ATTORNEY GENERAL OF THE STATE OF NEW YORK
INVESTOR PROTECTION BUREAU

In the Matter of

No. 18-105

Investigation by BARBARA D. UNDERWOOD, Attorney General of the State of New York, of

Credit Suisse Securities (USA) LLC

SETTLEMENT AGREEMENT

The Office of the Attorney General of the State of New York ("OAG") commenced an investigation pursuant to Article 23-A of the General Business Law ("GBL") of New York (the "Martin Act") and Section 63(12) of the Executive Law of New York concerning Credit Suisse Securities (USA) LLC's ("Credit Suisse") Retail Execution Services business (the "Investigation"). This Settlement Agreement ("Agreement") contains the findings of OAG's Investigation and the relief agreed to by OAG and Credit Suisse, whether acting through its directors, officers, employees, representatives, agents, affiliates, or subsidiaries (collectively, the "Parties"). Credit Suisse neither admits nor denies OAG's findings.

OAG's FINDINGS

INTRODUCTION

1. Broker-dealers that execute orders for retail customers often send such orders to other broker-dealers that specialize in handling such order flow. Between mid-2011 and March 2015 (the "Relevant Period"), Credit Suisse operated a wholesale market making desk called Retail Execution Services ("RES") in order to execute this type of order flow. During this period, RES executed both "held" and "not held" equity orders for its retail broker-dealer customers,

including over 15 million held retail-originated equity orders (over 8.5 billion shares) having a total market value of approximately $227 billion. Held orders that are marketable orders (either market orders, or buy (sell) limit orders whose limit price is at or above (below) the current market price) must be executed immediately (i.e., there is no price or time discretion), whereas not held orders do not require immediate execution and provide flexibility with respect to price and time of execution. Beginning in mid-2011 and continuing until March 2015, when RES closed, RES made material misrepresentations and omissions concerning its handling of held retail equity orders, in violation of the Martin Act and Executive Law § 63(12).

2. RES sought to differentiate itself by marketing its access to "vast" dark liquidity in Credit Suisse's own alternative trading system ("ATS") and dark pool, as well as RES's access to dark pools operated by other broker-dealers. Dark pools are markets in which bids and offers are not visible to market participants, unlike displayed exchanges and markets (i.e. "lit markets") where bids and offers are visible. During the Relevant Period, RES represented in its marketing materials that RES offered "enhanced liquidity" by accessing internal and external pools of liquidity, including access to Credit Suisse's own and other dark pools. However, between September 2011 and December 2012, RES executed only a *de minimis* number of held orders (unlike not held orders) in dark pools.

3. RES further represented in its Order Handling Guide that opportunities for "robust" and "enhanced" price improvement was one of the "core" elements of RES's approach to executing orders. Providing a better price than the currently quoted best bid or ask price is commonly referred to as "price improvement." Although RES described the factors relevant to the securities for which it would provide price improvement, it did not disclose that a subset of orders for which execution quality was not included in publicly reported execution quality

reports pursuant to Securities and Exchange Commission Rule 605 ("non-605" orders) typically would not receive any price improvement. The RES computer code automated the decision-making about whether or not a particular order would receive price improvement from RES. To distinguish between Rule 605 eligible orders and non-605 orders, the RES computer code included a function called "CountsForStats." If the order had Rule 605-like characteristics, it was eligible for, and in most cases did in fact, receive price improvement from RES. If the order did not have those characteristics, it typically did not receive price improvement from RES (although RES would have generally passed through to the customer any price improvement that the executing venue provided). RES's marketing documents listed certain factors that the RES trading code used in making price improvement decisions, but an order's Rule 605 status was not included in that list of factors.

4. RES stated in its Order Handling Guide that it would seek to execute customer orders at the "most favorable terms reasonably available." RES also represented in its Order Handling Guide that when RES commits capital, "[t]he benefit to our customer is a fill without market impact. The more liquidity we offer, the less impact a customer's order will have on the NBBO [i.e., the National Best Bid and Offer], potentially avoiding price dis-improvement."

