**NEW YORK STOCK EXCHANGE LLC**
**LETTER OF ACCEPTANCE, WAIVER, AND CONSENT**
**NO. 2016-01-06-00002**

TO: New York Stock Exchange LLC

RE: Lime Brokerage, LLC, Respondent
CRD No. 104369

**During the period from November 2013 and May 2018 (the "Relevant Period"), Lime Brokerage, LLC violated: (1) SEC Rule 15c3-5(b), (c)(1)(i), and (c)(1)(ii), and NYSE Rule 342 (for conduct prior to November 6, 2014) and NYSE Rule 3110 (for conduct on or after November 6, 2014). Consent to a censure, a $625,000 fine (split between NYSE, NYSE American, LLC, and NYSE Arca, Inc.), and an undertaking.**

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Pursuant to Rule 9216 of the New York Stock Exchange LLC (the "NYSE" or the "Exchange") Code of Procedure, Lime Brokerage, LLC ("Lime" or the "Firm") submits this Letter of Acceptance, Waiver, and Consent ("AWC") for the purpose of proposing a settlement of the alleged rule violations described below. This AWC is submitted on the condition that, if accepted, the NYSE will not bring any future actions against the Firm alleging violations based on the same factual findings described herein.

## I. ACCEPTANCE AND CONSENT

A. Lime hereby accepts and consents, without admitting or denying the findings, and solely for the purposes of this proceeding and any other proceeding brought by or on behalf of the NYSE, or to which the NYSE is a party, prior to a hearing and without an adjudication of any issue of law or fact, to the entry of the following findings by the NYSE:

### BACKGROUND AND JURISDICTION

1. At all relevant times Lime was an agency-only broker-dealer that provided technology and direct market access to the Firm's customers. Lime has been a registered member of NYSE since March 8, 2006. The Firm has also been a registered member with NYSE Arca, Inc. ("NYSE Arca") since March 22, 2002, NYSE American, LLC ("NYSE American") since December 1, 2008, NYSE National, Inc. since May 18, 2018, and FINRA since February 21, 2001. All registrations remain in effect.

### VIOLATIONS

2. Between November 2013 and May 2018 (the "Relevant Period"), Lime failed to establish, document, and maintain a system of risk management controls and supervisory procedures, including written supervisory procedures ("WSPs") and an

adequate system of follow-up and review of customer activity, reasonably designed to manage the financial, regulatory, and other risks of its market access business in violation of Rule 15c3-5 under the Securities Exchange Act of 1934 ("Rule 15c3-5")[1] and the supervisory rules of NYSE.

3. Lime failed to reasonably supervise its business and customers in several respects, including failing to:

    a. Establish reasonably designed pre-set credit limits, resulting in, *inter alia*, the Firm extending billions of dollars of unapproved credit exposure to clients and, thereafter, failing to correct the issue after it was identified, creating billions of dollars of unwarranted financial exposure to clients, other market participants, the Firm, and the markets at large.

    b. Establish a reasonably designed supervisory system for implementing appropriate pre-trade controls leading to, *inter alia*, the *ad hoc* application of controls by personnel not authorized to make compliance or risk determinations, which resulted in arbitrary, unapproved trading parameters, and a number of clients being excepted from certain controls altogether.

    c. Adequately monitor customer trading activity for potentially manipulative activity by, *inter alia*, failing to reasonably review and follow-up on tens of thousands of exception alerts and failing to take corrective steps despite clients engaging in recidivist problematic conduct, and providing incomplete or inadequate information to the Firm, for years.

4. Indeed, although Lime management was made aware of many of these issues – including senior personnel in compliance, as well as business, sales, and technology groups – Lime failed to address several of these issues.[2]

5. By failing to establish adequate controls and procedures concerning pre-set credit thresholds and pre-trade erroneous order controls, and failing to properly monitor and supervise the activities of its customers, the Firm violated Rules 15c3-5(b), (c)(1)(i), and (c)(1)(ii), and NYSE Rule 342 (for conduct prior to November 6, 2014) and NYSE Rule 3110 (for conduct on or after November 6, 2014).

