

# SPECIAL REPORT

## **The STA's Perspective on U.S. Market Structure**

**May 2008**



Security  
Traders  
Association

## About The STA

The STA is a worldwide professional trade organization that works to improve the ethics, business standards and working environment for our members. There are approximately 5,200 members, all engaged in the buying, selling, and trading of securities. Members participate in STA through 26 affiliate organizations and represent the interests of the trading community and institutional investors. The STA provides a forum for our traders, representing institutions, broker-dealers, ECNs, and floor brokers to share their unique perspectives on issues facing the securities markets. They work together to promote their shared interest in efficient, liquid markets as well as in investor protection.

## Mission Statement

The Security Traders Association is committed to promoting the interests of our members throughout the global financial markets, providing representation of these interests in the legislative, regulatory and technological processes, while fostering goodwill and high standards of integrity in accord with the Association's founding principle, **Dictum Meum Pactum** – *“My word is my bond.”*

## Vision Statement

Be the representative organization of security trading professionals across all markets and the leading authority, champion, and educator of individuals on issues affecting practitioners and markets.

Be the leading advocate of policies and provide programs that foster investor trust, professional ethics and marketplace integrity, and programs that support education, capital formation, and marketplace innovation.

# STA's Perspective on U.S. Market Structure

## Table of Contents

<b>Letter of Transmittal</b>	
<b>I. Executive Summary</b>	<b>1</b>
<b>II. Overview</b>	<b>3</b>
<b>III. Understanding Volatility</b>	<b>4</b>
<b>IV. Technological Innovation and Regulation NMS</b>	<b>7</b>
Technology Investments and Reg NMS	7
Access to Disparate Liquidity Pools	8
Algorithms and Quant Models	8
<b>V. Exchange Structure</b>	<b>10</b>
The Opening Process	10
For-Profit Exchanges	11
Alternative Liquidity Pools	12
<b>VI. Regulation</b>	<b>14</b>
The Order Protection Rule	15
Market Data	16
Regulation SHO	17
Clearly Erroneous Trades	19
<b>VII. Conclusion</b>	<b>21</b>



# Security Traders Association

## OFFICERS

### Chairman of the Board

#### **BART GREEN**

A.G. Edwards  
a Division of Wachovia Securities, LLC.  
St. Louis, Missouri

### President & CEO

#### **JOHN C. GIESEA**

Security Traders Association  
New York, New York

### Vice Chairman

#### **PETER J. DRISCOLL**

The Northern Trust Co.  
Chicago, Illinois

### Treasurer

#### **BRETT F. MOCK**

BTIG (Baypoint and Brass Trading)  
San Francisco, California

### Secretary

#### **LOUIS J. MATRONE**

Rushmore Investment advisors Inc.  
Dallas, Texas

### Past Chairman

#### **LISA M. UTASI**

ClearBridge Advisors  
New York, New York

## GOVERNORS

#### **JOSEPH N. CANGEMI**

BNY ConvergEx Group  
New York, New York

#### **TOM CARTER**

JonesTrading Institutional Services LLC  
Westlake Village, California

#### **JOHN DALEY**

Stifel Nicolaus  
Dallas, TX

#### **DREW GOSS**

JonesTrading Institutional Services LLC  
Heathrow, Florida

#### **BRIAN MCCARTHY**

Vanguard Brokerage Services  
Malvern, Pennsylvania

#### **JOSEPH MERCANE**

UBS  
New York, New York

#### **STEVE PULEO**

Canaccord Adams  
Boston, Massachusetts

#### **TONY SANFILIPPO**

WD Capital Management  
Westport, Connecticut

#### **JENNIFER GREEN SETZENFAND**

Federated Advisory Services Company  
Pittsburgh, Pennsylvania

#### **NANCY USIAK**

Cabrera Capital Markets  
Chicago, Illinois

#### **WILLIAM VANCE**

Roslyn, New York

May 6, 2008

To those interested in the U.S. Securities Markets:

Over the course of our seventy-five year history, the Security Traders Association (STA) has served as the voice of trading. By representing individual traders from all segments of the market including broker-dealers, institutions, ECNs, and exchanges, we formulate a consensus opinion on critical issues affecting securities markets and public policy. Because our consensus is built from the disparate viewpoints of our members, the positions we take in our Comment Letters, White Papers and Special Reports aim to improve the entire marketplace and not just one individual business model.

At the heart of our Association's mission is the dialogue that we have established within our industry, as well as outside of it with policy makers, legislators, and regulators. As the practitioners who daily fuel the trading engine that powers U.S. markets, our perspective is both informed and unique. That being said, we submit that market structure should insure that the net benefits of competition accrue to investors, through the appropriate balance of competition and regulation. Urged on by competitive forces, the U.S. markets have made significant strides modernizing and remain globally competitive. Our markets are liquid and robust. They are able to absorb the shocks of political, economic, and business dislocations. As a consequence investors in large measure have confidence in the integrity and stability of the U.S. market models.

Further, STA believes the sea change created by Reg NMS and by the increasingly competitive global investing environment call for a "checkup" on the current state of the U.S. markets and their future. Therefore, STA has drafted a special report that outlines what we believe are some of the major issues affecting our markets, hoping this will inform a public policy debate and bring attention to certain reforms which may be necessary. In summation, we are not calling for a rollback or wholesale revision of Reg NMS. Rather, this report contains a thorough "ground-level" analysis of today's markets so that interested parties understand what challenges face practitioners and where regulatory improvements could be made.

We look forward to discussing this report with you.

Sincerely,

Bart M. Green  
*Chairman*

John C. Giesea  
*President and CEO*

## AFFILIATES

Alabama Security Dealers Association  
Boston Security Traders Association  
Canadian Security Traders Association  
Carolina Security Traders Association  
Security Traders Association of Chicago  
Cleveland Security Traders Association  
Security Traders Association of Connecticut  
Dallas Security Traders Association

Denver Security Traders Association  
Security Traders Association of Florida  
Association Française des Equity Dealers  
Georgia Securities Association  
Kansas City Securities Association  
London Security Traders Association  
Security Traders Association of Los Angeles

Mid-Atlantic Security Traders Association  
Mid-South Security Dealers Association  
Minnesota Security Dealers Association  
Montreal Institutional Equity Traders Assoc.  
Security Traders Association of New York  
Investment Traders Association of Philadelphia

Pittsburgh Stock & Bond Association  
Security Traders Association of Portland, Oregon  
San Francisco Security Traders Association  
Seattle Security Traders Association  
Security Traders Association of St. Louis  
Institutional Equity Traders Association of Toronto  
Vancouver Security Traders Association  
Security Traders Association of Wisconsin

*Dictum Meum Pactum*

# I. Executive Summary

Since the STA's 2003 White Paper, U.S. equity market structure has evolved considerably. This evolution is due primarily to changes in exchange structure, regulation and technological advancements. One consequence of this evolution is the volatility the U.S. equity markets are now experiencing. These changes and their consequences are having a significant impact on the securities industry and the investors we are privileged to serve.

In 2005, the Securities and Exchange Commission adopted Regulation NMS (Reg NMS), the most significant change in U.S. market structure since the Congress called for the creation of a National Market System in 1975. Regulation NMS included a market-wide Order Protection Rule (OPR), and a realignment of the fee structure for market data. The implementation of the OPR imposed significant technological and other cost burdens on the industry. Whether this rule has been a net benefit to investors is open to debate.

Simultaneous to the implementation of Reg NMS U.S. equity exchanges migrated from member-owned entities to shareholder-owned for-profit concerns. This competitive model has allowed exchanges to better position themselves to raise the capital necessary for global expansion, helping U.S. markets remain competitive globally. From the trading community's viewpoint, for-profit exchanges raise a number of issues that need to be addressed.

In light of these and other developments, the STA believes that a review of certain aspects of regulation and market structure is needed in order to improve the markets, assure continued market quality, and sustain U.S. competitiveness.

