MANAGED FUNDS ASSOCIATION
The Voice of the Global Alternative Investment Industry
WASHINGTON, DC | NEW YORK

August 12, 2011

Via Electronic Mail: market-integrity@iosco.org

Mr. Werner Bijkerk
International Organization of Securities Commissions
Calle Oquendo 12
28006 Madrid
Spain

Re: Public Comment on Consultation Report: Regulatory Issues Raised by the Impact of Technological Changes on Market Integrity and Efficiency

Dear Mr. Bijkerk:

Managed Funds Association ("MFA")[1] appreciates the opportunity to provide comments on the Technical Committee of the International Organization of Securities Commissions' ("IOSCO") consultation report on "Regulatory Issues Raised by the Impact of Technological Changes on Market Integrity and Efficiency" (the "Consultation Report").[2] Specifically, the Consultation Report requests for comments with respect to high frequency trading ("HFT"). We support IOSCO's review of HFT as it is important for regulators world-wide to remain abreast in their understanding of market trends and technological developments.

MFA represents the views of institutional investors, including registered or authorized managers and private investment pools, whose investors include pensions, endowments, foundations and insurance companies. In our view, global regulations, including those in the EU, have fostered innovations in technology that have revolutionized investing in our equity markets, and promoted greater competition among marketplaces, to the benefit of investors. Most notably, the advancements in technology have empowered investors, both institutional and retail, with more sophisticated and efficient methods to access the markets and execute their investment strategies globally. In the process, these equity market developments have led to greater market liquidity and depth, tighter bid-ask spreads and lower transaction costs. These changes lower the cost of capital and enhance economic growth.

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[1] MFA is the voice of the global alternative investment industry. Its members are professionals in hedge funds, funds of funds and managed futures funds, as well as industry service providers. Established in 1991, MFA is the primary source of information for policy makers and the media and the leading advocate for sound business practices and industry growth. MFA members include the vast majority of the largest hedge fund groups in the world who manage a substantial portion of the approximately $2.0 trillion invested in absolute return strategies. MFA is headquartered in Washington, D.C., with an office in New York.

[2] Regulatory Issues Raised by the Impact of Technological Changes on Market Integrity and Efficiency, Consultation Report by the Technical Committee of the International Organization of Securities Commissions, CR02/11, July 2011, *available at:* http://www.iosco.org/library/pubdocs/pdf/IOSCOPD354.pdf.

Advancements in technology have vastly improved analytical, trading and execution tools; and led to significant strides in market efficiencies through competition, lower transaction costs and greater market depth and liquidity—all socially desirable traits. Technological developments or the use of technology should not be confused with HFT or individual trading strategies. Overall, investors are in a much better position today than in the past with respect to market access, market information, the amount paid in transaction fees, and order execution, among other trading/investment aspects.

Accordingly, we respectfully urge that any principles or recommendations that results from the Technical Committee's consultation on HFT be supported by empirical data. Without empirical data to support changes, any rule-making that follows could become a vehicle for costly, unintended detrimental consequences, and reverse the trend over the past decade of tighter bid-ask spreads, reduced commissions and transaction costs, faster execution speeds, more democratic market access, greater liquidity and increased market depth.[3]

I. General Comments

A. High Frequency Trading

We appreciate that the Consultation Report differentiates HFT from algorithmic trading and recognizes that determining a precise definition for HFT may not be practical for regulatory purposes.[4] However, in reviewing developments relating to market structure, market integrity and efficiency, we believe it would be more useful for regulators to separate technology and technological developments from trading strategies.[5] As concluded in the research paper of Professors Gomber, Arndt, Lutat and Uhle ("Gomber"), HFT "describes the usage of sophisticated technology that implements traditional trading strategies"; and as such, it is the individual trading strategies that need to be assessed rather than the means of transaction delivery.[6] We believe it is important to differentiate technological developments from strategies, and that it is over-simplistic to assert or blame advancements in technology for any perceived deteriorations in market integrity and efficiency.

Regulations to promote competition and reduce costs for investors, such as the U.S.'s Order Handling Rules and Regulation ATS[7] and the EU's Markets in Financial Instruments

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[3] *See* discussion *infra* Section II.

[4] Consultation Report at p. 21.

[5] *See, e.g.,* Peter Gomber et. al., High Frequency Trading, Goethe Universitat, Frankfurt Am Main, [hereinafter, "Gomber"] *available at:* http://ssrn.com/abstract=1858626. The research paper concludes, among others, that HFT is a technical means to implement established trading strategies; it applies the latest technological advances in market access, market data access and order routing to maximize the returns of established trading strategies.

[6] *Id.* at p. 30.

[7] Securities Exchange Act Release No. 37619A; 61 *FR* 48290 (Sept. 12, 1996); Securities Exchange Act Release No. 40760, 63 *FR* 70844 (Dec. 22, 1998).

Directive ("MiFID"),[8] fostered the development of new electronic markets and enabled investors to use more sophisticated automated computer programs to trade. This environment presented increased competition for the major market centers—competition that fostered improvements in their technology and forced expansion of their capacity as market activity increased. As a result, the existing market structure monopolies were eliminated and the timely flow of trade data was made available to all investors.[9] These changes were significant factors that led to the reduction in trading costs.

These market structure advances effectively enabled the growth of high frequency trading, a set of technological tools and trading methods based on low latency technology that were first developed in the early 1990's. Over time, HFT has found new applications that go beyond its early roots in proprietary trading. Investors of all types, regardless of their investment time horizons, broadly use HFT methods for efficient execution. Indeed, low latency execution methods have quickly become the standard execution platform offered by most broker-dealers. Today's traditional and newer liquidity providers also largely depend on HFT methods and either access the markets directly as broker-dealers or through an agency broker via "sponsored access".[10] Broker, exchange and investor trading technology all have become reliant on low latency technology.

As a result of market structure changes, many aspects of the EU and U.S. equity markets—spreads, fees, execution speed, market depth, efficiency, transparency and pricing reliability, for example—have steadily and drastically improved over the last several years to the benefit of the investing public (*see* charts below). Investors have measurably benefitted from technological and regulatory changes, and financial intermediaries now offer better service and more low-cost options for accessing markets and executing orders. In fact, many assert that those benefiting most from these changes (*i.e.,* increased liquidity, lower transaction costs, better technology, etc.) are long-term investors.

B. The Fairness and Integrity of Markets

The Consultation Report raises a few issues with respect to the use of HFT and the fairness and integrity of markets.[11] An equity market structure is fair when it treats similarly situated market participants in a consistent manner and provides all market participants with equal opportunity to compete and access markets. The success of individual participants should become a matter of competition. For example, the current U.S. market structure is fairer than it has ever been as it no longer preferences particular market intermediaries over other market participants in terms of providing and accessing liquidity (*e.g.*, specialists in specific stocks).

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[8] *See also,* TABB Group, Effective Spreads in European Equities, February 2010, *available at:* http://static.capitalize-on-change.com/Global/pdfs/Contributors%27%20Content/V08-001_Effective_Spreads_in_European_Equities%5B1%5D.pdf.

[9] *See, e.g.,* Regulation NMS, Securities Exchange Act Release No. 51808, 70 *FR* 37496 (June 29, 2005).

[10] *See* discussion *infra* II.2.

[11] Consultation Report at p. 27-29.

With respect to the point the Consultation Report raises on whether some investors may lose confidence in the markets because of a perceived technological disadvantage,[12] we believe this must be demonstrated empirically, not asserted anecdotally. All investors have greater access to advanced trading technology today through their banks and brokers.

