



April 21, 2010

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

Ms. Elizabeth M. Murphy
Secretary
Securities and Exchange Commission
100 F Street, NE
Washington, DC 20549-1090

Re: File No. S7-02-10, Concept Release on Equity Market Structure

Dear Ms. Murphy:

Thank you for the opportunity to comment on the SEC's concept release. Over the past year, we have made it very clear what we think about high frequency trading (HFT): That it is rife with problems that negatively affect retail investors and institutional managers of more traditional mutual funds, pension funds and hedge funds.

- We have written several white papers about HFT that can be found on our web site www.ThemisTrading.com.
- We maintain a daily blog (<http://blog.themistrading.com>) where we confront many issues surrounding HFT such as whether it truly adds liquidity and or shrinks spreads in other than the most active stocks.
- We have authored several articles where we have taken on some prominent high frequency proponents and critiqued their defenses of HFT point for point.¹

We do not wish to use our comment letter to review those arguments. Rather, we would like to focus on what we believe is the root of the problem that plagues the U.S. equity market – market structure.

Introduction

Regulations enacted by the Commission over the past decade, particularly Regulation NMS, have led to an enormous amount of unintended consequences, most notably fragmentation and the lack of transparency. The US equity market is now a fragmented web of for-profit exchanges, ECNs, ATNs and dark pools connected by high speed, low latency lines. Visible liquidity in all but the top volume stocks has essentially disappeared as many market participants elect to hide in dark pools and piece their orders out in small slices throughout the day. One of the main goals of Reg NMS was to encourage displayed liquidity. It is now apparent that this goal was not accomplished.

¹ See <http://www.tradersmagazine.com/news/agency-brokerage-high-frequency-trading-105382-1.html> or <http://www.advancedtrading.com/algorithms/showArticle.jhtml?articleID=220300593>

Traditionally, exchanges have competed for revenues in three different areas: listings, transaction fees and market data revenue. A recent study by Grant Thornton details what the firm refers to as “The Great Delisting Machine Timeline.”² They detail how a progression of regulation (including order handling, decimalization and Sarbanes-Oxley) has destroyed the economic incentive for traditional market making, investment banking and research.

This lack of economic incentive has caused the removal of support for capital-raising for small companies – a vital area of our economy. In turn, this has caused the drying up of the US IPO market and shut down a major source of revenue for the exchanges. In order to feed their for-profit exchange model, the exchanges needed to look elsewhere for revenue. In the process, we believe the exchanges have sacrificed the protection of all but a few investors, as follows.

I. For Profit Exchange Model

The for-profit exchange model is filled with conflicts of interests.

Exchanges were at one time thought to be similar to public utilities. Their main goal was to attract listings. Becoming a publicly traded company on a major stock exchange was instrumental for raising capital.

However, with the introduction of Reg NMS, the stock exchange model changed dramatically. We don't think we need to go through all the history of what led to this change (it is well documented elsewhere and we would like to keep our comments brief). The main point is that exchange model no longer generates most of its revenue from listing fees. Exchanges now receive most of their revenue from transactions and the sale of market data and related services based on those transactions.

The new exchange model is extremely competitive and filled with new entrants. There are now four major stock exchanges in the U.S.: NYSE, NASDAQ, BATS and Direct Edge. Two of these exchanges are publicly traded companies. Based on recent events, it is clear that the primary goal of all of these exchanges is to maximize profits. This is only normal for a publicly or privately held company, and they have every right to do so.

However, when that exchange also has the dual mandate of protecting all investors, the evidence shows that these companies have a clear conflict of interest.

Flash Orders

The most obvious example of this conflict occurred last year when so called “flash orders” were scrutinized by the public and the media. In June 2009, NASDAQ and BATS began offering their own version of a pre-routed order. NASDAQ called its version FLASH, and BATS referred to its version as BOLT.