6. The Firm has consented to a censure, a combined fine of $625,000 (split between NYSE, NYSE American, and NYSE Arca), and an undertaking to remediate the issues described herein, including with respect to the establishment and implementation of credit limits and pre-trade controls and related supervisory

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[1] The SEC adopted Rule 15c3-5 effective January 14, 2011. *See* 17 C.F.R. § 240.15c3-5, *Risk Management Controls for Brokers or Dealers with Market Access*, 75 Fed, Reg. 69792 (Nov. 15, 2010) (Final Rule Release).

[2] In May 2018 Lime acquired certain assets of another broker-dealer; in connection with that acquisition, members of that broker-dealer's management group were installed as Lime's new Chief Executive Officer, co-Presidents, and Chief Compliance Officer, among other personnel changes. The Relevant Period described herein predates the implementation of Lime's new management.

deficiencies, as well as with respect to establishing a reasonable system of customer supervision and follow-up.

## Applicable Rules

7. During the Relevant Period, Rule 15c3-5(b) required broker-dealers that provide 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 their market access business.

8. During the Relevant Period, Rule 15c3-5(c)(1)(i) required market access broker-dealers to have financial risk management controls and supervisory procedures reasonably designed to prevent the entry of orders that exceed appropriate pre-set credit or capital thresholds in the aggregate for each client and the broker-dealer.

9. During the Relevant Period, Rule 15c3-5(c)(l)(ii) required market access broker-dealers to have financial risk management controls and supervisory procedures reasonably designed to prevent the entry of erroneous orders, by rejecting 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.

10. During the Relevant Period, Rule 15c3-5(c)(2) required market access broker-dealers to have regulatory risk management controls and supervisory procedures reasonably designed to ensure compliance with all regulatory requirements.

11. Rule 15c3-5 required, among other things, that a broker-dealer with market access document its system of risk management controls and supervisory procedures that are designed to manage the financial, regulatory, and other risks of market access. The broker-dealer must preserve a copy of its supervisory procedures and "a written description of its risk management controls" as part of its books and records for the time period required by SEC Rule I 7a-4(e)(7). The required written description is intended, among other things, to assist Commission and SRO staff to assess the broker-dealer's compliance with the rule.[3]

12. At all relevant times, NYSE Rule 342 (for conduct prior to November 6, 2014) and NYSE Rule 3110 (for conduct on or after November 6, 2014) required, among other things, that every member establish, maintain, and enforce written procedures to supervise the business in which it engages and to supervise the activities of its associated persons that are reasonably designed to achieve compliance with applicable federal securities laws and regulations, and with the NYSE Rules.

[3] 75 Fed. Reg. at 69812.

## Violative Conduct

A. **Failure to Prevent the Entry of Orders Exceeding Reasonably Designed Pre-Set Credit Thresholds**

13. During the course of the investigation, Staff identified several deficiencies with respect to the Firm's application of client credit limits during the Relevant Period. These included failing to: (a) decrement credit limits across trading servers; (b) implement appropriate credit limits after identifying the decrementing error; and (c) establish and maintain reasonable written supervisory procedures and processes for implementing credit limits.

1. Failure to decrement credit limits across trading servers

14. Lime applied certain of its risk management controls, including credit limits, through trading clusters, which were pairings of trading servers, through which clients were configured to trade. Lime had multiple clusters available to clients and a number of clients were configured to trade through multiple clusters.

15. Until mid-2014, the Firm's trading clusters applied credit limits independently and did not account for the fact that many clients traded through multiple clusters. Instead, Lime allocated the full amount of approved credit for each client on each cluster on which it was configured. As a result, Lime provided clients trading on multiple clusters substantially more credit risk exposure than had been intended and approved.

16. For example, Client A was approved to have an approximately $500 million credit limit. However, because Client A was configured to trade on four clusters, Client A was inadvertently allowed an approximately $2 billion credit limit. Another client, Client B, was inadvertently allowed a $500 million credit limit despite being approved at an approximately $125 million limit.

17. Lime identified this configuration gap in or around January 2014. Lime staff raised this issue to senior people in compliance and business with one individual describing the error as an "urgent problem." A second senior employee stated that continuing to permit these credit limits was "very risky." However, the Firm did not begin to rollout updated configurations that enabled the trading clusters to calculate credit limits collectively until approximately six months later.

18. As a result of the failure to reasonably supervise the implementation of its pre-set credit thresholds and monitor the thresholds thereafter, Lime enabled its clients to take on billions of dollars of unsupported risk for which they were not vetted, posing risks to the clients, Lime, and other market participants.