Whether investors recognize it, low latency tools and techniques are available to all market participants, including retail investors. In fact, it has been through their brokers' investment in technology and competition that retail investors have been able to benefit from greater market access and (online) trade executions for as little as $7 a trade in the U.S. (as compared to around $45 per 100 shares ten years ago)[13] or the fixed commission rates (in the U.S.) that existed prior to May 1, 1975. Retail investors are able to access or benefit from sophisticated trading tools in a number of ways. First, through technological developments, retail broker-dealers, such as Schwab, E-Trade, Fidelity and TD Ameritrade in the U.S., are able to offer retail investors advanced analytical and research trading tools, real-time market data, lower trading costs and greater market access than ever before. Second, retail investors may trade through an intermediary that deploys sophisticated trading tools. Third, retail investors may invest in mutual funds or pension funds that will deploy sophisticated technology to execute trading strategies. Even investors generally considered "passive" or "long-term", such as mutual funds, rely on sophisticated trading tools, such as algorithms, to actively buy and sell securities on a daily basis at the best price in order to offer continuous liquidity to its investors. Accordingly, retail investors are able to access technology through these structures.

With respect to institutional investors, many choose not to invest and build proprietary trading tools from a cost-benefit perspective, but to hire service providers (*e.g.*, executing brokers or third-party vendors) with the best technology, and resources to trade at high speed and with the highest degrees of sophistication. Many investors, including MFA members, access the markets through a broker-dealer via direct market access or sponsored access and use algorithms supplied by buy-side brokers.

Sophisticated trading tools are available to all investors. Nevertheless, we recognize that understanding modern trading methods and technologies may be confusing for investors, including some professional investors. Technology continues to revolutionize financial markets and enhance market efficiency, just as it has for nearly every other industry or field in the modern world. Improved efficiency makes it more difficult for investors to earn greater proprietary profits and may lead some to identify trading technology as a problem (for them) even while it is benefitting investors and the markets as a whole. Nevertheless, investors should seek to fully benefit from the range of new technological advancements by staying abreast of developments and adapting to the times, especially when they have a fiduciary obligation to underlying investors. MFA members take this obligation extremely seriously. To best serve the interest of their investors, fiduciaries need to ensure that they are aware of and are making best use of the available resources, including the latest technological tools. To bridge this

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[12] Consultation Report at p. 27.

[13] James J. Angel et al., Equity Trading in the 21st Century, February 23, 2010, at p. 19, *available at:* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1584026 (hereinafter "Angel et al.").

informational gap and to better educate market participants and regulators, , we recommend that markets and market intermediaries regularly engage in educational campaigns and offer informational sessions to investors on electronic trading, algorithmic trading, low latency technology and other technological tools commonly used or available to investors.

The Consultation Report also raises HFT concerns with respect to market quality, abusive practices and oversight by market authorities.[14] From our experience, as supported by empirical data and further discussed below, many factors that comprise market quality have steadily improved over the past few years. Also, the majority of research on HFT finds evidence that HFT increases market quality.[15] We believe in discussing market quality and abusive practices, it is imperative that the Technical Committee and market authorities consider empirical evidence before reaching regulatory conclusions.

Again, in reviewing HFT, we believe technology should be separated from strategy; and that market authorities should continue to police markets for abusive practices. While market authorities may not have sufficient resources to compete with the private sector in technological capabilities, we do not believe they need to in order to conduct effective market surveillance. Sponsoring agents that provide low latency technology or access, such as market intermediaries, should have the means to provide market authorities with detailed reports from which surveillance can be conducted.

C. HFT and the Flash Crash of May 6, 2010

The Consultation Report underlines the U.S. Flash Crash of May 6, 2010 (the "Flash Crash") as an important reason for regulatory structures to keep pace with technological advances and changes in market microstructure.[16] We don't dispute the notion that it is important for regulators to stay current in their understanding of technological advances in the markets, however, we believe it is important to note that the events of May 6, 2010 were not unique and that investors have previously experienced similar, sharp market dislocations. A relevant example occurred decades ago, well before recent innovations and changes in market structure.[17] On May 28, 1962, the Dow Jones Industrial Average fell sharply in 20 minutes, with some stocks falling by as much as 9% in 12 minutes.[18] This market event became known as the

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[14] Consultation Report at p. 28.

[15] Gomber at p. 34. Gomber provides a list of available research papers on HFT and algorithmic trading, along with a short description of the research question, the applied methodology and the results of the papers.

[16] Consultation Report at p. 29.

[17] 1963 Special Study of the Securities Markets, Ch. XIII – The Market Break of May 1962 (hereinafter "1963 Special Study"), *available at:* http://c0403731.cdn.cloudfiles.rackspacecloud.com/collection/papers/1960/1963_SSMkt_Chapter_13_1.pdf.

See also Take Heed the Lessons from the 1962 Flash Crash, Ian Domowitz, June 21, 2010 *available at:* http://www.advancedtrading.com/exchanges/showArticle.jhtml?articleID=225700888.

[18] Back to the Future: Lessons from the Forgotten 'Flash Crash' of 1962, Jason Zwieg, The Wall Street Journal, May 29, 2010.

"Market Break of 1962" and was one of the subjects of the Securities and Exchange Commission's ("SEC") 1963 Special Study of the Securities Markets ("1963 Special Study").[19] Both "market breaks" in 1962 and 2010 happened suddenly and erratically, and in both cases liquidity seemed to evaporate for a brief period of time. Just as electronic market makers are said to have retreated on May 6, 2010, New York Stock Exchange specialists shifted to selling on May 28, 1962 and did not intervene to slow the decline.[20]

We believe these types of market breaks have complex causes that cannot be solely attributed to evolution in electronic trading or changes in market structure; trading in 1962 occurred on exchange floors or by telephone, well before the advent of electronic communication networks and dark pools, high frequency trading, and computerized systems. Events on both days were impacted by complex interactions involving multiple elements.[21] Indeed, the 1963 Special Study states:

> The history of the May 28 market break reveals that a complex interaction of causes and effects—including rational and emotional motivations as well as a variety of mechanisms and pressures—may suddenly create a downward spiral of great velocity and force. This, in turn, may change the impact of various normal market mechanisms, and thus temporarily impair the market's fair and orderly character.[22]

While the specific circumstances were different almost 50 years ago, the basic elements of the two events are strikingly similar: highly skittish investors found themselves unable to access accurate market data, so they retreated from the markets. When a market participant is unable to access accurate market data, it is likely to take a "wait-and-see" approach before buying or selling securities. A market participant doing otherwise could violate its risk management parameters or be deemed to be reckless and irresponsible by underlying investors, shareholders and regulators. Accordingly, we suggest that electronic trading did not play as special or unique a role in the Flash Crash as some have concluded, but was merely a means through which investors reacted to the market circumstances. Since the Flash Crash, the SEC has implemented first generation market-wide single-stock circuit breakers, and is considering a limit up-limit down market mechanism.[23] We believe such measures are an appropriate way to provide markets with a brief cooling-off period during times of extreme market uncertainty.

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[19] 1963 Special Study.

[20] 1963 Special Study.

[21] *See* 1963 Special Study *and* Report of the Staffs of the CFTC and SEC to the Joint Advisory Committee on Emerging Regulatory Issues dated May 18, 2010, CFTC and SEC Preliminary Findings Regarding the Market Events of May 6, 2010, *available at*: http://www.sec.gov/sec-cftc-prelimreport.pdf.

[22] 1963 Special Study at chapter XIII, at p. 209-210.

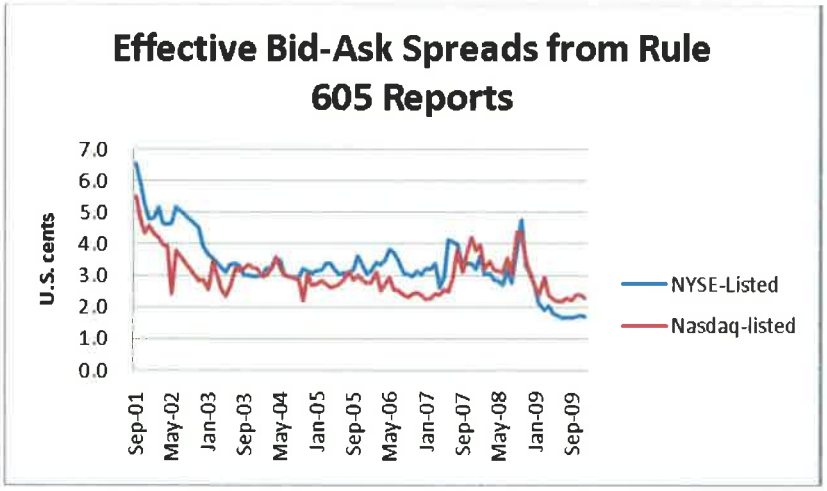
[23] Securities Exchange Act Release No. 34-62251 (June 10, 2010); Securities Exchange Act Release No. 34-64547 (May 25, 2011).

