

# **U.S. Regulation: Update on the Securities and Exchange Commission's Market Structure Initiatives**

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# Overview

- Regulation NMS;
- Co-Location, High Frequency Trading
- Congressional/Regulatory Response to “Flash Boys”
- Advisory Committees
- Dark Pools/Indications of Interest (IOIs)
- “Trade-at” Rule/Other Issues
- Internalization/Payment for Order Flow
- SEC Tick Size Pilot Program/Emerging Growth Companies
- Consolidated Audit Trail
- Regulation SCI
- SEC Examines Market Technology
- Securities Information Processors (SIPs)
- Market Data Fees
- Recent “Market Disruption” Events

# Market Structure Issues

- Note that many equity market structure issues were addressed in the SEC's Equity Market Concept Release in 2010. The failed BATS IPO, the issues with the Facebook IPO by NASDAQ, and the Knight Capital issues have again pressured the SEC to act.
- As such, the SEC has examined some key market structure issues, looking at dark pools, high frequency trading/co-location, large trader reporting, flash orders, trade-at issues, and internalization.
- The SEC has also moved forward with rules to address market technology issues such as a Consolidated Audit Trail (CAT) and Regulation Systems Compliance and Integrity (Regulation SCI). [see slides #14-15]
- Many of the current SEC Commissioners have addressed the need for a holistic review of equity market structure [see slide #5]. Even CFTC Commissioners have weighed in on some trading issues, such as high frequency or automated trading.
- In addition, the SEC has met with the NYSE, NASDAQ, and BATS on most of these issues and members of the House Financial Services Committee held roundtables on this subject. [see slide #8]

# Market Structure Issues

- On February 20, 2015, Chair Mary Jo White in a speech given at a SEC Speaks 2015 conference stated that “the staff has been engaged in an ongoing effort to comprehensively review the fundamentals of our current market structure and develop initiatives to ensure that investors and issuers are being optimally served. In particular, as I have publicly described, the staff is developing recommendations to enhance the transparency of alternative trading system operations, expand investor understanding of broker routing decisions, address the regulatory status of active proprietary traders, and mitigate market stability concerns through a targeted anti-disruptive trading rule. To aid our review, the Commission recently announced the formation of the Market Structure Advisory Committee.”
- On February 3, 2015, the SEC released its draft [Strategic Plan for 2014-2018](#). In the draft the SEC states that “The SEC will continue to pursue initiatives that promote the goals of the national market system in the trading of securities, such as enhancing price transparency, facilitating best execution, assuring fair access to trading systems, and fostering fair competition.”
- On January 27, 2014, Commissioner Michael Piwowar in a speech to the U.S. Chamber of Commerce called for a comprehensive equity market structure review. He stated two key features are: (1) It should be a multi-year review; and (2) the SEC should leverage existing resources of outside parties.
- On March 10, 2015, Commissioner Dan Gallagher, in remarks called for SEC supervision of fixed income liquidity, market structure and pension accounting, in particular taking steps to address the liquidity risks that plague the debt markets. This followed his remarks on February 21, 2014 advocating “a holistic review of U.S. equity market structure,” including what he hoped would be a retrospective review of Reg NMS.
- On February, 21, 2014, Commissioner Kara Stein, in remarks, stated that “All market participants need to have the appropriate systems and controls in place to ensure that they don’t trigger market failures. [The SEC] need[s] to be working on improving expectations and standards for those systems and controls.”
- On June 5, 2014, Securities and Exchange Commission (SEC) Chair Mary Jo White in [remarks](#) offered market structure recommendations related to: “market instability, high frequency trading, fragmentation, broker conflicts, and the quality of markets for smaller companies.”
- On June 30, 2014, the SEC Office of the Investor Advocate (OIA) issued its second annual [Report on Objectives](#). The OIA report identifies issues of focus for Fiscal Year 2015 including equity market structure, investor flight, municipal market reform, cybersecurity, effective disclosure, and elder abuse.