5. Despite these statements, between February 2013 and March 2015, for certain orders, RES used a routing tactic that sent an order only to lit markets (referred to herein as "Routing Tactic A"), without first attempting to fill the order in Credit Suisse's and other dark pools and electronic liquidity providers ("ELPs"). RES applied Routing Tactic A disproportionally often to non-605 orders (identified using the "CountsForStats" function) that were larger than (i.e., "outsized") the number of shares displayed at the then-prevailing market price, and thus had the potential to cause market impact. Outsized non-605 orders that RES

executed using Routing Tactic A generally created a greater market impact and therefore received a less favorable overall execution price than orders executed with other routing tactics that RES used.[1] RES's use of Routing Tactic A provided RES an opportunity to profit from, or "capture," market impact if there was post-trade price reversion, in which stock prices that have been temporarily displaced as a result of market activity may revert toward the original price level. The frequency with which RES used Routing Tactic A for certain outsized orders was not disclosed in RES's marketing materials.

FACTS

A. Respondent

6. Credit Suisse, a registered broker-dealer, is a Delaware limited liability company with headquarters in New York, New York. Credit Suisse is a wholly-owned subsidiary of Credit Suisse Group AG.

7. Between mid-2011 and March 2015, Credit Suisse operated a New York-based wholesale market making business called Retail Execution Services, which executed retail-originated orders in equity securities sent by other broker-dealers. In March 2015, Credit Suisse closed RES, which was generally not profitable.

B. Background

8. RES received customer orders on either a "held" or a "not held" basis. Held orders that are marketable must be immediately executed at the then-prevailing market price (i.e., there is no price or time discretion), whereas not held orders allow for price and time discretion. For both held and not held orders, the executing broker-dealer generally has discretion to select the routing

[1] This document does not reflect or constitute any finding that RES executed any orders outside of the then-prevailing NBBO.

strategy, including the venues to which the orders are routed, but must do so in a manner consistent with its representations. Some RES customers sent to the RES desk both held and not held orders, while other customers sent only held or not held orders.

9. The RES desk executed order flow on either a "principal" basis or a "riskless principal" basis. In a principal execution, also referred to as "internalization," RES took a proprietary position with risk by either buying from or selling to the customer. In a riskless principal execution, RES also bought from or sold to a customer, but RES did not take on any meaningful risk because RES, with a customer order in hand, first obtained the position in the marketplace (e.g., by trading principally on lit markets or in a dark pool), and then provided a corresponding execution to its customer at the same price (or better). RES executed held customer orders in one of three ways: (i) RES traded as principal to fill the entire order; (ii) RES executed the entire order on a riskless principal basis; or (iii) RES executed some of the order on a principal basis and some on a riskless principal basis (referred to herein as "split fills").

10. For the held orders at issue, RES did not charge customers commissions or markups, and instead sought to profit from its principal trading. RES considered two elements of potential profit: (i) spread capture (i.e., capturing the difference between the bid and ask for a security at the time the order was received); and (ii) impact capture (as set forth below). RES also considered the potential risk associated with internalizing all or part of the order.

11. The RES desk executed over 15 million held orders (over 8.5 billion shares) with a total market value of approximately $227 billion during the Relevant Period.[2]

[2] During the same time period, RES executed approximately 45 million not held orders (over 8 billion shares) with a total market value of approximately $270 billion.

C. RES Made Misleading Statements to Customers about Access to Dark Pool Liquidity

12. In marketing materials such as RES's Order Handling Guide and responses to customer questionnaires in 2011 and 2012, RES promoted its access to dark pool liquidity. Access to liquidity is a relevant factor in a retail wholesaler's ability to provide quality executions, and the liquidity to which RES had access was a material consideration for many of RES's retail broker-dealer customers in determining where to route their order flow.

a. RES's Order Handling Guide, distributed to all RES customers, represented that RES offered "enhancement opportunities from Credit Suisse's vast liquidity," including access to Credit Suisse's dark pool, which was at the time was the largest U.S. equity dark pool, as well as external dark pools. For example, RES's 2011 Order Handling Guide described "enhancement opportunities from Credit Suisse's vast liquidity, including access to Crossfinder, the largest ATS in the U.S."