Like the market break of 1963, we believe the result of the Flash Crash was a result of a complex interaction of causes and effects, some of which may be rooted in the U.S. market structure.[24] Accordingly, European regulators should separately review the EU market structure for potential microstructural flaws; but in doing so, should distinguish investor confidence (or lack thereof) from the means by which such investor confidence is expressed (*i.e.,* the mode of execution). Sudden deteriorations in investor confidence may be more fundamental and based on broader, economic concerns and market circumstances.

II. Response to Questions

1. What impact have the technological developments in the markets in recent years had on your own trading? Has it encouraged, discouraged or had no impact on your willingness to participate on the lit markets, and how does this differ between asset classes and/or instruments?

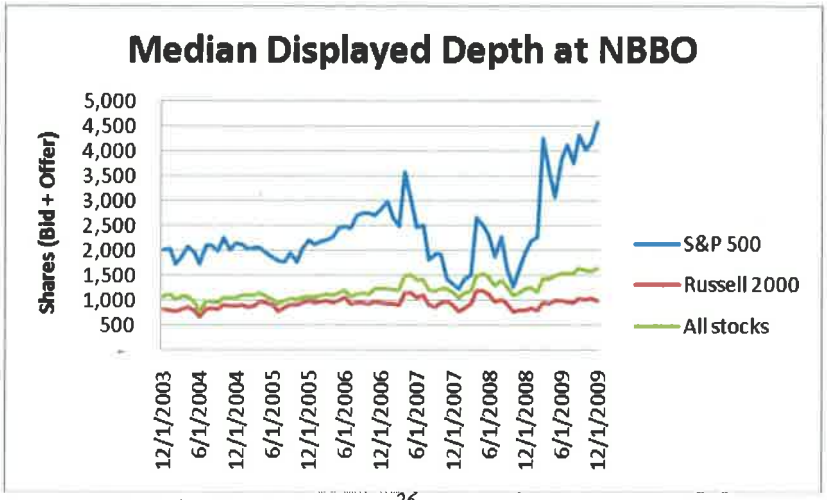
Market participants, including MFA members, have greatly benefited from the technological developments in the markets as spreads, fees, execution speed, market depth, efficiency, transparency and pricing reliability have steadily and drastically improved over the last several years. The technological developments have encouraged trading as they have reduced the cost of trading and increased market liquidity. Data below from the U.S. and EU markets highlight the benefits investors have experienced in recent years.



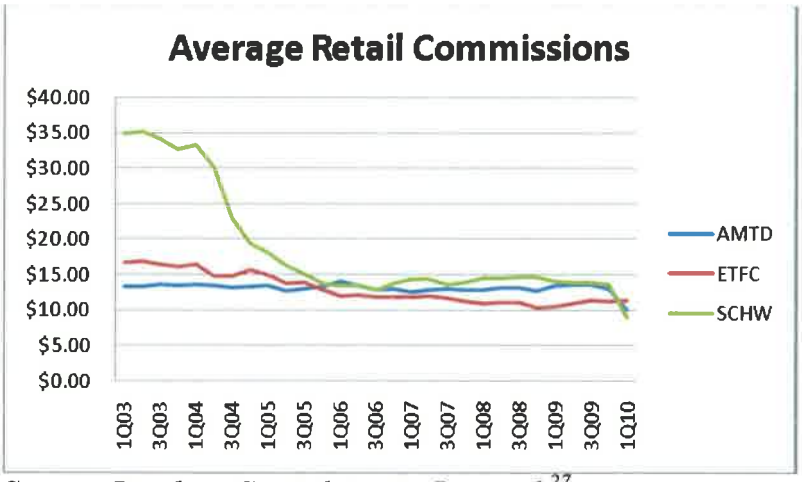
Source: Public Rule 605 Reports from Thomson, Market orders 100-9999 shares[25]
(SEC Rule 605 requires market centers to make available standardized, monthly reports of statistical information concerning their order executions.)

[24] *See* discussion *infr* Section II.5.

[25] As cited by Angel et al. at 10.



Source: Knight Capital Group[26]



Source: Barclays Capital Equity Research[27]

U.S. Retail Brokers:

AMTD = TD Ameritrade, Inc.
ETFC = E-Trade Financial Corporation
SCHW = Charles Schwab Corporation

[26] As cited by Angel et al. at 14.

[27] As cited by Angel et al. at 18.

Source: Rule 605 data from Thomson for all eligible market orders (100-9999 shares)[28]

Please see Appendix A for data from the EU.

As a result of regulatory and technological developments, market intermediaries globally have been forced to compete more and thus charge less, both in terms of explicit fees and implicit costs.[29] From 2001 to 2008, the average cost of trading equities (as displayed in the chart below) have fallen significantly in IOSCO countries globally. NYSE-listed securities fell by 43%; dropping from among the costliest of the large markets (Japan, Germany, the UK and France) to the cheapest.[30] Similarly, from 2001 to 2008, the average cost of trading Nasdaq-listed securities fell by 45% from the most expensive to the second lowest in the world in terms of trading costs.[31] The decrease in trading costs is directly attributable to the introduction of competition and the development and rise of HFT. Similar declines in trading costs occurred in France and the UK as technology and regulatory changes fostered innovation and competition.

HFT execution techniques have enabled investors and traders to supply the markets with liquidity and have in large part replaced the need for or role of traditional market makers.

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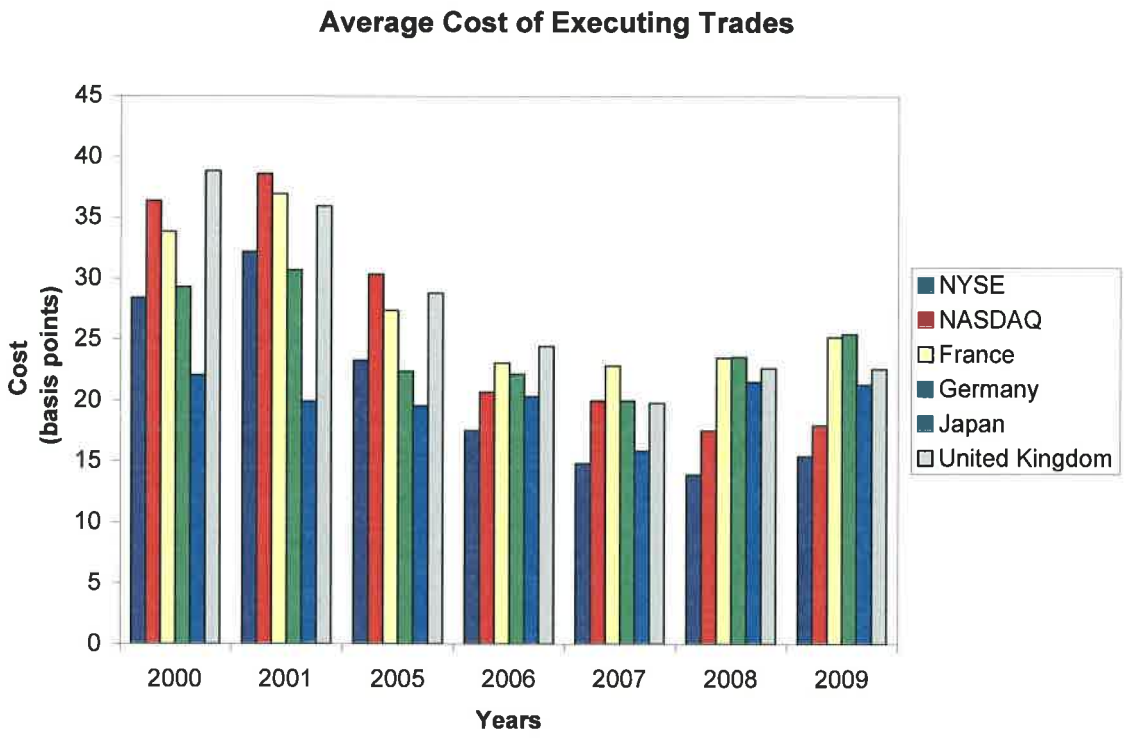
[28] As cited by Angel et al. at 22.

