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Stay Afloat in the New Wave of High-Frequency Trading Actions

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Recent high-profile market disruptions caused by advanced trading technologies, including the so-called "flash crash" and Knight Capital's software-driven collapse, have magnified interest in high-frequency trading. Regulators and legislators are driving to expand surveillance and regulation of high-frequency trading practices. The SEC has solicited a high-frequency trading firm to design a computer program that will, for the first time, afford the regulators real-time monitoring capabilities.[1] The U.S. Commodity Futures Trading Commission (CFTC) is expanding its regulatory oversight of high-frequency trading as directed in the landmark Dodd-Frank Wall Street Reform and Consumer Protection Act.

While the United States has not yet formulated a cohesive plan of action, countries around the globe are responding to similar concerns, advancing or enacting legislation to impose limits on high-frequency trading strategies.[2]

We believe there will be a substantial increase in U.S. enforcement activity aimed at curbing unfair practices in high-frequency trading. This article examines some high-frequency trading strategies likely to be targeted in the coming wave of enforcement and litigation actions, and outlines new defense tactics suited to high-frequency trading.

High-Frequency Trading Today

High-frequency trading (also called high-speed trading) employs computerized systems capable of rapid calculation and data transmission time to run algorithms that identify and execute trading opportunities in milliseconds—and increasingly in microseconds. The principal objective "involves minimizing risk and posting small deal sizes that enable [high-frequency traders] to move in and out of trades extremely quickly, arbitraging between spreads available on different exchanges and platforms, and even between the speed of trading available on them."[3] High-frequency traders often hold positions for very short periods, collecting fractions of a penny on each share of a large-quantity trade.

Proponents argue that the resulting liquidity affords other investors trading opportunities, and has led to historically low transaction costs and increased market efficiency. Critics contend that high-frequency trading has disadvantaged investors without access to cutting-edge technologies,[4] contributed to market volatility, eroded investor confidence, and has led to a two-tiered marketplace: high-frequency traders, and "everyone else."

High-frequency trading has grown to a 2009 peak of 60-70 percent of equity trading volume.[5] Despite a recent decline in this percentage, high-frequency trading now accounts for approximately half of all U.S. equity trading, and 60 percent of futures contracts trading on the Chicago Mercantile Exchange.[6] In addition, high-frequency trading has been increasingly employed

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in other asset classes, including options, foreign exchange, and fixed income. Experts predict continued growth.[7]

Although already on the SEC's radar, Dodd-Frank explicitly requires the SEC to conduct inquiries into high-frequency trading.[8] Dodd-Frank provides the CFTC with "new ammo in [its] enforcement arsenal" through broader anti-manipulation authority and new "disruptive practices" authority, likely to trigger enforcement activity in the futures and commodities markets for high-frequency traders, a species of traders CFTC Commissioner Bart Chilton has named "cheetahs."[9] Looking to become more of "a player in the fraud game,"[10] the CFTC has adopted rules providing enhanced enforcement authority akin to that of the SEC's powers under §10(b) of the Securities Exchange Act and corresponding Rule 10b-5.[11]

High-Frequency Trading Manipulations

Various high-frequency trading strategies, referred to as "market manipulation,"[12] "nefarious, predatory behavior,"[13] and "inherently wrong,"[14] are likely targets of future securities litigation. While some strategies are simply high-speed variants of old market manipulations, the high-speed, algorithmic nature of the trading complicates the nature of the violation. Traditional practices targeted by regulators that have new, high-speed variants include:

• **"Layering":** "[T]he placement of multiple, non-bona fide limit orders on one side of the market at various price levels at or away from the [National Best Bid or Offer (NBBO)] to create the appearance of a change in the levels of supply and demand, thereby artificially moving the price of the security."[15] Upon execution at the artificial price, the non-bona fide orders are immediately cancelled.[16]

• **"Spoofing":** "[P]lacing certain non-bona fide order(s), usually inside the [NBBO], with the intention of triggering another market participant(s) to join or improve the NBBO, followed by cancelling the non-bona fide order, and entering an order on the opposite side of the market."[17]

• **"Quote stuffing":** Placing a large number of buy or sell orders that are then cancelled almost immediately, thereby generating order congestion that slows down traders with inferior technology and creating a false sense of actual supply and demand.[18]

• **"Pinging":** Submitting and rapidly withdrawing an order to gauge market interest, thereby providing traders with response information that can enable them to force buyers into accepting a higher price simply by virtue of access to faster technology systems.[19]

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• **"Marking the close":** Acquiring a substantial position in a security prior to the close of trading, followed by offsetting the position at or immediately before the close in order to manipulate prices.[20]

High-frequency traders, who are reported to cancel at least 90 percent of their orders,[21] should be particularly concerned. Evidence suggests that the recent dramatic rise in cancellation rates is due in significant part to high-frequency trading.[22] Many contend that the high cancellation rates signal manipulative liquidity detection by which high-frequency traders attempt to discover the trading of large blocks of securities in order to trade with or ahead of those blocks, a front-running practice based on an information advantage "akin to having a microphone in the boardroom."[23] High cancellations may also indicate attempts to artificially inflate prices by artificially creating an appearance of volume, allowing sellers to profit from falsely elevated demand.

