

**Testimony of  
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**Before the Subcommittee on Securities, Insurance, and Investment  
Committee on Banking, Housing, and Urban Affairs**

**Permanent Subcommittee on Investigations  
Committee on Homeland Security and Government Affairs**

**United States Senate**

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Chairman Reed, Chairman Levin, Ranking Member Bunning, Ranking Member Coburn and  
Members of the Subcommittees:

I am Steve Luparello, Vice Chairman of the Financial Industry Regulatory Authority, or FINRA.  
On behalf of FINRA, I would like to thank you for the opportunity to testify today on the important  
issues of how markets and trading have evolved, and how we can enhance the information  
regulators receive to ensure market integrity and the protection of investors.

I'd like to commend Chairmen Schapiro and Gensler for their leadership in spearheading the  
coordinated review of market activity after the events of May 6. We appreciated the opportunity  
to collaborate with the SEC and other SROs to identify measures that could be taken quickly to  
significantly reduce the chances of a recurrence of the market disruption that occurred that day.  
FINRA's Chairman, Rick Ketchum, serves on the CFTC-SEC Joint Advisory Committee on  
Emerging Regulatory Issues that is continuing its work to identify additional steps regulators  
may take to respond to the lessons of May 6.

## **FINRA**

The Financial Industry Regulatory Authority (FINRA) is the largest independent regulator for all securities firms doing business in the United States. FINRA provides the first line of oversight for broker-dealers, and, through its comprehensive regulatory oversight programs, regulates both the firms and professionals that sell securities in the United States and the U.S. securities markets. FINRA oversees approximately 4,600 brokerage firms, 166,000 branch offices and 636,000 registered securities representatives. FINRA touches virtually every aspect of the securities business—from registering and educating industry participants to examining securities firms; writing rules and enforcing those rules and the federal securities laws; informing and educating the investing public; providing trade reporting and other industry utilities and administering the largest dispute resolution forum for investors and registered firms.

In addition, FINRA conducts surveillance of over-the-counter (OTC) trading in equities and debt, and provides market surveillance, investigatory and related regulatory services for equities and options traded on U.S. exchanges, including the New York Stock Exchange, NYSE Arca, NYSE Amex, NASDAQ, NASDAQ Options Market, NASDAQ OMX Philadelphia, NASDAQ OMX BX, BATS Equities and Options and The International Securities Exchange. Through this work, FINRA is responsible for aggregating and providing market surveillance for approximately 80 percent of U.S. equity trading.

FINRA's activities are overseen by the Securities and Exchange Commission (SEC), which approves all FINRA rules and has oversight authority over FINRA operations.

## **Response to May 6**

During the last several years, how and where trading occurs has evolved rapidly, as has execution speed, particularly with respect to equity trading. High-frequency trading, dark pools and direct access are now commonplace—and have contributed to the more fragmented markets that exist today. While the market fragmentation that has occurred has lowered barriers to entry and created fierce competition resulting in narrow quotation spreads and a high level of liquidity in good times, it can also result in the fast electronic removal of liquidity when markets are stressed, as we observed on May 6.

The events of May 6 identified several areas in which regulators could be more proactive in preventing or reducing the impact of extreme market volatility, as well as provide additional transparency and predictability in restoring order to the markets following such events. FINRA has been pleased to participate in these discussions with the U.S. equities and options exchanges, under the leadership and direction of the SEC, to establish and implement a number of important changes.

First, in June 2010, as a result of this coordinated effort, a framework for market-wide, stock-by-stock circuit-breaker rules and protocols was established and implemented on a pilot basis. Under these pilot rules, a single-stock circuit breaker is triggered if the price of a security changes by 10 percent within a rolling five-minute period. If triggered, all markets pause trading in the security for at least five minutes, and then the primary listing market employs its standard auction process to determine the opening print after the five-minute pause period.