## Volatility

The U.S. equity markets are currently experiencing volatility not seen recently. Underlying changes in market structure over the last decade have contributed to the current market volatility. Specifically, the increase in funds seeking short-term performance; the growth in the use of derivative products; new technologies; the pervasive use of algorithmic trading and quantitative models; and the reduction in the role of specialists and market makers have all contributed to the volatility we are currently experiencing. While a good deal has changed the level of volatility is not unprecedented. Current volatility is not unprecedented, the speed with which markets move today is.

## Technology

Technological advancements have dramatically changed the equity marketplace, with an increase in trading volume being executed by algorithmic and quantitative trading models as well as in alternative liquidity pools. The desire to access these liquidity pools has also increased the use of order routing technologies and linkages. Regulation NMS's Order Protection Rule (OPR) required substantial investment in new technology to ensure that systems complied with the rule. The OPR has contributed to continued growth in quote traffic, forcing industry to significantly increase trading systems' capacity. Therefore, STA recommends that rules going forward should specifically consider the costs and benefits of technological demands and capacity.

## Exchange Structure

Exchanges have transformed from membership-owned entities to shareholder-owned for-profit exchanges, enabling them to raise the capital needed to better position themselves for international expansion, competition, and investments in new technologies. This change in structure has created pressure to increase revenues by raising fees, such as market data fees. Concerns among market participants about the costs of trading on exchanges have led to a proliferation of alternative

liquidity pools, sometimes referred to as “dark” pools since they do not publicly display their liquidity. Many broker/dealers have invested millions of dollars in technology to enable them to internalize or match orders within their own systems before attempting to execute those orders on exchanges. The increased volumes trading on alternative liquidity pools should be monitored to prevent any negative effects on robust price discovery.

The opening process is a unique time of the trading day where intense price discovery occurs. The exchanges have begun to compete with each other to open stocks at the start of the day. While this competition has had valuable benefits, it has also created some investor confusion. Due to the importance of the open to the efficient functioning of the markets, the STA has had initial contact with exchange executives and will convene a meeting with all interested market participants with the goal of coming to agreement on an appropriate and coordinated opening process that is in the best interests of investors.

## Regulation

On the regulatory front, the SEC has guided the markets toward a national market system through the promulgation of rules and regulations designed to encourage access and connectivity. The STA's position is that a fully connected market assures access and leads to a competitive environment that enhances liquidity and transparency, and allows market participants to achieve best execution.

The Order Protection Rule (OPR) of Regulation NMS is intended to ensure that investors receive the best price that is being quoted on any market and to encourage limit order display. While the OPR was well intended, the Commission approved many complex exemptions to the rule, thus diluting its effectiveness. More trading venues are considering adding non-displayed orders in their markets. As non-displayed orders become available on more venues, their use is bound to grow and the incentive value of the OPR to display liquidity will diminish. There are both tangible and intangible costs to investors associated with this now overly complex rule. The STA is of the opinion that a marketplace without this order protection rule will be superior to enforcing the current OPR with its approximately seventeen exemptions and possibly more to come.

Pursuant to SEC rules, the exchanges collect, consolidate and distribute stock quote and trade information. This consolidated market data has been essential to the transparency in the U.S. securities markets and for facilitating best execution of investor orders. Exchanges assess market data fees, which are intended to compensate the exchanges for consolidating the data and for distributing the consolidated data. The growth in trading volumes has enlarged the pool of revenues charged for market data. Because most exchanges are now for-profit enterprises concerns of the ownership, pricing and distribution of market data fees have been heightened. Market data fees have important implications for the structure of the markets, as well as for all market participants. Therefore, STA recommends that the Commission undertake a comprehensive review of market data fees.

STA has long held that short selling adds to overall liquidity and represents a valid investment alternative. Regulation SHO and the removal of the price test have been the subject of media reports that suggest concerted efforts to drive the prices of certain securities down. The STA urges the SEC to aggressively pursue those who would manipulate the market or violate other provisions of Regulation SHO, such as the positive locate and delivery requirements.

Lastly, there should be clear, uniform and market-wide clearly erroneous trade policies. Clearly erroneous trades occur when someone has entered an order with an obvious error. Such trades disrupt the marketplace and create confusion. Because the exchanges are interconnected and a good deal of trading occurs on more than one venue, market centers should have uniform policies in place to collectively deal with such extraordinary events.

The STA offers this paper to establish a dialogue on issues of concern with our industry, and with policymakers.

## II. Overview

Today the financial and popular press are full of commentary about market regulation, market volatility and American competitiveness. The U.S. Treasury Department is calling for wholesale modification of the regulatory structure of the American equity markets. Self Regulatory Organizations (SROs), entities charged with front line oversight of these markets, warn that the current regulations they operate under place them at a competitive disadvantage. Some decry recent changes in regulation as being the cause of the extreme volatility of the equity markets. However, unlike the credit markets, the U.S. equity markets are functioning relatively well, but there are still areas with room for improved efficiencies.

The Security Traders Association (STA) has been encouraging appropriate regulatory and market structure changes for decades. Our organization embraces and incubates change. In fact our 2003 White Paper included many recommendations that were incorporated into Regulation NMS. We have consistently recommended changes with two goals in mind: first and foremost to protect investors; and second to encourage competition between and within markets and among broker/dealers. The STA has also consistently recommended that rules and regulations be changed incrementally to better identify and address any unintended consequences.

This fairly conservative approach has held our organization and our markets in high regard for more than 75 years. We believe that while markets are dynamic, it is important to implement changes when the market participants are not reacting emotionally. Consequences, especially the unintended consequences, are easier to identify in stable markets. Changes enacted in politically charged times or during financial market upheaval tend to be overreactions which have many more unintended consequences than changes that have been deliberately debated in times of stable markets.

Drawing on our experience as traders, we have identified four drivers of the current U.S. equity market: volatility, technology, exchange structure, and regulation. Each gives rise to a series of issues which we describe or recommend improvements to the markets. In this paper, we will address each in turn.

STA believes that further review of certain aspects of regulation and market structure is needed to improve our markets. These include: the necessity of the Order Protection Rule (OPR) or trade through rule; a need to explore the benefits of a coordinated opening; and a thorough review of market data fees. This paper will also describe and discuss some of the current headline topics including:

- Volatility;
- Regulation SHO;
- The “tick test”; and
- Exchange Structure.

We will recommend some incremental changes as warranted. We will also recommend no action on other issues.

### III. Understanding Volatility: Should Investors and Policy Makers be Concerned?

One of the most prominent topics currently discussed in the news is market volatility. Regulation SHO and its removal of the “tick test” for short sales (discussed later in the regulation section) have been demonized as the root of current volatility. However, the markets are much too complex for this alone to be the case. More in-depth analysis shows that there are several recent market structure changes that have contributed to increased volatility.

The strength of any market lies in its ability to provide fair, liquid and orderly execution of shares at prices that, while not predictable, do not fluctuate so much as to prevent the execution of coherent investment strategies with reasonable risk tolerance. This fundamental premise applies to individual stocks and portfolios and to retail and institutional investors alike.

The U.S. equity markets are currently experiencing volatility not seen in the prior six years. There are different ways to measure volatility, and current conditions are not unprecedented. In fact, from 2004 to 2007 note that the volatility of the S&P 500 Index (see chart below) appears unusually low. The catalyst for volatility is often uncertainty, and various interests are in fact served in volatile markets. Underlying changes in market structure over the last decade may be, in fact, exacerbating volatility. What this may mean for the future is that when the catalyst of uncertainty triggers volatility, the volatility will be exaggerated because the prior structural and market mechanisms, which dampened volatility, are no longer present or available. A few statistics are illustrative of the current conditions (again, see chart below, which illustrates the S&P 500 along with the Average True Range, which measures the implied volatility of S&P 500 index options).

