B. Firms may choose either fee. It is economically advantageous to choose the per subscriber fee only if it acts as a cap on a particular customer's per quote usage fee for a particular month. For example, under the CTA Plan a firm will apply the monthly per subscriber rate of \$1.00 for a particular customer if she accessed 134 or more online quotes in a given month.<sup>18</sup> Based on the Plans' definition, "professionals" who use market data for their own personal accounts are not eligible for the lower retail per subscriber monthly fee cap. For such customers, the Plans require that firms pay the per quote fees or the much higher professional monthly fee.

The technology for streaming or pulsing data is readily available and would assure that customers receive the most accurate and up-to-the-second data to analyze their portfolio balances and positions or to make investment and trading decisions, especially in fast-moving markets. To distribute streaming data, however, firms effectively must pay each of the Plan's monthly subscriber or capped fee for each customer to whom they offer access to a streaming tool, which by definition is not a device that offers per quote access.<sup>19</sup>

### **Enterprise Fees**

The CTA (both Tape A and B) is currently the only Plan that has an enterprise fee that covers direct real time quote distribution to retail investors. The CTA's enterprise fee is

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<sup>17</sup> The Plans' definition of a "Non-professional," which must appear in every "subscriber agreement," is a person who is not

- (a) registered or qualified with the SEC, the Commodities Futures Trading Commission, any state securities agency, any securities exchange or association, or any commodities or futures contract market or association,
- (b) engaged as an "investment advisor" as that term is defined in Section 202(a)(11) of the Investment Advisor's Act of 1940 (whether or not registered or qualified under that Act), nor
- (c) employed by a bank or other organization exempt from registration under Federal and/or state securities laws to perform functions that would require him or her to be so registered or qualified if he or she were to perform such functions for an organization not so exempt.

<sup>18</sup> This number equates to the number of quotes necessary at the CTA's first tier of \$.0075 per quote to reach the \$1.00 per subscriber monthly fee. *See* Appendix B.

<sup>19</sup> In addition to all of the market data fees discussed above, there are fees for delayed quotes, monthly access fees, stock table compilation fees, operations control program fees, trading analysis program fees, and market making execution system fees.

currently \$525,000 per month each for Tape A and Tape B. Firms pay the enterprise fee in lieu of some, but not all, of the non-professional fees (per-quote or per-subscriber) and the professional terminal fees that otherwise would apply. A few of the largest firms have adopted the enterprise fee as a partial cap on their monthly quote fee exposure. The enterprise fee excludes market data distributed to non-account holders (e.g., other users of a firm's Web site) and those customers who fall under the Plans' definition of "professional," including affiliated investment managers. These forms of market data distribution are still subject to the additional fees discussed above. As explained below, the enterprise fee reduces few if any of the administrative burdens imposed on firms under the other fee structures, while the process for obtaining NYSE's approval to come under the CTA Tape A enterprise can result in additional burdens.

### **Administrative Burdens on Firms**

"The administrative burdens related to the management and use of market data are substantial and costly to all participants in the market data industry."<sup>20</sup> In particular, the FISD reports that "[c]urrent mechanisms for billing and reporting are cumbersome, costly and inefficient," requiring "invoice reconciliation" as well as "[b]illing and reporting [that] is multiple-system and very manually intensive."<sup>21</sup> The SIA's White Paper documents some of the problems firms have had with the billing and reconciliation process, including confusion arising from the different roles that Plan Administrators, vendors, and firms play in the process, delayed credits, and difficulties resolving disputes about over-charges.<sup>22</sup> Schwab is a case in point.

As a result of the Plans' various and varying fee and user classifications, Schwab has to track professional and non-professional users, continuously maintain and update internal entitlements for accessing market data, and count quote usage per quote and per subscriber across all channels, products, and services for each of the four Plans. With approximately 10,000 registered representatives, 7 million accounts, multiple Web sites, and numerous tools and services that offer market data to our customers, this is a highly complex process. Every change or addition to a tool or service for our customers or registered representatives that incorporates real-time market data requires the design and implementation of a system interface application to track and count users and/or quotes. It is also technically difficult, requiring technology and staff resources, to aggregate a customer's quote usage across Web, voice, wireless, and software access channels in order to take advantage of the per subscriber monthly cap.

This complexity with its attendant tracking and counting steps, as well as the Plans' separate monthly reporting requirements, often results in Schwab's inability to report timely all of the data. In such instances, the Plans project or estimate Schwab's quote usage based on the prior month's report. This results in a continuous reconciliation process to compare actual usage with reported usage. Further complicating matters is that Nasdaq requires vendors to report brokerage firms' professional terminal usage instead of allowing the brokerage firms to report

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<sup>20</sup> FISD Memo at 6.

<sup>21</sup> *Id.* at 5-6.