Both exchanges were reacting to a very successful program that was launched in 2006 by rival Direct Edge called the Enhanced Liquidity Provider, or ELP. The ELP program helped Direct Edge grow its market share to 12.9% by August 2009, at the expense of NASDAQ and BATS. To stop the bleeding, NASDAQ and BATS applied for the ability to pre-route orders. Without much discussion, both received SEC approval.

In a comment letter dated June 17, 2009, Morgan Stanley noted that NASDAQ and BATS applied for this new order type under a “non-controversial” filing:

²http://www.grantthornton.com/staticfiles/GTCom/Public%20companies%20and%20capital%20markets/gt_wake_up_call.pdf

“NASDAQ and BATS have designated their filings as ‘non-controversial’ pursuant to Rule 19b-4(f)(6) under the Securities Exchange Act of 1934 (the ‘Exchange Act’), which requires that a proposed rule ‘not significantly affect the protection of investors or the public interest’ and ‘not impose any significant burden on competition’...Rule 19b-4(f)(6) under the Exchange Act, however, permits filings to become effective immediately without the typical notice, comment and approval process, if the filings are deemed ‘non-controversial’.”³

Were NASDAQ and BATS trying get a controversial order type approved without the usual comment period? Morgan Stanley seemed to think so:

“The Proposals clearly do not meet the standard of ‘non-controversial’ in that they have already generated controversy from a diverse group of market participants. Not only have the Proposals generated negative responses from various market participants, but the Commission itself has recently indicated that the appropriateness of the underlying practices permitted by the Proposals is something that the Commission may reconsider in the context of today’s electronic market environment.”⁴

In early August 2009, the Flash controversy heated up. Senator Charles Schumer sent a letter to Chairman Mary Schapiro urging the SEC to ban flash trading:

“This kind of unfair access seriously compromises the integrity of our markets and creates a two-tiered system where a privileged group of insiders receives preferential treatment, depriving others of a fair price for their transactions.”⁵

Unable to withstand the pressure, on August 6, 2009, NASDAQ and BATS voluntarily announced the removal of their pre-route order strategy, effective September 1, 2009.

However, this was not the end of pre-routed orders. The SEC has proposed banning these order types and issued this proposal for comment, but *pre-routed orders are still available on other exchanges* since the SEC has not yet made a decision.

Maker/Taker Model and the Economics of Routing Decisions

“Make-or-take pricing has significantly distorted trading,” wrote James Angel of Georgetown University in Washington, Lawrence Harris of the University of Southern California in Los Angeles and Chester Spatt of Carnegie Mellon University in Pittsburgh in their paper, “Equity Trading in the 21st Century.”⁶

Since the early 1990s, when the Island ECN first introduced rebate trading, the equity market has used a maker/taker model. Liquidity makers get paid a rebate by the exchange/ECN and liquidity takers pay a fee to the exchange/ECN. Normally, the rebate is less than the take fee. This model has become the standard for all market centers. Almost nobody in the trading community even questions the maker/taker model. It is assumed to be the only way stocks should trade.

Why doesn’t anyone question this? The buy side probably doesn’t care much since they pay a flat fee to their broker regardless if they are making or taking. The brokers who sponsor algorithmic trading systems have figured out a way for this model to be very profitable. And the exchanges are content with receiving the spread between the make/take rate.

³ <http://www.sec.gov/comments/sr-nasdaq-2009-043/nasdaq2009043-5.pdf>

⁴ IBID

⁵ http://schumer.senate.gov/new_website/record.cfm?id=316252

⁶ <http://www.finextra.com/Finextra-downloads//featuredocs/EquityTradinginthe21stCentury.pdf>

However, the authors of the “Equity Trading in the 21st Century” believe the maker/taker model has:

“...Distorted order routing decisions, aggravated agency problems among brokers and their clients, unlevelled the playing field among dealers and exchange trading systems, produced fraudulent trades, and produced quoted spreads that do not represent actual trading costs.”⁷

The maker/taker model is at the core of the equity market structure problem. It has influenced how most smart order routers access liquidity. Some orders are not routed to the destination where best execution would dictate, but to the cheapest destination first. Most institutional algos use a smart router to route orders in small pieces throughout the day. The pecking order of these routers differs depending on which broker sponsors the algo. But a common goal is to always route to the least expensive destination first. Most of the time this means routing to a dark pool before routing to a displayed liquidity venue. Some of these dark pools are filled with predatory traders that are “hiding out” electronically, watching for footprints that the algos leave.