b. In response to customer queries, RES highlighted its access to liquidity, including its access to Credit Suisse's own and other dark pools. For example, in a 2011 response to a questionnaire that a retail broker-dealer was using to help determine how to route order flow, RES focused on its ability to provide "[l]iquidity as a differentiating factor." RES further stated: "A vital component in a principal market maker's ability to provide quality executions is the ability to efficiently source and interact with liquidity." RES then provided expanded details concerning the "three key resources . . . that enhance RES's ability to source and interact with liquidity." One of these "key resources" was access to Credit Suisse's dark pool, about which RES stated: "RES has access to Crossfinder, an anonymous matching engine that is solely owned by Credit Suisse Securities (USA) LLC. Crossfinder

continues to hold its spot as the largest US equity dark pool by a considerable margin[.]" A second of these "key resources" was access to external venues, such as dark pools, through Credit Suisse's smart order router. Specifically, in describing RES's "Access to External Dark Pools," RES stated that it had access to a "broad and expanding list" of dark pools through "Credit Suisse's proprietary solution for dark book smart order routing."

13. These representations were misleading under the circumstances. Unlike not held orders, which RES regularly executed in Credit Suisse's own and other dark pools, RES rarely executed held orders in such venues between September 2011 and December 2012. In particular, RES trading data indicates that during this time, RES executed only a *de minimis* number of customer held orders in Credit Suisse's own dark pool (i.e., 512 orders out of 4 million, or approximately 0.01%) or other dark pools during this period.

D. RES Did Not Disclose that Non-605 Orders Typically Did Not Receive Certain Represented Benefits

14. In determining how to allocate order flow among various retail wholesalers, a primary factor that retail broker-dealers consider is the execution quality that each retail wholesaler delivers. Generally, the better the execution quality, the more order flow broker-dealers send to a particular retail wholesaler.

15. In RES's Order Handling Guides that were distributed to all customers, RES stated that it "seeks to execute its customers' orders at the most favorable terms reasonably available under prevailing market conditions." RES also stated in its Order Handling Guides that "RES execution algorithms focus on optimizing the execution experience of retail orders." RES also highlighted in its Order Handling Guides that when RES commits capital, "[t]he benefit to our

client is a fill without market impact. The more liquidity we offer, the less impact a client's order will have on the NBBO, potentially avoiding price dis-improvement. Our price improvement and liquidity enhancement levels are all geared to commit capital to the potential benefit of our clients."

16. Rule 605 requires that market centers such as RES publicly report certain aggregate order execution information, including measures of execution quality, on an aggregate basis. Certain orders are excluded from Rule 605 required reporting; for example, orders of 10,000 shares or more, orders of less than 100 shares, and not held orders are, by definition, non-605 orders. Statistics published pursuant to Rule 605 include, among other things, the spreads paid by investors (i.e., "effective spreads"), levels of price improvement provided, and speed of execution for various categories of orders. Although RES's broker-dealer customers received the same information from RES regarding pricing and timing of executions of their Rule 605-eligible and non-605 orders, and the execution prices of both Rule 605-eligible and non-605 orders are reported publicly, retail broker-dealers differ in the extent to which they monitor (and have the ability to monitor) execution quality for their non-605 orders.

17. RES received both Rule 605-eligible and non-605 order flow. The computer code RES used to execute orders included a function called "CountsForStats" that distinguished between held orders that had Rule 605 characteristics, and those that did not. The output of the CountsForStats function played a role in RES's decisions about how certain orders were routed, and about whether to apply price improvement to orders.