The pilot commenced with securities included in the S&P 500 Index and then was expanded in September 2010 to the Russell 1000 Index and certain exchange traded products. Where there is extreme volatility in a stock, this solution provides for a pause in trading that will allow market

participants to better evaluate the trading that has occurred, correct any erroneous "fat finger" orders and provide for a more transparent, organized opportunity to offset the order imbalances that may have caused the volatility. FINRA and the exchanges, with the SEC, have been monitoring continuously the application and effectiveness of the pilot to determine whether expansion to additional securities is appropriate and whether adopting or incorporating other mechanisms, such as a limit up/limit down procedure that would directly prevent trades outside of specified parameters, would be a more efficient and effective permanent approach.

Similarly, new rules were established to improve the consistency and transparency surrounding the process for breaking erroneous trades, particularly with respect to events like those that occurred May 6, which impacted multiple stocks within a very short time frame. In September, FINRA and the exchanges, in coordination with SEC staff, adopted on a pilot basis new rules to establish standards for breaking trades following multi-stock events. For events involving between five and 20 stocks, FINRA and the exchanges will break trades at least 10 percent away from the reference price (typically the consolidated last sale), and for events involving 20 or more stocks, at least 30 percent away from the reference price. These rules provide more certainty to market participants as to when and at what prices trades will be broken by FINRA and the exchanges, facilitating a more transparent and orderly resolution of multi-stock events.

Most recently, in November 2010, the SEC approved FINRA and exchange rules to strengthen the minimum quotation standards for market makers and effectively prohibit what have been called "stub quotes" in the U.S. equity markets—quotes to buy or sell stocks at prices so far away from the prevailing market that they are not intended to be executed. Executions against stub quotes represented a significant proportion of the trades that were executed at extreme prices on May 6, and subsequently broken. The new rules require market makers to maintain

continuous two-sided quotations throughout the trading day within a certain percentage of the NBBO, thereby prohibiting the use of extreme stub quotes.

Through the CFTC-SEC Joint Advisory Committee, deliberations continue about potential additional measures regulators may institute in the wake of May 6. FINRA is committed to working with our fellow regulators, through the Committee and in other ways, to continue this analysis.

Lastly, it is worth noting that the SEC also recently adopted rules preventing unfiltered market access, as well as requiring brokers with market access to have risk management controls and supervisory procedures to help prevent erroneous orders, ensure compliance with regulatory requirements and enforce credit or capital thresholds. FINRA has consistently taken the approach that brokers sponsoring market access have a responsibility to ensure that proper screens are in place before providing access to firms, including those who may use high-frequency or algorithmic trading strategies. FINRA has questioned brokers providing access to determine whether they have fulfilled their obligations to understand the ownership of firms to whom they are providing access and what is being done with algorithms used through those agreements. FINRA will continue to examine the firms it regulates for compliance in this area, analyze whether enhancements to our supervision rules are warranted and enforce the new SEC requirements vigorously.

### **High-Frequency Trading and the Trillium Case**

While the disruption on May 6 focused significant attention on high-frequency traders and algorithmic trading in today's highly automated marketplace, FINRA had already been scrutinizing trading activity closely in order to detect attempts to use these technologies to

implement manipulative trading strategies. In today's fragmented trading environment, it is very plausible that market participants will spread their activity across multiple markets and accounts in an attempt to avoid detection of trading abuses such as wash sales, frontrunning, insider trading, marking the close and open, and manipulative trading strategies like layering. FINRA is aggressively pursuing these types of illegal trading practices that inappropriately undermine legitimate market trading.

In September, FINRA fined a New York brokerage firm—Trillium Brokerage Services—over \$1 million and suspended several traders at the firm for using an illicit high-frequency trading strategy. Trillium, through nine proprietary traders, entered numerous layered, non-bona fide market moving orders to generate selling or buying interest in specific stocks. By entering the non-bona fide orders, often in substantial size relative to a stock's overall legitimate pending order volume, Trillium traders created a false appearance of buy- or sell-side pressure.

