

UNITED STATES OF AMERICA
Before the
SECURITIES AND EXCHANGE COMMISSION

SECURITIES EXCHANGE ACT OF 1934
Release No. 70694 / October 16, 2013

ADMINISTRATIVE PROCEEDING
File No. 3-15570

In the Matter of

Knight Capital Americas LLC

Respondent.

**ORDER INSTITUTING ADMINISTRATIVE
AND CEASE-AND-DESIST PROCEEDINGS,
PURSUANT TO SECTIONS 15(b) AND 21C
OF THE SECURITIES EXCHANGE ACT OF
1934, MAKING FINDINGS, AND IMPOSING
REMEDIAL SANCTIONS AND A
CEASE-AND-DESIST ORDER**

I.

The Securities and Exchange Commission (the “Commission”) deems it appropriate and in the public interest that public administrative and cease-and-desist proceedings be, and hereby are, instituted pursuant to Sections 15(b) and 21C of the Securities Exchange Act of 1934 (the “Exchange Act”) against Knight Capital Americas LLC (“Knight” or “Respondent”).

II.

In anticipation of the institution of these proceedings, Respondent has submitted an Offer of Settlement (the “Offer”), which the Commission has determined to accept. Solely for the purpose of these proceedings and any other proceedings by or on behalf of the Commission, or to which the Commission is a party, and without admitting or denying the findings herein, except as to the Commission’s jurisdiction over it and the subject matter of these proceedings, which are admitted, Respondent consents to the entry of this Order Instituting Administrative and Cease-and-Desist Proceedings, Pursuant to Sections 15(b) and 21C of the Securities Exchange Act of 1934, Making Findings, and Imposing Remedial Sanctions and a Cease-and-Desist Order (“Order”), as set forth below:

III.

On the basis of this Order and Respondent’s Offer, the Commission finds that:

INTRODUCTION

1. On August 1, 2012, Knight Capital Americas LLC (“Knight”) experienced a significant error in the operation of its automated routing system for equity orders, known as SMARS. While processing 212 small retail orders that Knight had received from its customers, SMARS routed millions of orders into the market over a 45-minute period, and obtained over 4 million executions in 154 stocks for more than 397 million shares. By the time that Knight stopped sending the orders, Knight had assumed a net long position in 80 stocks of approximately \$3.5 billion and a net short position in 74 stocks of approximately \$3.15 billion. Ultimately, Knight lost over \$460 million from these unwanted positions. The subject of these proceedings is Knight’s violation of a Commission rule that requires brokers or dealers to have controls and procedures in place reasonably designed to limit the risks associated with their access to the markets, including the risks associated with automated systems and the possibility of these types of errors.

2. Automated trading is an increasingly important component of the national market system. Automated trading typically occurs through or by brokers or dealers that have direct access to the national securities exchanges and other trading centers. Retail and institutional investors alike rely on these brokers, and their technology and systems, to access the markets.

3. Although automated technology brings benefits to investors, including increased execution speed and some decreased costs, automated trading also amplifies certain risks. As market participants increasingly rely on computers to make order routing and execution decisions, it is essential that compliance and risk management functions at brokers or dealers keep pace. In the absence of appropriate controls, the speed with which automated trading systems enter orders into the marketplace can turn an otherwise manageable error into an extreme event with potentially wide-spread impact.

4. Prudent technology risk management has, at its core, quality assurance, continuous improvement, controlled testing and user acceptance, process measuring, management and control, regular and rigorous review for compliance with applicable rules and regulations and a strong and independent audit process. To ensure these basic features are present and incorporated into day-to-day operations, brokers or dealers must invest appropriate resources in their technology, compliance, and supervisory infrastructures. Recent events and Commission enforcement actions¹ have demonstrated that this investment must be supported by an equally strong commitment to prioritize technology governance with a view toward preventing, wherever possible, software malfunctions, system errors and failures, outages or other contingencies and,

¹ See, e.g., In the Matter of the NASDAQ Stock Market LLC, et al., Sec. Exch. Rel. No. 69655 (May 29, 2013) (available at <http://www.sec.gov/litigation/admin/2013/34-69655.pdf>) (violations occurred as a result of system design limitations and weaknesses in processes and procedures); In the Matter of New York Stock Exchange LLC, et al., Sec. Exch. Rel. No. 67857 (Sept. 14, 2012) (available at <http://www.sec.gov/litigation/admin/2012/34-67857.pdf>) (violations occurred after compliance department played no role in design, implementation, or operation of market data systems); In the Matter of EDGX Exchange, Inc., et al., Sec. Exch. Rel. No. 65556 (Oct. 13, 2011) (available at <http://www.sec.gov/litigation/admin/2011/34-65556.pdf>) (violations occurred against backdrop of weaknesses in systems, processes, and controls).

when such issues arise, ensuring a prompt, effective, and risk-mitigating response. The failure by, or unwillingness of, a firm to do so can have potentially catastrophic consequences for the firm, its customers, their counterparties, investors and the marketplace.

5. The Commission adopted Exchange Act Rule 15c3-5² in November 2010 to require that brokers or dealers, as gatekeepers to the financial markets, “appropriately control the risks associated with market access, so as not to jeopardize their own financial condition, that of other market participants, the integrity of trading on the securities markets, and the stability of the financial system.”³

6. Subsection (b) of Rule 15c3-5 requires brokers or dealers with market access to “establish, document, and maintain a system of risk management controls and supervisory procedures reasonably designed to manage the financial, regulatory, and other risks” of having market access. The rule addresses a range of market access arrangements, including customers directing their own trading while using a broker’s market participant identifications, brokers trading for their customers as agents, and a broker-dealer’s trading activities that place its own capital at risk. Subsection (b) also requires a broker or dealer to preserve a copy of its supervisory procedures and a written description of its risk management controls as part of its books and records.

