Testimony

of
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before the

House Subcommittee on Capital Markets, Insurance, and Government Sponsored Enterprises

on

Market Data II: Implications to Investors and Market Transparency of Granting Ownership Rights Over Stock Quotes

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Executive Summary and Introduction

Mr. Chairman, members of the Subcommittee, I am Richard Ketchum, President of the Nasdaq Stock Market. We welcome the opportunity to continue our dialogue before this Subcommittee on the important issues of market data and our long-standing commitment to enhancing the availability and the value of the information we provide. In addition to addressing the questions raised for today's hearing, we also provide further discussion of issues raised at the March 14, 2001 hearing before this Subcommittee on market data.

The Nasdaq Stock Market is the largest electronic, screen-based market in the world, capable of handling trading levels of at least four billion shares a day. Nasdaq lists over 4,000 companies, has the largest dollar volume of trades of any financial market, and trades more shares per day than any other U.S. market. Since commencing operations in 1971, Nasdaq has been an engine of growth in our economy and has become a cornerstone of the American capital markets. Millions of jobs have been created in the United States by companies listed on Nasdaq. In addition, the creation and development of our marketplace has benefited many that interact with Nasdaq – including our issuers, market participants, and the investing public.

Under the thoughtful leadership of Congress and the U.S. Securities and Exchange Commission ("SEC"), the U.S. capital markets are the envy of the world. The continued success of our nation's capital markets, however, is not guaranteed. Many other markets abroad are continuously seeking ways to provide issuers and market participants with alternatives to our capital markets. In our view, excessive regulation of our securities markets would hamper this nation's ability to continue as a global leader.

A vital aspect of our capital markets – and relevant to this hearing – is market data. Today, American investors enjoy wide access to the highest quality, most current, and lowest cost market data of any major nation. In fact, Nasdaq's market data today is distributed to over 550,000 industry professionals and millions of investors, and investors have enjoyed a 75% decrease in our market data fees over the past two years. In fact, a full month of Nasdaq's market data costs a maximum of $1, less than a single ATM transaction.

We believe that a database of market data, like any other valuable database, would benefit from greater protection mechanisms. The value of market data is in its integrity. If unauthorized

parties can misappropriate it, and perhaps change it, that integrity is jeopardized to the detriment of investors here and worldwide. This is magnified in the ever-expanding Internet-based environment in which we live, and complicated by the challenge of applying a variety of intellectual property principles to modern databases.

In this regard, we supported the efforts in the last Congress contained in Title II of H.R. 1858, the "Consumer and Investor Access to Information Act of 1999," to the extent it would have filled a gap in Section 11A of the Exchange Act, by clarifying that piracy of real-time market data is a violation of our federal securities laws. While greater certainty in our ability to enjoin piracy is welcome, Nasdaq believes that the enactment of H.R. 1858 could have abrogated potentially important related rights in market data. There may be circumstances in which copyright, trade secret, and unfair competition and/or misappropriation rights and remedies, in addition to those that would have been available under H.R. 1858, may properly need to be asserted by market information processors. Accordingly, we would have concerns with legislation that would only codify the view of some that Nasdaq should only have very narrow enforcement and contractual rights and no other proprietary interests in its market data. We stand ready to assist this Subcommittee in addressing these concerns, should it choose to proceed with these or similar provisions.

If markets – like Nasdaq – are to continue seeking innovative ways to ensure unparalleled market integrity through greater market transparency of high quality market data to investors, our ability to limit the flow of this valuable market data to parties who have contracted for its use must be apparent and consistent with relevant existing rights. For the following reasons, we also believe that Nasdaq, as with any exchange or SRO, (1) has a right to protect its market data; and (2) should be able to establish prices for its market data consistent with basic free market principles:

- Nasdaq's market data is created within our marketplace and is shaped by our regulatory framework and internal quality controls.
- Nasdaq adds layer-on-layer of value to our market data – from creating a market structure designed to promote liquidity and transparency, supported by quality market participants subject to stringent marketplace rules, to developing and maintaining sophisticated automated market surveillance tools to monitor trading and issuer activity.

- Investors enjoy broad access to our quality market data at fair and reasonable prices. All indications are that individual investors are pleased with the broad access to market data they now enjoy.
- Allowing markets to charge fees for market data in a manner that reflects the value of such market data (as opposed to a strict cost-based justification), recognizes the market's right to protect the data, and the "value added" qualities a market brings to the data.
- The markets operate in a highly competitive environment, which acts as a natural "regulator" of market data fees. There is healthy competition among exchanges and SROs for trading volume, which culminates in the ultimate value of a particular market's quote and trade data. Additionally, market data fees drive demand for other competitive products and services that the market produces, thus ensuring that market data fees are fair and reasonable.

Part I of this testimony describes the current debate being advanced by some market participants on how much markets charge for market data. Part II describes the basic characteristics of market data and, more specifically, certain data products offered by Nasdaq. Part III illustrates Nasdaq's role in creating quality market data. In particular, how the quality of the market data Nasdaq produces results from many interrelated functions of our market – from the way in which the market is structured to the extensive market surveillance tools we employ to ensure the integrity of our market and our market data. Part IV discusses how Nasdaq provides market participants and investors with wide access to our high quality market data. Part V addresses how markets should determine the appropriate fees to charge for their market data. Finally, Part VI describes how the dialogue on market data should focus on how competitive forces ensure the fairness and reasonableness of fees – as opposed to cost-based government intervention.

Part I – The Current Debate

Recently, various market participants have vigorously debated the subject of market data. In particular, the debate focuses on how much exchanges and self-regulatory organizations ("SROs") charge for the market data they provide to the marketplace. For instance, certain market participants claim that market data should be deemed part of the public domain, and regulation should dictate that markets collect, consolidate, and disseminate that data – but at no

charge or on a cost-justified basis. This essentially is a commercial argument raised by certain market participants and data vendors to advance their business interests.