We are not the only ones who think that there are conflicts of interest embedded in the maker/taker model. In a comment letter to the SEC on March 4, 2010, Morgan Stanley stated:

“The real, underlying problem that needs to be addressed is the conduct of market participants. Diverse market participants are engaging in similar economically driven order handling/routing practices without being subjected to the same regulatory obligations merely by virtue of their respective defined roles in the marketplace.”⁸

“We believe that many of these issues, including the Proposal, are symptoms of the larger underlying cause – aggressive order handling/routing practices that have emerged in recent years. These practices, including the aggressive use of actionable IOIs [Indications of Interest] and blind pinging, are driven by economic incentives to engage in such practices across many different venues and market participants, not just by dark pools. The economic incentives that exist in the market to reduce execution costs inevitably lead to a race for cheaper execution alternatives.”⁹

“The acceptance of the ‘free look for a free execution’ mantra has lead to many market participants, including broker-dealers and exchanges, routing their orders to various alternative liquidity providers in lieu of the traditional lit marketplace. Competition and advances in technology have not only permitted, but have encouraged participants to look for the most cost effective execution, many times in conflict with the underlying customer whose order information is being ‘leaked’ to sophisticated market participants and who is not the ultimate recipient of the resulting economic benefit.”¹⁰

Morgan Stanley is saying that brokers are using algorithms that route to the cheapest venue and not necessarily the venue that provides best execution. Brokers are routing to venues where the predators hide out and take advantage of robotic order flow based on simple volume weighted average price (VWAP) algos. This has been proven by recent research from Quantitative Services Group (QSG), a leading provider of equity research and trading analytics to institutional investors:

⁷ IBID

⁸ <http://sec.gov/comments/s7-27-09/s72709-74.pdf>

⁹ IBID

¹⁰ IBID

"This study reveals that significantly higher impact costs and trading velocity are incurred for VWAP algorithms when compared to Arrival Price algorithms... The results suggest that High Frequency Trading (HFT) strategies are materially contributing to these increased costs... The details of the study uncover an important artifact from today's trading environment: increased order parceling has three negative ramifications. First, more 'strikes', or executions per order, increase a client's exposure to adverse ticks and this tick risk translates into higher impact costs. Second, more strikes increase the chances of leaving a statistical footprint that can be exploited by the 'tape reading' HFT algorithms. Third, should HFT strategies identify the order and begin to trade in anticipation of the order flow, this will begin a positive feedback loop that can significantly change an algorithm's behavior and invite even more predatory order flow."¹¹

How much money is being made by brokers and exchanges when they make these routing decisions, which are ultimately hurting their own clients and helping the HFT predators? Morgan Stanley states:

"We estimate that the annual economic benefit for broker-dealers aggressively routing in this manner could amount to \$63 million (based on a 100 million shares average daily trading volume). Similarly, exchanges that would have otherwise incurred a net loss of approximately \$10 million from having to route to other exchanges could turn that loss in an annual economic benefit of approximately \$76 million (based on a 100 million shares average daily trading volume) through fiscal routing to alternative liquidity sources. We encourage the Commission to carefully examine the current level of access and market data fees, which we believe are driving the current order handling/routing behavior."¹²