7. Subsection (c) of Rule 15c3-5 identifies specific required elements of a broker or dealer’s risk management controls and supervisory procedures. A broker or dealer must have systematic financial risk management controls and supervisory procedures that are reasonably designed to prevent the entry of erroneous orders and orders that exceed pre-set credit and capital thresholds in the aggregate for each customer and the broker or dealer. In addition, a broker or dealer must have regulatory risk management controls and supervisory procedures that are reasonably designed to ensure compliance with all regulatory requirements.

8. Subsection (e) of Rule 15c3-5 requires brokers or dealers with market access to establish, document, and maintain a system for regularly reviewing the effectiveness of their risk management controls and supervisory procedures. This sub-section also requires that the Chief Executive Officer (“CEO”) review and certify that the controls and procedures comply with subsections (b) and (c) of the rule. These requirements are intended to assure compliance on an ongoing basis, in part by charging senior management with responsibility to regularly review and certify the effectiveness of the controls.⁴

9. Beginning no later than July 14, 2011, and continuing through at least August 1, 2012, Knight’s system of risk management controls and supervisory procedures was not reasonably designed to manage the risk of its market access. In addition, Knight’s internal

² 17 C.F.R. § 240.15c3-5. The initial compliance date for Rule 15c3-5 was July 14, 2011. On June 30, 2011, the Commission extended the compliance date for certain requirements of Rule 15c3-5 until November 30, 2011.

³ Risk Management Controls for Brokers or Dealers with Market Access, 75 Fed. Reg. 69792, 69792 (Nov. 15, 2010) (final rule release).

⁴ *Id.* at 69811.

reviews were inadequate, its annual CEO certification for 2012 was defective, and its written description of its risk management controls was insufficient. Accordingly, Knight violated Rule 15c3-5. In particular:

- A. Knight did not have controls reasonably designed to prevent the entry of erroneous orders at a point immediately prior to the submission of orders to the market by one of Knight's equity order routers, as required under Rule 15c3-5(c)(1)(ii);
- B. Knight did not have controls reasonably designed to prevent it from entering orders for equity securities that exceeded pre-set capital thresholds for the firm, in the aggregate, as required under Rule 15c3-5(c)(1)(i). In particular, Knight failed to link accounts to firm-wide capital thresholds, and Knight relied on financial risk controls that were not capable of preventing the entry of orders;
- C. Knight did not have an adequate written description of its risk management controls as part of its books and records in a manner consistent with Rule 17a-4(e)(7) of the Exchange Act, as required by Rule 15c3-5(b);
- D. Knight also violated the requirements of Rule 15c3-5(b) because Knight did not have technology governance controls and supervisory procedures sufficient to ensure the orderly deployment of new code or to prevent the activation of code no longer intended for use in Knight's current operations but left on its servers that were accessing the market; and Knight did not have controls and supervisory procedures reasonably designed to guide employees' responses to significant technological and compliance incidents;
- E. Knight did not adequately review its business activity in connection with its market access to assure the overall effectiveness of its risk management controls and supervisory procedures, as required by Rule 15c3-5(e)(1); and
- F. Knight's 2012 annual CEO certification was defective because it did not certify that Knight's risk management controls and supervisory procedures complied with paragraphs (b) and (c) of Rule 15c3-5, as required by Rule 15c3-5(e)(2).

10. As a result of these failures, Knight did not have a system of risk management controls and supervisory procedures reasonably designed to manage the financial, regulatory, and other risks of market access on August 1, 2012, when it experienced a significant operational failure that affected SMARS, one of the primary systems Knight uses to send orders to the market. While Knight's technology staff worked to identify and resolve the issue, Knight remained connected to the markets and continued to send orders in certain listed securities. Knight's failures resulted in it accumulating an unintended multi-billion dollar portfolio of securities in approximately forty-five minutes on August 1 and, ultimately, Knight lost more than \$460 million, experienced net capital problems, and violated Rules 200(g) and 203(b) of Regulation SHO.

FACTS

A. Respondent

11. Knight Capital Americas LLC (“Knight”) is a U.S.-based broker-dealer and a wholly-owned subsidiary of KCG Holdings, Inc. Knight was owned by Knight Capital Group, Inc. until July 1, 2013, when that entity and GETCO Holding Company, LLC combined to form KCG Holdings, Inc. Knight is registered with the Commission pursuant to Section 15 of the Exchange Act and is a Financial Industry Regulatory Authority (“FINRA”) member. Knight has its principal business operations in Jersey City, New Jersey. Throughout 2011 and 2012, Knight’s aggregate trading (both for itself and for its customers) generally represented approximately ten percent of all trading in listed U.S. equity securities. SMARS generally represented approximately one percent or more of all trading in listed U.S. equity securities.