The “average true range” determines a security’s volatility over a given period. That is, the tendency of a security to move in either direction.



While the capital markets are extremely complex, instantaneously digesting hundreds of factors and inputs continuously, they remain highly efficient. Recent market structure changes, technological advancements, changes to the competitive landscape and changes in investor type and behavior are contributing to the enhanced volatility we are experiencing today. The recent asset repricing which cost investment banks and other financial firms billions of dollars in write-downs has also played a role in the recent increase in volatility.

Among these factors is the dramatic increase in the number of hedge funds, now estimated to be 9,000, managed by about 3,000 managers. These firms vary widely in assets under management from mini-funds with under \$20 million of assets under management to multi-billion dollar global funds run by bulge bracket firms that execute complex multi-asset strategies. Public and private pension funds, endowments and other institutional investors have increasingly made investments in hedge funds, private equity and other private pools of capital as a way to diversify and achieve non-correlated returns. There has also been a significant increase in the number and impact of 130/30 funds, used by both traditional mutual fund and hedge fund managers.<sup>1</sup> That said, all of these funds have at least two common denominators: they seek to raise new capital, and they seek robust returns. In fact their enhanced returns allow them to raise more capital. In order to earn the returns needed, they may deploy investment and trading strategies aimed at short-term performance. This trading behavior (with a focus on a short-term window of opportunity) in itself creates movement and momentum among stocks that fuels volatility and velocity.

There are many investment strategies available to this group of well capitalized managers, but as these strategies develop they tend to proliferate and result in the use of similar criteria to identify trades with the appropriate risk-reward profiles by other investment professionals. This may result in large numbers of competitors with similar philosophies and goals investing in the same assets at the same time, causing trades that are crowded with like-minded investors attempting to execute large volumes of unidirectional trades. These trades are often sent to the markets in waves, increasing volatility and velocity.

Investment banks, hedge funds and traditional institutional managers are increasingly using derivatives and options strategies. Traditionally, options have been used to hedge against volatility. While this is still the case today, derivatives are also employed because they provide greater leverage to the investor/manager, lowering the manager's cost of capital and enhancing returns. When positions are established in derivatives, the counterparties to those derivatives trades hedge in the cash or underlying market. Options volume is up, driving up hedging activity, which may in turn increase volume and volatility in the cash market.

On the technological front, the continuous delivery of news and information on a real-time basis provides investors/managers with the ability to instantly react to this news. In essence, there is a "shoot first" mentality in which investors trade on the news, and only later attempt to digest it. This has led to an increase in short term trading strategies and volatility. Compounding this issue are innovative new automated execution models designed to trade on the news directly from news sources or from the tape itself, without human intervention. This innovative technological development, yet to be studied extensively, could further impact market volatility.

Further, computer driven models, algorithms, program trades and quantitative trading models are now estimated to account for as much as 50% of daily equity trading volumes. Trades occur instantaneously and automatically without human intervention. This trend will continue, and impacts volatility during trading sessions. Today's volatility is also characterized by increased intraday velocity, or rapid price movement during trading sessions because of the high degree of market automation.

---

<sup>1</sup> A 130/30 fund is a type of mutual fund that engages in a long-short strategy, meaning it goes both long and short at the same time. The 130/30 portfolio allows the relaxation of the typical long-only constraint by allowing these funds to sell short 30% of the value of the long portfolio to fund an additional 30% long position with the proceeds from those shorts, resulting in a 130% long position and 30% short position. **Source:** Rosenblatt Securities, Inc., "Trading Talk: A Brief Primer on 130/30 Strategies: Do Believe the Hype... Only If Your Manager Has Skill" (January 23, 2007), <http://www.rblt.com/documents/TradingTalk1-23-07primeron130-30strategies.pdf>.

---

In the recent past, market makers and specialists were important market participants who provided liquidity when it was needed, which helped dampen volatility. Market makers and specialists were given advantages to reward them for fulfilling these obligations. Lower trading costs, informational advantage and first option to trade with the order flow were the standard advantages allowed to these participants. The change to decimal quotes from fractions impacted liquidity by reducing the incentive for market makers and specialists to commit capital. The result has been a collapse in spreads, equating to reduced profit potential for these participants, or simply put, not enough reward to justify the risk for market makers and specialists. A few market makers continue to play their traditional role, relying heavily on technology to squeeze costs out of their operations. But most market makers became agency traders, rarely using their firm's capital. The specialist system endured these changes and struggled to remain profitable in the new environment. The advent of fast markets further reduced the value of the incentives offered to liquidity providers. The specialist could no longer participate on a great enough scale to provide meaningful liquidity or profits. Market making incentives are no longer valuable enough to incentivize participants to risk their capital. The reduced role of liquidity providers of last resort has in turn reduced the dampening effects these participants have on volatility.

Sophisticated routing mechanisms for the distribution of order flow, without liquidity guarantees, are valuable tools in this new environment. These routing mechanisms are important in light of best execution requirements, because the non-displayed flow, available on a fragmented basis in alternative liquidity pools, must be accessed to fulfill the regulatory mandate of best execution. Brokers must access this fragmented liquidity environment via routers to fill sizeable orders.

#### Volatility Summary and Conclusion:

- Market Makers and Specialists have been the liquidity providers of last resort and have dampened volatility.
- From a public policy perspective, volatility must be considered in the context of investor needs. For investors with short time horizons, volatility presents opportunities for performance returns. Long-term investors can wait out any fluctuations, as even volatile markets have risen over time.
- Several changes in the market have contributed to volatility, including the increase in funds seeking for short-term performance; the growth in the use of derivative products; new technologies; algorithmic and quantitative models; and the reduction in the role of specialists and market makers.
- While the markets have been experiencing a high level of volatility recently, this level of volatility is not unprecedented.

## IV. Technological Innovation and Regulation NMS

Beyond sophisticated routing, technology in general has been an important driver of market structure over the years. In the 1970s and 1980s market structure evolved in part due to technology that allowed for automated quotation and execution systems. Regulators sought to keep up with technological innovation in the 1990s and the early 2000s through a series of incremental rules, including the Order Handling Rules, Regulation NMS and Regulation ATS, which led to the introduction of Electronic Communication Networks (ECNs) and Alternative Trading Systems (ATSs).

As the new ECNs began to earn market share other participants recognized opportunity, creating more ECN venues for equity trade executions. The proliferation of the ECN model and the resultant fragmentation of the market contributed to rapid growth in the utilization, sophistication, and availability of technology. As liquidity has fragmented across trading venues, the buy-side has sought the technological solutions that enable them to access the fragmented liquidity and to keep pace with other changes in the markets. The sell-side has spent untold millions of dollars on such technologies in an effort to service their buy-side clients more efficiently.

Technology creates more efficiency in the form of better trading venue linkages, more robust tools for order management and sophisticated tools for securities trading. Advancements in available technological tools have empowered institutional investors to access the equity trading markets directly thereby lowering their execution costs with the ultimate benefit accruing to investors. While technological innovation has produced these positive results, it sometimes supplants human capital as in the case of market makers. Technology also brings challenges ranging from the cost of development to maintaining the capacity needed to handle increased volumes and quote traffic.

### Technology Investments and Regulation NMS

While not the only catalyst for technology upgrades, compliance with Regulation NMS's Order Protection Rule (OPR) led to substantial investment, hundreds of millions of dollars by some estimates, in new technology. Although there are numerous exceptions and exemptions to the OPR, the rule requires that trades be executed at the best price, but it applies only to "protected quotations," top of book quotations that are immediately accessible for automatic execution. Market centers are required to match the best price or route trades to the market with the best price. This requirement was intended to enhance the competition to post the best bids and offers in order to receive the order flow from broker/dealers and other exchanges.