18. Between mid-2011 and March 2015, RES treated many non-605 orders less favorably as compared to Rule 605-eligible orders that were similar in other respects. Indeed, in certain instances, RES internally referred to non-605 orders as "EQ-ineligible" orders (where "EQ"

stood for execution quality). This differential treatment of certain non-605 orders was not disclosed to RES customers, which was misleading under the circumstances.

i. RES Generally Did Not Price Improve Non-605 Orders

19. In executing customer orders, RES frequently offered price improvement to improve the execution quality of certain orders. RES had discretion with respect to whether and how much price improvement to provide, but was required to do so in a manner consistent with its representations. In addition, the external venues to which RES routed orders, or portions of orders (i.e., "child orders"), sometimes offered price improvement (although the price improvement that RES offered was generally more than the amounts that the external venues offered).

20. Credit Suisse represented to its customers that opportunities for "robust" and "enhanced" price improvement was one of the "core" elements of RES's approach to executing orders. Further, RES's Order Handling Guides stated that RES's systems "automatically evaluate a number of factors, including the quoted spread at the time of order receipt, the quoted size at the time of order receipt, and the type of security (NDX, S&P 100, S&P 500, etc.) in determining the appropriate level of price improvement." While RES listed these non-exhaustive security-specific factors that were included in its evaluation of potential price improvement, RES did not disclose that an order's Rule 605 status was also a determinative factor in assessing whether RES itself would price improve a customer order.

21. Between mid-2011 and March 2015, RES itself generally did not improve the execution price of non-605 orders. This decision-making was automated by the RES computer code. Specifically, if the execution would not be included in the publicly reported execution quality statistics (i.e., CountsForStats was "false"), RES generally would not price improve the customer order. Alternatively, if the execution would be included in the publicly reported

execution quality statistics (i.e., CountsForStats was "true"), the order was eligible for and generally received RES price improvement.[3]

22. Credit Suisse's representations concerning the factors that RES considered in determining price improvement levels were misleading because Credit Suisse did not disclose that non-605 orders were generally ineligible for price improvement by RES. Such information would have been a material consideration for many retail broker-dealers in determining where to route non-605 order flow.

ii. RES Sought to Capture Impact on Select Non-605 Orders

23. From February 2013 through March 2015, RES utilized two primary tactics to route customer orders that it did not fully internalize. One tactic attempted to fill the order in Credit Suisse's and other dark pools and ELPs, where the available liquidity was unknown. The other was Routing Tactic A, which routed the non-internalized portions of certain customer orders to lit markets without first attempting to secure an execution in dark pools and ELPs. RES applied Routing Tactic A to outsized non-605 orders disproportionately often compared to Rule 605-eligible orders. Specifically, pursuant to the RES computer code, if a particular order had Rule 605 characteristics (i.e., CountsForStats was "true"), then Routing Tactic A was set to "false," and the order would generally not be routed pursuant to Routing Tactic A. Conversely, if the order did not have those characteristics (i.e., CountsForStats was "false"), then Routing Tactic A was set to "true," and the order would be more likely to be routed using Routing Tactic A.

24. RES's differential application of Routing Tactic A was particularly important with respect to orders that, due to their relatively large size, outsized the available liquidity at the then-

[3] One RES customer reached a separate agreement with RES whereby RES agreed to provide price improvement for that customer's non-605 held orders, which was written into the RES code.

prevailing market price, or market depth, because those orders had the potential to cause market impact. Market impact refers to a phenomenon in which buying or selling a security, or attempting to buy or sell a security, may result in the market price becoming less favorable to the buyer or seller. For example, buying a security may cause its price to increase if there are fewer shares available at the current price than the customer wishes to buy. Different trading tactics may result in different degrees of market impact, influencing the overall execution quality of the order. In particular, to the extent that significant market impact occurs before an order is completely filled, it may be more costly to fill the remainder of the order, which results in a less favorable overall execution price.

25. Outsized marketable held orders often can only be filled in their entirety by executing at more than one price level, including at least one price level outside of the NBBO at the time of arrival. By their nature, such orders have the potential to cause market impact. Outsized orders that RES routed pursuant to Routing Tactic A generally had the potential to cause, and in fact generally caused greater market impact over the course of the entire order (i.e., including any internalized portion) than orders executed with other strategies that RES used.