# Regulation NMS

- On April 6, 2005, the SEC adopted Regulation NMS (National Market System), “a series of initiatives designed to modernize and strengthen the national market system for equity securities.” It includes: (1) “Rule 610, which addresses access to markets; (2) Rule 611, which provides intermarket price priority for displayed and accessible quotations; (3) Rule 612, which establishes minimum pricing increments; and (4) amendments to the joint-industry plans and rules governing the dissemination of market data.”
- Impact of Reg NMS on Market - 60% of trading is on exchanges such as BATS, NYSE, NASDAQ, while 40% of trading is through ATS/ Dark Pools (about 40-50 exist) ([Source](#))
- Impact of Reg NMS on Market Participants: (1) Retail Companies-TD Ameritrade, Scottrade, Fidelity, Schwab; (2) Wholesale Market Makers-GETCO, Two Sigma, Citi (ATD), UBS; and (3) Buy Side Firms-Mutual Funds, Hedge Funds, Asset Aggregators.
- On February 28, 2014, the House Financial Services Committee’s Subcommittee on Capital Markets and Government Sponsored Enterprises held a hearing entitled “Equity Market Structure: A Review of SEC Regulation NMS.” Chairman Garrett (R-NJ) stated that questions have been raised as to whether the linking of venues through Regulation NMS is the cause of complexity and disruptions in the market. Representative Lynch (D-MA) noted that more than fifty percent of the trading of certain stocks has moved onto dark pools. He asked what should be done to move trades back onto exchanges, such as NASDAQ and the NYSE. Former SEC Commissioner Campos questioned whether moving trades onto exchanges is a worthy goal. He suggested that if trades are receiving the best execution, and if investors are getting the best price at that time, then the market is functioning properly.
- In recent remarks several SEC Commissioners have stated their support for a review of Regulation NMS. In October 2013, SEC Commissioner Gallagher stated “I think [Regulation NMS] is a prime candidate for retrospective review,” suggesting the SEC should look at the regulation “holistically,” and use empirical data to determine its impact and whether changes are necessary. In December, 2013 SEC Commissioner Luis Aguilar stated “Whether Regulation NMS has achieved its stated purpose, or whether it has produced unintended consequences, is a subject of great debate,” he added that he “think[s] that the commission should immediately revisit Regulation NMS.” On March 13, 2015, SEC Commissioner Piwowar gave [remarks](#) on the need for equity market structure review and the role for academia.

# High Frequency Trading/Co-Location

- Although there is no proposed rule on co-location or high frequency trading, the Commission is looking at these issues.
- Both are addressed in the SEC Equity Market Concept Release, in which the Commission proposes questions relating to how these issues benefit the long term investor. Both have been raised at SEC Open Meetings and Staff has indicated that these market issues could come in the form of proposals.
- The CFTC is looking at this issue, through its Technology Advisory Committee's Subcommittee on Automated and High Frequency Trading ("HFT"). This subcommittee is tasked "with developing recommendations regarding the definition of high frequency trading in the context of the larger universe of automated trading."
- On February 10, 2014, the Commodity Futures Trading Commission's (CFTC) Technology Advisory Committee (TAC) held a meeting, which included a discussion on the CFTC's concept release on automated trading.
- The Senate Permanent Subcommittee on Investigations (PSI) has held hearings to investigate high frequency trading practices (December 2010 and June 17, 2014). The Senate Banking Committee's Securities, Insurance, and Investment Subcommittee held hearings on market structure in Fall 2012. The House Financial Services Committee's Capital Markets and Government Sponsored Enterprises Subcommittee has also held hearings on this subject.
- In December 2012, former chief economist at the CFTC, Andrei Kirilenko, released an independent study in which he found that high-frequency traders make an average profit of as much as \$5.05 each time they go up against small traders buying and selling one of the most widely used financial contracts. Kirilenko reported his findings at a Research Conference on Derivatives at the CFTC in November 2012.