2. Failure to correct credit limits after discovering configuration error

19. Even after identifying the decrementing issue, the Firm failed to implement reduced credit limits on certain clients despite concerns of Firm staff, including in the compliance department, after clients resisted the changes.

20. Firm management, including compliance, agreed that Lime needed to reduce exposure limits to approved numbers and that it should happen "promptly."

21. However, notwithstanding the concerns raised by Lime personnel, Lime failed to implement these changes for a number of clients. For example, Lime never reduced Client A's credit limits to the approved threshold during the Relevant Period.

22. Describing the process of addressing the decrementing issues, one compliance analyst wrote to the then-Chief Compliance Officer that "[t]he dynamics here are all wrong and very troublesome," suggesting that business and other groups were choosing not to involve compliance in these critical issues. The Chief Compliance Officer agreed with the analyst but could not recall changes made in connection with this incident.

3. Failure to establish reasonable written supervisory procedures and processes for implementing credit limits

23. During most of Relevant Period, the Firm's Risk Committee was charged with the primary responsibility for setting credit limits. The Risk Committee was supposed to consider a number of factors in approving credit limits, including how market shifts could affect the client, as well as considerations set forth by the U.S. Securities and Exchange Commission ("SEC"), such as a customer's business, financial condition, and trading patterns, among others.[4] Prior to the Risk Committee, similar reviews were supposed to be done by the Director of Operations or others.

24. However, the Firm failed to substantiate that it followed its own WSPs and guidelines, including with respect to considering factors for setting credit limits set forth both by the Firm and SEC, or that it documented its processes for considering Rule 15c3-5 controls.

25. In part as a result of these procedural failures, Lime enabled clients' to trade with approved credit limits that sometimes equaled 70 times the client's cash equity. Lime approved Client A, for example, for a $500 million credit limit (which rose to approximately $2 billion due to the decrementing error) despite that client having only approximately $8 million in cash equity.

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[4] *See* Response 8, Responses to Frequently Asked Questions Concerning Risk Management Controls for Brokers or Dealers with Market Access, U.S. Securities and Exchange Commission (Apr. 15, 2014), *available at* https://www.sec.gov/divisions/marketreg/faq-15c-5-risk-management-controls-bd.htm.

26. The aforementioned conduct described in Section A constituted violations of Rule 15c3-5(c)(l)(i), and NYSE Rule 342 (for conduct prior to November 6, 2014) and NYSE Rule 3110 (for conduct on or after November 6, 2014).

## B. Failure to Establish, Maintain, and Enforce Controls Reasonably Designed to Prevent the Entry of Erroneous Orders

27. During the course of the investigation, Staff identified several deficiencies with respect to the Firm's implementation of pre-trade controls to prevent erroneous orders. Specifically, the deficiencies concerned the Firms: (a) rate limit controls; (b) duplicative order controls; and (c) boundary price checks.

### 1. Rate Limit Controls

28. Lime's rate limits and burst rates controlled how many new or cancel-and-replace orders an account could submit to the market per second, and were applied on an account by account basis. Such limits were important because transmission of abnormally high rates of messages can be an indicator of potential errors, system malfunctions, or improper conduct, and can result in market harm such as the creation of conditions that do not fairly reflect prices of securities or system issues by creating latencies in transmitting orders.

29. As with the Firm's credit limits, the Risk Committee or other designated personnel were charged with approving rate limits based on consideration of "many data points." However, the evidence did not substantiate the process for setting the rate limits, the factors to be considered, or the basis for the default rates set by the Firm.

30. Moreover, the effectiveness of the Firm's rate limits was hindered because Lime did not include cancelled orders as messages in the rate count. That omission permitted certain clients to send large numbers of cancellation orders through Lime's infrastructure (and to the market) over short periods of time. In multiple instances the transmissions of such high rates of orders by specific clients caused outages, latencies, and other issues in Lime's trading infrastructure that impacted order flow by other Lime clients.

31. Lime had the capacity to modify this control to address such issues; indeed, Lime knew that one way to avoid a client shutting "down any route at any time by sending a cancel flood" was to implement a rate limit for or including cancel messages, but Lime failed to take corrective action, exposing its clients to the risks of the latencies and outages described above.