The OPR has also resulted in a substantial increase in quote traffic, forcing the industry to increase capacity and build larger "pipes" capable of handling the quote traffic with little to no latency. Days of high market volume have put significant stress on trading systems. For example, on January 22, 2008, quote traffic hit over 635 million messages (compared to an August 16, 2007, peak of nearly 432 million messages), which reportedly contributed to problems with the trading systems of two major bulge bracket firms.<sup>2</sup> Quote traffic is by some estimates expected to increase by 50% to 100% this year alone.<sup>3</sup> The Tower Group predicts that with the combination of Regulation NMS in the U.S. and MiFiD in Europe, market data volume will continue to see rapid growth, with an estimated 900% increase in global market data published and a 21,000% increase in the total number of quotes.<sup>4</sup> In addition to processing challenges related to quote traffic, broker-dealers are also burdened with maintaining excessive historical tick data as required by Regulation NMS (with attendant data storage challenges).

---

<sup>2</sup> [Trading Systems Swoon Under Traffic Stress](#), *Wall Street Letter*, February 1, 2008.

<sup>3</sup> *Ibid*, *Wall Street Letter*, February 1, 2008.

<sup>4</sup> Anthony Malakian, [Data Processing: Forestalling a Market Data Overload](#), *Bank Technology News*, January 1, 2008.

---

Massive technological investment has been required on the part of trading venues just to allow them to participate in this new market environment, including the cost of investments needed to comply with Regulation NMS and to handle the resulting significant increase in quote traffic and to maintain sufficient storage of data.

## Access to Disparate Liquidity Pools

Order routing technologies and linkages have allowed better access to various liquidity pools.<sup>5</sup> The latest smart routers are capable of sending multiple orders to disparate destinations in search of “hidden” liquidity residing in one, or more pools. As the number of liquidity pools has increased, market professionals face challenges in determining whether to link directly to each alternative liquidity pool individually or to link via an aggregator.<sup>6</sup> Erik Sirri, Director of the SEC’s Division of Trading and Markets, also recently explained that a broker-dealer’s best execution responsibilities would not necessarily be satisfied by simply routing to displayed liquidity, but that brokers should instead:

“...undertake a regular and rigorous review of the execution quality that can be obtained at different trading venues, including the possibility that a venue may have liquidity available at an undisplayed price or additional undisplayed size beyond the displayed size of a quote. Effective routing, of course, can depend on a variety of factors that can change with the particular type of stock and type of order, among other things. It therefore is quite difficult to make any unqualified statements about how brokers should deal with dark pools when making routing decisions. Perhaps the one piece of advice I could offer, though, is for brokers to make sure that they have an informed basis for their routing decisions that is up-to-date with the current market structure, and not merely an unexamined theory or assumption about what may have worked in the past. The U.S. market structure is changing rapidly. Brokers should take the necessary steps to assure that their routing practices have kept pace.”<sup>7</sup>

The cost of access and order delivery to these execution venues can be only one of the many criteria used in making routing decisions under the obligation of best execution and these decisions must be re-evaluated on an ongoing basis. The liquidity pool phenomenon also impacts regulation and will be dealt with further in that section.

## Algorithms and Quant models

Algorithmic and quantitative trading models continue to increase market share (with some estimates indicating quant trading reaching over 50% of trading volume in certain shares<sup>8</sup>). A major reason for the growth in algorithmic trading is that many market participants believe algorithms efficiently help address market fragmentation by automatically seeking liquidity.<sup>9</sup> The Tabb Group estimates that algorithms represent about 22% of average daily U.S. equity share trading volume.<sup>10</sup>

---

<sup>5</sup> Note: Regulation NMS requires that a trading venue that receives 5% of equity volume provide open quotes. As yet, none of these alternative liquidity pools have amassed the requisite 5% level, yet it is estimated that 15 to 25% of equity volume is being executed in such venues and those percentages are expected to grow, due in part to the desire to avoid exchange fees.

<sup>6</sup> Tabb Group, *Institutional Equity Trading in America 2007: Divining a Path to Liquidity*, October 2007, p. 21.

<sup>7</sup> Erik R. Sirri, Director, Division of Trading and Markets, keynote speech at the SIFMA 2008 Dark Pools Symposium, February 1, 2008.

<sup>8</sup> Bryant Urstadt, *The Blow-Up*, *Technology Review*, Vol. 110, Iss. 6, pgs 36-42,6, Nov/Dec 2007.

<sup>9</sup> Tabb Group, p. 24.

<sup>10</sup> Tabb Group, p. 26-7.

---

Many broker-dealers and several software providers offer algorithmic trading models. Most of the models are based upon similar strategies. This results in many clients using the same algorithms to execute orders in the same stocks. Most of the current genre of algorithms is reactive in nature. If a client wants to purchase a thin issue often times they will try to maintain a certain percentage of the trading volume by setting the algorithm to purchase, for example, 20% of the volume that trades. As volume trades the algorithm will slice the order that is being worked in an attempt to maintain the desired 20% threshold. Problems can arise when more than five clients, in this case, are trying to purchase 20% of the trading volume. As the algorithms compete to maintain their percentage ratio they would push the price higher. There is a subset of algorithms offered that still do not have a circuit breaker mechanism that would stop the upward progression. For example, if multiple participants use the same algorithmic trading strategies, particularly in a low volume security, the result can create a short-term price dislocation. While humans could never react as fast as these models in these instances, humans can step back and analyze what is taking place and judge whether or not to continue.

Some algorithmic and quantitative models are designed to take advantage of maker/taker models. Indeed the cost of execution is a major factor in the decision of which liquidity pools are routed to and in what order. Some quantitative models are developed to garner market data fee rebates, especially those based on quoting activity. Some of these later models will automatically generate and deliver quotes that match the inside NBBO and cancel those quotes automatically when the quote has been in force long enough to garner the desired rebate. There is no investment intent here; if one of these automatically generated quotes is by some chance traded against the computer will simply generate an order to offset that trade. These models, particularly if they are based on similar strategies, may distort the market. For example, there are many quantitative models and algorithmic strategies that aggressively identify changes to the NBBO and route orders to the venues displaying those quotes attempting to execute trades entrusted to them. When the orders are cancelled due to the extremely short duration of the quote that they are trying to interact with, these models will often automatically move on to the next best quote posted for execution. The investor attempting to execute an investment strategy is given a report away from what was believed to be the NBBO and is left to question the integrity of the market.

The STA supports a market data regime designed to reward quality and “tradable” quotes and to discourage quotes that serve only commercial interests and which also have the negative consequences of “flickering” and locking and crossing markets. The STA recommends that the Commission examine this issue (which is further discussed in the “Regulation” section), including the changes Regulation NMS made to the revenue allocation formula for market data rebates, as part of a comprehensive review of market data fees.

#### Technology Summary and Conclusion:

- Dramatic changes and advancements in technology have been important drivers of market structure.
- There has been significant investment in technology due in part to efforts to comply with Regulation NMS.
- Desire to access liquidity pools has increased the use of order routing technologies and linkages.
- The exponential growth in message traffic has created significant strains on trading systems and may not ultimately benefit investors. The Commission and industry worked together in advance of Regulation NMS to avoid material problems with trading systems, serving as an example of a cooperative process between industry and the SEC. But rules going forward should specifically consider the costs and benefits of technological constraints and capacity.
- The Commission should examine the market data regime to ensure quality and tradable quotes that will enhance market structure and to discourage quotes that serve only commercial interests.

## V. Exchange Structure

U.S. markets are among the most liquid, transparent and efficient in the world. The creation of for-profit exchanges has allowed them to invest in new technologies, enhance their competitiveness, and expand internationally.

The U.S. equity markets are a decentralized, highly electronic and highly automated marketplace. Execution speeds are measured in milliseconds on some venues and microseconds on others. For a little perspective, it takes a honey bee 5 milliseconds to flap its wings and it takes light 5.4 micro seconds to travel one mile in a vacuum, the speed of light is about 670,616,630.6 miles per hour. These are time frames beyond human reaction times.