This trading strategy induced other market participants to enter orders to execute against limit orders previously entered by the Trillium traders. Once their orders were filled, the Trillium traders would then immediately cancel orders that had only been designed to create the false appearance of market activity. As a result of this improper high-frequency trading strategy, Trillium's traders obtained advantageous prices that otherwise would not have been available to them. Trillium's traders bought and sold NASDAQ securities in over 46,000 instances, reaping nearly \$575,000 in improper profits. Other market participants were unaware that they were acting on the illegitimate, layered orders entered by Trillium traders.

In addition to the nine traders, FINRA also took action against Trillium's Director of Trading and its Chief Compliance Officer. The 11 individuals were suspended from the securities industry or as principals for periods ranging from six months to two years. FINRA levied a total of \$802,500

in fines against the individuals, ranging from \$12,500 to \$220,000, and required the traders to pay out disgorgements totaling roughly \$292,000.

While FINRA is able to pursue instances of these illegal trading strategies on markets we regulate as well as through the cooperative information-sharing efforts of market surveillance staffs, the risk of missing instances of manipulation, wash sales, abusive short selling and other improper "gaming strategies" is still unacceptably large. While FINRA's ability to aggregate an increasing share of regulatory data for surveillance purposes is a strong step in the right direction, establishing a consolidated audit trail is the key to enhancing regulators' abilities to detect these activities. This would allow FINRA and the exchanges to more efficiently detect violations and adapt surveillance programs to new scenarios.

### **FINRA Market Regulation**

In addition to performing its own regulatory obligations to conduct surveillance of over-the-counter (OTC) trading in equities and debt, FINRA increasingly is providing surveillance and related regulatory services for equities and options traded on U.S. exchanges. FINRA is responsible for insider-trading surveillance for all exchange-listed equity securities across all U.S. exchanges, regardless of the market on which a trade is executed. FINRA is responsible for surveillance of NASDAQ OMX, originally as a sister subsidiary when NASDAQ was part of NASD and now under contract, and subsequently NASDAQ OMX BX (formerly the Boston Stock Exchange) and NASDAQ OMX PHLX (formerly the Philadelphia Stock Exchange) (collectively NASDAQ). In June 2010, FINRA became responsible for surveillance of the NYSE Euronext's three U.S. exchanges, the New York Stock Exchange (NYSE), NYSE ARCA and NYSE AMEX (collectively the NYSE). FINRA also provides regulatory services to the

International Securities Exchange, the Boston Options Exchange, the BATS Y and Z Exchanges and the EDGA and EDGX Exchanges.

As a result, FINRA presently is responsible for conducting post-trade market surveillance of approximately 80 percent of the equity share volume and 30-35 percent of the option contract volume traded on U.S. exchanges. With the recent addition of the NYSE, FINRA has started an integration process that will combine for the first time detailed trading data from FINRA, NASDAQ and the NYSE in one data center. With this aggregated data, FINRA will be able to conduct comprehensive, cross-market surveillance of 80 percent of the equity market.

FINRA uses a variety of sophisticated online and offline surveillance techniques and programs to detect potential violations and reconstruct market activity using trade, quote and order information that is captured daily. Specifically, FINRA's Market Regulation Department is comprised of approximately 440 employees that are organized into roughly 70 specialized teams of subject matter experts for certain rules and trading activity. These teams conduct investigations based on alerts generated by over 300 surveillance patterns that are designed to detect particular threat scenarios by canvassing some or all of the one billion or more market events that are captured by FINRA each day. FINRA also provides interpretive guidance on a variety of trading issues and rules, investigates market-related complaints from investors, broker-dealers and other parties, and conducts market and trading-related preventive compliance activities.

### **Consolidated Audit Trail**

With the growth in the number of registered exchanges and alternative trading systems, increased competition among trading venues and market structure policy compelling

connectivity among exchanges and between exchanges and other execution venues, it is clear that market quality can no longer be ensured by a single exchange acting in a siloed fashion. In fact, as noted earlier, it is plausible that certain market participants, knowing the extent of current regulatory fragmentation, now consciously spread their trading activity across several markets in an effort to exploit this fragmentation and avoid detection. As the SEC recognized with its recent rule proposal, that evolution of the U.S. equity markets and the technological advances in trading systems have created an environment where a consolidated audit trail is now essential to ensuring the proper surveillance of the securities markets and the confidence of investors in those markets.

