

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

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# Overview

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# 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 #14-16]
- 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, 21, 2014, Chair Mary Jo White in a speech given at a SEC Speaks 2014 conference stated that “[i]n 2014, we also will prioritize our review of equity market structure, focusing closely on how it impacts investors and companies of every size.”
- On February 3, 2014, 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. These may include: (1) reviewing the impact of algorithmic and other automated trading on the markets, including its potential contribution to market volatility and, if warranted, developing an appropriate policy response; (2) strengthening the incentives for investors to display trading interest, and thereby contribute to the price discovery process; (3) enhancing the post-trade transparency of alternative trading systems (including dark pools) in order to address market fragmentation and facilitate best execution; and (4) continuing and expanding a comprehensive review of equity market structure; and (5) considering a comprehensive review of the structure and operation of the listed options markets to promote fair, efficient, transparent, and competitive markets.”
- 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 of his vision for a comprehensive review of equity market structure. “First, in order to allow us to cover a wide range of topics, it should be a multi-year review. Second, so that each issue can be considered and addressed in sufficient depth, the Commission should leverage the resources of outside parties by leading a collaborative effort with market structure experts from the private sector and the academic world.”
- On February, 21, 2014, Commissioner Dan Gallagher, in remarks called for undertaking “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 “futures, options, and equities are inextricably linked, and [the SEC’s] oversight of them must be too....Critical market infrastructure should be both reliable and resilient....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 first annual [Report on Objectives](#). The OIA report identifies issues of focus for Fiscal Year 2015 including equity market structure, investor flight, cybersecurity, and effective disclosure.

# 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) urged the SEC to avoid imposing complex regulations on market participants without fully understanding the cause of their behavior. He 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.” In January 2014, SEC Commissioner Michael Piwowar called for a comprehensive review of equity market structure which should be considered a multi-year review. He suggested the SEC collaborate with the private sector and academia on this review.

# 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) began investigating high frequency trading practices (even holding a hearing in December 2010 that included this subject). The Senate Banking Committee's Securities, Insurance, and Investment Subcommittee held hearings on market structure in Fall 2012, which have been more informational than investigative. 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 March 2012 it was announced (in press reports) that the SEC has launched a “broad investigation” into whether exchanges favor large trading companies at the expense of smaller customers. The investigations are focusing on whether operators use multiple exchanges to appease customers which provide large order flows allowing them to grant advantages to some customers by using different rules on different exchanges. In March 2013 it was announced (in press reports) that the SEC will team up with the FBI to investigate high frequency trading technology for potential market manipulation. ([Source](#))
- 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. Nasdaq penalties will range from 0.01 cents to 1 cent per trade for traders who send over 1 million messages per day but generate fewer than 1 trade per 100 messages. Direct Edge’s program will target any customer whose trade-to-message ratio is less than 1 to 100 and those who exceed the ratio will receive lower rebates to place quotes.
- On July 18, 2012 the Financial Stability Oversight Council (FSOC) issued its annual report in which they voiced support for SEC/ CFTC “reigning in” HFT. The FSOC “recommends that the CFTC and SEC consider error control and risk-management standards for exchanges, clearing firms, and other market participants that are relevant for a high-speed trading environment . . . [and] continue to track developments in current and evolving market structure and analyze the need for policy responses when appropriate.” There were no similar references in 2013 FSOC annual report.
- In the December 2013 release of the Office of Financial Research annual report, concerns were raised over the systemic risks from HFT in that “automated trading represents a significant portion of daily equity and foreign exchange volumes and a sizable portion of Treasury market volumes. Given these volumes, high-frequency trading poses several potential financial stability risks, suggesting that closer monitoring may be warranted.”
- 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.”



# 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). SEC Division of Trading and Markets Director Stephen Luparello at a June 26, 2014, Congressional hearing further explained the Advisory Committee will be put together in compliance with the Federal Advisory Committee Act (FACA). FACA governs the establishment of and procedures used by advisory committees.
- 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).
- There is an indication that the new MSAC will consist of a small group (10 to 15 members) to advise the SEC on market structure issues.

# 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 December 2000, then SEC Chairman Levitt directed the Staff of the Office of Economic Analysis and the Office of Compliance Inspections and Examinations to prepare a report describing current payment for order flow and internalization practices, and outlining how the practices of payment for order flow and internalization have affected order routing decisions and the execution quality of customer options orders.
- The SEC issued a concept release in February 2004 seeking comment from market participants on various trading practices that are common in today's options markets. Among other things, the SEC has solicited the views of market participants on internalization of order flow. Internalization of order flow refers to the concept of a broker-dealer trading against its own customers' order flow. As a result, in February 2004, the SEC sought comment with respect to what action, if any, it should take with respect to internalization of order flow. After much consideration the SEC decided to not limit internalization.
- 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."
- According to Duncan Niederauer, CEO of NYSE Euronext, NYSE has lost share to what's called internalization, when brokers, which may operate dark pools, execute orders on their platforms at the best public price or better. 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. He notes in a [press release](#) on the letter that "[b]oth practices give market participants a financial incentive to fill client orders using methods that boost broker profits but interfere with their duty to provide clients with the best possible execution of their trades."
- 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, stating that "broad adoption of this policy [eliminating maker-taker payments] would reduce the conflicts inherent in such pricing schema and further reduce complexity through fewer order types and fewer venues." 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. Sprecher noted that he could not say what the cost of trading a share on the NYSE is because of the complex order types and trades that occur. He suggested that the elimination of maker-taker pricing would benefit the markets by providing simplicity.