Technological prowess and speed of execution is a primary basis for competition among the various liquidity venues. The U.S. market is fragmented, with no dominant liquidity center. For example, there are currently over 50 liquidity venues today: 10 to 15 exchanges and electronic communications networks (ECNs); and nearly 40 alternative liquidity pools commonly referred to as “dark” pools because they do not display any quotes.

Exchanges, ECNs, ATs and other market participants are engaged in an energetic fight for market share. This competitive vigor has been exacerbated as exchanges switch to for-profit status. Competition increases the opportunities for orders to be executed, including through alternative liquidity pools. We wholeheartedly agree with President Gerald Ford's comments as he signed the Securities Acts Amendments of 1975 into law: “No Government formula nor any industry system of exclusionary rules can match the incentives and rewards for innovation and improved efficiency which natural competition provides.” Market structure should ensure that the net benefits of competition accrue to investors, while avoiding any conflicts of interest.

## The Opening Process

A case illustrating the fight for market share would be the intense competition between the exchanges to open stocks at the start of the day. Economic news, earnings report releases, foreign stock market activity and other overnight news may create significant buy or sell interests for certain stocks, market sectors or the market as a whole. The opening process enables the market or stock to digest all of the news released since the close in one trade, at one price at the start of trading. Large quantities of buy and sell orders representing many disparate views about what the news means for the price of securities come together for a single call auction where the supply of securities is matched to the demand for those same securities. Hundreds of thousands, even millions, of shares change hands all at once, a truly amazing process.

Recent technological advances and exchange structure changes now allow venues to efficiently trade issues listed on competing venues. As a great deal of daily volume trades at or near the open and close this has become an area of intense competition. One venue attempts to show the other that their opening process is superior by opening the competing venue's listed issues first. This phenomenon could have profound implications to the price discovery process and investor confidence, especially if the first trade reported is of de-minimus volume or is subsequently removed from the tape (cancelled).

Currently the exchange that lists a company's stock is deemed to be the primary exchange for those shares. Many investors expect to be able to buy or sell shares of stock on that primary market's open or within the primary market's trading range when the purchase or sale is consummated. When two competing venues open the same stock using different processes and different order flows, the resultant opening price is seldom the same. The first price to be reported to the designated Security Information Processor (SIP) is picked up by most quote systems as the opening price and thus investors expect this price when their trade execution is reported to them. When this price is different from the primary market's opening price it creates confusion.

The STA believes that competition should drive market efficiencies, and that the efficiencies should benefit investors. The competition between the exchanges at the opening has forced slower venues to speed up their opening process. To their credit we have seen a great effort by some slower opening venues to improve their processes. However, this competition has also caused a good deal of investor confusion. The STA has recently had conversations with some high level exchange executives where they have acknowledged the problem that this competition causes. The exchange officials that we talked to appear to have common ground in wanting to find a satisfactory industry driven solution that would benefit investors. This solution may involve the venues ceding some sovereignty to accommodate the public good by fostering investor confidence.

Because the STA believes that the opening process is critical to the efficient functioning of the markets, we will host meetings between interested market participants, exchange representatives, leading academics, technology systems experts, regulators, and anyone else who can bring proactive ideas to bear on this problem. The meetings will attempt to identify the characteristics and components of a sound opening process. The goal will be to build a set of best practices that the exchanges can use as their opening process. Many participants have been identified and invited already; others will be invited as they are identified.

The STA:

- Recommends meeting with all market participants with the goal of coming to agreement on an appropriate and coordinated opening process that is in the best interests of investors. The solution should be negotiated with industry participants rather than achieved by regulatory mandate.
- Supports a coordinated opening that results in increased transparency, which should further result in the public dissemination of information that reflects the trading in a security during the opening process.

## For-Profit Exchanges

Beyond the immediate issues related to the opening, the relationship the exchanges have with their users has evolved along with the changes in their underlying models. To fund their competitive efforts many exchanges have demutualized and become for-profit entities. Some exchanges have accessed the public markets for capital and others have allowed their large order sending firms, who desire to monetize their order flow, to purchase stakes in their exchanges. While becoming for-profit enterprises has helped U.S. exchanges raise the capital necessary for global expansion and competition, the exchanges' relationships with their various constituents has changed.

Under the new for-profit structure, exchanges have a fiduciary obligation to their shareholders and they must grow their revenues and profits to attract investors. Previously, the membership-owned exchanges controlled exchange fees (transaction fees, market data fees and post trade fees) through a system of committees where the exchange fees were deliberated. Since these same members had to also pay the exchange fees, they had a vested interest in keeping fees low. The low fees charged by the exchange would help keep their operating expenses low, thus allowing the members to make healthy returns. This cost control mechanism is no longer in place in the for-profit model, potentially allowing fees to rise unencumbered. SEC Chairman Chris Cox recognized this problem in a letter to Congressman Paul Kanjorski dated January 18, 2008, saying:

You also note that many exchanges have demutualized in recent years and become competitive, profit-seeking entities. I strongly agree that the changed relationship between for-profit exchanges and the broker-dealers that formerly owned them requires new thinking about how best to ensure that exchanges continue to meet the needs of investors....<sup>11</sup>

---

<sup>11</sup> Letter from SEC Chairman Christopher Cox to the Hon. Paul E. Kanjorski, January 18, 2008, p. 1.

One of the Congressional findings underpinning the Securities Acts Amendments of 1975 is:

It is in the public interest and appropriate for the protection of investors and the maintenance of fair and orderly markets to assure the availability to brokers, dealers, and investors of information with respect to quotations for and transactions in securities. . . .<sup>12</sup>

Simply put, investors need market data in order to make informed trading decisions. A major factor in the growth of the securities markets has been readily available, economically priced quote and trade data. Market data fees are paid to trading venues and intended to offset the cost of consolidating the data and market regulation efforts. Excess fees are rebated to market participants as an inducement for them to send orders to the venue. These rebates have grown large enough that business models designed only to capture market data fees have sprung up. When new models are developed to capture fees it becomes evident that the fees are too high with distorting effects in the markets.

The exchange user base has also seen a transformation in the last few years, from solely member broker/dealers to a much broader base. Advanced technological linkages have allowed the exchanges and other trading venues to appeal directly to the end user or investor for order flow, allowing many institutional investors direct access to their trading systems. As the Tabb Group reports, “Low touch trading has accelerated dramatically as the buy-side has shifted a major percentage of (order) flow to DMA (direct market access). . . Buy-side traders have chosen self direction and electronic tools over transparency. . . .”<sup>13</sup> Today institutional investors increasingly bypass broker/dealers and access the markets directly using many of the same systems that only their registered broker/dealer counterparts were allowed to use just a few short years ago. Institutions have taken control of their routing decisions and are comfortable with the best execution responsibilities that have been assumed in the process. This disintermediation has allowed institutional investors to significantly reduce the average commission rate paid to the broker/dealers that represent them, with average commission rates per share falling more than 25% in the last few years. As commission rates have fallen, controlling the cost of trade execution has become even more important.

## Alternative Liquidity Pools

The proliferation of alternative liquidity pools is a direct result of concerns about rising exchange fees / trading costs as well as the concerns about other market participants jumping in front of a resting limit order by a penny with little or no opportunity cost. Buy-side interest in using alternative liquidity pools is in order to trade large blocks of small and mid cap thinly traded securities with little market impact or information leakage. Broker/dealer concerns about the costs associated with trading on traditional liquidity venues has prompted them to invest millions of dollars in technology which enables them to match orders within their own systems (a process called internalization) before attempting to execute those orders on exchanges or public trading venues. The broker/dealers have recognized the competitive nature of their relationship with the exchanges and have developed these and other pools of liquidity to compete with them.

---

<sup>12</sup> Congressional findings (Section 11A of the Securities Exchange Act of 1934) SEC 11A. 78k-1 (a)(1)(C) (iii).