### 2. Pre-Trade Duplicative Order Controls

32. Beginning in or around the end of 2013, the Firm began utilizing a post-trade Duplicative Order Report to identify potentially duplicative orders for review. However, such a report did not adequately comply with Rule 15c3-5(c)(1)(ii), which required the prevention of orders appearing to be duplicative.

33. The Firm did not have any in-line pre-trade duplicative order controls to prevent such orders.

34. The Firm had the capability to implement an in-line pre-trade block on potentially duplicative orders, but did not do so. The Firm knew that as a result of this approach, it was permitting potentially duplicative orders to enter the market.

3. Pre-Trade Boundary Price Checks

35. During the Relevant Period, the Firm implemented boundary (or price) checks to prevent clients from entering orders that were outside a particular range from a security's reference price. This control was a primary safeguard against potentially erroneously priced orders.

36. The Firm's boundary price checks were not reasonably designed for a number of reasons, including, but not limited to the following.

a. With regard to the Firm's boundary price checks during core trading hours during the period between 2012 and in or around the middle of 2014, Lime set its controls only to notify it of the entry of an order outside the set bands, not to actually reject or block any orders.

b. The Firm had no boundary price checks (or notifications) for non-core trading hours, at all, until around December 2014.

c. The Firm's boundary price checks were not configured in accordance with the Firm's own procedures; rather, the checks were implemented at parameters more lenient than had been approved by management and, in some instances, were not configured for certain clients at all. These configuration decisions were made by personnel without consultation of compliance or the Risk Committee (or other oversight groups).

37. The aforementioned conduct described in Section B constituted violations of Rule 15c3-5(c)(l)(ii), and NYSE Rule 342 (for conduct prior to November 6, 2014) and NYSE Rule 3110 (for conduct on or after November 6, 2014).

C. **Failure to Monitor for Potential Manipulative Activity**

38. Lime was responsible for establishing, implementing, and maintaining adequate risk management controls and supervisory procedures, including WSPs, and a system of follow-up and review reasonably designed to: (a) investigate red flags and monitor the trading activity of its customers; (b) detect and prevent suspicious and potentially manipulative trades; and (c) ensure that all trades entered under the Firm's market participant identifiers complied with applicable federal securities laws and regulations and the rules of NYSE. *See, e.g.,* NYSE Rule 3110.

39. Lime failed to have reasonable controls and procedures to adequately provide for the monitoring, reviewing, and follow-up concerning potentially improper trading activity by the Firm's clients, including with respect to indicia of potential erroneous or manipulative activity, including abnormally high rates of messaging, manipulation of markets leading up to and in the close, and pre-arranged trading, such as wash trades.

40. Indeed the Firm acknowledged that its WSPs lacked detailed descriptions of the various supervisory systems it purportedly undertook in monitoring client activity. This was, in part, because in lieu of written procedures, the Firm relied on the discretion of its employees.

41. This *ad hoc* approach resulted in repeated failures to adequately review and follow-up on potentially manipulative trading conduct by clients.

42. For example, between October 2014 and December 2017, one client triggered Lime's surveillances over 50,000 times. More than 400 of those alerts concerned marking the close or open, while more than 13,000 concerned possible spoofing or layering. Nonetheless, the Firm appeared to have reached out to the client in only a small number of instances regarding this potentially violative trading. And, even in those rare instances, the Firm accepted at face value general responses and descriptions by the client and with little to no internal consideration of the issues.

43. Even when Lime staff did identify a potential issue with a client's activity for follow-up, it regularly failed to take any corrective actions, instead submitting to client pressure not make changes or relying on the client itself to implement controls that Lime had the capability to do itself.

44. For example, Lime had reached out to one client at least as early as 2012 about taking corrective action to address malfunctions by the client's algorithm. The client repeatedly insisted that it would correct the issue and that Lime not implement more restrictive limits on its trading. Lime conceded to the client's requests. In at least 10 instances over the next four years, Lime reached out to the same client concerning similar trading issues. The client repeatedly insisted it had or would take corrective action. Lime repeatedly took the client's response at face value and took no further action.

45. As recently as May 2016, Lime staff asked the client "[g]iven the recidivism – specifically the fact that [compliance staff] have contacted you about this [conduct and controls] previously – is there a way that you are able to ensure that all new code changes" would address the relevant issues.