In response to these claims, the SEC published a concept release on the subject.[1] The SEC Market Data Concept Release elicited many comments – from SROs, broker-dealers, vendors, and investors. The response to the concept release made it clear that the issues surrounding market data fees were complex and varied and required a more in-depth study. As a result, SEC Chairman Arthur Levitt established the SEC Advisory Committee on Market Information – chaired by Professor Joel Seligman, Dean of the Washington University School of Law (the "Seligman Committee") – to evaluate Section 11A of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and the current framework for market data. The Seligman Committee has been tasked with recommending how the current framework for market data should be adjusted to advance the objectives of a national market system ("NMS"). As a member of the Seligman committee, Nasdaq has been an active participant in this dialogue. In particular, Nasdaq submitted a white paper to the Seligman Committee proposing alternatives to the current structure for the collection and distribution of market data that encourage competition.[2] The paper is consistent with the charter of the Seligman Committee, and focuses on the regulatory and technical structure surrounding the distribution of market data. The Seligman Committee is expected to report its recommendations to the SEC in September 2001.

This Subcommittee also has taken an interest in the subject of market data.[3] Nasdaq, along with other market centers and market participants, testified before this Subcommittee on March 14, 2001.[4] Before setting forth our view that it is appropriate for Nasdaq to be compensated for our market data, we think it is worthwhile to present a description of market data to frame the debate.

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[1] *See Regulation of Market Information Fees and Revenues*, Exchange Act Release No. 42208 (December 9, 1999) ("SEC Market Data Concept Release").

[2] Nasdaq's white paper is available on the SEC web site at <http://www.sec.gov/pdf/nasdmi.pdf>.

[3] Hearing on "Public Access to Stock Market Data—Improving Transparency and Competition," U.S. House of Representatives Committee on Financial Services, Subcommittee on Capital Markets, Insurance, and Government Sponsored Enterprises (March 14, 2001), at <http://www.house.gov/financialservices/031401tc.htm>.

[4] The testimony of Edward S. Knight, Executive Vice President & General Counsel of The Nasdaq Stock Market is available on the web site for the House Financial Services Committee at<http://www.house.gov/financialservices/031401kn.pdf>.

Part II – Market Data Defined

Market data consists of quotation and trading information generated by a particular market. Market data comes in many different varieties. Market data is typically distinguished by the type of information (*i.e.,* quotes and trades), the depth of quotation information (*i.e.,* the best bid or best offer or enhanced information like Nasdaq's full quotation montage), and the time of dissemination (*i.e.,* real-time, delayed, and historical).

Individual pieces of quotation or trade information, in isolation, are not useful to market participants or the investing public. Individual bits of information input into Nasdaq are only useful when presented within the context of the overall market at a specific point in time. Nasdaq arranges and consolidates these individual bits of information in a manner that enables the data to interact within our marketplace, and allows participants to find the other side of their trade. Stated another way, trade information that broker-dealers (or more directly, their customers) provide to Nasdaq is the raw material; it is not the refined product – the real time market data to which we add layer-upon-layer of value through rigorous quality controls.

Quotes represent the buying and selling interest of market participants. In particular, each Nasdaq market maker and exchange specialist posts the highest price that it is willing to buy a particular security (bid) and the lowest price that it is willing to sell a particular security (offer). The quotes also reflect any investor orders that market makers or specialists may be holding. Trade information, on the other hand, represents the most recent sale price for a particular security.

Quotes are further distinguished with respect to the depth of the quotation information. A particular market (such as Nasdaq) may have a best bid or offer ("BBO") that is representative of the trading interest on that market. A market may also have bids and offers below the BBO that represent additional trading interest of market participants. We commonly refer to this type of enhanced quotation information as the "Nasdaq Montage" or "Nasdaq Book." Lastly, if multiple markets trade the same security, then the BBO from each market is consolidated to determine the national best bid or offer ("NBBO") for that security.[5] A reliable and widely disseminated

[5] The NBBO is a reflection of the best price at which market participants are willing to trade at a single point in time, and, as such, is among the most vital pieces of market information to market participants, including exchanges, broker-dealers, and institutional and retail investors.

NBBO ensures that customers are informed of the best prices and sizes available in the marketplace, and can evaluate the quality of executions they receive. In addition, the NBBO assists broker-dealers in complying with applicable rules and regulations, including compliance with their best execution and short sale obligations.

The NBBO continues to be important in today's decimal trading environment.[6] As trading in decimals expands, however, market quotation information below a particular market's BBO or the NBBO will become increasingly important to broker-dealers and investors. Accordingly, Nasdaq continues to explore innovative ways of creating, packaging, and disseminating enhanced information so that market data vendors, broker-dealers, and investors will have access to whatever enhanced information suits their respective interests.

Market data is also categorized based on the time of dissemination. For example, market data may be disseminated instantaneously (or "real-time") or on a delayed basis (typically 15 to 20 minutes from the posting of the quote or the execution of the trade). In addition, market data may be disseminated on a historical basis to reflect daily, monthly, or yearly trends in particular securities. Nasdaq has chosen not to charge for delayed market data. For real-time and historical market data, Nasdaq considers the value that the particular data product will bring to the marketplace when determining the appropriate fees.

Nasdaq makes significant investments in the research and development of our market data products.[7] To that end, we continually explore ways to develop innovative data products, based on real-time and historical data, to assist investors and market participants in making informed investment and trading decisions.

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[6] *See Market Information: Searching for Consensus*, SEC Commissioner Paul R. Carey, Twenty-Eighth Annual Securities Regulation Institute, January 25, 2001. In his speech highlighting the issues being considered by the Advisory Committee, Commissioner Carey noted that even in a decimal trading environment, "the inability to discover the best prices in the national market would be a major step backward."