B. August 1, 2012 and Related Events

Preparation for NYSE Retail Liquidity Program

12. To enable its customers’ participation in the Retail Liquidity Program (“RLP”) at the New York Stock Exchange,⁵ which was scheduled to commence on August 1, 2012, Knight made a number of changes to its systems and software code related to its order handling processes. These changes included developing and deploying new software code in SMARS. SMARS is an automated, high speed, algorithmic router that sends orders into the market for execution. A core function of SMARS is to receive orders passed from other components of Knight’s trading platform (“parent” orders) and then, as needed based on the available liquidity, send one or more representative (or “child”) orders to external venues for execution.

13. Upon deployment, the new RLP code in SMARS was intended to replace unused code in the relevant portion of the order router. This unused code previously had been used for functionality called “Power Peg,” which Knight had discontinued using many years earlier. Despite the lack of use, the Power Peg functionality remained present and callable at the time of the RLP deployment. The new RLP code also repurposed a flag that was formerly used to activate the Power Peg code. Knight intended to delete the Power Peg code so that when this flag was set to “yes,” the new RLP functionality—rather than Power Peg—would be engaged.

14. When Knight used the Power Peg code previously, as child orders were executed, a cumulative quantity function counted the number of shares of the parent order that had been executed. This feature instructed the code to stop routing child orders after the parent order had been filled completely. In 2003, Knight ceased using the Power Peg functionality. In 2005, Knight moved the tracking of cumulative shares function in the Power Peg code to an earlier point in the SMARS code sequence. Knight did not retest the Power Peg code after moving the cumulative quantity function to determine whether Power Peg would still function correctly if called.

⁵ See Release No. 34-67347 (July 3, 2012) (order granting approval to NYSE proposed rule changes to establish a retail liquidity program for NYSE-listed securities and NYSE Amex equities on a 12-month pilot basis and granting exemptions from Rule 612(c) of Regulation NMS).

15. Beginning on July 27, 2012, Knight deployed the new RLP code in SMARS in stages by placing it on a limited number of servers in SMARS on successive days. During the deployment of the new code, however, one of Knight's technicians did not copy the new code to one of the eight SMARS computer servers. Knight did not have a second technician review this deployment and no one at Knight realized that the Power Peg code had not been removed from the eighth server, nor the new RLP code added. Knight had no written procedures that required such a review.

Events of August 1, 2012

16. On August 1, Knight received orders from broker-dealers whose customers were eligible to participate in the RLP. The seven servers that received the new code processed these orders correctly. However, orders sent with the repurposed flag to the eighth server triggered the defective Power Peg code still present on that server. As a result, this server began sending child orders to certain trading centers for execution. Because the cumulative quantity function had been moved, this server continuously sent child orders, in rapid sequence, for each incoming parent order without regard to the number of share executions Knight had already received from trading centers. Although one part of Knight's order handling system recognized that the parent orders had been filled, this information was not communicated to SMARS.

17. The consequences of the failures were substantial. For the 212 incoming parent orders that were processed by the defective Power Peg code, SMARS sent millions of child orders, resulting in 4 million executions in 154 stocks for more than 397 million shares in approximately 45 minutes. Knight inadvertently assumed an approximately \$3.5 billion net long position in 80 stocks and an approximately \$3.15 billion net short position in 74 stocks. Ultimately, Knight realized a \$460 million loss on these positions.

18. The millions of erroneous executions influenced share prices during the 45 minute period. For example, for 75 of the stocks, Knight's executions comprised more than 20 percent of the trading volume and contributed to price moves of greater than five percent. As to 37 of those stocks, the price moved by greater than ten percent, and Knight's executions constituted more than 50 percent of the trading volume. These share price movements affected other market participants, with some participants receiving less favorable prices than they would have in the absence of these executions and others receiving more favorable prices.

BNET Reject E-mail Messages

19. On August 1, Knight also received orders eligible for the RLP but that were designated for pre-market trading.⁶ SMARS processed these orders and, beginning at approximately 8:01 a.m. ET, an internal system at Knight generated automated e-mail messages (called "BNET rejects") that referenced SMARS and identified an error described as "Power Peg disabled." Knight's system sent 97 of these e-mail messages to a group of Knight personnel before the 9:30 a.m. market open. Knight did not design these types of messages to be system alerts, and Knight personnel generally did not review them when they were received. However,

⁶ These orders were distinct from the 212 incoming parent orders that led to the executions described above.

these messages were sent in real time, were caused by the code deployment failure, and provided Knight with a potential opportunity to identify and fix the coding issue prior to the market open. These notifications were not acted upon before the market opened and were not used to diagnose the problem after the open.

C. Controls and Supervisory Procedures

SMARS

20. Knight had a number of controls in place *prior* to the point that orders reached SMARS. In particular, Knight's customer interface, internal order management system, and system for internally executing customer orders all contained controls concerning the prevention of the entry of erroneous orders.

21. However, Knight did not have adequate controls in SMARS to prevent the entry of erroneous orders. For example, Knight did not have sufficient controls to monitor the *output* from SMARS, such as a control to compare orders leaving SMARS with those that entered it. Knight also did not have procedures in place to halt SMARS's operations in response to its own aberrant activity. Knight had a control that capped the limit price on a parent order, and therefore related child orders, at 9.5 percent below the National Best Bid (for sell orders) or above the National Best Offer (for buy orders) for the stock at the time that SMARS had received the parent order. However, this control would not prevent the entry of erroneous orders in circumstances in which the National Best Bid or Offer moved by less than 9.5 percent. Further, it did not apply to orders—such as the 212 orders described above—that Knight received before the market open and intended to send to participate in the opening auction at the primary listing exchange for the stock.

