

**UNITED STATES OF AMERICA**  
**Before the**  
**SECURITIES AND EXCHANGE COMMISSION**

**SECURITIES ACT OF 1933**  
**Release No. 10272 / December 16, 2016**

**SECURITIES EXCHANGE ACT OF 1934**  
**Release No. 79576 / December 16, 2016**

**INVESTMENT ADVISERS ACT OF 1940**  
**Release No. 4590 / December 16, 2016**

**ADMINISTRATIVE PROCEEDING**  
**File No. 3-17730**

**In the Matter of**

**Deutsche Bank Securities Inc.**

**Respondent.**

**ORDER INSTITUTING ADMINISTRATIVE  
AND CEASE-AND-DESIST PROCEEDINGS,  
PURSUANT TO SECTION 8A OF THE  
SECURITIES ACT OF 1933, SECTIONS 15(b)  
AND 21C OF THE SECURITIES EXCHANGE  
ACT OF 1934, AND SECTION 203(e) OF THE  
INVESTMENT ADVISERS ACT OF 1940,  
MAKING FINDINGS, AND IMPOSING  
REMEDIAL SANCTIONS AND A CEASE-  
AND-DESIST ORDER**

**I.**

The Securities and Exchange Commission (“Commission”) deems it appropriate and in the public interest that public administrative and cease-and-desist proceedings be, and hereby are, instituted pursuant to Section 8A of the Securities Act of 1933 (“Securities Act”), Sections 15(b) and 21C of the Securities Exchange Act of 1934 (“Exchange Act”), and Section 203(e) of the Investment Advisers Act of 1940 (“Advisers Act”) against Deutsche Bank Securities Inc. (“Deutsche Bank” or “Respondent”).

**II.**

In anticipation of the institution of these proceedings, Respondent has submitted an Offer of Settlement (the “Offer”) that the Commission has determined to accept. Respondent admits the facts set forth in Section IV below, acknowledges that its conduct violated the federal securities

laws, admits the Commission’s jurisdiction over it and the subject matter of these proceedings, and consents to the entry of this Order Instituting Administrative and Cease-and-Desist Proceedings Pursuant to Section 8A of the Securities Act, Sections 15(b) and 21C of the Exchange Act, and Section 203(e) of the Investment Advisers Act of 1940, 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:

#### Summary

1. This case arises from Deutsche Bank’s material misstatements and omissions, during the period January 2012 through February 2014 (the “Relevant Period”), regarding its operation of SuperX+, an order router that primarily routes equity orders to venues known as “dark pools.”

2. Equities trading activity occurs at a variety of trading centers, including registered exchanges, alternative trading systems (“ATSS”<sup>1</sup>) (many of which operate as dark pools<sup>2</sup>), and non-ATS broker-dealers that execute orders. Broker-dealers serve as a key link to these various trading centers. They connect market participants, including themselves and their clients, to trading centers and are responsible for handling billions of orders every day. To decide how, when, and where to send these orders, broker-dealers often use algorithms designed to determine the “optimal” places to send orders based on a variety of factors. Broker-dealers often describe their proprietary routing technology as a means to differentiate themselves from their competitors. When broker-dealers choose to tout the material operations and functionality of their order routers, they must describe them accurately, without material misrepresentations or omissions.

3. Deutsche Bank, a registered broker-dealer, offers its clients the use of three order

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<sup>1</sup> Rule 300(a) of Regulation ATS promulgated under the Exchange Act provides that an ATS is “any organization, association, person, group of persons, or system: (1) [t]hat constitutes, maintains, or provides a market place or facilities for bringing together purchasers and sellers of securities or for otherwise performing with respect to securities the functions commonly performed by a stock exchange within the meaning of [Exchange Act Rule 3b-16]; and (2) [t]hat does not: (i) [s]et rules governing the conduct of subscribers other than the conduct of subscribers’ trading on such [ATS]; or (ii) [d]iscipline subscribers other than by exclusion from trading.”

<sup>2</sup> A dark pool is a trading venue that does not publicly display orders or quotations in the consolidated quotation data. *Regulation of NMS Stock Alternative Trading Systems*, 80 Fed. Reg. 80998, 81008 fn. 123 (Dec. 28, 2015). By contrast, an electronic communication network (ECN) is an ATS that publicly displays its best-priced orders in the consolidated quotation data. *Id.* at 81009.

routers, including one, known as SuperX+<sup>3</sup>, which primarily accesses ATSS.<sup>4</sup> SuperX+ determines where, when, and how to route orders based on a number of factors, including client instructions and Deutsche Bank’s own routing algorithms. Among those algorithms is a “Dark Pool Ranking Model” (“DPRM”), which is intended to assess the execution quality and liquidity of all venues to which SuperX+ routes orders.