[7] *See* Exhibit A.

Part III – Creating Quality Market Data – Nasdaq's Role

The success of our marketplace culminates in the high quality market data we deliver to investors, which we create, consolidate, and disseminate at substantial expense. Our open market structure is designed to promote liquidity and transparency, and is supported by quality market participants subject to stringent marketplace rules, and sophisticated automated market surveillance tools to monitor trading and issuer activity. Leveraging such a sophisticated market environment, we strive to create and deliver quality market data to the market participants and investing public who find it so essential to their investment decisions.

As the SEC stated in the SEC Market Data Concept Release,[8] the value of a market's information depends on the quality of the market's operation and regulation.

> Information is worthless if it is cut off during a systems outage (particularly during a volatile, high-volume trading day when reliable access to market information is most critical), tainted by fraud or manipulation, or simply fails to reflect accurately the buying and selling interest in a security. Consequently, there is a direct connection between the value of a market's information and the resources allocated to operating and regulating that market.[9]

To that end, reliable, accurate, and timely market data results from a complex set of actions by Nadsaq's core operations, as described below. The investments made by Nasdaq in our market, regulatory, and technological infrastructure facilitate universal access to valuable market data at reasonable cost to all market participants and investors.

Market Structure

SRO-operated markets – like Nasdaq – play an integral role in the proper functioning of a NMS, and without their participation, market information simply would have no value whatsoever. Some market participants have suggested that SRO-operated markets have "unique access" to market data. We believe that, to the extent SRO-operated markets have "unique access" to market data, it is only because the market data was borne out of the proper functioning of such markets. Said another way, market information is not a by-product of trading activity in our market; it is the foundation of Nasdaq's role as a "market." Because Nasdaq actively brings

[8] *See* SEC Market Data Concept Release, *supra* note 1.

[9] *Id.* at Section I.

together order, quote, and last sale information and provides transparency in a manner that drives the interaction and execution of orders, broker-dealers actively seek out our market to provide quality executions for their customers' trading interest.[10]

Nasdaq's competing market maker structure and open architecture have facilitated the capital formation of thousands of U.S. companies and have contributed to the success of a broad range of market participants, including broker-dealers, ECNs, and online trading firms – all of which serve the American public in their investing needs. Nasdaq's market structure is designed to encourage multiple dealers that are geographically dispersed and linked through our sophisticated computer network to compete for investors' orders. In some cases, over 100 market makers commit significant amounts of capital and post firm two-sided quotations for a particular security in a manner that facilitates the price discovery process. In this way, our market structure enables market participants to obtain quality executions for their customers. In addition, our open architecture encourages other market participants, including ECNs, to provide additional liquidity and transparency.

Nasdaq's market structure is also supported by stringent marketplace rules that create the framework for the production of quality market data. For example, Nasdaq market makers must meet special capital requirements and display continuous two-sided firm quotes[11] in all securities in which they choose to make a market. Market makers also commit to (1) provide automatic execution for investors' orders[12] and (2) protect and display customer limit orders and provide customers with quality executions consistent with their best execution obligations. ECNs were integrated into Nasdaq in 1997 as part of the implementation of the SEC's order handling rules, and provide an additional source of liquidity to Nasdaq. ECNs display either one-sided or two-sided quotes, which reflect actual orders that reside on their trading system.

In addition, Nasdaq employs sophisticated technology to conduct systemic review of all quotation and trade data submitted into Nasdaq's systems to ensure that our market participants

[10] *See* Sharon Brown-Hruska and Jerry Ellig, *Financial Markets as Information Monopolies*, 23 REGULATION, at 31.

[11] *See* Rule 11Ac1-1 under the Exchange Act ("SEC Firm Quote Rule") and Nasdaq Stock Market Rule 4613(b).

[12] Nasdaq's new small order execution system – SuperSoes – was implemented as a pilot on July 9, 2001. Full implementation is expected by the end of July 2001. SuperSoes increases the maximum order size to 999,999 shares for automatic execution.

are acting in a manner that is consistent with the rules and standards of practice established by Nasdaq.[13] To that end, Nasdaq's market structure enables the interaction of buying and selling trading interest in a liquid and transparent trading environment. In addition, our market structure maintains a stable and orderly market, which, in turn, enhances investor trust in our market and the market data we create.

Market Surveillance

Just as our overall market structure enhances market data quality, our sophisticated market surveillance systems also serve an important role. Our market surveillance systems – supervised by the MarketWatch Department and Market Regulation Department – reinforce the accuracy, reliability, and timeliness of Nasdaq market data. In other words, Nasdaq market surveillance systems continually validate the individual bits of information submitted by market participants into our systems.

MarketWatch

The mission of The Nasdaq MarketWatch Department is to facilitate regulatory oversight of Nasdaq on a real-time basis, to maintain a level playing field for investors and protect the integrity of the marketplace. MarketWatch is composed of two sections – StockWatch and TradeWatch. These sections work together to monitor news, market activity, trade reporting, and to prepare and track the impact of regulatory changes or major events to Nasdaq.