Capital Thresholds

22. Although Knight had position limits for some of its trading groups, these limits did not account for the firm's exposure from outstanding orders. Knight also did not have pre-set capital thresholds in the aggregate for the firm that were linked to automated controls that would prevent the entry of orders if the thresholds were exceeded.

23. For example, Knight had an account—designated the 33 Account—that temporarily held multiple types of positions, including positions resulting from executions that Knight received back from the markets that its systems could not match to the unfilled quantity of a parent order. Knight assigned a \$2 million gross position limit to the 33 Account, but it did not link this account to any automated controls concerning Knight's overall financial exposure.

24. On the morning of August 1, the 33 Account began accumulating an unusually large position resulting from the millions of executions of the child orders that SMARS was sending to the market. Because Knight did not link the 33 Account to pre-set, firm-wide capital thresholds that would prevent the entry of orders, on an automated basis, that exceeded those thresholds, SMARS continued to send millions of child orders to the market despite the fact that the parent orders already had been completely filled.⁷ Moreover, because the 33 Account held

⁷ Knight does have automatic shutdown of its trading with respect to certain strategies of one of its trading groups when their P&L limits are exceeded.

positions from multiple sources, Knight personnel could not quickly determine the nature or source of the positions accumulating in the 33 Account on the morning of August 1.

25. Knight's primary risk monitoring tool, known as "PMON," is a post-execution position monitoring system. At the opening of the market, senior Knight personnel observed a large volume of positions accruing in the 33 Account. However, Knight did not link this tool to its entry of orders so that the entry of orders in the market would automatically stop when Knight exceeded pre-set capital thresholds or its gross position limits. PMON relied entirely on human monitoring and did not generate automated alerts regarding the firm's financial exposure. PMON also did not display the limits for the accounts or trading groups; the person viewing PMON had to know the applicable limits to recognize that a limit had been exceeded. PMON experienced delays during high volume events, such as the one experienced on August 1, resulting in reports that were inaccurate.

Code Development and Deployment

26. Knight did not have written code development and deployment procedures for SMARS (although other groups at Knight had written procedures), and Knight did not require a second technician to review code deployment in SMARS. Knight also did not have a written protocol concerning the accessing of unused code on its production servers, such as a protocol requiring the testing of any such code after it had been accessed to ensure that the code still functioned properly.

Incident Response

27. On August 1, Knight did not have supervisory procedures concerning incident response. More specifically, Knight did not have supervisory procedures to guide its relevant personnel when significant issues developed. On August 1, Knight relied primarily on its technology team to attempt to identify and address the SMARS problem in a live trading environment. Knight's system continued to send millions of child orders while its personnel attempted to identify the source of the problem. In one of its attempts to address the problem, Knight uninstalled the new RLP code from the seven servers where it had been deployed correctly. This action worsened the problem, causing additional incoming parent orders to activate the Power Peg code that was present on those servers, similar to what had already occurred on the eighth server.

D. Compliance Reviews and Written Description of Controls

Initial Assessment of Compliance

28. Knight's assessment of its controls and procedures began prior to the July 14, 2011 compliance date. Knight's compliance department initiated the assessment, which involved discussions among staff of that department, as well as the pertinent business and technology units. The participants concluded that Knight's system of controls satisfied Rule 15c3-5. The assessment largely focused on compiling an inventory of Knight's existing controls and confirming that they functioned as intended. The assessment did not consider possible problems within SMARS or the consequences of potential malfunctions in SMARS. This assessment also did not consider PMON's inability to prevent the entry of orders that would exceed a capital

threshold. Further, Knight did not document sufficiently the evaluation done of the controls so that subsequent reviewers could identify these gaps in the assessment.

Written Description

29. During the initial assessment, the compliance department prepared a document that listed Knight's systems and some of the controls. This document was incomplete and therefore did not satisfy the documentation requirements of Rule 15c3-5(b). In September 2011, nearly two months after the compliance date of Rule 15c3-5's provision requiring the written description of the risk management controls, the compliance department drafted a narrative intended to describe Knight's market access systems and controls. This document also was incomplete, and was inaccurate in some respects. For example, the narrative omitted Knight's proprietary Electronic Trading Group ("ETG"), which was a significant source of Knight's trading and order volumes. The compliance department and supervisory control group ("SCG"), working together with pertinent business and technology units, began to address the missing elements of the document in November 2011, which resulted in a revised draft in January 2012, nearly six months after the compliance date of Rule 15c3-5(b). Although this draft included aspects of ETG, it lacked the Lead Market Making ("LMM") desk and other important systems. As of the CEO certification in March 2012, discussed below, Knight still was adding key systems and controls to the document. Prior to certification, the CEO was informed about the pending revisions. It was not until July 2012, nearly a year after the compliance date, that Knight added the LMM desk, which had experienced erroneous trade events over the previous months.

Written Supervisory Procedures

30. In August 2011, subsequent to the compliance date of Rule 15c3-5's provision requiring written supervisory procedures, Knight adopted written supervisory procedures ("WSPs") to guide regular reviews of its compliance with Rule 15c3-5. Knight's compliance department drafted the WSPs, which assigned various tasks to be performed by SCG staff in consultation with the pertinent business and technology units. Taken together, the WSPs had the goal of evaluating the reasonableness of Knight's market access controls and Knight's compliance with Rule 15c3-5 on an ongoing basis. Each WSP required a senior member of the pertinent business unit to approve the work of the SCG staff. Further, a separate compliance department procedure required a compliance analyst twice a year to review the work done under the WSPs.