# 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 (in conjunction with this JOBS Act report) to discuss “how to best study its effects on IPOs, trading, and liquidity for small and middle capitalization companies, and what, if any, changes should be considered.” 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”). Specifically, the bill requires securities of an EGC to quote in 5 cent increments, unless the EGC opts-out of the pilot program (and therefore quote in pennies) or unless the EGC elects to have its securities quoted at 10 cent increments.
- On February 21, 2014 SEC Chair Mary Jo White in remarks at the annual SEC Speaks 2014 conference stated that she would be “pushing forward is the development and implementation of a tick-size pilot, along carefully defined parameters, that would widen the quoting and trading increments and test.”
- 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.” These include “NMS common stocks with: (1) “a market capitalization of \$5 billion or less; (2) an average daily trading volume of one million shares or less; and (3) a share price of \$2 per share or more.” The SEC order calls on the exchanges and FINRA to file the Tick Size Pilot Plan with the Commission by August 25, 2014. Once filed, the SEC would publish the proposed pilot plan for public comment and thereafter consider whether to approve it. Participants are to provide to the SEC their assessment of various impacts of the pilot program no later than six months after the end of the pilot program.

# 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).
- According to the SEC staff release, the rule would require the exchanges and SROs to “jointly submit a comprehensive plan detailing how they would develop, implement, and maintain” such an audit trail. The CAT would “collect and accurately identify every order, cancellation, modification, and trade execution for all exchange-listed equities and equity options across all U.S. markets.” Certain data will be required to be reported to a “central repository” by 8 a.m. eastern time the following trading day. Reportable events are to be “tagged and stored by the central repository in a linked fashion” which will allow regulators to more easily follow an order through its entire life cycle...” Each broker-dealer and national exchange will be assigned a unique identifier as will each customer and customer advisers with trading discretion. SROs and their members are required to synchronize their business clocks and reportable events must be time stamped in millisecond or finer increments. The SROs are given some flexibility in determining the specifics of how the data is reported to the repositories but must it be done in a way that the repository can then transmit to regulators in a uniform format.
- The SROs are required to provide details on how the CAT would be created, why reasonable alternatives were not chosen, detail estimated costs, discuss ways to eliminate unnecessary reporting, establish an Advisory Committee for the central repository, and provide information on anticipated error rates. The SROs will be required to submit their plan to the SEC within 270 days from publication of the rule. Once the plan is adopted, SROs will have one year to begin reporting to the central repository but small broker-dealers will have up to three years to begin reporting.
- Note that from a “Market Data Solution” solicitation for an equity and equity option market data collection and analysis (November 2011), Tradeworx (Red Bank, N.J.) was awarded a contract in June 2012 to provide the SEC with a real-time data service to provide trading and quoting information.
- On February 26, 2013 the SROs released a request for proposals (RFP) on how to build a consolidated audit trail for all market activity to comply with Securities Exchange Act Rule 613 (Rule 613), which was adopted by the Securities and Exchange Commission (SEC) in July 2012. 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.



# Consolidated Audit Trail

- On May 7, 2013, SEC Chair Mary Jo White in testimony before the Subcommittee on Financial Services and General Government, House Committee on Appropriations stated: “We also plan to use the SEC Reserve Fund toward the development of the capability to intake, store and analyze data from the upcoming Consolidated Audit Trail (CAT) that the Commission has mandated the SROs create to increase the data available to regulators. A CAT repository would enable the SEC to intake CAT data and store it in the EDW, as well as to develop analytical tools and a single software platform that will allow the SEC to identify patterns, trends, and anomalies in the CAT data. The tools and platform will allow seamless searches of data sets to examine activity to reveal suspicious behavior in securities-related activities and quickly trace the origin.
- 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. All market participants should be involved in helping to develop the CAT—it is not, nor should it be, the exclusive province of the Commission and the SROs. And we must also move quickly. Until regulators, buy-side traders, brokers, consultants, and the academic community can pore over the data, we simply don’t know what we’re missing.”
- On February, 21, 2014, Chair Mary Jo White in a speech at the SEC Speaks 2014 conference stated that “[t]he SEC, the SROs, and other market participants are also proceeding to implement the Consolidated Audit Trail Rule which when operational will further enhance the ability of regulators to monitor and analyze the equity markets on a more timely basis...It is a difficult and complex undertaking, which must be accorded the highest priority by all to complete.”
- On June 23, 2014, the national securities exchanges and FINRA (the self-regulatory organizations or SROs) began distributing a cost study [questionnaire](#) to gather information to assess and manage the financial impact of anticipated reporting requirements for the Consolidated Audit Trail (CAT). The questionnaires are to be returned by August 6, 2014.
- 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.
- On January 27, 2014, SEC Chair Mary Jo White gave a speech entitled: “The SEC in 2014” stating that she anticipates “that the Commission’s 2014 rulemaking agenda will include consideration of the adoption of Regulation SCI.”
- In remarks on March 19, 2014, SEC Chair Mary Jo White noted a focus on operational and systems issues, including the pending rule for Regulation SCI to require the exchanges and alternative trading systems to enhance their technologies. She stressed the need for all market participants to have access to the SEC’s market data.

# 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 and Scheduling Prehearing Conference for June 23, 2014.

# 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.