26. RES's code attempted to calculate RES's risk and potential to profit from each order, and used that calculation to determine whether and how much of the order to internalize, and how much if any to route out and fill on a riskless principal basis. This calculation attempted to predict, among other things, RES's potential opportunity to capture market impact. Specifically, this decision was made using a utility function in the RES computer code. In making this decision, RES considered three factors: (1) potential spread capture, (2) potential impact capture, and (3) potential risk to RES. Generally, the utility function selected the level of RES's capital commitment in order to maximize the potential spread and impact capture, while minimizing

potential risk. For large outsized orders, with the potential to cause significant market impact, impact capture was frequently the most important factor in the code's determination of how much of an order to internalize.

27. When RES filled orders on a split (partially principal and partially riskless principal) basis, it typically began the execution by routing one or more child orders to the lit markets using Routing Tactic A. As those child orders were filled, the stock price often moved higher for purchases and lower for sales. RES would then internalize the final piece of the order (often larger than any of the individual child orders) at the new prevailing market price. Following the execution of an outsized order, there may be price reversion, in which stock prices that have been temporarily displaced as a result of market activity could potentially revert toward the original price level. If price reversion did occur, RES was left with a potentially profitable position in the internalized portion of the order. Further, RES used Routing Tactic A significantly more often to route the riskless principal portion of split fills compared to otherwise equivalent orders filled on an entirely riskless basis. Because RES took no principal position when orders were filled completely on a riskless principal basis, and there was no market impact of orders that RES fully internalized, split fills were those where RES had the potential to capture impact.

28. For example, in the case of a customer sell order, if the stock price decreased as RES executed child orders (i.e., sold small amounts) in a riskless principal capacity in the lit market, RES's purchase of the remaining portion of the order from the RES customer on a principal basis at the prevailing market price would be at a lower price than the price when the parent order arrived. If the price of the stock subsequently reverted back towards its original (higher) level before RES unwound its position, RES would be left with a potentially profitable

position. RES had the opportunity to exit that position at a profit, by liquidating its position on another trading venue or by matching it against a customer buy order.[4]

29. RES's disproportionate use of Routing Tactic A on non-605 orders allowed RES the potential opportunity to profit from impact capture on a category of orders without affecting RES's published execution quality statistics. RES used Routing Tactic A on a greater percentage of non-605 orders than Rule 605-eligible orders, and on a greater percentage of outsized non-605 orders than outsized Rule 605-eligible orders. RES's use of Routing Tactic A varied over time.

a. From February 2013 through November 2013 (referred to herein as "Period 1"), for all RES customers, RES used Routing Tactic A almost exclusively on select categories of outsized non-605 held orders, and rarely on outsized Rule 605-eligible held orders. In particular, RES's use of Routing Tactic A was concentrated among non-605 orders of 10,000 shares or more, and orders received while the markets were closed. In Period 1, RES used Routing Tactic A on approximately 8,600 non-605 outsized held orders that were filled on a split basis. These orders comprised a total of approximately 120 million shares, and had a total market value of approximately $2.5 billion.

b. From December 2013 through January 2015 (referred to herein as "Period 2"), RES continued to use Routing Tactic A more frequently for outsized non-605 held orders than for outsized Rule 605-eligible orders. Further, RES used Routing Tactic A across all categories of non-605 orders, not limited to orders of 10,000 shares or more and orders received after the markets closed. During Period 2,

[4] The RES code included a function that sent liquidating orders to trading venues no earlier than 10 minutes after RES established a position, if the position had not already been liquidated by matching it against customer orders.

RES's use of Routing Tactic A varied by customer group. For one set of customers, RES used Routing Tactic A almost exclusively on outsized non-605 orders, and rarely on outsized Rule 605-eligible orders. In Period 2, for those customers, RES used Routing Tactic A on approximately 4,500 held outsized non-605 orders. These orders comprised a total of approximately 60 million shares, and had a total market value of approximately $990 million.

30. OAG finds that the actions described above are in violation of the Martin Act, GBL § 352 *et seq.*, and Executive Law § 63(12).

