

SEC Fines NASDAQ for Violations Surrounding Facebook IPO

On May 29, 2013, the SEC charged NASDAQ and NASDAQ Execution Services (“NES”), a registered broker-dealer affiliated with the exchange, with violations of securities laws and regulations due to inadequate systems and poor decision-making during the IPO and preliminary secondary market trading of Facebook. Without admitting to or denying SEC findings, NASDAQ has agreed to settle the charges for \$10 million—the largest penalty ever imposed on an exchange. NASDAQ has also agreed to implement changes to systems and processes, including technical improvements to its cross systems, additional processes for ensuring compliance with Regulations NMS and SHO, increased oversight for new systems, an enlarged Regulatory Group, an engineering team dedicated to system monitoring and analysis, and improved software for all technology personnel. Pursuant to the settlement order, the SEC has reserved the right to request evidence of the satisfactory completion of these undertakings should it be deemed necessary.

Exchanges have an obligation to ensure that their systems, processes, and contingency plans are sufficient to handle IPOs and subsequent trading without causing disruption to the market. Under Section 19(g)(1) of the Exchange Act, exchanges also have an obligation to comply with their own internal rules. The SEC alleged that, on May 18, 2012, NASDAQ violated Section 19(g)(1) by not complying with several of its own rules during the Facebook IPO, and that NES violated Section 15(c)(3) of the Exchange Act, and Rule 15c3-1 thereunder, by failing to maintain sufficient net capital reserves on that day.

In a typical IPO on NASDAQ, an IPO Cross Application is used to analyze buy and sell orders to determine the price at which shares will trade. A Matching Engine then matches orders at this price. Prior to this matching, called "the cross," NASDAQ runs a Validation Check to confirm that orders in the IPO Cross Application match those in the Matching Engine. If orders are canceled while the IPO Cross Application is calculating the price and volume for the cross, the Validation Check fails and the IPO Cross Application must recalculate the share price. This procedure typically takes only one to two milliseconds, and had been in place since December 2010.

The Facebook IPO was widely anticipated to be one of the largest in history. In preparation for the IPO, NASDAQ conducted several tests of its systems using volumes up to 40,000 orders. On May 18, 2012, however, NASDAQ actually received over 496,000 buy and sell orders for Facebook. A number of these were placed while the IPO Cross Application was attempting to calculate the share price for the cross. This extraordinary volume of orders created a loop which prevented NASDAQ's systems from completing the cross, releasing the bulk print, and commencing normal secondary trading as planned.

NASDAQ senior officials called a "code blue" conference call to discuss this situation. NASDAQ engineers reported that the Validation Check was preventing the cross from being completed, but they could not identify the precise root of the problem. The engineers suggested that the cross could be completed if they executed a "failover" to a duplicate Matching Engine and removed the lines of code that configured the Validation Check. NASDAQ officials allegedly understood that executing such a failover would cause orders canceled while the IPO Cross Application was running to be erroneously included in the cross. The participants of the conference call decided that, in order to solve this dilemma, NASDAQ itself would need to take a position opposite the mismatched

orders in an error account, even though, at that time, NASDAQ did not have a rule allowing the exchange or any of its affiliates to assume such a position. One alternative would have been to inform members that submitted cancelations during the price calculation that their orders had not been successfully canceled. NASDAQ officials ordered the execution of the failover using an error account, however, without discussing this alternative.

By the time NASDAQ officials ordered execution of the failover, the IPO Cross Application's inability to escape the undiagnosed loop had caused the application to fall 19 minutes behind orders received. While a real-time status check would have revealed this difficulty, no such check was run. When NASDAQ executed the failover with this unaddressed time discrepancy, 38,000 marketable orders were erroneously omitted from the cross, and NASDAQ consequently acquired a short position of more than 3 million shares of Facebook, valued at approximately \$129 million. At this time, the Execution Application NASDAQ used to send order confirmations to members also began to fail. The root of this problem was that, unbeknownst to NASDAQ, the application depended upon a successful Validation Check to operate. Without order confirmations, NASDAQ members could not determine the positions that they held in Facebook. This failure of the Execution Application, in turn, caused NASDAQ's Proprietary Feed and Securities Information Processor Quotation Data Feed to erroneously show a bid price higher than the ask price. Such erroneous prices then disrupted NASDAQ's Trade-Through and Short Sale Price-Test systems used to meet the requirements of Regulation NMS and Regulation SHO that depended upon prices from the two data feeds.

Shortly after these problems began, NASDAQ officials met to discuss whether trading in Facebook should be halted pursuant to a NASDAQ rule allowing such a halt when "extraordinary market activity" is occurring. At this time, NASDAQ officials

were allegedly aware that there was a 6.3 million share discrepancy between the final indicative and actual volume in the bulk print, that the two data feeds were not functioning properly, and that order confirmations were not being delivered to members. NASDAQ officials decided not to halt trading, however, because they believed that no “extraordinary market activity” was occurring and that the problems would be resolved within minutes.

Over the next half hour, NASDAQ made multiple attempts to force the Execution Application to deliver order confirmations, but was unable to do so. NASDAQ officials eventually ordered engineers to manually modify certain calculations to remedy the disruption of NASDAQ’s Trade-Through and Short Sale Price-Test systems. Internal miscommunication, however, led NASDAQ engineers to entirely shut down the two systems instead. The system issues stemming from the Facebook IPO also began to disrupt trading in another stock, Zynga, when its trading could not be resumed after a halt because the resumption required use of the occupied IPO Cross Application. Despite this discord, as well as a plea from a large market-making broker-dealer that trading in Facebook be halted so that members could “catch up and actually understand [their] exposure,” NASDAQ officials still did not reconsider their refusal to halt trading.

It was not until more than two hours later that NASDAQ found a way to bypass the Execution Application to release into the market or cancel the 30,000 orders omitted from the cross, deliver order confirmations, rectify the price discrepancy in the data feeds, and realize the extent of its short position in Facebook. The extended delay meant that the orders belatedly released into market were not given priority over same or worse-priced orders executed beforehand in secondary trading. This violated NASDAQ’s fundamental rule on price-time priority. When NASDAQ became aware of its significant short position in Facebook, the exchange ordered NES to

immediately purchase enough Facebook shares to fully cover the position.

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