# High Frequency Trading/Co-Location

- High Frequency Trading Investigation: In [December 2014](#) and [January 2015](#), the SEC Division of Economic Research and Analysis (DERA) released two working papers on role that automated, high-frequency trading plays in the marketplace, including one that claimed to be the first study to demonstrate the benefits of low-latency trading.
- Order Cancellation: In March 2012 it was announced (in press reports) that Nasdaq and Direct Edge will impose penalties on high-frequency traders who “clog” the markets’ data pipelines with “unnecessary messages that do not result in trades.” Similar proposals have been announced by Deutsche Borse and Borsa Italiana. \
- On May 7, 2014 the Financial Stability Oversight Council (FSOC) issued its [annual report](#) in which they voiced support for SEC/ CFTC “reigning in” HFT. The Council “recognized that alternative trading venues and methods may present operational and other risks by magnifying system-wide complexity. These vulnerabilities may be heightened, particularly in fragmented markets, by high frequency or low latency automated trading activities. As such, regulators should focus not only on centrally-traded products, but also on a broader set of financial products and trading methods that trade off exchanges.”
- In the November 2014 release of the Office of Financial Research annual [report](#), concerns were raised over HFT in that “relatively opaque alternative trading systems raise concerns about the transparency of pricing and the impact of high frequency trading..”
- On January 2, 2014, FINRA released a letter outlining their regulatory priorities for 2014. Among those included a focus on high frequency trading. In the letter FINRA stated that “[t]he use of HFT strategies has grown substantially over the past years and drives a significant portion of activity on the U.S. markets. Given the scale of the potential impact these practices may have, the surveillance of abusive algorithms remains a high priority for FINRA. FINRA reminds firms using HFT strategies and other trading algorithms of their obligation to be vigilant when testing these strategies pre-and post-launch to ensure that the strategies do not result in abusive trading.”



# Congressional/Regulatory Response to “Flash Boys”

- On May 13, 2014, the Senate Agriculture Committee held a hearing entitled “High Frequency and Automated Trading in Futures Markets.” The hearing focused on latency issues in the futures markets, the possibility of “front running,” risk controls, and whether the Commodity Futures Trading Commission (CFTC) will issue rules on automated trading. Chairwoman Stabenow (D-MI) suggests using funds from enforcement cases to fund the CFTC. When asked whether the CFTC is considering a rule on automated trading practices, CFTC Division of Market Oversight Director Vincent McGonagle stated the CFTC is looking at comments received on the CFTC Concept Release on “Risk Controls and System Safeguards for Automated Trading Environments” and noted the Concept Release may be a precursor to rule writing.
- On June 3, 2014, the Commodity Futures Trading Commission’s (CFTC) Technology Advisory Committee (TAC) held a [meeting](#) to discuss issues related to: (1) high-frequency trading; (2) the CFTC’s surveillance program; and (3) swap execution facilities (SEFs). CFTC staff is reviewing comments received on the Concept Release on Risk Controls and System Safeguards and hope to provide a recommendation soon.
- On June 17, 2014, the Senate Homeland Security and Government Affairs Committee’s Permanent Subcommittee on Investigations held a [hearing](#) entitled “Conflicts of Interest, Investor Loss of Confidence, and High Speed Trading in U.S. Stock Markets.” The hearing examined several equity market structure issues, including the maker-taker exchange model, payment for order flow, best execution, co-location and high frequency trading.
- The Senate Banking Committee’s Securities, Insurance, and Investment Subcommittee held a [hearing](#) entitled: “High Frequency Trading’s Impact on the Economy” on June 18, 2014. The hearing focused on potential changes to improve conditions for investing in small capitalization companies and for retail investors.
- On June 26, 2014, the House Financial Services Committee’s Capital Markets and Government Sponsored Enterprises Subcommittee held a [hearing](#) entitled: “Oversight of the SEC’s Division of Trading and Markets.” The hearing focused on the Securities and Exchange Commission’s (SEC) review of equity market structure; the impacts of the Volcker Rule; the maker-taker exchange model; “dark” trading; high frequency trading (HFT); and whether the self-regulatory organization (SRO) system should be reevaluated. SEC Division of Trading and Markets Director Stephen Luparello testified on market structure issues, OTC derivatives, fiduciary duty, and fixed income markets.
- On July 8, 2014, the Senate Banking Committee held a [hearing](#) entitled “The Role of Regulation in Shaping Equity Market Structure and Electronic Trading.” The hearing focused on the impacts of high frequency trading (HFT) in the equities markets, the need for a review of equity market structure is needed, the importance of market maker obligations, concerns over dark pools and impacts of competition on the markets.
- On July 28, 2014, Representative Scott Garrett (R-NJ), Chairman of the House Financial Services Committee’s Subcommittee on Capital Markets and Government Sponsored Enterprises, hosted a public roundtable on the U.S. Equity Market Structure. The roundtable, which featured industry participants, included three panels focused on: “promoting a level playing field and enhancing competition”; “improving resiliency and eliminating single points of failure”; and “market making and trading in the 21<sup>st</sup> Century.”
- Michael Lewis published a [rebuttal](#) in the April 2015 issue of Vanity Fair. He renewed his previous calls for reform and the debate continues.