31. Some of the WSPs were incomplete as written, and Knight personnel had conflicting views regarding what some of the WSPs required. For example, relevant Knight personnel differed on whether some WSPs required an evaluation of the controls or merely an identification that controls and procedures existed. In addition, the WSP that was supposed to require an evaluation of the reasonableness of Knight's controls only required a review of certain types of controls and did not require an evaluation of controls to reject orders that exceed pre-set capital thresholds in the aggregate for the firm or that indicate duplicative orders.

Post-Compliance Date Reviews

32. Knight conducted periodic reviews pursuant to the WSPs. As explained above, the WSPs assigned various tasks to be performed by SCG staff in consultation with the pertinent

business and technology units, with a senior member of the pertinent business unit reviewing and approving that work. These reviews did not consider whether Knight needed controls to limit the risk that SMARS could malfunction, nor did these reviews consider whether Knight needed controls concerning code deployment or unused code residing on servers. Before undertaking any evaluation of Knight's controls, SCG, along with business and technology staff, had to spend significant time and effort identifying the missing content and correcting the inaccuracies in the written description.

33. Several previous events presented an opportunity for Knight to review the adequacy of its controls in their entirety. For example, in October 2011, Knight used test data to perform a weekend disaster recovery test. After the test concluded, Knight's LMM desk mistakenly continued to use the test data to generate automated quotes when trading began that Monday morning. Knight experienced a nearly \$7.5 million loss as a result of this event. Knight responded to the event by limiting the operation of the system to market hours, changing the control so that this system would stop providing quotes after receiving an execution, and adding an item to a disaster recovery checklist that required a check of the test data. Knight did not broadly consider whether it had sufficient controls to prevent the entry of erroneous orders, regardless of the specific system that sent the orders or the particular reason for that system's error. Knight also did not have a mechanism to test whether their systems were relying on stale data.

E. CEO Certification

34. In March 2012, Knight's CEO signed a certification concerning Rule 15c3-5. The certification did not state that Knight's controls and procedures complied with the rule. Instead, the certification stated that Knight had in place "processes" to comply with the rule. This drafting error was not intentional, the CEO did not notice the error, and the CEO believed at the time that he was certifying that Knight's controls and procedures complied with the rule.⁸

F. Collateral Consequences

35. There were collateral consequences as a result of the August 1 event, including significant net capital problems. In addition, many of the millions of orders that SMARS sent on August 1 were short sale orders. Knight did not mark these orders as short sales, as required by Rule 200(g) of Regulation SHO.⁹ Similarly, Rule 203(b) of Regulation SHO prohibits a broker or dealer from accepting a short sale order in an equity security from another person, or effecting a short sale in an equity security for its own account, unless it has borrowed the security, entered into a bona-fide arrangement to borrow the security, or has reasonable grounds to believe that the security can be borrowed so that it can be delivered on the date delivery is due (known as the "locate" requirement), and has documented compliance with this requirement.¹⁰ Knight did not

⁸ Before signing the certification, the CEO received a report concerning reviews that Knight personnel had performed pursuant to the WSPs. The report contained sub-certifications from eight senior Knight employees. Although the report contained a similar drafting error as the certification, all of the employees who signed the report to the CEO believed that Knight was in compliance with Rule 15c3-5.

⁹ 17 C.F.R. § 242.200(g).

¹⁰ 17 C.F.R. § 242.203(b).

obtain a “locate” in connection with Knight’s unintended orders and did not document compliance with the requirement with respect to Knight’s unintended orders.

VIOLATIONS

A. Market Access Rule: Section 15(c)(3) of the Exchange Act and Rule 15c3-5

36. Section 15(c)(3) of the Exchange Act, among other things, prohibits a broker or dealer from effecting any securities transaction in contravention of the rules and regulations the Commission prescribes as necessary or appropriate in the public interest, or for the protection of investors, to provide safeguards with respect to the financial responsibility and related practices of brokers or dealers. Knight violated this Section through its violations, described below, of a rule promulgated by the Commission thereunder.

37. Subsection (c)(1)(i) of Rule 15c3-5 requires that a broker or dealer’s risk management controls and supervisory procedures shall be reasonably designed to prevent systematically the entry of orders that exceed appropriate pre-set credit or capital thresholds in the aggregate for each customer and the broker or dealer. Knight violated this requirement by failing to link pre-set capital thresholds to Knight’s entry of orders so that Knight would stop sending orders when it breached such thresholds. Instead, Knight relied on tools, including PMON, that were not capable of preventing the entry of orders whose execution would exceed a capital threshold and did not link the 33 Account to pre-set capital thresholds. These inadequacies contributed to Knight’s failure to detect promptly the severity of, and to resolve quickly, the problems on August 1 or to mitigate the effects prior to the resolution of the software issue.

38. Subsection (c)(1)(ii) of Rule 15c3-5 requires that a broker or dealer’s risk management controls and supervisory procedures be reasonably designed to prevent systematically the entry of erroneous orders that exceed appropriate price or size parameters on an order-by-order basis or over a short period of time, or that indicate duplicative orders. Knight violated this requirement by failing to have controls reasonably designed to prevent the entry of erroneous orders at a point immediately prior to the submission of orders to the market by SMARS, which had the core function of dividing parent orders into child orders and sending them to the market. The controls that Knight had in place were not reasonably designed to limit Knight’s financial exposure arising from errors within SMARS, such as problems in the operation of the software that sent child orders to fill parent orders. As evidenced by the events of August 1, the absence of adequate controls at the point immediately prior to Knight’s submission of orders to the market left Knight vulnerable to the financial and regulatory risks of Knight’s erroneous entry of orders and had substantial consequences to both Knight and the market.