31. OAG finds the relief and agreements contained in this Agreement appropriate and in the public interest. THEREFORE, OAG is willing to discontinue its Investigation and accept this Agreement pursuant to Executive Law § 63(15), in lieu of commencement of a statutory action or proceeding for the enforcement of a law of this State based on the conduct described.

IT IS HEREBY UNDERSTOOD AND AGREED, by and between the Parties:

RELIEF

32. Monetary Relief

a. *Monetary Relief Amount*: Credit Suisse shall pay to the State of New York a penalty of $5 million (the "Monetary Relief Amount"). Payment of the Monetary Relief Amount shall be made in full within fourteen business days of the effective date of this Agreement.

b. Payments shall be made by wire transfer, attorney check, corporate or certified check, or bank draft, which shall be made payable to the "New York State Department of Law", and shall reference Agreement No. 18-105; payments shall

be addressed to the attention of Jonathan Zweig, State of New York, Office of the Attorney General, Investor Protection Bureau, 28 Liberty Street, New York, New York 10005.

MISCELLANEOUS

Subsequent Proceedings

33. Credit Suisse expressly agrees and acknowledges that OAG may initiate a subsequent investigation, civil action, or proceeding to enforce this Agreement, for violations of the Agreement, or if the Agreement is voided pursuant to Paragraph 41, and agrees and acknowledges that in such event:

a. any statute of limitations or other time-related defenses are tolled from and after the effective date of this Agreement;

b. OAG may use statements, documents or other materials produced or provided by Credit Suisse prior to or after the effective date of this Agreement;

c. any civil action or proceeding must be adjudicated by the courts of the State of New York, and that Credit Suisse irrevocably and unconditionally waives any objection based upon personal jurisdiction, inconvenient forum, or venue; and

d. evidence of a violation of this Agreement shall constitute prima facie proof of a violation of the applicable law pursuant to Executive Law § 63(15).

34. If a court of competent jurisdiction determines that Credit Suisse has violated the Agreement, Credit Suisse shall pay to OAG the reasonable cost, if any, of obtaining such determination and of enforcing this Agreement, including without limitation legal fees, expenses, and court costs.

Effects of Agreement:

35. This Agreement is not intended for use by any third party in any other proceeding.

36. All terms and conditions of this Agreement shall continue in full force and effect on any successor, assignee, or transferee of Credit Suisse. Credit Suisse shall include in any such successor, assignment or transfer agreement a provision that binds the successor, assignee or transferee to the terms of the Agreement. No party may assign, delegate, or otherwise transfer any of its rights or obligations under this Agreement without the prior written consent of OAG.

37. Nothing contained herein shall be construed as to deprive any person of any private right under the law.

38. Any failure by OAG to insist upon the strict performance by Credit Suisse of any of the provisions of this Agreement shall not be deemed a waiver of any of the provisions hereof, and OAG, notwithstanding that failure, shall have the right thereafter to insist upon the strict performance of any and all of the provisions of this Agreement to be performed by Credit Suisse.

39. This Agreement is binding on the parties, but this Agreement is not a final order of any court or governmental authority, and is not intended to form the basis for any disqualification(s) regarding the subject of a final order of a court or government authority, including, without limitation, Regulation A, and Rules 504 and 506(d) under the Securities Act of 1933, and Regulation CF.

Communications:

40. All notices, reports, requests, and other communications pursuant to this Agreement must reference Agreement No. 18-105, and shall be in writing and shall, unless expressly provided otherwise herein, be given by hand delivery; express courier; or electronic

mail at an address designated in writing by the recipient, followed by postage prepaid mail, and shall be addressed as follows:

If to Credit Suisse, to:

Lara M. Leaf
Director
Credit Suisse Securities (USA) LLC
One Madison Avenue
New York, New York 10010

If to OAG, to:

Jonathan Zweig
Assistant Attorney General
State of New York
Office of the Attorney General
Investor Protection Bureau
28 Liberty Street
New York, New York 10005;

or, in his absence, to the person holding the title of Bureau Chief, Investor Protection Bureau.