StockWatch conducts real-time surveillance of issuer activity in Nasdaq. To accomplish this task, StockWatch continually reviews press releases issued by Nasdaq-listed companies for material news and monitors price and volume activity in Nasdaq securities on a real-time basis using automated surveillance systems. These functions allow StockWatch to provide an orderly market and to protect investors as well as Nasdaq-listed companies. Nasdaq rules require issuers

[13] For example, Nasdaq Stock Market Rule 4613(e) prohibits a market maker, absent extraordinary circumstances, from "locking" or "crossing" the best bid or best offer in a particular security. In other words, if the BBO is 10 bid – 10.02 offer, then market makers are prohibited from quoting (1) an offer that is equal to ("locks") or less than ("crosses") the current inside bid (10); and (2) a bid that is equal to ("locks") or greater than ("crosses") the current inside offer (10.02). If a market maker "locks" or "crosses" the current inside BBO, then Nasdaq rejects the quotation data and informs the submitting market maker. In response, the market maker may either (1) submit a conforming bid or offer; or (2) override the system parameters and re-submit the bid or offer that locks or crosses the market. This is one of many examples of how Nasdaq helps to ensure that the market data we create and provide to market participants and investors is based on individual pieces of information that have been examined for accuracy and reliability in the quality control process.

to give StockWatch advance notice of news events to permit StockWatch to assess press releases for materiality and in certain circumstances, implement a trading halt. During the trading halt, Nasdaq does not collect or disseminate quote or trade data. Such a pause benefits existing and potential shareholders by allowing for the equal distribution of material news among all market participants and by making sure trading is based on publicly disclosed information. Nasdaq's authority in this area is broad-reaching and is essential to the operation of a marketplace that offers proper investor protection.

TradeWatch uses the Surveillance Delivery Real-Time (SDR) system to conduct real-time monitoring of trading activity in Nasdaq. The SDR system, an award-winning technology innovation,[14] analyzes market information and generates specific alerts through an integrated database with proprietary alert parameters. TradeWatch analysts review alerts to make sure that certain price and volume information reported by market participants is accurate, thereby reinforcing integrity in the marketplace. TradeWatch resolves locked/crossed markets and real-time trade reporting issues in accordance with applicable marketplace rules. TradeWatch also evaluates erroneous trades and works with market participants to correct Nasdaq's trade data to ensure its accuracy. TradeWatch also facilitates immediate resolution of index calculation problems caused by trade reporting errors.

Market Regulation

NASD Regulation's Market Regulation Department also contributes to the quality control process. Market Regulation operates in three units: Quality of Markets; Compliance and Surveillance; and Trading and Market Making Examination/Market Integrity.[15] Through a variety of sophisticated surveillance techniques and programs, Market Regulation seeks to ensure the protection of investors and the preservation of the integrity and fairness of Nasdaq by monitoring market participants' compliance with NASD/Nasdaq rules. If rule violations are found and documented, Market Regulation will prosecute the matter to ensure that appropriate sanctions are

[14] A distinguished panel of judges at the 2000 Computerworld Smithsonian Awards selected Nasdaq as a Computerworld Smithsonian Laureate in the Finance, Insurance and Real Estate category for the SDR system.

[15] NASD Regulation was established in 1996 as a separate, independent subsidiary of the NASD. It was created as part of a major restructuring of the NASD, a major feature of which was to separate the regulation of the broker-dealer profession from the operation of The Nasdaq Stock Market. Nasdaq has contracted with NASD Regulation to perform its regulatory functions.

imposed. Market Regulation also works closely with the SEC and other law enforcement agencies. Market Regulation has the responsibility of monitoring and regulating the quoting and trading activity of over 5500 NASD member firms. As a national securities exchange, Nasdaq will continue to contract with NASD Regulation to perform its regulatory functions.

The sheer volume of stock trading activity made possible by technology requires swift detection of market abuses. To assist Market Regulation staff, technology has become the key in monitoring the market effectively. The StockWatch Automated Tracking System℠ (SWAT℠) is an automated system that creates an individual "profile" for every security, based on its historical price and volume information, industry-wide trends, and the publicly disseminated news of a particular company. The Research and Data Analysis Repository℠ (RADAR℠), in use since November 1995, provides immediate access to market data and other related information, dramatically increasing the speed and flexibility with which large quantities of data are analyzed.

Technological Infrastructure

Nasdaq invests hundreds of millions of dollars to develop and maintain the technological infrastructure that makes the operation of The Nasdaq Stock Market possible. Nasdaq's investments in its technological infrastructure have enabled our systems to keep pace with the explosive growth we have experienced over the last seven years. Nasdaq systems have processed significant market activity on an average daily share and quote basis from 1994 to 2000. Specifically, our average daily share volume and average daily quote traffic over this period has increased 574% and 439%, respectively:

Year	Average Daily Share Volume	Average Daily Quote Traffic
1994	296,000,000	98,692
1995	404,000,000	158,021
1996	549,000,000	222,609
1997	654,000,000	549,258
1998	791,000,000	1.02 million
1999	1,054,000,000	2.09 million
2000	1,700,000,000	4.33 million

To support this unprecedented growth, we have assembled and maintain the computer networks, communications systems, and all other systems necessary to operate Nasdaq, both at our Trumbull, Connecticut and Rockville, Maryland sites.[16] In the event that the Trumbull facility – Nasdaq's primary market facility – goes offline, the Rockville site stands ready to support the operation of the market.

Part IV – Access to Market Data

For the investing public to benefit from the development of the high quality market data products generated because of Nasdaq's market role and our rigorous quality control procedures, they must have access to the data. In enacting the Securities Act Amendments of 1975 ("1975 Amendments"),[17] Congress authorized the SEC to facilitate the creation of a NMS, the heart of which was to be communications systems that would disseminate consolidated market information. Thus, the creation of a NMS was premised on investors having access to consolidated information from all markets.[18] Today, American investors enjoy wide access to the highest quality, most current, and lowest cost market data of any major nation. In particular, investors have access to unlimited real-time and delayed market data from Nasdaq and the other exchanges through an ever-increasing number of media and distribution outlets. In the SEC Market Data Concept Release, the SEC recognized the broad access to market information that investors enjoy. The SEC stated:

> All participants in the U.S. markets have access to a consolidated real-time stream of market data for any of the thousands of equity securities and options that are actively traded … Under this regulatory framework, the SROs have developed and funded the systems that have been so successful in disseminating a highly reliable, real-time stream of consolidated market data throughout the United States and the world.[19]

Nasdaq has long recognized the importance of market data to investor's decision-making process, and has sought to disseminate its market data to the broadest population of industry professionals and investors. In fact, Nasdaq's market data today is distributed to over 550,000

[16] Exhibit B describes Nasdaq's state-of-the-art electrical and mechanical facility infrastructure.