39. Subsection (b) of Rule 15c3-5 requires, among other things, that a broker or dealer preserve a copy of its supervisory procedures and a written description of its risk management controls as part of its books and records in a manner consistent with Rule 17a-4(e)(7). As highlighted in the Adopting Release, this document serves the purpose of assisting Commission and Self-Regulatory Organization staff during an examination of the broker or dealer for compliance with the rule.¹¹ It also assists the broker or dealer in conducting the reviews and

¹¹ 75 Fed. Reg. at 69812.

performing the certification required by the rule. Knight violated this requirement by failing to have an adequate written description of its risk management controls. Knight did attempt to create a narrative of its risk management controls after the compliance date of Rule 15c3-5, but this document remained incomplete and, in some instances, inaccurate through the summer of 2012. The insufficiencies in this document adversely affected the quality of the reviews Knight conducted of its risk controls after the compliance date of Rule 15c3-5. As described above, Knight's staff had to spend considerable time and effort identifying the missing content and correcting the inaccuracies in this document before they could evaluate Knight's controls.

40. Knight also violated the overarching requirement of subsection (b) of Rule 15c3-5 that brokers or dealers "shall establish, document, and maintain a system of risk management controls and supervisory procedures reasonably designed to manage the financial, regulatory, and other risks of" its market access. As explained above, Knight lacked adequate controls for its order router and failed to have an automated control to prevent the entry of orders that exceeded firm-wide pre-set capital thresholds. Knight also lacked reasonably designed controls and supervisory procedures to detect and prevent software malfunctions that can result from code development and deployment.

41. For example, a written procedure requiring a simple double-check of the deployment of the RLP code could have identified that a server had been missed and averted the events of August 1. Having a procedure that integrated the BNET Reject messages into Knight's monitoring of its systems likewise could have prevented the events of August 1. Further, in 2003, Knight elected to leave the Power Peg code on SMARS's production servers, and, in 2005, accessed this code to use the cumulative quantity functionality in another application without taking measures to safeguard against malfunctions or inadvertent activation. A written protocol requiring the retesting of the Power Peg code in 2005 could have identified that Knight had inadvertently disabled the cumulative quantity functionality in the Power Peg code. These shortcomings were made more consequential by the fact that Knight did not have controls in SMARS that were sufficient to address the risk posed by possible problems in the operation of the software as it sent child orders to fill a parent order.

42. Further, Knight did not have adequate controls and supervisory procedures to guide employees' response to incidents such as what occurred on August 1. In light of Knight's market access, Knight needed clear guidance for its technology personnel as to when to disconnect a malfunctioning system from the market.

43. Subsection (e) of Rule 15c3-5 requires that a broker or dealer establish, document, and maintain a system for regularly reviewing the effectiveness of the risk management controls and supervisory procedures required by Rule 15c3-5(b) and (c). Subsection (e)(1) of Rule 15c3-5 requires, among other things, that a broker or dealer review, no less frequently than annually, the business activity of the broker or dealer in connection with market access to assure the overall effectiveness of such risk management controls and supervisory procedures. Reasonably designed WSPs are an important component of the system required by the rule, because they help ensure that the broker or dealer fulfills its obligations to conduct a review of the overall effectiveness of its risk management controls and supervisory procedures.

44. Knight violated subsection (e) of Rule 15c3-5 because its system for regularly reviewing the effectiveness of its risk management controls was inadequate. For example, Knight's WSPs were incomplete as written and did not provide clear guidance as to what they required. Further, Knight's initial assessment of its market access controls did not sufficiently consider whether the controls were reasonably designed to manage Knight's market access risks or whether Knight needed additional controls. This review, and the post-compliance date reviews, failed to consider adequately the risks posed by possible malfunctions in SMARS, one of Knight's primary systems for accessing the markets, and failed to consider Knight's inability to prevent the entry of orders whose execution would exceed pre-set capital thresholds. These reviews also failed to assess adequately the consequences of Knight's reliance on PMON as a primary risk monitoring tool, such as the risks posed by the lack of automated alerts and PMON's inability to prevent the entry of orders that would exceed a capital threshold or position limit. Further, Knight's reviews did not adequately consider the root causes of previous incidents involving the entry of erroneous orders and the reasons why Knight's controls failed to limit the harm from those incidents. Knight reacted to the events narrowly, limiting its responses to changes designed to prevent the exact problem at hand from recurring.

45. Subsection (e)(2) of Rule 15c3-5 requires that a broker or dealer's CEO (or equivalent officer) certify on an annual basis that the firm's risk management controls and supervisory procedures comply with paragraphs (b) and (c) of Rule 15c3-5. The certification signed by Knight's CEO did not state that Knight's controls and supervisory procedures complied with those provisions of the rule. Rather, it stated that Knight had in place "processes" to comply with the rule. Certifying to the existence of processes is not equivalent to certifying that controls and procedures are reasonably designed and comply with the rule. Accordingly, Knight violated subsection (e)(2) of Rule 15c3-5.