4. During the Relevant Period, Deutsche Bank made materially misleading statements and omissions concerning (a) the status and functioning of the DPRM, and (b) the extent of discretion and subjective judgment exercised by Deutsche Bank personnel in operating the DPRM. During this same period, SuperX+ routed approximately 1.39 billion orders, representing approximately 1.78 trillion shares.

5. The DPRM was designed to measure and rank the dark pools and other venues to which SuperX+ might route orders, and also to calculate the likelihood that an order sent to those venues would be executed—known as historical “liquidity” or “Fill Probability.”<sup>5</sup> Deutsche Bank intended first to rank the different venues based on its assessment of their execution quality (“DPRM Rankings”), and use those rankings to determine which venues were eligible to receive different types of orders routed by Super X+. Deutsche Bank then intended to use Fill Probability to determine the sequence in which those eligible venues would initially receive orders. As described below, SuperX+ generally prioritized the venues that received high DPRM Rankings; other than as instructed by clients, only orders designated as “aggressive” would be routed to the venues that were ranked as having the lowest execution quality.

6. Deutsche Bank described the DPRM to clients and potential clients as the “quantitative core” of SuperX+. Deutsche Bank cited the DPRM when responding to inquiries from clients and potential clients regarding the firm’s algorithms and order routing capabilities. Deutsche Bank also represented that the DPRM was updated “periodically,” and that SuperX+ relied on “a sophisticated dark pool ranking model that profiles dark pools based on transaction cost, statistically determined compatibility for each order, client order attributes, and real time market conditions.”

7. These representations were false. From January 2012 through February 2014, Deutsche Bank did not operate SuperX+ as it said it did, because unanticipated technological

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<sup>3</sup> Deutsche Bank initially referred to this order router as “SuperX”. Deutsche Bank eventually gave this name to its ATS and renamed its dark order router “SuperX+”. To avoid confusion, the order router is referred to herein as SuperX+, and Deutsche Bank’s ATS is referred to as SuperX, regardless of timeframe.

<sup>4</sup> Customers and potential customers of Deutsche Bank’s broker-dealer are referred to herein as “clients,” consistent with the firm’s disclosures discussed below.

<sup>5</sup> This Order concerns the first iteration of the DPRM. Deutsche Bank adopted a new statistical methodology for the DPRM’s measurement and rankings in February 2014.

problems, which remained unaddressed throughout the Relevant Period, resulted in the Rankings and Fill Probabilities not being calculated.

8. Deutsche Bank generally intended to update the DPRM Rankings and Fill Probabilities on a quarterly basis but, from January 2012 through February 2014, updated the calculations only a single time because of a data coding error.<sup>6</sup>

9. For the first part of this period, from January 2012 through February 2013, Deutsche Bank used the DPRM Rankings and Fill Probabilities from December 2011 instead of using updated calculations.

10. Also from January 2012 through February 2013, despite ongoing problems running the DPRM, Deutsche Bank continued to connect new venues to SuperX+. During this time period, SuperX+ began routing orders to seven additional venues. Because it lacked historic data with respect to these newly-connected venues, Deutsche Bank manually assigned DPRM Rankings and Fill Probabilities based on subjective judgment. Rather than subsequently calculating Rankings and Fill Probabilities to determine, based on the “quantitative” measurement Deutsche Bank described to clients and potential clients, when to send orders to these venues and in what sequence, Deutsche Bank continued to apply the subjective scores. As a result, Deutsche Bank continued to use Fill Probabilities for several new venues that differed meaningfully from their actual performance.

11. On February 19, 2013, Deutsche Bank updated the DPRM Rankings and Fill Probabilities for the first time since December 2011. Deutsche Bank was able to do so only by departing from its typical procedure for updating the DPRM Rankings and Fill Probabilities. Thereafter, it did not successfully update the DPRM Rankings and Fill Probabilities again until February 2014, when the firm changed the methodology for the model.<sup>7</sup>

12. The February 2013 iteration of the DPRM, used by Deutsche Bank for the next year, had additional problems. Due to an inadvertent coding error, Deutsche Bank’s own dark pool (SuperX) received an erroneous DPRM Ranking that placed it in the bottom tier of venues and rendered it ineligible to receive all but the most aggressive orders. Believing SuperX’s new DPRM Ranking to be an error, but not, at the time, determining the actual cause of the error, Deutsche Bank manually overrode the DPRM Ranking and placed SuperX into the highest DPRM Ranking position. The same coding error also inflated the February 2013 DPRM Rankings of at least two other venues. As a result, SuperX+ routed millions of orders to those

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<sup>6</sup> Every other time Deutsche Bank attempted to update the calculations during this period, its system crashed due to the coding error. Further, as discussed in greater detail below, even on the one occasion during this period when Deutsche Bank did run the DPRM, Deutsche Bank did not update four venues’ Rankings and Fill Probabilities.