[17] Pub. L. No. 94-29, 89 Stat. 97 (June 4, 1975).

[18] S. Rep. No. 94-75, 94th Cong., 1st Sess. 9 (1975) ("Senate Report").

[19] SEC Market Data Concept Release, *supra* note 1, at Section I.

industry professionals and millions of investors. Nasdaq remains committed to offering broad access to our valuable market data.

Nasdaq has taken proactive steps to lower the individual investor's cost of access to our real-time market data, by 50% in 1999 and by another 50% in 2000 to a cap of $1 per month per user, while continuing to realize the value that the data holds to industry professionals and individual investors. The monthly fee for unlimited real time data costs less than the service charge for a single ATM transaction. A full year's worth of market data costs less than many Americans pay for a single online trade or a single month of Internet access. Moreover, the low cost of market data to firms is evidenced by the fact that many firms bundle it for no charge for their active customer accounts.

Nasdaq's market data fee structure encourages a highly liquid trading environment that benefits issuers, market participants, and investors alike. In fact, all indications are that individual investors are pleased with the broad access to market data they now enjoy and we hear no evidence of investor outcry with respect to access or cost. Notwithstanding this fact, the debate – fueled by a small group of vocal market participants – continues on how markets should determine the appropriate fees to charge for their market data.

Part V – Charges for Market Data

Markets should be able to charge fees for market data that, in today's competitive landscape, reflect the value of that market data. Such fees recognize the "value added" qualities a market brings to the data. Value-based pricing is also consistent with the framework created by Congress when enacting the 1975 Amendments, and the practice of the SEC in implementing that framework.

The debate regarding market data centers around whether market data should be provided at cost or priced based on the value it brings to the marketplace. Markets should be able to charge fees that, in a competitive landscape, reflect the value of that market data. Forcing markets into rigid, utility rate-making would be a departure from the current approach that focuses on the fairness and reasonableness of fees and vigilant SEC oversight. As described

below, Congress clearly contemplated that markets would be able to charge for their market data, so long as the charge was fair and reasonable, and not unreasonably discriminatory.

Nasdaq's role as a market and our internal quality controls (described in Part III) create the value of the market data that we produce. These value-added qualities that a market brings to its market data reinforces a market's right to protect the data and the notion that a market should be compensated for it. In that regard, market data fees should be related to the value of the market data. For example, markets have chosen to provide delayed quotation and transaction information for free. We also provide real-time quotes for each market maker and ECN in Nasdaq NM and SmallCap securities and real-time last sale information – at a cost to non-professional investors that is one-fifth of what it had been one year ago.

Charging for access to our market data products is not only consistent with basic free market principles, but, as noted above, it is also consistent with the framework created by Congress when enacting the 1975 Amendments. For example, Congress enacted Section 19(b) of the Exchange Act that authorized the SEC, among other things, to oversee SRO fees. In particular, Nasdaq submits proposed fees to the SEC as a proposed rule change. The SEC review of such filing includes a public comment period, during which anyone has the right to express his or her views. The SEC considers the opinions collected through the comment period. This process is exhaustive, but it ensures that the SEC can carry out its oversight responsibilities granted to it by Congress with respect to market data fees.

In addition, Congress amended the Exchange Act to facilitate the establishment of a NMS. Section 11A(c)(1) provides the SEC with rule-making authority to ensure that market data is provided on terms that are "fair and reasonable" and "not unreasonably discriminatory." Congress did not provide any specific guidance to be used in determining whether market data fees were set in a manner consistent with this standard.[20]

Rather than focusing on the nature or level of market data fees, Congress was concerned about the potential for exclusive processors to engage in anti-competitive or discriminatory practices vis-à-vis particular markets, broker-dealers, or vendors. This is reflected in the legislative history that discusses the SEC's rule-making authority under Section 11A(c)(1). For

[20] *See* Appendix B to NYSE's April 10, 2000 submission to the SEC in response to the SEC Market Data Concept Release.

example, the Senate Report's analysis of Section 11A(c)(1)(C) – the source of the "fair and reasonable" standard – describes the standard as "reasonable and non-discriminatory."[21] Moreover, in describing Section 11A(c)(1)(D), the Senate Report addresses potential anti-competitive or discriminatory behavior, but not the nature or determination of fees charged for market data.[22] In fact, nowhere in Section 11A of the Exchange Act or the related legislative history does it suggest that SROs should be precluded from charging fees for their market data, or that such fees must be justified only on the basis of cost.

It is important to note that Congress in 1975 was able to clearly reflect its intent to establish a cost-based pricing approach in another context. Specifically, Congress established a cost-based justification requirement in the context of eliminating fixed commission rates.[23] Section 6(e)(1)(A) – which applied until November 1, 1976 – allowed an exchange to impose a "reasonable" schedule or fix "reasonable" rates of commissions if the SEC found it to be in the public interest. Section 6(e)(1)(B) – which became effective after November 1, 1976 – prohibits a schedule or fixed commission rates unless the SEC makes a finding that the rates "*are reasonable in relation to the costs of providing the service for which such fees are charged*…" (emphasis added). This illustrates that (1) Congress knew how to draft statutory language requiring cost-justification when it intended to do so and (2) the term "reasonable," without more, does not signal that rates must be cost-justified.