# Advisory Committees

- The Securities and Exchange Commission (SEC) Chair Mary Jo White announced in a June 5, 2014 [speech](#) the formation of a “Market Structure Advisory Committee” (MSAC). On January 13, new members of the Advisory Committee were [announced](#). The committee will provide a formal mechanism through which the Commission can receive advice and recommendations specifically related to equity market structure issues and is expected to meet 4 times a year.
- The SEC currently has two other advisory committees: the Investor Advisory Committee (formed in compliance with Section 911 of the Dodd-Frank Act and meets FACA standards); and the Advisory Committee on Small and Emerging Companies (formed in compliance with FACA).

# Dark Pools / Indications of Interest

- Dark Pools / Indications of Interest
- The proposed rule, approved by SEC Commissioners on October 21, 2009 had a comment period that ended on February 22, 2010. The rule would:
  - Require actionable IOIs [indications of interest] to be treated like other quotes and subject to the same disclosure rules,
  - Lower the trading volume threshold applicable to alternative trading systems for displaying best-priced orders to 0.25%, for ATSS, including dark pools that use actionable IOIs,
  - Create the same level of post-trade transparency for dark pools –and other ATSS –as for registered exchanges (i.e., amend existing rules to require real-time disclosure of the identity of the dark pool that executed the trade).
- On May 20, 2011, note that the Technical Committee of the International Organization of Securities Commissions (IOSCO) published a final report, Principles on Dark Liquidity, containing principles to assist securities markets authorities in dealing with issues concerning dark liquidity.
- Dark Pools Regulation (Canada): On April 13, 2012, the CSA (Canadian Securities Administrators) and IIROC (Investment Industry Regulatory Organization of Canada) introduced Amendments to the Universal Market Integrity Rules (UMIR), which became effective on October 10, 2012. These amendments purport to achieve goals similar to those of the U.S. “Trade-At” Rule. If a trade is to be executed in the dark, it must offer meaningful price improvement over the displayed market's price.

# Trade-At Rule/Other Issues

- On February 18, 2011, the Joint CFTC-SEC Advisory Committee on Emerging Regulatory Issues issued a report entitled Recommendations Regarding Regulatory Responses to the Market Events of May 6, 2010 setting forth its recommendations for regulatory action by the SEC and the CFTC in the wake of the so-called "flash crash" of May 6th.
- One recommendation involves adjusting the order routing system to a "trade-at" rule, which would require venues that do not display the national best bid-offer (NBBO) to present price improvement options or route the order to a venue that does display the NBBO. Revision of the order routing routine would involve significant investment in technology, and retail brokers would be required to display their order flow to other venues for possible price improvement instead of directly internalizing orders and retaining the revenue themselves.
- The Securities Industry and Financial Markets Association (SIFMA) submitted comments to the SEC in response to this proposal. While SIFMA supports the committee's efforts and improvements to existing initiatives and believes these programs are sufficient in addressing primary market structure issues raised by the Flash Crash events, they ultimately submitted a comment letter rejecting the proposals, noting that the committee's recommendations for more extensive changes to market structure—which includes the proposed trade-at rule—are unwarranted.
- As noted on slide #10, the Canadian regulators passed new rules governing dark pools to address the U.S. concept of a "trade-at" rule. Note that both the NASDAQ and the NYSE have expressed support for a trade-at rule. [Data on this change is mixed in terms of market impact.]
- Duncan Niederauer, CEO, NYSE-Euronext testimony before the House Financial Services Committee on June 20, 2012: "NYSE believes that investors are more likely to have confidence in the securities markets if they believe that they are receiving fair prices when they buy and sell securities. As trading volume has shifted to new trading centers that operate with less transparency and fewer regulatory requirements, more and more information is outside of public view and excluded from the price discovery process."
- According to a Reuters article in February 2012, Nasdaq began lobbying Congress for an "amendment that would effectively set a partial "trade-at" rule by allowing newly-listed companies to require that any stock trades not conducted on an exchange be executed at a price that is "superior" to the best price displayed by any U.S. exchange. According to a March 2014 Wall Street Journal article, news reports still indicate that Nasdaq is pursuing a "trade-at" rule, but now to be included in the SEC Tick Size Pilot Program. [Thomas Wittman](#), Executive Vice President, Global Head of Equities, The NASDAX OMX Group, Inc., at a July 8 Senate Banking Committee [hearing](#) entitled "The Role of Regulation in Shaping Equity Market Structure and Electronic Trading" said that as more liquidity moves off-exchange less, liquidity is available for small cap stocks.