B. Regulation SHO: Rules 200(g) and 203(b)

46. Rule 200(g) of Regulation SHO requires each broker or dealer to mark all sell orders of any equity security as "long," "short" or "short exempt."

47. Rule 203(b) of Regulation SHO states that a broker or dealer "may not accept a short sale order in an equity security from another person, or effect a short sale in an equity security for its own account, unless the broker or dealer has: (i) [b]orrowed the security, or entered into a bona-fide arrangement to borrow the security; or (ii) [r]easonable grounds to believe that the security can be borrowed so that it can be delivered on the date delivery is due; and (iii) [d]ocumented compliance with" these requirements.

48. Knight violated Rules 200(g) and 203(b) of Regulation SHO on August 1, 2012, by mismarking short sale orders as "long" and by failing to borrow, enter into a bona-fide arrangement to borrow, or have reasonable grounds to believe that the securities could be borrowed, so that they could be delivered on the date delivery was due, and failing to document compliance with this requirement, before effecting short sales.

49. Based on the foregoing, the Commission finds that Knight willfully¹² violated Section 15(c)(3) of the Exchange Act and Rule 15c3-5 thereunder, and Rules 200(g) and 203(b) of Regulation SHO.

REMEDIAL EFFORTS

50. In determining to accept the Offer, the Commission considered remedial acts that Knight undertook and the cooperation that Knight afforded to the Commission staff following the August 1 event.

UNDERTAKINGS

51. Respondent has undertaken to do the following:

- A. Retain at its own expense one or more qualified independent consultants (the “Consultant”) not unacceptable to the Commission staff to conduct a comprehensive review of Respondent’s compliance with Exchange Act Rule 15c3-5, including but not limited to:
- i. Respondent’s software development lifecycle processes for all of Knight’s business critical systems and applications, including trading systems, finance, risk, and compliance; and
 - ii. Respondent’s risk management controls and supervisory procedures, including those pertaining to Respondent’s: (a) deployment of new software and code; (b) order routers; (c) firm-wide capital thresholds and the linkage, on an automated, pre-trade basis, of such thresholds to the entry of orders; and (d) incident response protocols.

Such Consultant shall prepare a written report (the “Report”) that:

- iii. evaluates the adequacy of Respondent’s software development lifecycle processes and its risk management controls and supervisory procedures to manage Respondent’s financial, regulatory, and other risks of market access; and
- iv. as may be needed, makes recommendations about how Respondent should modify or supplement its processes, controls, and procedures to manage its financial, regulatory, and other risks of market access.

Respondent shall provide a copy of the engagement letter within fourteen (14) days of the date of this Order detailing the Consultant’s responsibilities

¹² A willful violation of the securities laws means merely “that the person charged with the duty knows what he is doing.” Wonsover v. SEC, 205 F.3d 408, 414 (D.C. Cir. 2000) (quoting Hughes v. SEC, 174 F.2d 969, 977 (D.C. Cir. 1949)). There is no requirement that the actor “also be aware that he is violating one of the Rules or Acts.” Id. (quoting Gearhart & Otis, Inc. v. SEC, 348 F.2d 798, 803 (D.C. Cir. 1965)).

to Commission staff.

- B. Cooperate fully with the Consultant, including providing the Consultant with access to Respondent's files, books, records, and personnel (and Respondent's affiliated entities' files, books, records, and personnel, in each case to the extent they relate to Respondent), as reasonably requested for the above-mentioned reviews, and obtaining the cooperation of respective employees or other persons under Respondent's control. Respondent shall require the Consultant to report to Commission staff on its activities as the staff may request.
- C. Permit the Consultant to engage such assistance, clerical, legal, or expert, as necessary and at a reasonable cost, to carry out its activities, and the cost, if any, of such assistance shall be borne exclusively by Respondent.
- D. Require the Consultant within thirty (30) days of being retained, unless otherwise extended by Commission staff for good cause, to provide Respondent and Commission staff with an estimate of the time needed to complete the review and prepare the Report and provide a proposed deadline for the Report, subject to the approval of Commission staff.
- E. Require the Consultant to issue the Report by the approved deadline and provide the Report simultaneously to both Commission staff and Respondent.
- F. Submit to Commission staff and the Consultant, within thirty (30) days of the Consultant's issuance of the Report, the date by which Respondent will adopt and implement any recommendations in the Report, subject to Sections F(1)-(3) below and subject to the approval of Commission staff.
 - (1) As to any recommendation that Respondent considers to be, in whole or in part, unduly burdensome or impractical, Respondent may submit in writing to the Consultant and Commission staff a proposed alternative reasonably designed to accomplish the same objectives, within sixty (60) days of receiving the Report. Respondent shall then attempt in good faith to reach an agreement with the Consultant relating to each disputed recommendation and request that the Consultant reasonably evaluate any alternative proposed by Respondent. If, upon evaluating Respondent's proposal, the Consultant determines that the suggested alternative is reasonably designed to accomplish the same objectives as the recommendations in question, then the Consultant shall approve the suggested alternative and make the recommendations. If the Consultant determines that the suggested alternative is not reasonably designed to accomplish the same objectives, the Consultant shall reject Respondent's proposal. The Consultant shall inform Respondent of the Consultant's final determination

concerning any recommendation that Respondent considers to be unduly burdensome or impractical within fourteen (14) days after the conclusion of the discussion and evaluation by Respondent and the Consultant.