[21] *See* Senate Report, *supra* note 18, at 104. Specifically, the Senate Report states that "[t]he Commission would be required to assure that all securities information processors, i.e., vendors have access for purposes of distributing, or publishing, *on reasonable and non-discriminatory terms,* the securities quotation information and transaction information collected, processed, or prepared for distribution or publication by any exclusive processor of such information." *Id.* (Emphasis added).

[22] The Senate Report states that "[t]he SEC would be required to assure that all exchange members, brokers, dealers, and securities information processors as well as such other persons as the SEC deems appropriate, have access on reasonable and non-discriminatory terms to quotations and reports of transactions published by any [SRO] or securities information processor. The SEC would thus be directed to remove present and future anti-competitive restrictions on access to basic market information, e.g., by eliminating rules giving members of an exchange an exclusive right to particular information." *Id.*

[23] Section 6(e)(1) of the Exchange Act permits an exchange to impose fixed commission rates or schedules, if the SEC makes certain findings.

The understanding that Congress did not intend to require a cost-based justification of market data fees, is also supported by the manner in which the SEC has reviewed market data fee proposals. The SEC most often has reviewed market data fees as proposed rule changes by the NASD under Section 19(b) and by the various NMS plans under Rule 11Aa3-2(c) of the Exchange Act. In the SEC Market Data Concept Release, the SEC noted that it "has relied to a great extent on the ability of SROs and [NMS plans] to negotiate fees that are acceptable to SRO members, information vendors, investors, and other interested parties."[24] The SEC also noted that "[a]s a means to arrive at fair and reasonable fees, the negotiation process is buttressed by the public notice and comment procedures that accompany proposed rule changes."[25]

The SEC also has recognized that market data revenues "enable the SROs to fulfill their self-regulatory functions" and "play an essential role in the Exchange Act regulatory scheme."[26] Certain market participants, however, believe that markets' pricing models should be limited to their direct costs for processing and disseminating market data. While Nasdaq recognizes the need to balance a value-based pricing approach with the need to ensure that the fees are reasonably related to the cost of producing the data, Nasdaq, as with other SROs, finds that the quality of the market shapes the quality of the market data coming from that market. Therefore, it is very difficult to separate the cost of market data from the cost of the market that creates it.

Nasdaq is a multi-product marketplace that generates revenues and costs from several interrelated core operations – involving issuer listings, transactions, trade reporting, and market data. Accordingly, our focus in determining fees has been to examine the value of the service or product it is providing, and then to analyze how to spread or allocate costs in a fair and reasonable and non-discriminatory manner. In that regard, we strongly believe that regulatory services and technology should continue to be funded from a broad revenue base, which includes revenues from listings, transactions, trade reporting, and market data, in a way that does not create financial disincentives to fund and perform those services.

As a crucial component of this broad revenue base, market data revenues are a stable, broad-based and equitable source of funding that helps to ensure the health and safety of the

[24] *See* SEC Market Data Concept Release, *supra* note 1, at Section III.C.

[25] *Id.*

[26] *Id.*, at Section IV.

securities markets. In particular, market data revenues provide a crucial source of funding that: 1) enables Nasdaq to maintain the capacity, redundancy, and reliability of our order, trade, and quotation processing systems that are second to none,[27] and 2) allows NASD Regulation to perform extensive and exhaustive market oversight to create a protected trading environment for investors. Nasdaq is able to fund such important endeavors, and at the same time, investors have enjoyed a 75% reduction in market data fees over the last two years.

To date, this framework has served our markets well and has allowed competitive forces to shape the landscape of market data fees, while providing a regulatory backstop in the event that it does not. Moreover, Nasdaq becoming a for-profit entity does not change this analysis. We are still subject to SEC oversight of market data fees, and more importantly, we have the same competitive incentives (discussed below) to develop innovative market data products, and make them available at fair and reasonable prices. The development of a specific set of criteria that dictates market data fees jeopardizes the foundation on which our NMS was built and will only cause the pendulum to swing further away from competition and closer to excessive regulation – a result that runs afoul of what Congress intended in 1975.

Part VI – Competition…Not Cost

Rather than focusing on what markets charge for market data, the focus should be on competition. Specifically, Congress in 1975 sought to balance its desire to allow competition to shape a NMS with an understanding that, in the environment of the 1970s, SEC involvement would be needed to achieve the goal of providing investors and broker-dealers with consolidated market information. Congress recognized that competition initially might not be sufficient to ensure the automated dissemination of consolidated market information that would form the heart of a NMS. Accordingly, Congress gave the SEC "pervasive rulemaking power to regulate securities communications systems."[28]

Using this authority, the SEC adopted a number of rules under which the exchanges and SROs have been required to act jointly in disseminating market information. It is under this regulatory framework that the exchanges have acted jointly to develop and fund systems that

[27] *See* discussion of Nasdaq's Technological Infrastructure in Part III, *supra*.

[28] H.R. Rep. No. 229, 94th Cong., 1st Sess. 93 (1975).

successfully disseminate a highly reliable, real-time stream of consolidated market information throughout the U.S. and the world.