Many institutions are using algorithms to receive an average VWAP execution. At the end of the day, they get their VWAP. But what has happened internally? Brokers have profited \$63 million and exchanges \$86 million due to their poor routing decisions at the expense of the long-term investor. But this is only the tip of the iceberg. The real money is being made by HFT firms as they detect the footprints of the algorithm and interposition themselves with the help of their lightning fast technology and access to direct market feeds from the exchanges. HFT is estimated to be an \$8-20 billion a year industry. This money comes from somewhere. *We believe that a good part of it is coming from the leakage of institutional algos due to the fact that brokers and exchanges have an economic incentive to route to the cheapest venue.*

We believe that the maker/taker model needs to be reevaluated. How much liquidity in stocks like Citigroup, which trade close to a billion shares a day, needs to be incented with rebates? With the help of broker/dealer algos and exchanges, the maker/taker model is being used to assist high speed traders in their daily pilfering of millions of dollars from long-term investors. The Commission states very clearly in their concept release:

"Where the interests of long-term investors and short-term professional traders diverge, the Commission repeatedly has emphasized that its duty is to uphold the interests of long-term investors."¹³

The maker/taker model is a clear example of long-term investors being fleeced by short-term traders.

¹¹ <http://www.nyssa.org/AM/CM/ContentDisplay.cfm?ContentFileID=1456>

¹² <http://sec.gov/comments/s7-27-09/s72709-74.pdf>

¹³ <http://www.sec.gov/rules/concept/2010/34-61358.pdf>

Rebate Arbitrage

NASDAQ, Direct Edge and NYSE all operate more than one exchange. BATS is currently pending approval from the SEC for a second exchange and NASDAQ for a third one. The US equity market is currently extremely fragmented. Why do our major exchanges want to fragment the market even more? One reason is so that some of their more sophisticated and technologically advanced members can participate in a strategy called Rebate Arbitrage.

For example, NASDAQ OMX operates the NASDAQ system as well as the NASDAQ BX system. Up until April 15, 2010, BX had a very aggressive rebate program. This had created a rebate arbitrage incentive in the market. On NASDAQ BX, a rebate of \$0.0001/share was given to remove liquidity on shares priced less than \$1.00.¹⁴ On NASDAQ, a rebate of 0.20% of the total dollar volume was given to add liquidity on shares priced less than \$1.00.¹⁵

Now, let's look at how this affects the trading of a stock priced under \$1.00, such as Sirius XM Radio (SIRI):

- Broker places order to buy 100k shares of SIRI at \$0.8701 on NASDAQ. Order gets hit and broker collects a \$174 rebate (100k x \$0.8701 x 0.002).
- Broker then sells 100k shares at \$0.87 on NASDAQ BX and collects a rebate of \$10 but incurs a trading loss of \$10 (100k x .0001).
- Broker makes \$174 on the transaction, but has added no economic value.

It is fair to note that on April 15, 2010, NASDAQ changed its fee schedule to no longer provide rebates for taking liquidity on NASDAQ BX. However, a rebate arbitrage still exists since the NASDAQ rebate for adding liquidity (20bps) is greater than the NASDAQ BX rate (15bps) for taking liquidity.

II. Latency Arbitrage

Latency Arbitrage has become one of the fastest growing strategies on Wall Street. Latency has been steadily decreasing as hardware, software and networking have improved and through the isolation of inefficiencies in circuits and cabling. There is now a wide variety of consultants available to develop ways for corporations and trading firms to reduce latency from endpoint to endpoint. There also is a continuous need to upgrade equipment.

HFTs use cutting edge technology and co-located servers at exchanges and ATSSs, combined with purchases of raw data feeds from these market centers, to create their own inside National Best Bid and Offer (NBBO) quote and depth of book substantially earlier than what is publicly available from the Security Information Processor, or SIP quote. The SIP feeds quotes seen on professional terminals, algorithmic trading systems used by institutions for as much as 50% of their orders, and quotes seen by retail investors on Internet sites.