# Internalization/Payment for Order Flow

- In 2000 the SEC looked at payment for order flow and internalization. In the 2004 Concept Release the SEC also asked questions about internalization of order flow.
- Recently there have been movements by the two largest exchanges, NYSE and Nasdaq, calling for a “trade at” rule which would limit internalization and “dark liquidity.” This concept is included in the Tick Size Pilot Program.
- According to Duncan Niederauer, CEO of NYSE Euronext, NYSE has lost share to what's called internalization. NYSE has made recommendations to the SEC that they require dark pools and market makers that want to trade stocks without quoting publicly beforehand to improve the price the customer gets by a certain amount over what is available in the marketplace.
- Also, the SEC Investor Advisory Committee has looked into the issue of payment for order flow at its January 2014 meeting.
- On July 9, 2014, Senator Carl Levin (D-MI), chairman of the Senate Committee on Homeland Security & Governmental Affairs’ Permanent Subcommittee on Investigations, sent a [letter](#) to Securities and Exchange Commission Chair Mary Jo White calling on the SEC to take immediate action to eliminate conflicts of interest in the maker-taker system and payments for order flow, following the Subcommittee’s hearing on the subject.
- According to news reports, the NYSE has been lobbying the SEC to abolish the practice of paying rebates to large brokers to attract trades to stock exchanges and other trading platforms. In fact, [Tom Farley](#), President of the New York Stock Exchange (NYSE), testified at a June 17, 2014 hearing before Senate Committee on Homeland Security & Governmental Affairs’ Permanent Subcommittee on Investigations that NYSE and its parent company, Intercontinental Exchange (ICE), support eliminating the maker-taker structure, .
- At a July 28, 2014 House Financial Services Committee’s Subcommittee on Capital Markets and Government Sponsored Enterprises public roundtable on the U.S. Equity Market Structure, Jeffrey Sprecher (Chairman and Chief Executive Officer, Intercontinental Exchange, which owns the NYSE) suggested eliminating maker-taker pricing schemes.
- On March 3, 2015, Congressman Stephen F. Lynch (MA-08) [introduced](#) H.R. 1216, the *Maker-Taker Conflict of Interest Reform Act of 2015*. This legislation requires the Securities and Exchange Commission (SEC) to carry out a pilot program to assess the impact of an alternative to the maker-taker pricing model.