There are many examples – past, current, and pending – that illustrate the flexibility of the 1975 Amendments to allow for greater competition among markets. As described below, Nasdaq competes with other markets for listings, transactions, and market participants – the success or failure on these fronts greatly impact the value of our market data. For example, since Nasdaq commenced operations in 1971, Nasdaq, the NYSE, and other exchanges have competed vigorously to attract quality issuers to list on the respective markets. Nasdaq currently lists for trading the securities of over 4,000 companies. Between 1990 and 2000, over 88% of companies having initial public offerings on primary U.S. markets have chosen to list on Nasdaq.[29]

In addition, Nasdaq faces competition for transactions. The 1975 Amendments authorized the SEC to grant exchanges unlisted trading privileges in over-the-counter (OTC) stocks. This paved the way for Nasdaq and exchanges to compete for transactions in Nasdaq-listed securities. In 1985, the SEC granted exchanges unlisted trading privileges (UTP) in certain Nasdaq National Market (NM) securities.[30] In 1987, the Chicago Stock Exchange, commenced trading in 25 Nasdaq NM securities.[31]

To further this competitive trading environment, in 1990 the SEC approved the Unlisted Trading Privileges Plan ("Nasdaq/NMS/UTP Plan") governing the collection, consolidation and dissemination of quotation and transaction information for Nasdaq NM securities.[32] In addition, alternative trading systems, including ECNs, have entered the competitive arena for transactions in recent years. Several of these ECNs are transforming themselves into national securities exchanges. For example, Island ECN has an exchange application pending with the SEC and Archipelago will operate its equity-trading platform as an exchange pursuant to its acquisition of the Pacific Exchange ("PCX"). As exchanges, they will be eligible for a share of the revenue

[29] Approximately 25% of Nasdaq-listed companies are eligible for listing on the NYSE, and many of the remaining companies are eligible for listing on the AMEX. In 2000, 25 companies moved from Nasdaq to the NYSE, while one switched from NYSE to Nasdaq.

[30] Exchange Act Release No. 22412 (September 16, 1985).

[31] Exchange Act Release No. 24407 (April 29, 1987).

[32] Exchange Act Release No. 28146 (June 26, 1990).

generated by the sale of Nasdaq market data products. Accordingly, this development will enhance the level of competition among markets for order flow in Nasdaq-listed securities.

In addition, Nasdaq has an application pending with the SEC to become a registered national securities exchange. As an exchange, the trading environment for Nasdaq-listed securities will open itself up further to new potential competitors – including other existing exchanges, and ECNs that also choose to register as national securities exchanges. All of these market centers will provide new choices for market participants to trade, and for the investing public to place their orders to obtain a quality execution in Nasdaq-listed stocks.

Accordingly, Nasdaq will face increasing competitive pressures with respect to transactions in Nasdaq-listed securities. Nasdaq fully supports the increasing levels of competition that we will face as the NMS continues to evolve. However, Nasdaq also believes that for a competitive environment to thrive, each competitor should operate on a fair and level playing field, one that encourages innovation. As such, each competitor should be able to price its voluntary products and services based on value, as applied using supply and demand, and free of regulatory oversight – to the greatest extent possible.

Nasdaq believes that the increased competition characterized by today's market environment will continue to drive innovation and quality. In turn, these competitive forces will dictate the fairness and reasonableness of market data fees. We recognize that because of certain regulatory requirements – like the SEC's Vendor Display Rule – competitive forces cannot fully supplant SEC oversight with respect to fees charged by a market for its particular BBO. For voluntary, enhanced market data (*e.g.,* market data below the BBO), however, a truly competitive environment can flourish.

By unleashing competitive forces with respect to enhanced market data, exchanges and SROs will be encouraged to innovate and create enhanced execution, market data, and other services, thereby increasing the value of their respective markets and market data.[33] In turn, each market's desire to attract trading interest, in part, by creating innovative ways to package and disseminate enhanced market data, will help to ensure that market participants and investors will

[33] For example, in conjunction with SuperMontage, Nasdaq has developed an enhanced market data product – called the Prime Feed – that will disseminate on a real-time basis, all individual attributable quote/order information at the three best price levels displayed in the Nasdaq Order Display Facility.

have access to whatever enhanced data suits their respective needs, at prices that are fair and reasonable.

Economic theory holds that true competition among markets should "regulate" market data fees. As described above, Nasdaq is a multi-product marketplace that generates revenues and costs from several interrelated core operations – involving issuer listings, transactions, trade reporting, and market data. The source of competition is also the organic and intrinsic interrelationship of these core operations. Accordingly, Nasdaq must analyze the impact that fee changes relating to any one service will have on the others. For example, if Nasdaq attempted to raise our market data fees beyond the value of the data to market participants and investors, market data revenue may rise (though this is not certain, at least beyond a short-term period of adjustment to the change),[34] but the revenue from other services would likely fall. In particular, market participants and investors would likely conduct fewer transactions in Nasdaq-listed securities because they may not have ready access to the data on which to base their investment decisions – leading to a decline in transaction and trade reporting revenues.[35]

Further, the decline in trading volume, and the lack of widely disseminated market data for a specific issuer, would over time make Nasdaq less attractive to issuers because of the apparent decline in liquidity and investor interest for their securities and a higher cost of capital – leading to a decline in listing revenues (and related transaction revenues generated from trading activity in these issuers' securities). Accordingly, the decline in Nasdaq's revenues from listings, transactions, and trade reporting may be far greater than any increase in market data revenue. Nasdaq must recognize that demand for its data is price-sensitive and that competition for transactions and listings constrain the price we can charge for our market data. We have demonstrated this over the last few years by steadily lowering our market data fees.

[34] For example, if Nasdaq increased the price of real-time market data to levels exceeding the value market participants and investors attach to the market data, some may choose simply to access delayed market data at no charge – as opposed to paying excessive fees for real-time market data. Of course, this would result in a decline in market data revenues.

[35] Market participants and investors may seek out alternatives to Nasdaq-listed securities, such as similarly situated NYSE-listed securities, exchange-traded, or traditional mutual funds.