¹⁴ http://www.nasdaqomxtrader.com/Trader.aspx?id=bx_pricing

¹⁵ <http://www.nasdaqomxtrader.com/Trader.aspx?id=PriceListTrading2>

HFTs are able to reengineer the quote by paying exchanges and ATSs for the right to locate their servers next to market center data servers and matching engines, and by paying for the right to access raw data feeds. They employ technologies such as feed handlers to further speed the receiving of data from the exchanges. Recently, a firm named QuantHouse announced that its feed handler technology, used to standardize exchange raw market data feeds, is able to decode more than 5.55 million messages per second.¹⁶

As a result, HFTs know with near certainty what the market will be microseconds ahead of everybody else – valuable knowledge that HFTs take advantage of when they trade thousands of stocks, thousands of times, every trading day. HFTs will then use techniques, such as Predatory Algos, Immediate or Cancel (or “cancel and replace”) orders, and Dark Pool Pinging, to determine what kind of institutional algo orders are in the market, such as those driven by commonly used VWAP formulas, and how those orders will react if the bid / offer of a stock moves up or down.

In its concept release, the SEC asks many questions about market structure. We have a few of our own:

Do HFT firms have an unfair advantage?

Most professionals on Wall Street have taken a standard from our past for granted, that everyone sees the same quote and market data at the same time. What if the time differential between what the HFTs see and what everybody else sees was 5 minutes instead of 5 milliseconds? Would that be acceptable? It is not the amount of time that matters. It's that a differential exists at all.

It is interesting to note that some of the exchanges make sure that each co-located customer receives equal amounts of connecting cable, so that a server at the northeast corner of a facility has the same latency as one at the southwest corner. It appears that “fairness” and the equalization of market data speed among co-located firms is an important “must” for the exchanges, but not so when it comes to all other institutional and retail investors.

Is it fair to sell these rights to the highest bidders when market centers are supposed to be protecting all participants' interests equally?

Latency Arbitrage has created a two-tiered market of technology enhanced insiders (comprised of a handful of large banks, brokerage firms and hedge funds) and the rest of us. To be clear, HFTs only enjoy this advantage because market centers are selling them the right to co-locate and access raw data feeds. As for-profit organizations, market centers are incentivized to do this.

¹⁶ <http://www.automatedtrader.net/news/quant-news/37724/quanthouse-breaks-the-555-million-market-data-messages-decoded-per-second>

When a market center provides an HFT with the ability to out-maneuver institutional orders, is not the exchange putting institutions and their brokers in breach of their fiduciary responsibilities, especially those institutions managing pension funds governed by Employee Retirement Income Security Act (ERISA)?

It is entirely one thing for an HFT firm to use proprietary algorithms to try to predict how an institution's algo will operate, so that the HFT can out-maneuver the institution. But it is the buy side traders fiduciary responsibility to protect his/her firms orders by adjusting execution methods and tactics regularly, in order to avoid predictability. Quantitative Services Group LLC's (QSG) study found significantly higher impact costs and trading velocity are incurred for VWAP algorithms when compared to Arrival Price algorithms, especially when applied to liquid, low price stocks. QSG concluded, "The results suggest that High Frequency Trading strategies are materially contributing to these increased costs."¹⁷

To further enforce our case that HFTs are paying to see information before the general public, we thought it would be helpful to quote a few paragraphs from the SEC's Concept Release that we are commenting on:

"Exchanges, ATSS, and other broker-dealers are prohibited from providing their data directly to customers any sooner than they provide their data to the plan processors for the Networks. The fact that trading center data feeds do not need to go through the extra step of consolidation at a plan processor, however, means that such data feeds can reach end-users faster than the consolidated data feeds. The average latencies of the consolidation function at plan processors (from the time the processor receives information from the SROs to the time it distributes consolidated information to the public) are as follows: (1) Network A and Network B - less than 5 milliseconds for quotation data and less than 10 milliseconds for trade data; and (2) Network C - 5.892 milliseconds for quotation data and 6.680 milliseconds for trade data."¹⁸

The Commission also states:

"Some proprietary firm strategies may exploit structural vulnerabilities in the market or in certain market participants. For example, by obtaining the fastest delivery of market data through co-location arrangements and individual trading center data feeds, proprietary firms theoretically could profit by identifying market participants who are offering executions at stale prices."¹⁹

"When it adopted Regulation NMS in 2005, the Commission did not require exchanges, ATSS, and other broker-dealers to delay their individual data feeds to synchronize with the distribution of consolidated data, but prohibited them from independently transmitting their own data any sooner than they transmitted the data to the plan processors. Given the extra step required for SROs to transmit market data to plan processors, and for plan processors to consolidate the information and distribute it the public, the information in the individual data feeds of exchanges and ECNs generally reaches market participants faster than the same information in the consolidated data feeds. The extent of the latency depends, among other things, on the speed of the systems used by the plan processors to transmit and process consolidated data and on the distances between the trading centers, the plan processors, and the recipients."²⁰

¹⁷ <http://www.nyssa.org/AM/CM/ContentDisplay.cfm?ContentFileID=1456>

¹⁸ <http://www.sec.gov/rules/concept/2010/34-61358.pdf>

¹⁹ IBID

²⁰ IBID

"The Commission understands that the average latency of plan processors for the consolidated data feeds generally is less than 10 milliseconds. This latency captures the difference in time between receipt of data by the plan processors from the SROs and distribution of the data by the plan processors to the public."²¹

We could stop our comment letter right here because the Commission has just made our case. They acknowledge that HFTs are seeing information before everybody else because they are buying direct data feeds and paying for their servers to be co-located. They acknowledge that HFTs are profiting at the expense of the average investor. They acknowledge that there are currently two sets of data in the public domain: fast data, which is accessed by privileged firms that can afford all the technology and market data expenses, and slow data, which is what the rest of the investment community receives.

But we also have another topic that needs to be examined...

III. Market Data Revenue

Exchanges generate market data revenue from the sale of quote and trade information to third parties such as Bloomberg and Yahoo Finance. This fee paid by the vendor to the exchange is usually just passed along to all investors. This is a huge revenue generating business for the major exchanges. Sales of consolidated market data generated approximately \$400 million in 2004. This represented about 10-15% of total revenues from the largest exchanges.

Back in 2006, a debate started by the NetCoalition raged about the amount of fees that the exchanges were charging for their market data. While most agree that exchanges should be compensated for the service that they provide, the debate centered upon how much was being charged. NetCoalition argued that the cost associated with the exchanges obtaining the market data was far lower than the revenue that they were receiving. Exchanges were quick to point out that they were not even required by Reg NMS to supply depth of book information. They argued that it was their proprietary information and they could sell it if they wanted.

The exchanges won this debate and have been enjoying lucrative market data revenues ever since. The exchanges figured out that to attract more business to their market, they would have to encourage order flow through rebates. We have already detailed the maker/taker model and how it creates incentives for brokers to place orders on the highest rebate system, but not necessarily providing best execution. There is, however, another way that exchanges attract order flow: they will rebate back a portion of their tape revenue to the broker who initiated the order flow. This rebate could be up to 100% depending on the level of business that the broker does with the exchange.

In 2007, to further complicate matters as a result of Reg NMS, the SEC changed how market data revenue was calculated. No longer would it be from the volume executed, but now a portion would be credited based on quotes. After the revenue pools are calculated, they are now shared with exchanges based on quotes and trades. Quotes at the NBBO and trades are eligible for approximately 50% of revenue. Only exchanges can compete for the quote revenue since trade reporting facilities (TRFs) only report trades and do not quote.

We believe that a good portion of quotes that are cancelled are being placed for the sole reason of generating quote revenue. An SRO can generate "quote credits" for each second of time that the SROs quote is at the NBBO. HFT firms have the ability to detect when a stock is moving and cancel their quote before it is executed.