[29] We believe the success of the current equity market structure in lowering direct and indirect transaction costs paid by all investors is also evidenced by the drastic drop in the market value of equity market intermediaries. Ten years ago, these intermediaries were extraordinarily profitable because they were able to extract large spreads from investors. For example, in June 2000, Merrill Lynch paid $1 billion for Herzog Heine Geduld, a leading Nasdaq market maker. Three months later, Goldman Sachs paid $6.5 billion for Spear, Leeds & Kellogg, a leading New York Stock Exchange floor specialist, Nasdaq market maker, and options specialist and market maker. In January 2010, LaBranche, one of five remaining specialists at the NYSE, agreed to sell its market-making operation for $25 million to Barclays Plc. The NYSE specialist operation was the core part of the LaBranche business. LaBranche's stock price is down more than 90% from its peak in 2001. Another example is Knight Capital Group, which operates a leading market making business. Knight's stock peaked at over $76 per share in 1999 and is worth less than $15 today.

[30] Elkins/McSherry, Institutional Investor.

[31] *Id.* Remarkably, costs for trading NYSE and Nasdaq-listed securities continued to decline in 2008 when trading costs around the world increased. *Id.*

Significantly, users of HFT technologies have replaced manual market-making making trading much more efficient and lowering profit margins as evidenced by the lower total market-making spread that exists to provide liquidity to investors. These market participants' use of scalable technology has driven net revenue per share to a very small fraction of a penny; thus, even at today's higher trading volumes, the total spread captured is less than the amount captured by human market makers a decade ago. Gross revenue for an electronic market maker using HFT is estimated at $0.001 and $0.002 per share, or $100,000 in gross revenue per day (100 million shares a day at $0.001), while net revenue would be less after costs such as clearing, regulatory fees, technology, and related transactions used to hedge risk.[32] Simply sitting in a privileged position and collecting wide spreads is no longer a viable business strategy for market makers in the U.S. equity markets.



Source: Elkins/McSherry, Institutional Investor

Further, despite the severe Financial Crisis of 2008 and the steep decline in equity prices, the global equity markets operated remarkably well. Market participants using HFT methods and low latency technology remained in the markets to trade with other market participants and were responsible for providing the equity markets with liquidity during times of market stress,

[32] Rosenblatt Securities Inc., Market Structure Analysis & Trading Strategy: An In-Depth Look at High Frequency Trading, September 30, 2009, (hereinafter "Rosenblatt Securities"). Rosenblatt Securities coins the term "electronic market-making" to reference HFT market participants that are making markets electronically.

Rosenblatt Securities also compares the annual revenue for GETCO, likely the world's biggest HFT firm, at $400 million in 2008 to an estimated $1.63 billion in gross Nasdaq dealer revenues for the month of June in 1997. Rosenblatt Securities at 28.

including the failure of Lehman Brothers, the bailouts of AIG, Fannie and Freddie, the failure of Washington Mutual, and the rescue of Merrill Lynch.[33] The equity trading systems handled the volatility and trade volumes without system problems, unlike the Market Crash of 1987, where the slower, less developed trading systems used at the time were quickly overwhelmed by trading volume and market makers would not answer the phone because they lacked the capacity to execute orders.[34] More significantly, though, the equity markets did not freeze because liquidity in these markets is provided by a broad and diverse group of market participants, who are separately capitalized and less interconnected to the broader financial system than traditional dealers. This proved to be extremely important when the major dealers, who are highly interconnected in markets of a variety of asset classes, experienced firm-wide liquidity issues, which impaired their ability to provide liquidity to these markets. Accordingly, the proliferation of trading venues and market participants prevented the equity markets from suffering from a lack of dealer participation that impaired, or effectively froze, the markets of other asset classes, such as the credit, fixed income and over-the-counter derivatives markets.

2. What are your views on the suggestion that proprietary trading firms (including HFT firms) that are not currently subject to registration/authorisation by a regulator should be required to obtain such a registration/authorisation? Are there specific regulatory requirements you believe such firms should face? To what extent do your answers differ if the proprietary trading firm accesses the market as the customer of an intermediary firm through DEA (i.e. under that intermediary's trading rules/codes) rather than as a direct member of the market itself?

In the U.S., the SEC has adopted regulations on market access and direct electronic access. The SEC's "Risk Management Controls for Brokers or Dealers with Market Access" regulation requires broker-dealers with access to trading securities directly on an exchange or alternative trading system, including those providing direct electronic access to customers, to: establish, document, and maintain a system of risk management controls and supervisory procedures that, among other things, is reasonably designed to systematically limit the financial exposure of the broker-dealer that could arise as a result of market access; and ensure compliance with all regulatory requirements that are applicable in connection with market access.[35] We believe such controls are adequate and that additional registration of proprietary trading firms is not necessary. We encourage European market authorities to consider adopting similar regulations, which place responsibility upon market intermediaries for monitoring orders that originate from their own infrastructure, as similarly recommended by IOSCO.[36] Such controls should be effective as market intermediaries are in the best position to prevent orders from customers that may negatively impact market integrity.

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[33] Rosenblatt Securities at 29.

[34] *See* Angel et al.; Rosenblatt Securities at 29.

[35] Risk Management Controls for Brokers or Dealers with Market Access, Exchange Act Release No. 63241, 75 FR 69792 (Nov. 15, 2010) *available at:* *http://www.sec.gov/rules/final/2010/34-63241fr.pdf*; *see also* Exchange Act Release No. 64748, 76 FR 38293 (June 30, 2011) *available at:* *http://www.sec.gov/rules/final/2011/34-64748fr.pdf*.

[36] Consultation Report, at p. 51 (Annex 2, Principles for Direct Electronic Access).

3. What recommendations, if any, would you propose to strengthen the regulatory requirements around pre- and post-trade risk controls? In particular, what measures, if any, do you think regulators should introduce that relate specifically to the use of and risks posed by algorithmic trading and/or HFT?

As discussed in response to question 2, we believe appropriate regulations around pre- and post-trade risk controls will address risks raised by electronic trading, such as the SEC's Risk Management Controls for Brokers or Dealers with Market Access. Regulations should encourage market cooperation and infrastructure compatibility amongst market entities.

4. To what extent do you believe the use of trading control mechanisms such as circuit breakers and limit-up/limit-down systems by trading venues should be mandated? If you believe they should be mandated, should venue operators be permitted to design their own controls or should they be harmonised/coordinated across venues (including between interrelated instruments such as a derivative and its underlying)?

Most markets have had broad circuit breakers in place for decades, and those have periodically provided necessary pauses that have enabled market participants and intermediaries time to gather necessary information and restore liquidity. From our experience, for liquid stocks, single-stock circuit breakers have been helpful, but have the draw-back of being easily triggered by erroneous trades; and thus, may create market disruptions and may be subject to manipulation. We believe a single-stock, market-wide limit-up/limit-down system may be an effective means to implement a market pause during times of market uncertainty.[37]

With respect to whether all trading venues should be mandated to implement circuit breakers or a limit-up/limit-down system, we believe further analysis is necessary before IOSCO makes such a recommendation. Some academics believe that the Flash Crash is unique to the U.S. equity market structure and its national market system; and that European and Asian regulators should be cautious in addressing and fixing a problem that exists in a different market structure.[38]

5. To what extent do you believe market maker schemes offered by trading venues should be subject to mandatory minimum criteria? Should the criteria be determined by the trading venue alone? To what extent do you agree with the suggestion that the use of stub quotes should be prohibited?