- (2) In the event that Respondent and the Consultant are unable to agree on an alternative proposal, Respondent shall accept the Consultant's recommendations.
 - (3) Within thirty (30) days after final agreement is reached on any disputed recommendation, Respondent shall submit to the Consultant and Commission staff the date by which Respondent will adopt and implement the agreed-upon recommendation, subject to the approval of Commission staff.
- G. Adopt and implement, on the timetable set forth by Respondent in accordance with Item F, the recommendations in the Report. Respondent shall notify the Consultant and Commission staff when the recommendations have been implemented.
- H. Require the Consultant to certify, in writing, to Respondent and Commission staff, that Respondent has implemented the agreed-upon recommendations for which the Consultant was responsible and that Knight's risk management controls and supervisory procedures are reasonably designed to manage the financial, regulatory, and other risks of market access. The Consultant's certification shall be received within sixty (60) days after Respondent has notified the Consultant that the recommendations have been implemented.
- I. Within one hundred and eighty (180) days from the date of the applicable certification described in paragraph H above, require the Consultant to have completed a review of Knight's revised product development processes and risk management controls and supervisory procedures and submit a final written report ("Final Report") to Respondent and Commission staff. The Final Report shall describe the review made of Knight's revised processes, controls, and procedures, and describe how Knight is implementing, enforcing, and auditing the enforcement and implementation of those processes, controls, and procedures. The Final Report shall include an opinion of the Consultant as to whether the revised processes, controls, and procedures and their implementation and enforcement by Respondent and Respondent's auditing of the implementation and enforcement of those processes, controls, and procedures are reasonably designed to manage the financial, regulatory, and other risks of market access.
- J. To ensure the independence of the Consultant, Respondent shall not have the authority to terminate the Consultant without prior written approval of Commission staff and shall compensate the Consultant and persons

engaged to assist the Consultant for services rendered pursuant to this Order at their reasonable and customary rates.

- K. Require the Consultant to enter into an agreement that provides for the period of engagement and for a period of two years from the completion of the engagement, that the Consultant shall not enter into any employment, consultant, attorney-client, auditing, or other professional relationship with Respondent, or any of its present or former affiliates, directors, officers, employees, or agents acting in their capacity. The agreement will also provide that the Consultant will require that any firm with which he/she/it is affiliated or of which he/she/it is a member, and any person engaged to assist the Consultant in performance of his/her/its duties under this Order shall not, without prior written consent of Commission staff, enter into any employment, consultant, attorney-client, auditing or other professional relationship with Respondent, or any of its present or former affiliates, directors, officers, employees, or agents acting in their capacity as such for the period of the engagement and for a period of two years after the engagement.
- L. Respondent may apply to Commission staff for an extension of the deadlines described above before their expiration and, upon a showing of good cause by Respondent, Commission staff may, in its sole discretion, grant such extensions for whatever time period it deems appropriate.
- M. Certification of Compliance by Respondent: Respondent shall certify, in writing, compliance with the undertakings set forth above. The certification shall identify the undertakings, provide written evidence of compliance in the form of a narrative, and be supported by exhibits sufficient to demonstrate compliance. The Commission staff may make reasonable requests for further evidence of compliance, and Respondent agrees to provide such evidence. The certification and supporting material shall be submitted to Robert A. Cohen, Assistant Director, Market Abuse Unit, Division of Enforcement, with a copy to the Office of Chief Counsel of the Enforcement Division, no later than sixty (60) days from the date of the completion of the undertakings.

IV.

In view of the foregoing, the Commission deems it necessary and appropriate in the public interest, and for the protection of investors, to impose the sanctions agreed to in Respondent's Offer.

Accordingly, pursuant to Sections 15(b) and 21C of the Exchange Act, it is hereby ORDERED that:

A. Respondent Knight cease and desist from committing or causing any violations and any future violations of Section 15(c)(3) of the Exchange Act and Rule 15c3-5 thereunder, and Rules 200(g) and 203(b) of Regulation SHO.

B. Respondent Knight is censured.

C. Pursuant to Section 21B(a)(1) and (2) of the Exchange Act, Respondent Knight shall, within ten (10) days of the entry of this Order, pay a civil money penalty in the amount of \$12,000,000 (\$12 million) to the United States Treasury. If timely payment is not made, additional interest shall accrue pursuant to 31 U.S.C. § 3717. Such payment must be made in one of the following ways: (1) Respondent Knight may transmit payment electronically to the Commission, which will provide detailed ACH transfer/Fedwire instructions upon request; (2) Respondent may make direct payment from a bank account via Pay.gov through the SEC website at <http://www.sec.gov/about/offices/ofm.htm>; or (3) Respondent Knight may pay by certified check, bank cashier's check, or United States postal money order made payable to the Securities and Exchange Commission and hand-delivered or mailed to:

Enterprise Services Center
Accounts Receivable Branch
HQ Bldg., Room 181, AMZ-341
6500 South MacArthur Boulevard
Oklahoma City, OK 73169

Payments by check or money order must be accompanied by a cover letter identifying Knight as a Respondent in these proceedings and the file number of these proceedings; a copy of the cover letter and check or money order must be sent to Daniel M. Hawke, Chief, Market Abuse Unit, Division of Enforcement, Securities and Exchange Commission, The Mellon Independence Center, 701 Market Street, Philadelphia, PA 19106-1532.

D. Respondent Knight shall comply with the Undertakings enumerated above.

By the Commission.

Elizabeth M. Murphy
Secretary