<sup>22</sup> SIA White Paper at 21.

directly to Nasdaq. Requiring the vendors to play a “bill collector” role results in increased vendor burdens that increase the cost of market data for end-users.<sup>23</sup>

The sheer size of the monthly invoices from the Plan Administrators further illustrates the extent of the burden involved in administering market data. For example, the Schwab bill from the NYSE for CTA Tape A for the month of March 2001 was 52 pages long. Because over- and under-billing has occurred with some frequency in the past (resulting in many additional person hours to resolve the matter with the particular Plan), Schwab staff must spend additional time each month reconciling each line item of each bill against actual usage.<sup>24</sup>

Schwab's recent effort to avail itself of the CTA Tape A (NYSE) enterprise fee as an alternative to the professional terminal and monthly per quote and per customer fees demonstrates the difficulties in complying with the Plans' differing and changing requirements based on fee classifications. First, Schwab continues to report its professional terminal and per quote and per subscriber usage. Second, the NYSE required that Schwab change its reporting to distinguish between enterprise fee-eligible and non-enterprise fee-eligible usage. Third, the NYSE required Schwab to change its reporting from the end of the calendar month to the middle of the month. Fourth, the NYSE requested a significant amount of information from Schwab, much of which had already been provided to NYSE in years past. It took Schwab 8 weeks to comply with these changes and requests, delaying implementation of the enterprise cap.

### **Burden on Investors**

Schwab has received many complaints from our customers who do not understand the lengthy data license agreements the exchanges require them to agree to before they can access real-time quotes online. These agreements are not subject to the SEC's plain English requirements. For example, the “Nasdaq Consolidated Subscriber Agreement” is over five single-spaced pages and is a one-size fits all agreement: Nasdaq requires retail investors to click-through essentially the same agreement that Nasdaq requires brokerage firms to sign. The agreement confusingly treats retail investors as the licensee-subscribers and the brokerage firm as the “vendor.” Unlike most firms that have counsel to review contracts, retail investors simply trying to open an account or access real-time quotes online have no such support. To many customers who bother to read the detailed legalese, the agreements are intimidating.

The Nasdaq agreement contains industry definitions and jargon, technical legal terms such as the scope of license and limited warranties, raises the issue of potential damages, and requires investors to agree to indemnify Nasdaq for certain third party suits. Provisions such as those limiting how a subscriber may present the data, requiring a subscriber to take security precautions to prevent unauthorized access to the data, granting Nasdaq the right to inspect subscriber premises, and discussing notices and invoices under the agreement are inapplicable and confusing to retail investors. Assuming investors take enough time to read and understand the agreements, the Plans' click-through agreement requirements impose hundreds of thousands of burden hours on the public each year.

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<sup>23</sup> See *id.* at 22.

<sup>24</sup> The Plan Administrators also reserve the right to demand an audit from an independent accountant. Schwab's last required audit involved approximately 150 hours of firm personnel time and cost \$30,000 in engagement fees.

## V. Pilot Fees

The Plans include provisions for “market tests,” also known as “pilot programs.” The SEC Staff Memo states that pilots are to be “of limited duration, geography and scope” to allow a Plan to “test[ ] new market data services without having to undergo the administrative process associated with making a new fee a part of the permanent fee schedule and without having to offer the service to everyone until its viability has been substantiated.”<sup>25</sup> The brief SEC Staff Memo discussion of pilots does not analyze their impact on competition, potential discriminatory impact, lack of transparency, or the business uncertainty pilot programs create for firms.<sup>26</sup>

Historically, the Plans have relied on pilot programs as a primary means to change their market data fee structures. Significant pricing changes implemented as temporary programs place a burden on firms who must plan and budget for market data expenses, an ever-increasing cost in recent years. For example, offering access to streaming Nasdaq Level 2 (NQDS) data is a critical component of any firm’s offering to active traders and helps level the playing field between individual investors and professionals. Through a recent pilot program, Nasdaq instituted a \$10 per month retail fee for Level 2 data, enabling firms to make available new retail market data products to investors. However, the Nasdaq pilot expires this August. Nasdaq has not indicated what it plans to do. It could revert back to charging retail investors (or their brokerage firms) \$50 a month for Level 2 – the professional fee. This move would have a devastating impact on firms that have begun offering Level 2 data to their customers. Because it is a “pilot,” Nasdaq effectively could quintuple the retail rate for Level 2 data by reverting to the professional Level 2 fee (increasing the cost for a retail investor by \$480 a year) without any SEC review or public comment.

## CONCLUSION

As this memorandum documents, the burdens created by the exchanges’ control, limitations, and classification of market data are substantial. When analyzed carefully, the burdens and inefficiencies can be traced to the exchanges’ treatment of market data - which broker-dealers and others are required to report to them and display - as the exchanges’ proprietary product to license, generate revenue from, and restrict. Any recommended approach to market data reform should take into account these documented burdens on efficiency, competition, and the National Market System goal of widespread availability of market data.

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<sup>25</sup> SEC Staff Memo at 2 (discussing CTA pilots); *see also id.* at 3-4 (discussing Nasdaq pilots).

<sup>26</sup> For a general discussion of past pilot programs, see SIA White Paper at 14-15. *See also id.* at 24 (noting a Nasdaq pilot for an enterprise fee that involved a single firm).