<sup>13</sup> The Tabb Group, Institutional Equity Trading in America 2007, page 11.

---

Alternative liquidity pools are not new, as NYSE floor brokers traditionally only displayed a small portion of their trading intentions, and these pools are cause for only general concern thus far, as no one pool has yet amassed a substantial amount of trade volume. Institutional participants believe that these alternative liquidity venues are a more efficient way to execute their orders. This is the main reason for their explosive growth, estimated to be as much as 95% from 2004 – 2007. This perceived advancement in efficiency has come at a significant cost to transparency. As these pools continue to grow their absorption of orders before they arrive at traditional venues may lead to more fragmentation in the market and less robust price discovery in those traditional venues. Ironically the very price discovery that dark pools depreciate is the major externality of traditional venues that dark pools rely upon to price their internalized trades. STA believes the Commission (SEC) should continue to closely monitor the aggregate and individual volumes of alternative liquidity pools in order to ensure adequate price discovery. Any loss of transparency, the competitive hallmark of U.S. markets, is a concern.

#### Exchange Structure Summary and Conclusion:

- Exchange user bases have transformed from solely member broker/dealer to a much broader group of market participants.
- The change in exchange structure from membership-owned utilities to shareholder owned for-profit entities has created pressure on exchanges to increase fees.
- The proliferation of alternative liquidity pools is a direct result of concerns about rising trading costs and the volumes trading should be monitored closely to prevent any negative effects on robust price discovery.
- The STA recommends that market participants meet to develop a coordinated opening process.

## VI. REGULATION

Transparency, investor confidence, innovation and competition are the hallmarks of efficient securities markets. It is widely believed that connecting all of the various trading venues into a national market system would yield the most efficient markets. Indeed in 1975 Congress envisioned that:

...linking...all markets for qualified securities through communication and data processing facilities will foster efficiency, enhance competition, increase the information available to brokers, dealers, and investors, facilitate the off-setting of investors' orders, and contribute to best execution of such orders.<sup>14</sup>

The SEC has been shepherding the markets toward a truly national market system since 1975, through the promulgation of rules and regulations designed to encourage access and connectivity. The STA has consistently stated that the appropriate balance between regulation and competition yields the best opportunity for achieving a national market system and we believe the SEC's recent implementation of Regulation NMS was a major advancement in the quest for a national market system because it required access and connectivity, enabling competition.

The STA's 2003 White Paper stated that a fully connected market, with non-discriminatory access and automatic execution would be the appropriate first step to allow participants to achieve best execution in a national market system. Our position was (and is) that a fully connected market would assure access and lead to a competitive environment that would enhance liquidity and transparency. This would allow market participants to access the market center with best price in order to achieve best execution by eliminating barriers such as unlinked markets, discriminatory access and manual or slow executions. Since Regulation NMS has been implemented the scenario we articulated has in large measure been achieved, but it has been achieved more so due to competition than as a result of Order Protection Rule (OPR).

The STA also recognizes the challenges for the Commission in the rulemaking process, including the need to strike the right balance between allowing the approval of new exchange products, while also ensuring that there remains fair competition among all market participants. The SEC already faces similar challenges in areas such as Section 19(b)(1) of the Securities Acts Amendments of 1975, which requires the SEC to give notice and to provide opportunity for interested persons to comment on proposed SRO rule changes. The STA believes that interested persons should have a meaningful opportunity to obtain accurate information about proposed changes in self-regulatory rules and to comment on the need or justification for these changes. As such, the Commission has a responsibility to balance self-regulatory rules and needs while simultaneously promoting market innovation at the same time. One possible means of achieving this balance would be to use principles based rule making where possible and save the prescriptive rule promulgation for only the more difficult issues.

---

<sup>14</sup> Congressional findings (Section 11A of the Securities Exchange Act of 1934) SEC. 11A. 78k-1 (a)(1) (D).

---

# The Order Protection Rule

The Order Protection Rule (Rule 611), one of the four major rules promulgated in Regulation NMS, was designed to encourage limit order display and depth of liquidity in the markets. The current OPR was modeled after the old Intermarket Trading System (ITS) trade through rule and was meant to mollify buy-side traders and trading venues that had grown accustomed to the protections afforded by the ITS rule.

The STA is of the opinion that a marketplace without this order protection rule will be superior to enforcing the current OPR with its approximately seventeen exemptions (and possibly more to come). While this position would appear “anti-investor,” it is not. We suggest that the existence of access, connectivity and transparency will yield investors desired liquidity and executions. While the OPR was well intended, its many complex exemptions complicate compliance and dilute its effectiveness. The specific nature of each exemption matters less than the fact that their creation was necessary. STA has long held that competition will serve investors seeking both quality execution and desired liquidity. When markets are connected and monopolistic barriers are removed, market participants will trade where they can get the best execution. Price, speed, liquidity and efficiency are all factors in the equation, but it is up to the participants to weigh each one. Competition and innovation will create a framework for satisfying best execution. Regulatory mandates simply provide a minimum standard.

The Order Protection Rule is also intended to encourage display of liquidity. As Erik Sirri, SEC’s Director of Trading and Markets recently stated in an address:

“The Commission long has emphasized the importance of displayed liquidity in promoting efficient equity markets. Displayed liquidity provides the price discovery that is the starting point for all types of trading, both on and off the quoting markets. . . . Over the years, the Commission repeatedly has acted to encourage the display of trading interest. Most recently, of course, it adopted Regulation NMS in 2005 to establish market-wide protection of displayed quotes against trade-throughs at inferior prices.”<sup>15</sup>

In fact the OPR has done the opposite. New alternative liquidity venues have popped up at such a rapid pace that many market professionals cannot even keep up with the new products, services and opportunities in the marketplace. The one thing that these new venues have in common is that they do not display the orders residing on them.

More trading venues are either considering adding non-displayed orders or are in the process of changing their trading rules to allow such orders in their markets believing that their venues must have these order types in order to compete. As non-displayed orders become available on more venues their use is bound to grow and the incentive value of the OPR will diminish further. The STA believes that the elimination of the OPR contained in Regulation NMS will allow for superior executions and will positively impact displayed liquidity.

---

<sup>15</sup> Erik R. Sirri, Director, Division of Trading and Markets, keynote speech at the SIFMA 2008 Dark Pools Symposium, February 1, 2008.

---

## Market Data

Participants in the U.S. markets have real-time access to the best quote and trade data in stocks. Pursuant to SEC rules, this information is disseminated on a consolidated basis. Quote and trade data are continuously collected from the many different market centers (i.e., exchanges, market makers, and ATSS) that simultaneously trade a security and then disseminate to the public in a single stream of information. Consolidated market information has been an essential element in the success of the U.S. securities markets. It is the principal tool for assuring the transparency of buying and selling interest in a security, for addressing the fragmentation of trading among many different market centers, and for facilitating the best execution of investor orders by their brokers.<sup>16</sup>

Market data is currently the subject of divergent views at multiple levels. The growth in trading volume has enlarged the collected pool of dollars charged for market data and thus heightened the sensitivity of this issue. The concerns surrounding market data fees have focused primarily on the purpose, ownership, pricing and distribution of market data.

Market data fees are intended to be used by exchanges to pay for consolidation of the data they receive, distribution of the consolidated data, and market regulation. For several years there have been ongoing disputes concerning who actually owns the market data which is being sold. Most exchanges claim ownership of market data stating, “exchange market data is the totality of the information assets that each exchange creates by attracting order flow...”<sup>17</sup> In essence most exchanges believe that consolidation of the data is what gives its value.<sup>18</sup> Other market participants such as members of the Securities Industry and Financial Markets Association (SIFMA), the Chamber of Commerce, the Financial Services Roundtable, and the NetCoalition have argued the opposite. For instance, the NetCoalition claims, “this data is actually created by the public and brought to broker/dealers who are compelled by law to provide it to the exchanges — immediately and without compensation — in furtherance of public goals articulated in the Exchange Act.”<sup>19</sup>

---

<sup>16</sup> Proposed Rule, Regulation NMS, Securities and Exchange Commission, File No. S7-10-04 [69 Federal Register 11176] (March 9, 2004).