46. During the same period, compliance staff expressed concern about the client's activity and, in particular about "just how many strategies a small number of people can operate and maintain control over – that's our bigger concern," and that the client's algorithm was possibly operating "without human monitoring or interaction."

Notwithstanding the above, Lime took no further action to address its concerns or the client's trading.

47. The aforementioned supervisory failures described in this section constituted violations of NYSE Rule 342 (for conduct prior to November 6, 2014) and NYSE Rule 3110 (for conduct on or after November 6, 2014).

## RELEVANT PRIOR DISCIPLINARY HISTORY

48. On October 13, 2016, Lime settled a matter concerning its failure to establish reasonable risk management system and WSPs to oversee market access clients and surveil for potentially manipulative trading. Lime paid a $90,000 total fine to multiple exchanges (including NYSE American (formerly known as NYSE MKT)) to settle the matter. (FINRA Matter No. 20130362578).

49. On January 1, 2015, Lime settled a matter with three non-NYSE exchanges concerning inadequate supervision of market access clients specific to marking the close activity. Further, the WSPs did not identify the person responsible for monitoring compliance with appropriate rules, or follow-up steps to be taken concerning such activity. Lime paid a $130,000 total fine to resolve the matter.

## SANCTIONS

1. Based on the aforementioned conduct, during the Relevant Period, Lime violated:

    a. Rule 15c3-5(c)(l)(i), and NYSE Rule 342 (for conduct prior to November 6, 2014) and NYSE Rule 3110 (for conduct on or after November 6, 2014), by failing to have adequate risk management controls and supervisory procedures reasonably designed to systematically limit its financial exposure and prevent the entry of orders that exceeded appropriate, pre-set credit thresholds;

    b. Rule 15c3-5(c)(1)(ii), and NYSE Rule 342 (for conduct prior to November 6, 2014) and NYSE Rule 3110 (for conduct on or after November 6, 2014), by failing to have adequate risk management controls and supervisory procedures reasonably designed to prevent the entry of erroneous orders by rejecting orders that exceed appropriate price or size parameters, or that indicate duplicative orders;

    c. NYSE Rule 342 (for conduct prior to November 6, 2014) and NYSE Rule 3110 (for conduct on or after November 6, 2014), by failing to monitor client trading to ensure compliance with all regulatory requirements, including to detect and prevent potentially violative manipulative and wash trading; and

    d. Rule 15c3-5(b), and NYSE Rule 342 (for conduct prior to November 6, 2014) and NYSE Rule 3110 (for conduct on or after November 6, 2014), by failing to establish, maintain, and preserve an adequate written description of its risk management controls and supervisory procedures in violation of.

## Sanctions

2. Respondent consents to the following sanctions:

   a. a censure;

   b. a total fine in the amount of $625,000, $210,000 of which is payable to NYSE; and

   c. an undertaking to, within 90 days, remediate the issues described herein including with respect to the establishment and implementation of credit limits and pre-trade controls and related supervisory deficiencies, as well as with respect to establishing a reasonable system of customer supervision and follow-up.

The Firm agrees to pay the monetary sanction(s) upon notice that this AWC has been accepted and that such payment(s) are due and payable. The Firm has submitted a Method of Payment Confirmation form showing the method by which it will pay the fine imposed.

The Firm specifically and voluntarily waives any right to claim that it is unable to pay, now or at any time hereafter, the monetary sanction(s) imposed in this matter.

The Firm agrees that it shall not seek or accept, directly or indirectly, reimbursement or indemnification from any source, including but not limited to payment made pursuant to any insurance policy, with regard to any fine amounts that the Firm pays pursuant to this AWC, regardless of the use of the fine amounts. The Firm further agrees that it shall not claim, assert, or apply for a tax deduction or tax credit with regard to any federal, state, or local tax for any fine amounts that the Firm pays pursuant to this AWC, regardless of the use of the fine amounts.[5]

## II. WAIVER OF PROCEDURAL RIGHTS

The Firm specifically and voluntarily waives the following rights granted under the NYSE Code of Procedure:

A. To have a Formal Complaint issued specifying the allegations against the Firm;

B. To be notified of the Formal Complaint and have the opportunity to answer the allegations in writing;

C. To defend against the allegations in a disciplinary hearing before a hearing panel, to have a written record of the hearing made and to have a written decision issued; and

D. To appeal any such decision to the Exchange's Board of Directors and then to the

[5] For purposes of this paragraph, Firm means the Firm or its shareholders.