## **APPENDIX A – Plan Overview**

### **Consolidated Tape Association Plan ("CTA") and Consolidated Quotation Association Plan ("CQ")**

The CTA Plan provides for the collection and consolidation of transaction reports and last sale data for exchange-listed securities. The CQ Plan provides for the collection and dissemination of quotations (*i.e.*, bid-and-ask prices) for exchange-listed securities. The CTA and CQ Plans essentially operate as one integrated system. The plans share the same participants: The New York Stock Exchange ("NYSE"), the American Stock Exchange ("Amex"), the Boston Stock Exchange, Incorporated ("BSE"), the Chicago Board Options Exchange, Incorporated ("CBOE"), the Chicago Stock Exchange, Incorporated ("CHX"), the Cincinnati Stock Exchange ("CSE"), the Pacific Exchange, Inc. ("PCX"), the Philadelphia Stock Exchange, Inc. ("Phlx") and the National Association of Securities Dealers, Inc. ("NASD").

The data for the CTA and CQ Plans are consolidated and disseminated together. The two plans use two "networks" for the consolidation and dissemination of their data. The networks divide the securities for which data is collected based on the market on which those securities are listed. Network A collects and disseminates transaction reports/last sale information and quotes for all securities listed on the NYSE, including common and preferred stock and long-term warrants. Network B provides data for all securities listed on the Amex or one of the regional exchanges, but not listed on the NYSE or Nasdaq. The NYSE serves as the administrator for Network A's day-to-day operations, including the administration and negotiation of contracts for the distribution of Network A data to vendors and broker-dealers. The Amex serves as administrator for Network B's day-to-day operations; including the administration and negotiation of contracts for the distribution of Network B data to vendors and broker-dealers.

### **The Nasdaq/Unlisted Trading Privileges Plan ("Nasdaq/UTP")**

The Nasdaq/UTP Plan covers the collection and dissemination of market data for Nasdaq National Market securities, Nasdaq SmallCap securities and other over-the-counter securities (including the OTC Bulletin Board). Plan participants include Nasdaq, Amex, CBOE, Phlx and, as a limited participant, the BSE. This plan is administered by the Nasdaq marketplace. The Nasdaq plan reports data collected from NASD member firms, including market makers and broker-dealers, and from electronic communications networks ("ECNs"). Nasdaq is the plan administrator and handles the administration and negotiation of contracts with market data vendors and broker-dealers.

### **The Plan for Reporting of Consolidated Options Last Sale Reports and Quotation Information ("OPRA Plan")**

The OPRA Plan covers the collection and dissemination of market data for exchange-listed options contracts, including equity and index options and foreign-currency options. The plan participants are Amex, CBOE, PCX, Phlx, ISE, and NYSE (although NYSE no longer trades listed options). The plan is administered by the Options Price Reporting Authority ("OPRA"), which is comprised of one representative from each market that is an OPRA Plan participant. The CBOE provides administrative services for the OPRA Plan.

**APPENDIX B – Summary of Fees**

<b>Plan</b>	<b>Pro Terminal</b>	<b>Fee</b>	<b>Non-Pro Electronic and Voice Products</b>	<b>Fee</b>	<b>Enterprise Fee</b>
<b>CTA</b>  <b>(NYSE Tape A and AMEX Tape B)</b>	<i>Professional Subscriber – Monthly Rate Per Device:</i>		<i>Usage Based Subscriber – Monthly Fee Per Quote:</i>		\$525,000 for each Tape (doesn't include non-account holders, pro-clients or affiliated IAs)
	<u>NYSE</u> 10,000 + devices 5,000 – 9,999 devices 750 – 4,999 devices <u>AMEX</u> Member firms per device (\$13.60 for last sale, \$13.65 bid/ask)	\$18.75 \$19.75 \$20.75 \$27.25	For each of the first 20MM quotes For each of the next 20MM quotes For each subsequent quote in excess of 40 MM quotes	\$0.0075 \$0.0050 \$0.0025	
			<i>Nonprofessional Subscriber – Monthly Fee Per Active User:</i>		
			For each of the first 250K users	\$1.00	
			Subsequent users	\$0.50	
<b>Nasdaq</b>	Professional Interrogation Device for Level 1 – Monthly rate	\$20.00	Per query	\$0.0050	Not offered
	Professional Interrogation Device for Level 2 (NQDS) – Monthly rate	\$50.00	Level 1 – Non-Professional Subscriber Monthly Rate <i>Per User</i>  Level 2(NQDS) – Non-Professional Subscriber Monthly Rate Per User ( <u>pilot only</u> ; otherwise pro rate applies)	\$1.00  \$10.00	
<b>OPRA</b>	Professional device charges (for registered reps, based on Schwab enterprise rate)	\$10.00	Per quote fee	\$0.0050	Not offered
			Options chain fee (per chain)	\$0.02	
			Non-professional options chain fee (monthly fee per user)	\$1.00	
			No monthly cap for professionals		