<sup>17</sup> Exchange Market Data Coalition (American Stock Exchange, Boston Stock Exchange, Chicago Board Options Exchange, Chicago Stock Exchange, International Securities Exchange, The Nasdaq Stock Market, New York Stock Exchange, NYSE/Arca Exchange, and Philadelphia Stock Exchange) letter to Securities and Exchange Commission, NetCoalition Petition for Review, January 1, 2007, p. 3.

<sup>18</sup> National Stock Exchange diverges sharply from other U.S. exchanges in its views on market data, calling the markup for market data “excessive” and recommending, among other things, that exchanges “Charge the securities industry an explicit fee for the costs of data consolidation... We believe this fee in the aggregate would be significantly less than the current cost of consolidated data.” See National Stock Exchange letter to Ms. Nancy M. Morris, Securities and Exchange Commission, In the Matter of NetCoalition, SR-NYSE Arca-2006-21, February 27, 2007, pp. 1, 3.

<sup>19</sup> NetCoalition letter to Ms. Nancy M. Morris, Securities and Exchange Commission, In the Matter of NetCoalition, SR-NYSE Arca-2006-21, March 6, 2007, p. 6.

---

Indeed, the pricing of market data may be the most controversial component of the current dispute. The NetCoalition and other non-exchange market participants believe that the data fees must be related to the cost of producing this data, and the SEC's Concept Release on Market Data suggests that a cost-based standard should be used in the case of fees charged by a "monopolistic provider."<sup>20</sup> In a later Concept Release on Self-Regulation, the Commission reaffirmed their position that "the total amount of market information revenues should remain reasonably related to the cost of market information"<sup>21</sup> but most of the exchanges claim that "cost based" is not the current standard of review, nor has it ever been the standard of review."<sup>22</sup>

The pool of market data fees is significant and exchanges have employed a practice of rebating a portion of these revenues to market participants. These rebates have formed an important economic tool used to encourage order flow and thus greater market share. The rebating of market data fees has also impacted market structure as business models have been created to take advantage of opportunities created by this competition. The SEC has recognized the significant impact of market data fees saying, "some SROs rebate substantial market data revenues to the market participants that contribute to creating the market data," and that its proposal "is intended to address the serious economic and regulatory distortions caused by the current Plan formulas."<sup>23</sup>

STA is convinced that the issues involving market data fees carry important implications for investors, exchanges and market participants, and require thorough examination. The Commission should determine how these fees should be calculated and how these fees can be utilized for the improvement of the marketplace.

## Regulation SHO

Short selling is defined as the practice of selling financial securities the seller does not own in the hope of repurchasing them later at a lower price. This is done in an attempt to profit from an expected decline in the price. Short selling has long been a subject of spirited debate. Prior to Regulation SHO's removal of restrictive price tests such as the "tick test" (NYSE rule 110) and the "bid test" (NASDAQ Rule 3350) from all trading venues, there were market centers which had restrictive price prohibitions (NYSE, AMEX and regional exchanges used the "tick test" and NASDAQ used the "bid test") and those that did not (ARCA and various ECNs and ATs). This provided opportunistic market participants an opportunity for "regulatory arbitrage" where participants chose which venue to execute a trade on because of its trading rules. The STA has consistently warned of the potential distortion caused by regulatory arbitrage, promoted the notion that "like securities" should be regulated by "like rules," and favored the removal of price tests.<sup>24</sup> We believe that these price tests (such as the "bid test" or "tick test") have been rendered ineffective by structural changes to the markets and that price tests would be unable to dampen volatility even if they were to be reinstated.

---

<sup>20</sup> See Regulation of Market Information Fees and Revenues, Securities and Exchange Commission, File No. S7-28-99: "Congress did not include a strict, cost-of-service standard in Section 11A of the Exchange Act, opting instead to allow the Commission some flexibility in assessing the fairness and reasonableness of fees. Nevertheless, the fees charged by a monopolistic provider of a service (such as the exclusive processors of market information) need to be tied to some type of cost-based standard in order to preclude excessive profits if fees are too high or underfunding or subsidization if fees are too low. The Commission therefore believes that the total amount of market information revenues should remain reasonably related to the cost of market information."

<sup>21</sup> Concept Release Concerning Self-Regulation, Securities and Exchange Commission, File No. S7-40-04.

<sup>22</sup> Exchange Market Data Coalition letter, p. 2.

<sup>23</sup> Concept Release Concerning Self-Regulation.

<sup>24</sup> "Fulfilling the Promise of the National Market System: STA's Perspective on U.S. Market Structure," Security Traders Association, August 2003, pp. 6-7.

---

STA has long held that short selling enhances overall liquidity and represents a valid investment alternative. Historically, short selling was much easier on the NASDAQ market because there were multiple market makers trading the security, any one of which could create an uptick at any given time. We will therefore illustrate our point using the NYSE environment. The NYSE uniquely had a specialist in command of the trading of each security listed upon the exchange, tasked with the responsibility of keeping fair and orderly markets. With the single specialist system, the exchanges dominant market share and the strict “tick test” allowed the specialist near total control of trading and thus prices. Also, equities were traded in fractions of 1/16 of a dollar, so each price increment was worth 6.25 cents.<sup>25</sup>

The introduction of penny pricing (moving from trading in fractions of 1/16 to decimals) in 2001 reduced each price increment to only one cent, resulting in 6.25 times as many price points. The specialist had a much more difficult time controlling price and thus short sellers. The advent of Regulation NMS in 2005 and its proclamation that markets must be fast to effectively participate in the national market system further eroded the control that the specialist enjoyed. It was too difficult for a specialist to control a market when trades were occurring in sub-second intervals. The fast market requirement has also empowered NYSE competitors who have since taken a good deal of market share from the NYSE, thus fragmenting the market and further reducing the control of the specialist and allowing more short selling at more venues and price points.

Market professionals have long known strategies that allowed them to establish positions equivalent to short sales without regard to any price test. For example, if participants desired a short position in a sector of the market, Exchange Traded Funds (ETFs) (i.e. the Biotech Holders provides exposure to the bio tech group), futures products (i.e. the S&P 500 Future traded at the Chicago Mercantile Exchange (CME)) and index options products (SPX S&P 500 index options or the DJX Dow Jones Industrial Average Index Options traded at the Chicago Board Options Exchange (CBOE)) allowed this exposure and did not require any price test. If exposure to a specific equity security was desired the participant merely needed to purchase put options or sell call options on the desired security.

The SEC recognized the flaws that had rendered the price test rules obsolete and proactively attempted to formulate rules that could effectively prevent abusive short selling. Regulation SHO was the result of those efforts. Recognizing that focusing on price constraints or even trading constraints in a one-hundred price point sub-second trading environment would be futile, the Commission concentrated on how to efficiently constrain short selling on the issuer and back office side of the equation while removing the ineffective price tests. Regulation SHO was promulgated following much industry and academic comment. It was also implemented incrementally with a year-long pilot period during which the effects of removal of price tests was carefully studied. No detrimental effects were identified during the pilot period.

More specifically Rule 203(b) of Regulation SHO provides that a broker or dealer may not accept a short sale order in an equity security from another person, or effect a short sale in an equity security for its own account, unless the broker or dealer has borrowed the security or entered into a bona-fide arrangement to borrow the security or has reasonable grounds to believe the security can be borrowed so that it can be delivered on the date delivery is due. This rule attempts to prohibit naked short selling. For securities in which a substantial amount of failures to deliver have occurred, Rule 203(b)(3) of Regulation SHO requires registered clearing agency participants to close out all failures to deliver 10 days after normal settlement. These rules, when enforced properly, should severely restrict the amount of short selling which can legally occur.