MFA does not believe that more stringent market maker obligations would prevent a future market break; and, accordingly, does not support imposing a mandatory minimum criteria

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[37] *See* letter to Elizabeth Murphy, Secretary, SEC, from Stuart J. Kaswell, Managing Director & General Counsel, MFA, on June 21, 2011 on "Joint Industry Limit Up-Limit Down Proposal," *available at: http://www.managedfunds.org/downloads/MFA%20Final%20limit%20up-limit%20down.6.21.11.pdf* (MFA requested that the U.S. joint industry plan to implement a limit up/limit down mechanism modify certain technical specifications to prevent unnecessary market disruptions).

[38] Gomber at p. 39 and 58.

for market makers or imposing market maker-like obligations on non-market makers. We are concerned that such requirements may perversely lead to less liquidity in the equity markets; and would raise costs for investors without providing any additional benefit. Imposing minimum criteria or requiring market participants, including certain investors, to register as market makers could decrease liquidity as many may not be able to commit to meeting market maker obligations, such as broker-dealer capital and margin requirements. As a consequence, such participants would be forced to curtail their trading/investing strategies. With fewer buyers and sellers competing to provide better prices in the markets and greater reliance on registered market makers, bid-ask spreads would widen, leading to higher transaction costs for all investors. In particular, trading costs for retail investors, who tend to trade at or close to the bid-ask spread, would rise in direct proportion to changes in spreads.

Moreover, market makers generally receive special trading privileges for maintaining continuous two-sided displayed quotes. From our past experience, the preferential treatment received by market makers have come at a price for investors through higher transaction costs and prices every day for every trade, with no benefit during times of great volatility. As observed from an analysis of the Flash Crash, "HFTs continued their strategy of rapidly buying and selling contracts, while about half of the intermediaries closed their positions and got out of the market."[39] The Joint CFTC-SEC Advisory Committee on Emerging Regulatory Issues in its recommendations on regulatory responses to the Flash Crash also concluded: "We recognize that in many periods of sudden and extreme volatility trading uncertainties may result in active traders withdrawing no matter what the incentives."[40]

Rather than focusing on trading obligations, we believe regulators should focus on mechanisms that create a more orderly market in times of great uncertainty, such as temporary circuit breakers or limit up-limit down mechanisms that aim to provide a temporary cooling-off period during times of panic and uncertainty.

6. Do you have suggestions for improvements to regulators' surveillance capabilities with respect to the markets and modern trading techniques? Please elaborate. Who should bear the cost of investing in such capabilities and the cost of operating and supervising the markets in order to ensure fairness among market participants? Please elaborate.

MFA believes that exchanges, alternative trading venues and intermediaries providing direct electronic access should play a greater role in the oversight and surveillance of markets. As these entities have the technology to facilitate and support trading strategies that apply the latest technological advances, and benefit from such capacity, they are in a better position to capture the requisite information regulators need to perform surveillance.

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[39] Kirilenko et. al., The Flash Crash: The Impact of High Frequency Trading on an Electronic Market, May 26, 20110, at p. 37, *available at:* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1686004.

[40] Joint CFTC-SEC Advisory Committee on Emerging Regulatory Issues, Recommendations Regarding Regulatory Responses to the Market Events of May 6, 2010, at p. 9, *available at:* http://www.sec.gov/spotlight/sec-cftcjointcommittee/021811-report.pdf.

Exchanges and alternative trading venues should have responsibility for conducting oversight and surveillance of their markets. Intermediaries providing direct electronic access should have an obligation to exchanges and alternative trading venues to provide any necessary trading information for oversight purposes. Market authorities should oversee the surveillance conducted by exchanges and alternative trading venues, and to the extent feasible, may consider conducting their own surveillance searches on trading reports received from such entities. We believe such a framework provides a practical and equitable allocation of responsibility and costs.

7. What do you perceive as the major causes of settlement indiscipline and settlement failures? What steps, if any, do you believe regulators should take to address these causes?

MFA supports an affirmative stock "locate" framework for implementing settlement discipline, such as under the SEC's Regulation SHO, where a broker-dealer, prior to accepting a short sale order, must "locate" securities available for borrowing.[41] The SEC's recent amendment to Regulation SHO to include Rule 204 mandating close-out of failures to deliver on T+4 has also proven to be highly effective in reducing settlement failures. For example, as of July 2009, the level of fails in the U.S. equity markets was at 0.16%.[42] Of the 0.16% fails, 42.5% were in exchange traded funds ("ETFs").[43] Many in the industry believe that settlement failures in ETFs may be due to latency in the creation/redemption process. See **Appendix B** for data on settlement failures in the U.S. equity markets.

8. Have the appropriate steps been taken to limit or manage conflicts of interest that arise where an investment firm simultaneously conducts client-serving activities and proprietary trading or a trading participant is also a shareholder in a venue on which it trades? If you believe conflicts management is inadequate, please explain how this manifests itself and any recommendation you have for how conflicts management could be improved.

Generally, MFA believes that where an entity has a conflict of interest, the entity should have an obligation to disclose the conflict and how it addresses the conflict. For example, investment firms should disclose whether they provide their proprietary desks with different, more sophisticated or lower latency trading tools or any form of customer information. Nevertheless, disclosure is not a substitute for violations of an investment firm's affirmative obligations, such as best execution.

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[41] Regulation SHO, 17 CFR §242.200 *et seq.*

[42] Statement by The Depository Trust & Clearing Corporation, U.S. SEC Securities Lending and Short Sale Roundtable, September 30, 2009, *available at:* http://www.sec.gov/comments/4-590/4590-32.pdf. For more recent data on failures to deliver in U.S. equity markets, *see* SEC website: http://www.sec.gov/foia/docs/failsdata.htm.

[43] *Id.*

9. Do you think existing laws and rules on market abuse and disorderly trading cover computer generated orders and are relevant in today's market environment?

MFA believes that market authorities should provide greater guidance on market abuse and disorderly trading with respect to computer generated orders. Many new terms have been coined by regulators, members of the press, and market participants; but the definitions are vague and not always consistently used. For example, after the Flash Crash, the SEC announced that it was looking into "quote stuffing".[44] An article described "quote stuffing" as involving placing large orders within fractions of a second and then cancelling orders almost immediately. Since the term "quote stuffing" has not been legally defined, market participants are uncertain as to whether manipulative intent is necessary or how legitimate trading strategies may be differentiated from the description provided for quote stuffing.

10. Are there any strategies employed by HFT firms that raise particular concerns? If so, how would you recommend that regulators address them?

In considering market manipulation, the use of technology should be distinguished from trading strategies. As we see it, HFT is a broad term which includes the use of technology to implement established trading strategies. Regulators should focus on defining manipulative activities or strategies rather than on firms that use HFT technology. Further, as a general rule, we believe there is bad behavior but not bad technology.

MFA is not aware of any specific, manipulative strategies that are carried out uniquely through the use of HFT technology.[45] Nevertheless, MFA fully supports market authorities' objectives to eradicate illegal and improper trading and investment activities from our markets. Illegal market behavior reduces investor confidence in the markets and threatens liquidity to the detriment of all.

11. Should charges or fees be imposed on messages, cancellations or high order-to-trade ratios? If so, how should the fees or charges be determined and on what basis?

MFA does not support the imposition of charges or fees on messages, cancellations or high order-to-trade ratios. Many research firms have concluded, and from our experience we agree, that high frequency traders are liquidity providers.[46] In today's markets, order flow may be more accurately viewed as continuous liquidity that constantly adjusts for current market conditions or an indication by market participants of their "willingness to trade." It is the equivalent of the quoting activity by traditional market makers; market participants or

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[44] *See, e.g.,* Jessica Holzer and Brett Philbin, SEC Is Looking At 'Quote Stuffing', WSJ, September 7, 2010.