Representations and Warranties:

41. OAG has agreed to the terms of this Agreement based on, among other things, the representations made to OAG by Credit Suisse and its counsel and OAG's own factual investigation as set forth in the findings set forth above. Credit Suisse represents and warrants that neither it nor its counsel has made any material representations to OAG that are inaccurate or misleading. If any material representations by Credit Suisse or its counsel are later found to be inaccurate or misleading, this Agreement is voidable by OAG in its sole discretion.

42. No representation, inducement, promise, understanding, condition, or warranty not set forth in this Agreement has been made to or relied upon by Credit Suisse in agreeing to this Agreement.

43. Credit Suisse represents and warrants, through the signatures below, that the terms and conditions of this Agreement are duly approved. Credit Suisse further represents and warrants that the signatory to this Agreement is duly authorized to sign this Agreement.

General Principles:

44. Unless a term limit for compliance is otherwise specified within this Agreement, Credit Suisse's obligations under this Agreement are enduring. Nothing in this Agreement shall relieve Credit Suisse of other obligations imposed by any applicable state or federal law or regulation or other applicable law.

45. Credit Suisse neither admits nor denies OAG's findings set forth in the Agreement. Credit Suisse agrees not to take any action or to make or permit to be made any public statement denying, directly or indirectly, any finding in the Agreement or creating the impression that the Agreement is without legal or factual basis. Nothing in this provision affects Credit Suisse's: (i) testimonial obligations; or (ii) right to take legal or factual positions in litigation or other legal proceedings in which OAG is not a party.

46. Nothing contained herein shall be construed to limit the remedies available to OAG in the event that Credit Suisse violates the Agreement after its effective date.

47. This Agreement may not be amended except by an instrument in writing signed on behalf of the Parties to this Agreement.

48. In the event that any one or more of the provisions contained in this Agreement shall for any reason be held by a court of competent jurisdiction to be invalid, illegal, or unenforceable in any respect, in the sole discretion of OAG, such invalidity, illegality, or unenforceability shall not affect any other provision of this Agreement.

49. Credit Suisse acknowledges that it has entered this Agreement freely and voluntarily and upon due deliberation with the advice of counsel.

50. This Agreement shall be governed by the laws of the State of New York without regard to any conflict of laws principles.

51. The Agreement and all its terms shall be construed as if mutually drafted with no presumption of any type against any party that may be found to have been the drafter.

52. This Agreement may be executed in multiple counterparts by the parties hereto. All counterparts so executed shall constitute one agreement binding upon all parties, notwithstanding that all parties are not signatories to the original or the same counterpart. Each counterpart shall be deemed an original to this Agreement, all of which shall constitute one agreement to be valid as of the effective date of this Agreement. For purposes of this Agreement, copies of signatures shall be treated the same as originals. Documents executed, scanned and transmitted electronically and electronic signatures shall be deemed original signatures for purposes of this Agreement and all matters related thereto, with such scanned and electronic signatures having the same legal effect as original signatures.

[*Remainder of page intentionally left blank.*]

53. The effective date of this Agreement shall be September 27, 2018.

BARBARA D. UNDERWOOD
Attorney General of the State of New York
28 Liberty Street
New York, NY 10005

By: _____
Cynthia Hanawalt
Bureau Chief, Investor Protection Bureau

Of Counsel:

Rebecca Reilly
Assistant Attorney General

Jonathan Zweig
Assistant Attorney General

CREDIT SUISSE SECURITIES (USA) LLC

By: _____
Lara M. Leaf
Director

STATE OF New York)
) ss.:
COUNTY OF New York)

On the 27th day of September in the year 2018 before me personally came Lara Leaf to me known, who, being by me duly sworn, did depose and say that he/she resides at New York, New York, and that he/she holds the title of Director at Credit Suisse, the corporation described herein and which executed the above instrument.

Sworn to before me this 27th day of September, 2018

_____
NOTARY PUBLIC

KAREN GROVER
Notary Public, State of New York
No. 01GR5070226
Qualified in Suffolk County
Certificate Filed in New York County
Commission Expires December 9, 2018