Footnotes in the Regulation SHO release and the responses to the SEC’s frequently asked questions, which address how broker-dealers satisfy the “locate requirement” under Rule 203(b)(3),<sup>26</sup> serve to create more uncertainty. These interpretations seem to allow registered broker/dealers to rely on other entities, some of which are not registered with the SEC, for their performance under the rule. These non-registered entities have become some of the broker/dealers largest customers making it more probable that the broker/dealers would readily accept any assurances provided to them.

---

<sup>25</sup> Prior to decimalization, securities were traded in fractional amounts of 1/16ths.

<sup>26</sup> For more information, reference the SEC’s Division of Market Regulation: “Responses to Frequently Asked Questions Concerning Regulation SHO,” Questions 4.1 and 4.3 at <http://www.sec.gov/divisions/marketreg/mrfaqregsho1204.htm>.

---

In any event, it would be extremely difficult to reestablish and regulate a “tick test” or “bid test” in the current market structure. The primary markets’ volumes (NYSE & NASDAQ) have eroded to less than 40% and the quote traffic now changes at multiple markets multiple times per second. On top of this, the proliferation of non-displayed dark pool liquidity makes it more difficult to find the true inside quote. Therefore, questions in and challenges to reestablishing a “tick test” would include: (a) What prices or venues would a price test be anchored to; and (b) How could it be effectively implemented across such a fragmented and diverse market structure? Any form of price test would not be practical or effective. Additionally, the ability to monitor and enforce any such rule would be taxing on the regulators and the practitioners. The STA respectfully suggests that the other provisions of Regulation SHO, such as the positive locate rule and delivery requirements provisions, should be more aggressively and rigorously enforced.

Media reports often suggest concerted efforts to drive the prices of certain securities down. Existing SEC regulations make it illegal to collude, act in concert with others and prohibit market manipulation. These regulations should be more aggressively enforced. We strongly agree with House Financial Services Committee Chairman Barney Frank’s statement in a letter to SEC Chairman Christopher Cox on April 4, 2008, that: “Under appropriate conditions, short selling contributes to the efficiency of capital markets. But manipulative or collusive short selling threatens the market’s integrity.”<sup>27</sup>

## Clearly Erroneous Trades

Clearly erroneous trades occur when someone has entered an order with an obvious error in any term, such as the number of shares, the price, or the identification. There are numerous examples as to clearly erroneous trades disrupting the marketplace and creating confusion. One such instance occurred in after hours trading when Google’s price reportedly fell from \$387 to \$38 due to what appeared to be a keystroke error.<sup>28</sup>

Most venues consider a transaction to be clearly erroneous when the execution is substantially inconsistent with the current and recent historical trading pattern of the security. Markets use clearly erroneous trade policies to declare such trades null and void in an effort to bolster their venue’s market integrity. Originally, many automated trading venues had erroneous trade policies that were designed to protect them in case of system malfunction. While most clearly erroneous policies still continue to provide relief from system problems, some have gone much further. On one venue participants can seek relief under this policy because of “general volatility of market conditions” or “other factors and circumstances as the situation may warrant.” Another policy suggests that the principle of unjust enrichment should be a guiding factor as to whether or not to grant relief. Yet another policy considers such mundane errors as wrong stock and wrong side.

Yet the policies are being invoked at an increasing rate to relieve parties who have made common errors or even inappropriate or uninformed trading decisions. These last instances do not fall under the rule of “clearly erroneous” and relief should not be granted or allowed. For example, a venue that allows a trade in a security before the primary markets open in that security should not be allowed to invoke a clearly erroneous policy and declare that trade null because the execution price was away from the primary market’s opening price.

---

<sup>27</sup> House Financial Services Committee Chairman Barney Frank letter to SEC Chairman Christopher Cox April 4, 2008.

<sup>28</sup> Dan Dorfman, *New York Sun*, “Error Knocks Down Google \$350 a Share,” July 31, 2006, p. 1.

---

The reversal of any trade can have profound consequences for the parties involved. As an example, assume an individual receives confirmation that a trade was executed at a price that, although advantageous after-the-fact, is believed to be a bona fide execution. The individual then engages in transactions against that position. If the first trade is cancelled as erroneous, market risk is borne by this innocent party. Informing a trader hours later that a trade is being declared null and void is unfathomable. Also consider the confusion when only one of the venues on which the trade was executed invokes the clearly erroneous policy. Arbitrary or subjective policies on when a trade is valid or not is cause for great concern. Objective criteria of what constitutes a clearly erroneous trade must be developed and standard procedures on how these trades are handled must be uniform.

Given the interconnected nature of our markets today, all automated trading centers should have uniform rules in addressing clearly erroneous trades. Like rules should be in place for like securities across all venues. Currently, regulatory arbitrage can occur between exchanges and the notification process can take many hours which subjects market participants to extreme risk exposure. With regard to solutions, exchanges should have an automated governor in place that prevents electronic executions when consecutive trades would take place more than a certain percent away from the previously reported trade. Clearly erroneous trade rules may also be appropriate in instances when market centers need to collectively handle extraordinary events, such as catastrophic errors of great magnitude.

There should be clear market wide policies and procedures for trading halts as well as clearly erroneous trades. Market regulation must keep pace with the speed of today's markets and the potential for technological glitches and mistakes. Market centers need to be able to deal collectively in the case of an extraordinary event, whether it is a catastrophic error due to technology or human error.

The recent regulatory consolidation blending NYSE-Euronext Regulation and FINRA is certainly a step in the right direction. Though this combination does not directly impact market regulation in this case, it does provide evidence of the need for greater efficiency in regulating our markets and to the extent possible to have rules that cross markets eliminating duplication and enhancing compliance.

#### Regulation Summary and Conclusion:

- The Order Protection Rule with its many exemptions is too complicated and should be rescinded.
- The Commission should undertake a comprehensive review of market data fees.
- Regulation SHO and the removal of the price test has not created increased volatility in the markets. Short selling contributes to the efficiency of the markets, but the SEC should aggressively pursue those who would manipulate or conspire.
- There should be clear, uniform and market-wide policies with regard to clearly erroneous trades as well as for trading halts.

## VII. CONCLUSION

Synthesizing the topics discussed in this Special Report highlights the importance of achieving the right balance of innovation and regulation in a competitive, capitalist system. Innovation, demonstrated through developments such as (i) the rise of alternative liquidity pools; (ii) competition between Opening Auctions; (iii) technological innovation and (iv) for-profit exchanges have clearly benefited the markets. Regulation as exhibited through (i) Regulation SHO; (ii) Regulation NMS; (iii) the STA's initiative around Opening Auctions and (iv) market data reveal both the need for oversight, and the complications that arise from over-proscriptive regulation.

We applaud the SEC's initiatives toward a robust, competitive and fair U.S. equities market. We further appreciate the improved and interactive dialogue between the SEC and the industry, and the approachability of the SEC's staff over the past few years. However, we would like to particularly emphasize the administrative burden that extraneous rules place on industry participants – at the risk of stifling competition. Clearly it is in all participants' interest to support a fair, compliant and transparent market structure system. But in some sense, the pendulum has swung too far – the extent of oversight in the equities market versus the other traded markets in the U.S. (such as fixed income) is incomparable. As such, it is imperative that the regulators employ a robust approach to cost/benefit analyses in future rulemakings to achieve the proper weighting of market forces versus regulation.

The STA intends to remain an active voice on Market Structure issues, and we appreciate the opportunity to publicly express our views.



Security  
Traders  
Association

420 Lexington Avenue  
Suite 2334  
New York, NY 10170

*tel* (212) 867-7002

*fax* (212) 867-7030

**[www.securitytraders.org](http://www.securitytraders.org)**