In August 2010, FINRA fined high-frequency trading firm Trillium Brokerage Services $1 million and ordered disgorgement of almost $175,000 for employing layering and spoofing strategies, and related supervisory failures.[24] In addition, 11 individual traders were fined and/or suspended.[25] FINRA deemed the firm's practice of entering "non-bona fide market moving orders to generate selling or buying interest" that "created a false appearance or buy- or sell-side pressure" to be "an illicit high frequency trading strategy."[26] In employing the strategy, the traders obtained advantageous prices that would have been otherwise unavailable on 46,000 occasions as "[o]ther market participants were unaware that they were acting on the layered, illegitimate orders."[27]

Dodd-Frank's explicit, blanket prohibition of spoofing and "bidding or offering with the intent to cancel the bid or offer before execution" makes high-frequency cancellations a likely subject for future CFTC enforcement action as well.[28] The CFTC's interpretation seems to also prohibit layering[29] and quote stuffing,[30] and its position that the submission of even a single bid or offer with the intent to cancel constitutes a violation, signals a need for extremely diligent compliance programs.[31]

While marking the close is not exclusively the province of high-frequency traders, such traders are likely targets of future enforcement, given their unique ability to trade massive volumes of securities extremely rapidly. In April 2012, in its first major case against a high-frequency trading firm, the CFTC fined Optiver $13 million and ordered disgorgement of $1 million for marking the close.[32] The complaint alleges that in March 2007, the firm and associated traders attempted to move energy futures prices on at least 19 instances by executing a large volume of trading in the final moments before the close.[33] For the CFTC, the settlement was a milestone in its efforts to aggressively tackle high-frequency trading manipulations. For high-frequency traders, it serves as a warning of the heightened likelihood of enforcement action as the CFTC leverages its expanded authority.[34]

Defenses to Allegations of Manipulation

While the new technologies will lead to new claims by regulators and private plaintiffs, high-speed trading brings defense lawyers new tools as well.

Algorithms make pleading and proving scienter far more difficult, magnifying its importance in high-frequency trading cases. Scienter, a "mental state embracing intent to deceive, manipulate, or defraud," is required to demonstrate a cause of action for market manipulation under Rule 10b-5.[35] An algorithm may not obviously be designed to execute a manipulative trading practice, and the layers of complexity and quasi-randomness that can be introduced when an algorithm reacts to market stimuli will make pleading and proving scienter in the high-frequency trading context far more difficult.

On any judicial test to assess scienter,[36] a high-frequency trading firm might easily defend itself by saying that the result of its algorithm was a truly unanticipated consequence of the algorithm's response to market stimuli—including other algorithms whose behavior could not possibly be predicted—thus countering any intent to manipulate or to inject inaccurate information into the market.

It is also more difficult to demonstrate causation and actual manipulation in the high-frequency trading world. For every dishonest high-speed trader trying to manipulate a price, other algorithms can and frequently do react at the same eye-blink rate to nullify, or at least complicate, the effects of the first algorithm. These interactions can leave a fact-finder with thorny, multi-variable issues of causation and market effects that will challenge even experienced and technologically savvy regulators and plaintiffs with expert assistance to clearly plead and/or present to a fact-finder. Equally savvy defense lawyers will understand how algorithms interact in a way that undermines a finding of causation or actual manipulation.

Despite these defenses, however, a high-frequency trading firm suspected of manipulation may be subject to intense regulatory investigations and discovery obligations. The availability of a winning defense can minimize the pain at the end of the day, but often cannot fully eliminate the expense of getting to that end result.

Conclusion

The recent surge of interest in high-frequency trading, and the CFTC's expanded authority under Dodd-Frank, signal a substantial future increase in enforcement and litigation activity in this area. As regulators come to better understand high-frequency trading, they will be emboldened to bring actions for abusive practices. Firms employing sophisticated technologies should pay close attention to new regulatory and legislative developments, and avoid the pitfalls listed above during what is likely to be a period of intense scrutiny. As always, proper expertise and focus is necessary to streamline internal investigations and discovery, to present complex technical evidence to regulators, counterparties, and fact-finders, and to minimize the burdens of grappling with this complex and rapidly developing area.

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7. "The fast and the furious," The Economist, Feb. 25, 2012, http://www.economist.com/node/21547988.

8. Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, Pub. L. No. 111-203, §967(a)(2)(D), 124 Stat. 1376, 1913 (2010) [hereinafter Dodd-Frank Act].

9. Bart Chilton, Comm'r, CFTC, Caging the Financial Cheetahs, American Soybean Association Legislative Forum, Washington, D.C. (July 12, 2011), available at http://www.cftc.gov/PressRoom/SpeechesTestimony/opachilton-50.