[45] *See, e.g.,* James J. Angel and Douglas McCabe, Fairness in Financial Markets: The Case of High Frequency Trading, McDonough School of Business, December 21,2010 (concluding that it is "the use of the technology, rather than the technology itself, that determines fairness or unfairness"; and providing the example of traders using high-speed technology to engage in traditional manipulative strategies, such as frontrunning, bear raids and wash sales.).

[46] *See, e.g.,* Rosenblatt Securities Inc., Tabb Group, and Woodbine Associates Inc.

intermediaries using HFT execution methods in providing market liquidity constantly re-adjust their orders/quotes in response to market movements.

For investors to receive best execution, liquidity providers need to provide competitive, tradable quotes, and in today's high volume, decimalized market—with distributed market centers in the U.S.—this requires frequent quote revisions, which appear as high cancellation rates. These market participant orders that are submitted and often subsequently cancelled are limit orders—the very type of orders regulators generally encourage.[47] For example, the SEC has stated that "strengthened protection of displayed limit orders would help reward market participants for displaying their trading interest and thereby promote fairer and more vigorous competition among orders seeking to supply liquidity."[48] The simple example below shows how a general movement up or down in market levels creates order cancellations and new orders.

Quote for an S&P 500 Security

	Bid	**-**	**Ask**
Market	**25.00**		**25.01**
Order	25.00		25.01
	Market moves by 1/10 of 1% (2.5¢)		
Market	**25.02**		**25.03**
Cancel	25.00		25.01
Replace	25.02		25.03

Market makers have always cancelled and refreshed their quotes in response to market movements. With today's more democratic access to markets, liquidity providers working on very thin margins and empowered by low latency technology can respond quickly to changing circumstances. No longer at the mercy of specialists or an oligopoly of human market makers, market participants, including a large segment of investors, can now receive immediate cancellations and just as quickly enter new orders. In particular, this is an essential requirement for market participants engaged in electronic market making strategies to be able to offer tight bid-ask spreads and provide liquidity at low margins.

If market authorities were to limit cancellations in any way, market participants would be more reluctant to post limit orders, which would likely result in a widening of spreads and a decrease in liquidity. Also, such policy could significantly harm the execution quality that investors receive, as many rely on the same technology and their own ability to cancel stale orders in order to minimize their transaction costs. While many orders may be short in duration, from our experience, these orders contribute to more liquid and efficient markets.

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[47] *See, e.g.,* Reg NMS Adopting Release at 37501 (SEC intended to encourage limit orders through Reg NMS's Order Protection Rule).

[48] *Id.*

12. Should market operators be required to make their co-location services available on a fair and non-discriminatory basis?

Market operators should be required to make their co-location services available on a fair and non-discriminatory basis. MFA feels strongly that co-location is a critical component to low latency technology which should be available to market participants that pay for this service. We believe that as long as co-location is available to investors, traders and larger brokers on an equal basis, the secondary market for such services to smaller customers from their brokers should be competitive and thus, fairly priced.

13. Should market operators be required to provide testing environments to enable participants to stress test their algorithms? If so, what kind of minimum requirements are reasonable?

MFA supports requiring market operators to provide testing environments to enable participants to stress test their algorithms. Market risks created by technology are best addressed through technical solutions. We believe it makes sense to ensure that marketplaces have infrastructures that are compatible with those of market intermediaries and participants; and that all parties have appropriate risk controls in place.[49] In fact, we believe it may be a helpful safety precaution to require market operators to certify market participants that have passed a minimum level of stress testing before allowing such participants to trade using a new algorithm.

All market entities should have appropriate risk controls in place. Market participants should conduct internal back testing and be able to prove that they apply sophisticated risk management tools and operational safeguards.[50] Marketplaces, on the other hand, should ensure adequate investment is made into their infrastructure yearly, including their data bandwidth to prevent time delays of accurate market data; be able to handle peak volumes; and have controls and mechanisms in place to protect against erroneous trades or technical failures of market participants.[51]

14. To what extent do you have other comments related to the risks to market integrity and efficiency raised by the issues in this report?

All investors have benefited greatly from the advancements in technology in the financial markets, including retail investors. A real risk relating to the issues of HFT and market integrity and efficiency, however, is investor confidence and the perception of fairness and integrity.[52] We believe these investor concerns result partly from a fear of the unknown. To address these concerns, we believe market intermediaries should have an obligation to provide educational information and additional disclosures to investors regarding available technology. Enhanced

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[49] Gomber at p. 52.

[50] *Id.*

[51] *Id.*

[52] Consultation Report at p. 27.

disclosures would also make the evaluation, selection and utilization of available market innovations much simpler for all investors.

Further, we believe investors should be aware of and receive disclosure if a connectivity provider provides its proprietary desks different, more sophisticated or lower latency trading tools or any form of customer information. In these respects, we believe it would be helpful to fiduciaries and investors if market intermediaries and connectivity vendors provide greater disclosure and standardize disclosure on connectivity offerings and the utilization of customer information. Currently, it is very challenging for investors to compare low latency technology across firms. We believe investors would benefit if counterparts and vendors use an industry-wide, standardized, benchmarking approach to measure connectivity services and low-latency technology. In addition, firms offering execution connectivity to customers should disclose if the firm is utilizing the same connectivity platform or if more advanced execution technology for proprietary activity exists, and whether there are any systematic or programmed preferences between the order entry and execution process for client and proprietary orders.

Moreover, to the extent that a market intermediary or vendor providing connectivity uses, packages, redistributes, or sells information based on the flow of a customer's investment activity—such as information on market color, trends, volumes, sector change or other market commentary or metrics—we believe the firm should provide written disclosure to current and prospective connectivity customers. Customers should be aware of how and under what terms their information is being used. Disclosures with respect to execution connectivity and customer order flow information would assist investors in assessing execution quality and possible conflicts of interest.

* * * * *

As investors, MFA's members have a strong interest in liquid and deep markets that are honest and operate efficiently. We respectfully urge the Technical Committee in considering principles regarding HFT or other technological developments in the markets to proceed cautiously as we are concerned that unintended consequences could negatively impact investors by decreasing market liquidity, depth and efficiency while raising transaction costs.

MFA appreciates the opportunity to respond to the Consultation Report and would be pleased to meet with the Technical Committee to further discuss our comments. If the Technical Committee has questions or comments, please do not hesitate to contact Jennifer Han or the undersigned at (202) 730-2600.

Respectfully submitted,

/s/ Stuart J. Kaswell

Stuart J. Kaswell
Executive Vice President and Managing Director,
General Counsel

Appendix A

The following graphs are excerpts from a TABB Group Pinpoint:

> Miranda Mizen, TABB Group, Effective Spreads in European Equities, February 2010, *available at:* http://static.capitalize-on-change.com/Global/pdfs/Contributors%27%20Content/V08-001_Effective_Spreads_in_European_Equities%5B1%5D.pdf.