Conclusion

Markets – like Nasdaq – have been the engines of growth in our economy, and the foundation of what is the world's most vibrant capital market. As we move into a new phase of the evolution of our market structure, we must ensure that the core policy goals established by Congress in 1975 – including broad public access to consolidated market data, the maintenance of stable and orderly markets, and the ability to promote competition – are preserved and encouraged to the greatest extent possible. This flexible framework can continue to encourage competition and innovation among markets, resulting in the development of quality market data that investors can trust. These competitive forces will also ensure that investors have broad access to our market data at value-based prices, which are fair and reasonable. By unleashing these competitive forces, the ultimate beneficiary is the investing public.

Thank you for the opportunity to testify. We look forward to working with you as you consider the various aspects of market data issues. I will be happy to answer any questions you may have.

EXHIBIT A

Nasdaq Market Data Products

- Nasdaq offers real-time quotation information through the Nasdaq Level 1 Service℠. The Nasdaq Level 1 Service includes:
- Consolidated real-time quotation information reflecting the national best bid and best offer ("NBBO") for all Nasdaq National Market ("NM") securities and Nasdaq SmallCap securities.
- Real-time values for the Nasdaq Composite® Index, Nasdaq/NM Composite® Index, and eight industrial sub-indexes.
- Real-time market maker quotes and NBBO information for OTC Bulletin Board® (OTCBB) securities.
- End-of-day market summary statistics such as most active issues and new high/lows for The Nasdaq Stock Market.
- Daily net asset values and associated data for over 8,000 money market and mutual funds are reported to the Mutual Fund Quotation Service℠ (MFQS℠).
- In addition, Nasdaq offers real-time transaction information through the Nasdaq Trade Dissemination Service℠ (NTDS℠). NTDS includes:
- Real-time price and volume data for each trade in Nasdaq NM and SmallCap securities.
- Real-time trade price and size data for each trade in OTCBB domestic, foreign, and American Depositary Receipt (ADR) securities.
- Trade price and size data for other over-the-counter securities transactions that are reported via the Automated Confirmation Transaction Service℠ (ACT℠).
- End-of-day summary data (such as high/low/closing prices and volume) for all Nasdaq and OTCBB securities.
- Real-time values for the Nasdaq-100 Index® and Nasdaq-Financial Index®.
- Nasdaq also provides enhanced data products to market participants, vendors, and investors. For example, Nasdaq has developed an enhanced quotation data product called the Nasdaq Quotation Dissemination Service℠ (NQDS℠). NQDS includes:
- Real-time quotes for each market maker and electronic communications network ("ECN") in Nasdaq NM and SmallCap securities.
- Real-time quotation information reflecting the NBBO for Nasdaq NM and SmallCap securities.
- Nasdaq has developed a historical data product in response to requests from market participants to increase the availability of Nasdaq-verified trading data through NasdaqTrader.com. This product offering – called Nasdaq PostData℠ – will allow market participants to view such data and make informed choices regarding their trading partners. Nasdaq plans to offer the PostData℠ product from the Secure Data section of the Nasdaq Trader web site, pending approval by the SEC. Nasdaq PostData℠ – will contain the previous day's share and block volume statistics posted by participating market makers, ECNs, and order-entry firms for all Nasdaq-traded securities.

EXHIBIT B

Nasdaq Facility Infrastructure

Nasdaq's electrical and mechanical infrastructure features the following:

- A 45-watt per square foot capability.
- Two utility power feeds from separate geographical locations/substations.
- Dual internal electrical infrastructure design capable of supplying two power sources to the data center floor.
- Four Rotary uninterruptible power sources (UPSs) Systems (N+2) design (1500 kilovolt total capacity).
- Four batter strings (one per UPS) capable of supplying fifteen minutes of backup at full design load.
- A Battery Monitoring System for all UPS, generator and station batteries.
- Three 1450 kilovolt diesel generators capable of supporting the data center through a long-term outage indefinitely without interruption at 3000 kilovolt. These generators are fueled via two underground 15,000-gallon main tanks with an additional underground 6,000-gallon tank used for fuel deliveries and fuel analysis before being pumped to the main tanks.
- An electrical monitoring system (EMS) monitors over 800 electrical points within the infrastructure. The power distribution system is depicted on a color graphical display PC and will show electrical component alarms and system status as they occur. Alarms are also saved in a historical file for archival and trouble shooting purposes.
- An infrastructure simulation system, based on the design of the EMS system and our electrical infrastructure, is available to provide training, troubleshooting and simulated electrical procedures and switching scenario validations without interfering with the primary electrical distribution system.

Richard G. Ketchum
President
The Nasdaq Stock Market, Inc.

Richard G. Ketchum was appointed President of The Nasdaq Stock in July 2000. He is a member of Nasdaq's Office of the Chairman and is expected to be elected to Nasdaq's Board of Directors in the near future.

Prior to this appointment, Ketchum oversaw a broad range of NASD operations as president of the National Association of Securities Dealers, Inc. (NASD). He worked closely with the association's subsidiaries, The Nasdaq Market, Inc., and NASD Regulation, Inc., in the development and formulation of legal, regulatory and market policies, as well as international initiatives.

Ketchum joined the NASD as Executive Vice President in 1991 and was appointed Chief Operating Officer in 1993. Prior to joining the NASD, Ketchum was the Director of the Division of Market Regulation at the Securities and Exchange Commission (SEC). The Division's responsibilities included the oversight of all U.S. securities markets, the interpretation of the Commission's rules regulating the secondary trading markets and facilitating the development of a national market system.

Ketchum was associated with the law firm of Milbank, Tweed, Hadley and McCloy in New York from 1975 to 1977 before joining the staff of the SEC. He is a member of the adjunct faculty of the Georgetown School of Law and previously for the Washington School of Law at American University and a member of the bar in both New York and the District of Columbia.

He earned his J.D. from the New York University School of Law in 1975 and his B.A. from Tufts University in 1972. Ketchum and his wife, Mary Beth have three children and reside in Alexandria, Virginia.

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