U.S. Securities and Exchange Commission and a U.S. Court of Appeals.

Further, the Firm specifically and voluntarily waives any right to claim bias or prejudgment of the Chief Regulatory Officer of the NYSE; the Exchange's Board of Directors, Disciplinary Action Committee ("DAC"), and Committee for Review ("CFR"); any Director, DAC member, or CFR member; Counsel to the Exchange Board of Directors or CFR; any other NYSE employee; or any Regulatory Staff as defined in Rule 9120 in connection with such person's or body's participation in discussions regarding the terms and conditions of this AWC, or other consideration of this AWC, including acceptance or rejection of this AWC.

The Firm further specifically and voluntarily waives any right to claim that a person violated the ex parte communication prohibitions of Rule 9143 or the separation of functions prohibitions of Rule 9144, in connection with such person's or body's participation in discussions regarding the terms and conditions of this AWC, or other consideration of this AWC, including its acceptance or rejection.

## III. OTHER MATTERS

The Firm understands that:

A. Submission of this AWC is voluntary and will not resolve this matter unless and until it has been reviewed by NYSE Regulation, and accepted by the Chief Regulatory Officer of the NYSE pursuant to NYSE Rule 9216;

B. If this AWC is not accepted, its submission will not be used as evidence to prove any of the allegations against the Firm; and

C. If accepted:

1. The AWC shall be sent to each Director and each member of the Committee for Review via courier, express delivery or electronic means, and shall be deemed final and shall constitute the complaint, answer, and decision in the matter, 25 days after it is sent to each Director and each member of the Committee for Review, unless review by the Exchange Board of Directors is requested pursuant to NYSE Rule 9310(a)(1)(B);

2. This AWC will become part of the Firm's permanent disciplinary record and may be considered in any future actions brought by the Exchange, or any other regulator against the Firm;

3. The NYSE shall publish a copy of the AWC on its website in accordance with NYSE Rule 8313;

4. The NYSE may make a public announcement concerning this agreement and the subject matter thereof in accordance with NYSE Rule 8313; and

5. The Firm may not take any action or make or permit to be made any public statement, including in regulatory filings or otherwise, denying, directly or

indirectly, any finding in this AWC or create the impression that the AWC is without factual basis. The Firm may not take any position in any proceeding brought by or on behalf of the Exchange, or to which the Exchange is a party, that is inconsistent with any part of this AWC. Nothing in this provision affects the Firm's (i) testimonial obligations; or (ii) right to take legal or factual positions in litigation or other legal proceedings in which the Exchange is not a party.

D. A signed copy of this AWC and the accompanying Method of Payment Confirmation form delivered by email, facsimile or other means of electronic transmission shall be deemed to have the same legal effect as delivery of an original signed copy.

E. The Firm may attach a Corrective Action Statement to this AWC that is a statement of demonstrable corrective steps taken to prevent future misconduct. The Firm understands that it may not deny the charges or make any statement that is inconsistent with the AWC in this Statement. Any such statement does not constitute factual or legal findings by the Exchange, nor does it reflect the views of NYSE Regulation or its staff.

The Firm certifies that, in connection with each of the Exchange's requests for documents in connection with this matter, the Firm made a diligent inquiry of all persons who reasonably had possession of responsive documents, and that those documents have been produced or identified in a privilege log. The Firm acknowledges that, in agreeing to the AWC, the Exchange has relied upon, among other things, the completeness of such document production.

The undersigned, on behalf of the Firm, certifies that a person duly authorized to act on its behalf has read and understands all of the provisions of this AWC and has been given a full opportunity to ask questions about it; that it has agreed to the AWC's provisions voluntarily; and that no offer, threat, inducement, or promise of any kind, other than the terms set forth herein and the prospect of avoiding the issuance of a Complaint, has been made to induce the firm to submit it.

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Date

Lime Brokerage, LLC,
Respondent

By: ______________________
Farid Naib
Chief Executive Officer

Reviewed by:

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Accepted by NYSE Regulation

1/17/19
Date

Aaron Krieger

Aaron H. Krieger, Esq.
Daniel J. Northrop, Esq.
Enforcement counsel
NYSE Regulation

Signed on behalf of New York Stock Exchange LLC, by delegated authority from its Chief Regulatory Officer