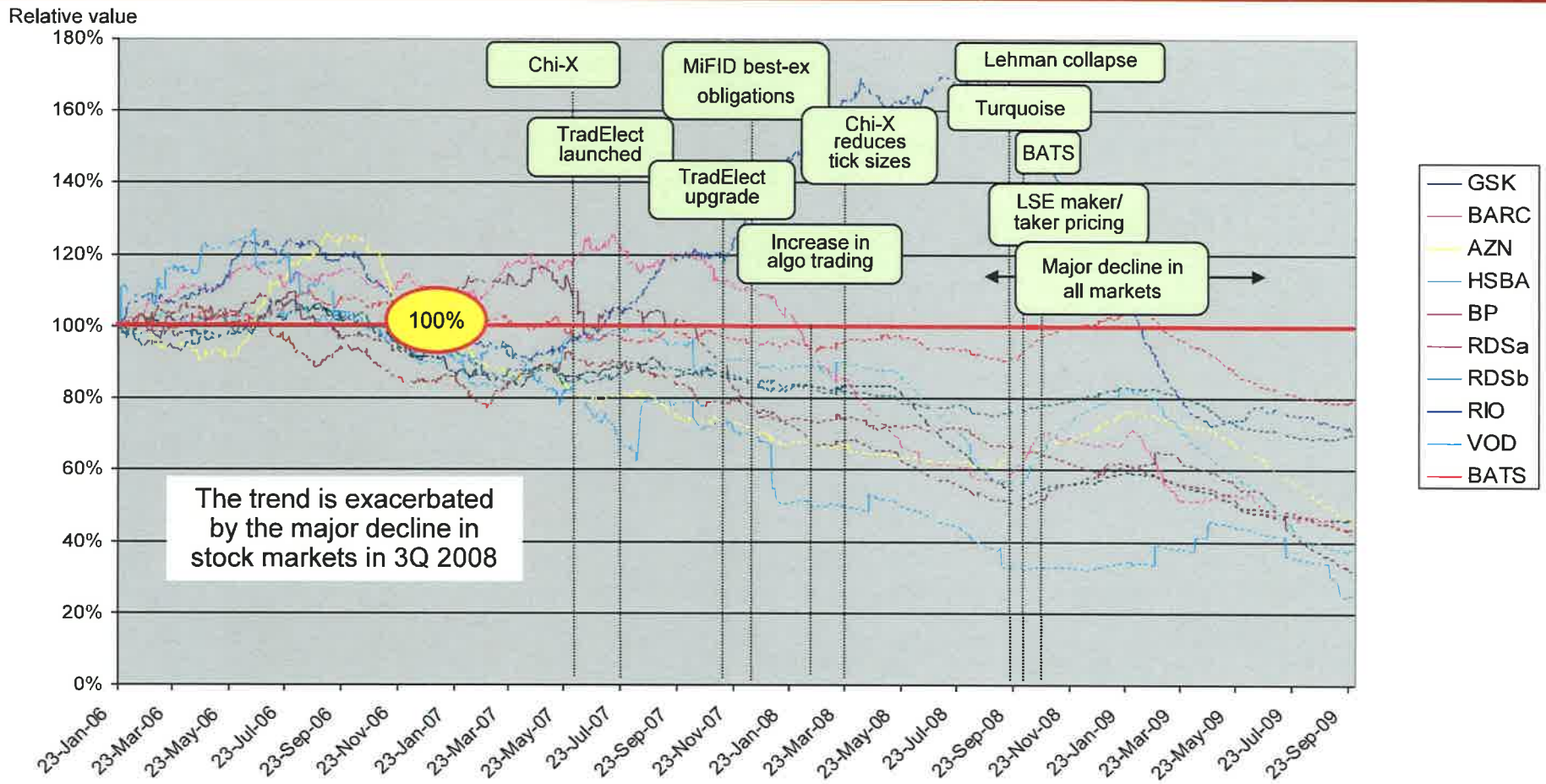
The first graph charts the decrease in average effective spreads in the most liquid FTSE 100 stocks with various regulatory or competitive market events.

The second graph charts the decrease in average effective spreads in the most liquid DAX stocks.

The third graph charts the decrease in average effective spreads in the most liquid CAC stocks.

Average effective spreads have come down over a four year period in 100% of these ten most liquid FTSE 100 stocks measured

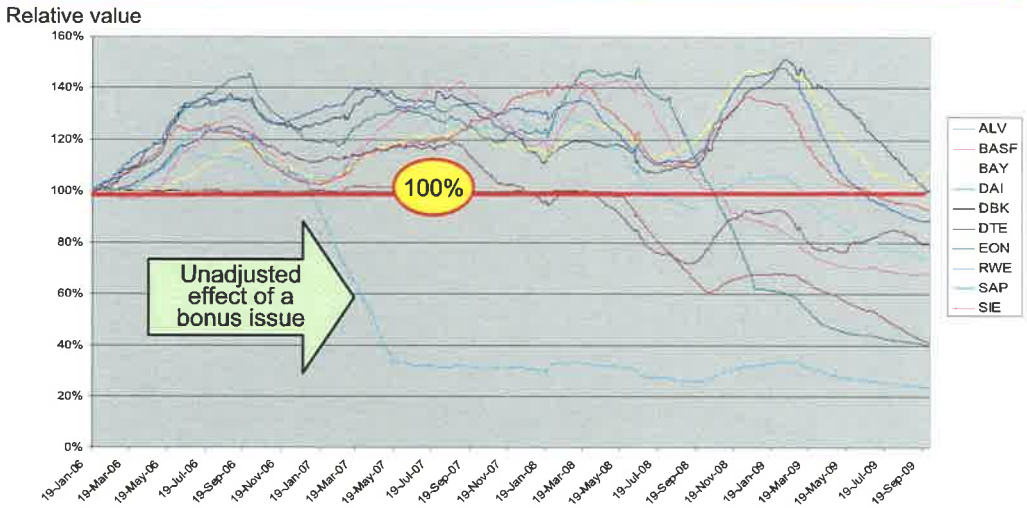
Relative 100-day Average Effective Spreads: Most Liquid FTSE 100 stocks



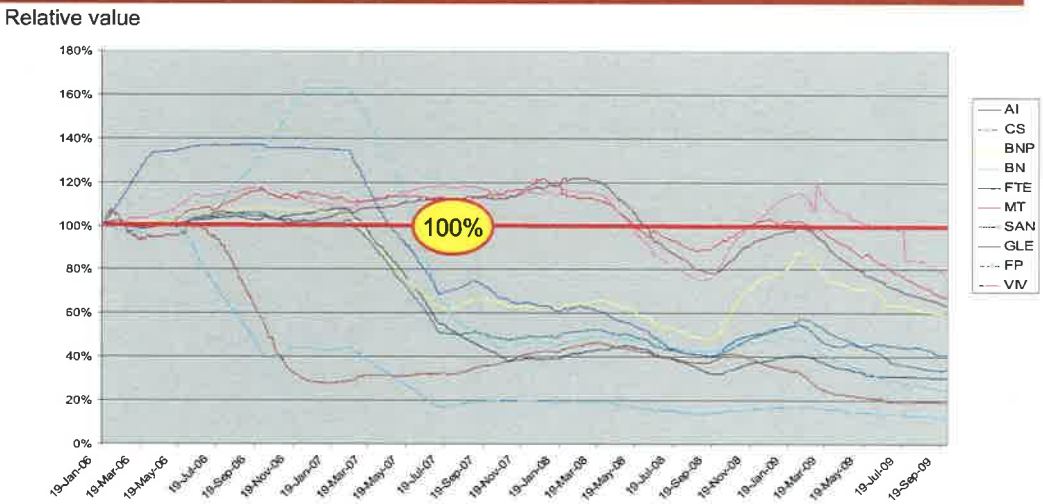
Effective spread measures the distance from the midpoint of the market to the execution price at the time of the trade. This value is then doubled to capture the whole bid/offer spread. The spread at each trade is divided by the number of shares traded, which is the effective spread per share traded. This measure is then averaged over the trading day per venue to make the average effective spread.

The downward pressure on effective spreads in the most liquid stocks is very similar in the most liquid DAX 30 and CAC 40 stocks

Relative 100-day Average Effective Spreads: Most Liquid DAX



Relative 100-day Average Effective Spreads: Most Liquid CAC



- Effective spreads are most likely to decline in the more liquid stocks, but 95% of CAC 40 stocks and 85% of DAX stocks we measured also show lower effective spreads over four years.
- Stocks trading on markets with traditionally higher concentration on the order books show similar trends to FTSE 100 stocks.
- The downward trend is observed despite the fact that the CAC declined 14% and the DAX rose by 15% over the total period measured.