# SEC Tick Size Pilot Program/Emerging Growth Companies (EGCs)

- In accordance with the JOBS Act, on July 20, 2012, the SEC released its staff report on decimalization, which recommended that the SEC “not proceed with the specific rulemaking to increase tick sizes...but should consider additional steps that may be needed to determine whether rulemaking should be undertaken in the future.” The SEC then has 180 days to increase the trading increment for emerging growth companies. That increase would be greater than 1 cent but less than 10 cents.
- On February 5, 2013, the SEC held a roundtable on decimalization. Some participants at the roundtable expressed differing views on whether a pilot program for tick sizes would be helpful to investors and for the provision of research coverage for smaller capitalization companies.
- On February 1, 2013 the SEC Advisory Committee on Small and Emerging Companies made recommendations to the SEC that: (1) the SEC adopt rules to increase the tick size for smaller exchange-listed companies that will allow such companies to on a voluntary basis choose their own tick size within a limited range designated by the SEC: and (2) that such a change should not be adopted on a pilot basis but should be reviewed by the SEC and adjustments made as needed.
- On January 29, 2014 the SEC convened a meeting of the Investor Advisory Committee. The Advisory Committee adopted recommendations which did not support moving forward with a tick size pilot program.
- On February 11, 2014 the House passed the “Small Cap Liquidity Reform Act” (H.R.3448) by a vote of 412 to 4. Introduced by Representatives Sean Duffy (R-WI) and John Carney (D-DE), the legislation would require the Securities and Exchange Committee to conduct a five-year pilot program to allow the stocks of emerging growth companies (EGCs) to quote in 5 or 10 cent increments (“tick size”).
- The SEC released an [order](#) on June 25, 2014, for the exchanges and the Financial Industry Regulatory Authority (FINRA) “to act jointly to develop and file with the Commission a national market system plan to implement a targeted 12 month pilot program that will widen minimum quoting and trading increments (tick sizes) for certain small capitalization stocks.”
- On August 26, 2014, the national securities exchanges and FINRA filed a [proposal](#) with the SEC to establish a “targeted 12 month pilot program” to widen minimum quoting and trading increments for certain stocks with market capitalization of \$5 billion or less; and average daily trading volume of \$1 million or less, and a closing share price of at least \$2 per share. The pilot will consist of one control group and three test groups with 400 securities in each test group selected by “stratified sampling.” The proposal is subject to a 21 day comment period with comment due by September 16, 2014.

# Consolidated Audit Trail

- At a July 11, 2012 open meeting, the Securities and Exchange Commission (SEC) approved in a 3 to 2 vote a new rule requiring the national securities exchanges and self-regulatory organizations (SROs) to establish a market-wide consolidated audit trail (CAT).
- The national securities exchanges and national securities associations (collectively, the SROs) have been working as a consortium since July 27, 2012 to develop the CAT NMS Plan, and on September 30 2014, filed the CAT NMS Plan with the SEC.
- The process is not expected to be completed until the end of the year when the SEC may approve/disapprove of the industry plan. The industry working group developing the NMS plan has projected that the CAT will most likely not be completed until 2 to 3 years after SEC approval of the plan. This could end up delaying full implementation of CAT until early 2017.
- On February 6, 2014, Commissioner Kara Stein in a speech before the Trader Forum 2014 Equity Trading Summit stated that “[t]he Consolidated Audit Trail (or “CAT”) is intended to help fill that [data] void.” She urged that “we need the deeper information that only the CAT will provide. And we also need help in getting it up and running as soon as possible.
- On July 1, 2014, the national securities exchanges and FINRA (the self-regulatory organizations or SROs) released a list of six bids chosen from the list of ten RFP responses submitted to build and maintain the Consolidated Audit Trail (CAT). The six bids are now on the “short list” for consideration to build and maintain the CAT.

# Regulation SCI

- At a March 7, 2013 open meeting, the SEC voted unanimously (4-to-0) to propose a rule “Regulation Systems Compliance and Integrity (Regulation SCI).” Reg SCI “would require entities [known as ‘SCI entities’] essential to the smooth functioning of the U.S. securities markets to have comprehensive policies and procedures regarding their technological systems.” The rule is designed to assure that these systems: (1) “have adequate capacity, integrity, resiliency, availability, and security;” (2) “operate in the manner intended;” and (3) “are well-positioned to promptly take appropriate corrective action when problems arise.” “SCI entities” under this proposal would include: (1) self-regulatory organizations (the registered national securities exchanges, registered clearing agencies, FINRA, and MSRB); (2) alternative trading systems “that exceed specified volume thresholds” (SCI ATSS); (3) “disseminators of market data under certain National Market Systems plans” (“plan processors”); and (4) “certain clearing agencies exempt from SEC regulation.” The SEC extended the comment period until July 8, 2013.
- At a November 19, 2014, open meeting, the Securities and Exchange Commission (SEC) unanimously approved final rules to implement Regulation Systems Compliance and Integrity (Reg SCI). Entities subject to Regulation SCI generally must comply with the requirements nine months after the effective date. ATSS newly meeting the volume thresholds in the rules for the first time, will be provided an additional six months from the time that the ATS first meets the applicable thresholds to comply. Further, entities will have 21 months from the effective date to comply with the industry- or sector-wide coordinated testing requirement.