10. Peter J. Henning, "C.F.T.C. Is Set to Get Tougher on Fraud," Dealbook, Nov. 1, 2010, http://dealbook.nytimes.com/2010/11/01/c-f-t-c-is-set-to-get-tougher-on-fraud/.

11. CFTC Rule 180.1 prohibits intentional or reckless fraud-based manipulation unrelated to price. Rule 180.2 prohibits intentional direct or indirect manipulation or attempted manipulation related to price. 17 C.F.R. §180.1-180.2.

12. See Hearing, supra note 5 (testimony of David Lauer, Consultant, Better Markets) (citing to "conclusive evidence" of pervasive quote stuffing); Advent Software, "High-Frequency Trading: Useful Liquidity Tool or Weapon of Financial Mass Destruction?" (White Paper 2012), http://files.meetup.com/2958762/WP_HFT_0412.pdf (citing Mark Stys, Chief Investment Officer of Bluemont Capital Advisors, as saying order-anticipation strategies "provid[e] opportunities for high-speed, virtually undetectable market manipulation").

13. Hearing, supra note 5 (testimony of David Lauer).

14. Hearing, supra note 5 (testimony of Andrew M. Brooks, T. Rowe Price Assocs.) ("[M]any high frequency trading strategies are designed to initiate an order to simply gauge the market's reaction and then quickly react and transact faster than other investors can").

15. See FINRA Press Release, FINRA Joins Exchanges and the SEC in Fining Hold Brothers More Than $5.9 Million for Manipulative Trading, Anti-Money Laundering, and Other Violations (Sept. 25, 2012), available at http://www.finra.org/Newsroom/NewsReleases/2012/P178687?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+FINRANews+%28FINRA+News%29.

16. See id.

17. See id.

18. See Hearing, supra note 5 (testimony of David Lauer).

19. See Brian Mahoney, "High-Frequency Trading Needs Speed Limits, Experts Tell Senate," Law360 (Sept. 20, 2012), http://www.law360.com/securities/articles/380088/high-frequency-trading-needs-speed-limit-experts-tell-senate.

20. Complaint at 2, *CFTC v. Optiver US*, (S.D.N.Y. 2008) (No. 08-06560).

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22. Robert Litzenberger, et al., The Impacts of Automation and High Frequency Trading on Market Quality, 4 Ann. Rev. Fin. Econ. 59, 73 (2012).

23. Letter from Niall H. O'Malley, Managing Dir., Blue Point Inv. Mgmt., to Elizabeth M. Murphy, Secretary, SEC (Nov. 2, 2012), available at http://www.sec.gov/comments/s7-02-10/s70210-383.pdf.

24. Trillium Brokerage Servs., FINRA Letter of Acceptance, Waiver, and Consent, No. 20070076782-01 (2010).

25. FINRA Press Release, FINRA Sanctions Trillium Brokerage Services, Director of Trading, Chief Compliance Officer, and Nine Traders $2.26 Million for Illicit Equities Trading Strategy (Sept. 13, 2010), available at http://www.finra.org/Newsroom/NewsReleases/2010/P121951.

26. Id.

27. Id.

28. Dodd-Frank, §747, amending 4c(a) to add 5(C).

29. In its Proposed Interpretive Order, the CFTC cites to FINRA's action against Trillium "for a discussion of a 'spoofing' case involving an illicit high frequency trading strategy." 76 Fed. Reg. 14943, 14947 n. 51 (March 18, 2011).

30. Id. (explaining that violations include, but are not limited to submitting or cancelling bids or offers to (i) overload a registered entity's quotation system; (ii) delay another person's execution of trades; and (iii) create an appearance of false market depth).

31. Id.

32. CFTC Press Release, Federal Court Orders $14 Million in Fines and Disgorgement Stemming from CFTC Charges against Optiver and Others for Manipulation of NYMEX Crude, Heating Oil, and Gasoline Futures Contracts and Making False Statements (April 19, 2012), available at http://www.cftc.gov/PressRoom/PressReleases/pr6239-12.

33. See supra note 20.

34. Under Dodd-Frank, the CFTC amended CEA §4c(a)(5)(B) to prohibit marking the close. See supra note 29, at 14944, 14946 (March 18, 2011). The CFTC noted that the prohibition is not limited to the closing period and that violations include both executed orders and non-executed bids and offers, if submitted for the purpose of disrupting fair and equitable trading. Id. at 14946.

35. *Aaron v. S.E.C.*, 446 U.S. 680, 691 (1980) (SEC enforcement action); *Ernst & Ernst v. Hochfelder*, 425 U.S. 185, 193, 194 n.12 (1976) (private action).

36. Courts employ various tests. See, e.g., *Markowski v. S.E.C.*, 274 F.3d 525, 528 (D.C. Cir. 2001) (using a "sole intent" test); *ATSI Commc'ns v. Shaar Fund*, 493 F.3d 87, 100 (2d Cir. 2007) (citing *GFL Advantage Fund v. Colkitt*, 272 F.3d 189, 207 (3d Cir. 2001) (using an "inaccurate information" test).