In its proposal to adopt a consolidated audit trail, the SEC correctly identified the challenges that exist in conducting market surveillance with today's regulatory audit trails. FINRA agrees with the SEC on those issues and strongly supports the establishment of a consolidated audit trail as a critical step to enhance regulators' ability to conduct surveillance of trading activity across multiple markets.

The events of May 6 also have demonstrated the need for SROs and the SEC to have direct and more timely access to consolidated audit trail data. As the Commission noted in its proposal, the SEC's and SROs' inability to timely and efficiently access the patchwork of audit trail data that currently exists creates delays in identifying potential market abuses and creating market reconstructions. Thus, FINRA believes the key aspects necessary for ensuring an effective, comprehensive and efficient consolidated audit trail are: uniform data (both data format and data content across markets); reliable data; and timely access to the data by SROs and the SEC.

In terms of implementation, FINRA believes the most effective, efficient and timely way to achieve the goals of a consolidated audit trail is to expand existing systems, such as FINRA's Order Audit Trail System (OATS), and consolidate this information with exchange data and discrete new data, such as large trader information, into a central repository. Building off existing systems would significantly reduce both the cost (to the industry, and ultimately, investors) and the time for implementation of a fully consolidated audit trail and integration of that audit trail into surveillance systems.

Because market participants already have systems in place to comply with OATS requirements, programming changes needed for an entirely new system are substantially greater than expanding existing protocols. In addition, FINRA recently received SEC approval to expand OATS beyond NASDAQ-listed issues to include all exchange-listed issues, further enhancing the benefits of leveraging OATS for a consolidated audit trail.

FINRA also believes that the practicality, costs and benefits associated with incorporating a broad array of real-time data into the consolidated audit trail should be considered carefully. In many cases, information may be extremely difficult to provide accurately on a real-time basis. In addition, there are many types of information that have limited real-time regulatory benefit, due to the time needed to validate and analyze data to detect complex, violative trading activity. It has also been FINRA's experience that the quality of real-time data can degrade during significant market events due to capacity and other issues.

In terms of the content of any consolidated audit trail, FINRA's experience has shown that there are certain critical elements necessary to conduct effective surveillance across multiple markets. As an initial matter, it is essential that each market participant be required to report the same data elements in a uniform way. Moreover, consolidated data is only useful if each reporting

entity uses the same timekeeping system. FINRA also believes that each broker-dealer must have a unique identifier that remains the same regardless of the market on which the participant is trading, and that those identifiers should be more granular than at the firm level. Similarly, FINRA agrees with the SEC that each customer of a firm should have a unique identifier that is constant across all firms through which the customer trades.

Based on our experience developing and operating OATS, FINRA has a unique perspective on many of the specific issues and questions raised in the SEC's proposal. We have provided detailed comments to the Commission and are committed to working with them as consideration of the proposal moves forward.

## **Conclusion**

Changes in financial markets in recent years have necessitated adaptation by regulators across a wide spectrum of issues. Both technological and policy developments have driven changes in the markets that make the practice of regulating them a more complex task.

FINRA continually reviews its programs and technology to ensure that our approach reflects the realities of today's markets. May 6 clearly demonstrated areas where regulators should alter rules going forward to avoid a repeat of the events of that day. As noted above, several coordinated rulemakings have been implemented and consideration of additional steps continues.

The SEC has correctly identified one of the most pressing issues that faces regulators conducting market surveillance—that we are all hampered by the lack of a comprehensive, sufficiently granular and robust consolidated audit trail across the equity markets. It is vital that

we consolidate audit trail data in one place so that abusive trading practices can be more readily identified. FINRA stands ready to work with Congress, the Commission and other SROs to help bring about a consolidated and enhanced audit trail that will facilitate more effective surveillance for the protection of investors and market integrity.

Again, I appreciate the opportunity to share our views. I would be happy to answer any questions you may have.