# SEC Examines Market Technology

- SEC Holds Market Technology Roundtable: On October 2, 2012, the SEC held a roundtable entitled: “Technology and Trading: Promoting Stability in Today’s Markets.” The roundtable included panels on “the prevention of errors” and on “error response”. Then SEC Chairman Mary Schapiro asserted that the stability of the securities market is tied to its own technological infrastructure. Schapiro stressed the need to address: (1) the structure of markets, “such as multiple execution venues, the presence of high frequency trading, dark pools, and the like”; and (2) the infrastructure of markets, “as in the technology that undergirds trading activity.” Schapiro pointed out that a single infrastructure failure could have a ripple effect across the industry, and that limiting harm from technological errors “is not as good as preventing errors in the first place.”
- On January 27, 2014, SEC Chair Mary Jo White gave a speech entitled: “The SEC in 2014”. She noted that the SEC’s Quantitative Analytics Unit in its National Exam Program has, for example, developed a revolutionary new instrument called NEAT, which stands for National Exam Analytics Tool. “With NEAT, our examiners are able to access and systematically analyze massive amounts of trading data from firms in a fraction of the time it has taken in years past. In 2014, our examiners will be using the NEAT analytics to identify signs of not only possible insider trading, but also front running, window dressing, improper allocations of investment opportunities, and other kinds of misconduct.” She also discussed MIDAS, adding that the SEC “brought online another transformative tool that enables us to collect and sift through massive amounts of trading data across markets instantaneously, an exercise that once took the staff weeks or months. We call this technology MIDAS –the Market Information Data Analytics System. In the coming weeks, we are expecting to post further staff analysis of off-exchange trading, a review of research on high-frequency trading, and a data series on depth-of-book liquidity.

# Securities Information Processors (SIPs)

- The three-hour trading shutdown of Nasdaq listed securities on August 22, 2013 brought to light the critical role of Securities Information Processors (SIPs). A similar 6-minute in duration failure of the Nasdaq SIP also occurred on September 4, 2013.
- During the August 22 failure, Nasdaq's SIP went down, resulting in Nasdaq halting trading in Nasdaq-listed stocks. This action was deemed a necessary action because the SIP distributes quotations and transactions in those securities. While the New York Stock Exchange (NYSE) and Nasdaq both provide proprietary data feeds to certain investors who specifically pay for those proprietary feeds, no other SIP provides competing services to disseminate quote and trade information to all investors. Therefore, the temporary failure of Nasdaq's SIP resulted in no trading in Nasdaq-listed stocks. This highlights SIPs as being potential single points of failure for the equity markets.
- The 1975 Amendments to the securities laws created centralized SIPs for consolidation and dissemination of data for investors, which was one part of the creation of a National Market System. The Congressional findings with regard to creation of a SIP and National Market System included: "more efficient and effective market operations" by "new data processing and communications techniques"; and the linkage of markets "through communication and data processing facilities" to "foster efficiency, enhance competition, increase information available...and contribute to best execution of such orders."
- There are currently two operators of exclusive processors: the New York Stock Exchange, which runs the SIP for Tapes A and B; and the Nasdaq, which operates the SIP for Tape C, or the UTP Plan (Nasdaq-listed stocks). The Consolidated Tape Association/Consolidated Quotation Plans (CTA/CQ Plans) govern the dissemination of real-time trade and quote information sent to the NYSE's SIP from all exchanges that quote and trade exchange-listed securities (except Nasdaq-listed securities). The Unlisted Trading Privileges (UTP) Plan sets for the collection, processing and distribution of UTP SIP data. The Unlisted Trading Privileges (UTP) Quote Data Feed (UQDF) and the UTP Trade Data Feed (UTDF) provide continuous quotations and last sale information, respectively, "from all market centers trading Nasdaq-listed securities."
- The SIPs are important not only for consolidating vital quote and trade information for investors, but they are also integral to the operation of recently adopted mechanisms to address market volatility.
- Despite criticism over the operation of the SIPs, they are important to the operation of the current market, and without them, the market would not likely be able to function as efficiently as possible. Still, because they represent a potential single point of failure, policymakers should consider ways to address the potential systemic vulnerability of the SIPs.
- On January 27, 2014, SEC Chair Mary Jo White gave a speech entitled: "The SEC in 2014" stating that following the interruption of trading in Nasdaq-listed securities last August, she met with the leaders of the equities and options exchanges. At her urging, they pledged to work toward enhancing the integrity of market systems, including the critical market infrastructures that can prove to be "single points of failure," such as public feeds of quotes and trades. They have since been working hard to develop and implement such measures, and she expects more to be done to address these vulnerabilities in 2014.
- For further information see: Securities Information Processors (SIPs): Current Structure and Potential Changes