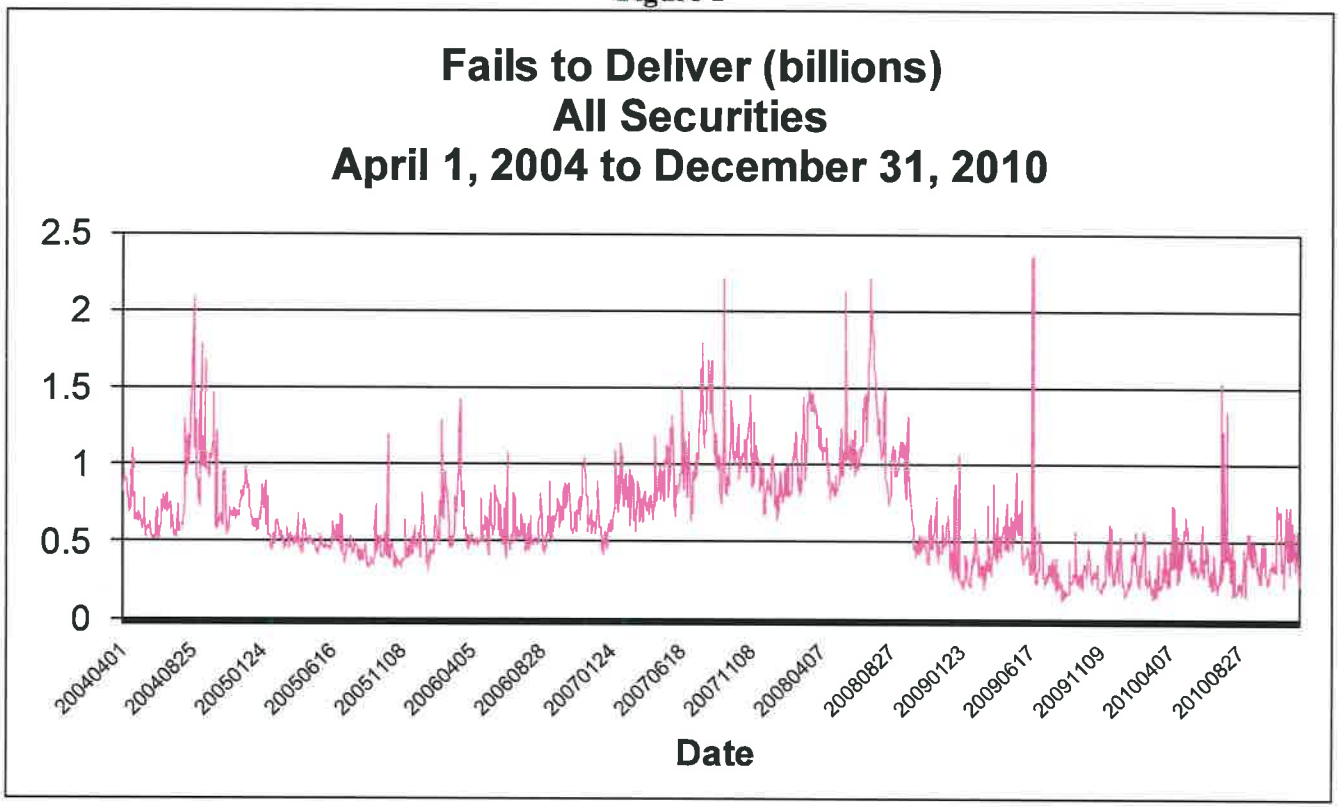
Appendix B

The following charts are from an SEC Division of Risk, Strategy and Innovation memorandum, and show: the level of fails to deliver for all U.S. securities from April 1, 2004 to December 31, 2010; and the number of exchange traded products as a proportion of securities that fail to deliver.

Note: Under the SEC's Regulation SHO, "threshold securities" are equity securities that have an aggregate fail to deliver position for:

- five consecutive settlement days at a registered clearing agency (e.g., National Securities Clearing Corporation (NSCC));
- totaling 10,000 shares or more; and
- equal to at least 0.5% of the issuer's total shares outstanding.

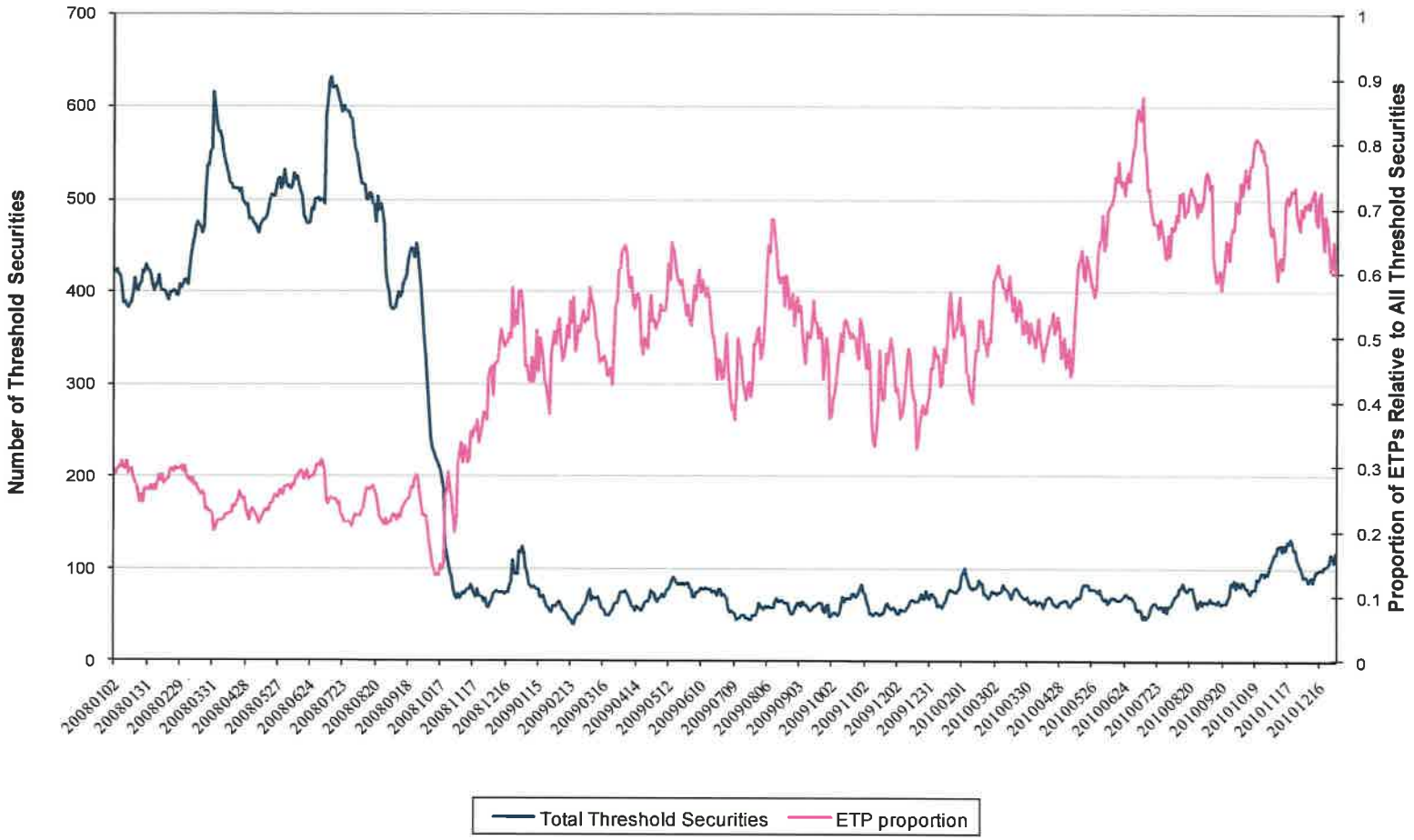
Figure 1



This is a memo of the staff of the Office of Markets in the Division of Risk, Strategy and Financial Innovation. The Commission has expressed no view regarding the analysis, findings or conclusions herein.

Figure 8

Number of Threshold Securities and ETPs as a Proportion of Threshold Securities by Day



This is a memo of the staff of the Office of Markets in the Division of Risk, Strategy and Financial Innovation. The Commission has expressed no view regarding the analysis, findings or conclusions herein.