²¹ IBID

A research paper prepared by the SEC's Office of Economic Analysis concludes:

"...Incentives created by allocation formulas are large enough to have a significant impact on average trade size and that revenue-sharing rebate programs are a key mechanism used by exchanges to align the incentives of order-flow providers with the exchange."²²

"Market data revenue is an impetus contributing to the practices of payment for order flow, internalization, and order preferencing, but has largely been ignored in the literature investigating those practices."²³

Conclusion

Over the past decade, regulatory changes in the US equity market have been dramatic. The market has shifted from a slow paced auction market with 1/8 point spreads to a high speed, electronic market where penny wide spreads are common. Consolidated average daily share volume and trades in NYSE-listed stocks increased from just 2.1 billion shares and 2.9 million trades in January 2005, to 5.9 billion shares (an increase of 181%) and 22.1 million trades (an increase of 662%) in September 2009.²⁴

On the surface, it appears that these new regulations have been successful and the equity market appears healthy and liquid. But as we have detailed, there are many inequalities now present. Fairness and transparency seem to have lost out to the never ending quest for profit.

While we do think that HFT has an unfair advantage in the marketplace, we do not believe that it is the problem. HFT is the symptom of what lies at the heart of the equity market today. In their quest to satisfy the bottom line, the exchanges have sold out the institutional and retail investor. Left unchecked, the exchanges will continue to make choices that cater to a customer base that generates most of their revenue – the HFT community.

HFT is a very big bucket that catches many types of trading. For the most part, we don't question HFTs' morality or legality. HFT practitioners, even the predatory ones, are doing what our free market system encourages them to do: make money by all legal and acceptable means, collateral damage be damned. The problem is that our market structure has evolved to cater to them. And to date, our regulatory bodies have rubber-stamped every system and rule change placed in front of them by the exchanges.

We do question a market structure that has allowed predatory HFT to flourish. The predatory trading, which picks off dark pools using a plethora of tools (actionable IOIs, for example), and is amped up with co-located speed, is an issue in our opinion. But make no mistake: it is a dwarf issue relative to the fact that for-profit exchanges, focused on next quarter's profits, cater to HFT firms at the expense of others.

- Exchanges rolled out FLASH order types, admitting that they were wrong and unfair.
- Exchanges sell co-location space and data feeds to HFT firms looking for micro/nano/pico second speed advantages, so that they can beat slower orders to the quote.
- Why is the SIP, the public quote that powers the vast majority of institutional buy-side algorithms, operating at a much slower speed than those who are paying to co-locate?

²² http://faculty.bus.olemiss.edu/rvanness/Speakers/2008-2009/MayhewCaglio-tape_shredding.pdf

²³ IBID

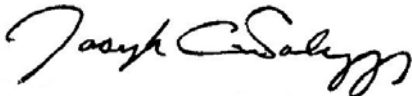
²⁴ <http://sec.gov/rules/proposed/2010/34-61908.pdf>

We believe that our comment letter has clearly illustrated that there are a number of incentives currently in the equity market that are not aligned with the public's interest and the stated goal of the SEC to uphold the interests of long-term investors. We commend the efforts that the Commission has taken thus far in their market structure review and urge the SEC to continue investigating the issues that we have identified in this letter.

Sincerely,



Sal L. Arnuk, co-founder, Themis Trading



Joseph Saluzzi, co-founder, Themis Trading

Joseph Saluzzi (jsaluzzi@ThemisTrading.com) and Sal L. Arnuk (sarnuk@ThemisTrading.com) are co-heads of the equity trading desk at Themis Trading LLC (www.themistrading.com), an independent, no conflict agency brokerage firm specializing in trading listed and OTC equities for institutions. Prior to Themis, Mr. Arnuk worked for more than 10 years at Instinet Corporation, where he headed the team responsible for equity sales and trading for major institutional money managers. Mr. Saluzzi worked for more than nine years at Instinet, where he headed the team responsible for equity sales and trading for major hedge fund accounts.