# Market Data Fees

- Since 2008, an industry group called “NetCoalition”, which is a collection of internet companies and other companies such as Bloomberg and trade groups such as the Securities Industry and Financial Markets Association (SIFMA), have challenged the Securities and Exchange Commission’s (SEC) policy on market data fees in court over policies that institutionalize market data as an exchange product. This coalition received a favorable outcome from the D.C. Circuit Court of Appeals in 2010.
- In an April 2013 decision on this issue, the D.C. Circuit Court of Appeals directed the SEC to consider fee complaints under a “denial of access” process. As such, SIFMA filed two such petitions with the SEC in May 2013.
- These challenges over market data fees are far from over.
- With \$400 million in market data fees at stake, the issue is closely being watched by industry in view of its impact on market structure issues.
- On May 16, 2014, the SEC released an [order](#) referring the SIFMA petitions to an Administrative Law Judge, noting that the SRO fee rules may be reviewed by the SEC and SIFMA needs to show that its members constitute “aggrieved persons”. On May 23, 2014, the Commission issued an Order Designating Presiding Judge (CALJ) and Scheduling Prehearing Conference for June 23, 2014.
- On October 20, 2014, following briefing and SIFMA's submission of several member affidavits, the CALJ issued an [order](#) finding that jurisdiction existed over the two rule challenges before her. On November 21, 2014, the CALJ granted the parties' Joint Motion to Extend Hearing and Prehearing Schedules. The extension order set new deadlines for relevant litigation events ranging from January 20, 2015 (for the SROs' initial pre-hearing filings) to April 20, 2015 (for the hearing). On December 23, 2014, the CALJ [denied](#) a motion by SIFMA to consolidate their motions.

# Recent “Market Disruption” Events

- Knight Capital Group Inc.-\$460 million trading loss in August 2012. In just 45 minutes, Knight’s computers rapidly bought and sold millions of shares. Those trades pushed the value of many stocks up, and the company’s losses appear to have occurred when it had to sell the overvalued stocks back into the market at a lower price. As a result, Knight Capital lost approximately \$10 million per minute, almost had to go into bankruptcy, and subsequently agreed to be purchased.
- BATS Global Markets and Facebook IPOs (NASDAQ)–The systems issues associated with their initial public offerings in March and May 2012, respectively. The losses sustained as a result of the Facebook IPO may be as much as hundreds of millions of dollars.
- Goldman Sachs –On August 20, 2013, Goldman Sachs executed a large number of erroneous options trades when one of its automated trading systems malfunctioned.
- NASDAQ–On August 22, 2013, the trading of more than 2,000 NASDAQ-listed stocks, with a total estimated market capitalization of \$5.7 trillion, was halted for three hours because of a technology failure related to NASDAQ’s market data feed.
- NASDAQ: On September 4, 2013, Nasdaq OMX suffered a six minute trading outage due to an outage in one of its quote dissemination channels related to “symbols PC through SPZ.” Nasdaq trading was not impacted and the market closed for the day in an orderly manner.
- Options Data Feed –On September 16, 2013, options trading was halted for more than a half-hour due to a failure of a data feed that supplied options prices to the market.
- NASDAQ / Stock Indexes –On October 29, 2013, a data feed interruption prevented prices for NASDAQ’s benchmark U.S. stock indexes from being disseminated for almost an hour.
- NASDAQ –On November 1, 2013, NASDAQ halted trading on one of its three options markets for most of the day when its systems encountered problems processing an increase of orders and could not disseminate quotes for a subset of securities.
- OTC Markets –On November 7, 2013, a network failure at OTC Markets Group Inc. prevented trading in thousands of unlisted shares for more than five hours.