<sup>7</sup> Deutsche Bank’s second generation DPRM has been in continuous use since February 2014.

two venues, contrary to the DPRM methodology that Deutsche Bank claimed it was using.

13. During the entire Relevant Period, Deutsche Bank failed to inform clients and potential clients that the DPRM was not fully operational, and did not disclose the subjective process by which it assigned DPRM Rankings and Fill Probabilities to new venues and its own dark pool. Deutsche Bank continued to include, in written materials disseminated to existing and potential clients, present-tense descriptions of the DPRM as an ongoing, data-driven mechanism. Those statements were misleading because Deutsche Bank updated the DPRM only once during this period, used DPRM Rankings and Fill Probabilities that were, at times, more than one year old, and were, with respect to at least seven venues, based not on data but rather on the subjective judgment of Deutsche Bank personnel.

14. These issues with Deutsche Bank's DPRM were material. At least some Deutsche Bank clients wanted to know, and would have expected Deutsche Bank to inform them, if the DPRM did not function properly, relied on stale data, or applied subjective judgment instead of objective data to determine where to place and retain certain venues in the Super X+ routing table.

15. As a result of the materially misleading statements and omissions of fact described throughout this Order concerning the DPRM, Deutsche Bank violated Section 17(a)(2) of the Securities Act, an antifraud provision of the federal securities laws.

16. In addition to its violations regarding the DPRM, Deutsche Bank also violated Rule 301(b)(2) of Regulation ATS by failing to amend its Form ATS<sup>8</sup> to provide "a copy of the alternative trading system's subscriber manual and any other materials provided to subscribers," which are attachments called for by Form ATS, and to correct information about the operations of the ATS.

#### **IV.**

##### **Respondent**

17. Deutsche Bank Securities Inc. ("Deutsche Bank"), an affiliate of Deutsche Bank AG, is a broker-dealer registered under the Securities Exchange Act of 1934 and an investment adviser registered under the Investment Advisers Act of 1940, with offices in the United States. Since 2010, Deutsche Bank has operated SuperX+, an order router that primarily routes to dark pools. Between January 1, 2012, and February 28, 2014, SuperX+ routed approximately 1.39 billion orders, representing approximately 1.78 trillion shares. Since 2009, Deutsche Bank also has operated

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<sup>8</sup> Filed with the Commission pursuant to Rule 301(b)(2) of Regulation ATS, a Form ATS is a confidential document that an ATS uses to notify the Commission of its operations.

SuperX, a dark pool that operates pursuant to Regulation ATS. As of July 2016, SuperX was the fourth-largest alternative trading system (“ATS”) in the United States, as measured by total trades and total shares traded in equities on a weekly basis.

## **Facts**

### **Deutsche Bank’s Dark Pool Ranking Model**

18. One of Deutsche Bank’s smart order routers is known as SuperX+. SuperX+ primarily routes to dark pools, and also routes some non-displayed orders to exchanges.

19. Beginning in April 2010 and continuing throughout the Relevant Period (January 2012 through February 2014), Deutsche Bank marketed to clients and potential clients a component of SuperX+ called the “Dark Pool Ranking Model” (“DPRM”).

20. The DPRM was designed to assist in measuring the performance of the venues to which Deutsche Bank might route orders via SuperX+, and in identifying venues eligible to receive those orders. Between April 2010 and February 5, 2014, the DPRM evaluated venues by measuring price movement between the time an order routed by Deutsche Bank arrived at a venue and the time the order was executed.

21. The venues measured by the DPRM included Deutsche Bank’s own dark pool, SuperX. SuperX+ relied on the DPRM—among other things, including client instructions—to help determine where to route certain orders.

22. The output of the DPRM was a tiered ranking of the venues to which SuperX+ routed orders (“DPRM Ranking”). Those tiers determined which venues were eligible to receive different categories of orders routed by SuperX+. In the absence of specific client instructions or a Deutsche Bank algorithm specifying that an order should be sent to a particular venue, SuperX+ generally applied the DPRM to all orders.

23. In general, depending on their trading strategies and preferences, clients would designate their orders as “aggressive,” “neutral,” or “passive.” The DPRM worked as follows: For orders marked as “aggressive”—meaning that the client or Deutsche Bank algorithm placed priority on receiving an execution—100% of the venues to which SuperX+ routed were eligible to receive the order, regardless of their DPRM Ranking. For orders marked “neutral,” only the top 80% of venues, as ranked by the DPRM, were eligible, with the lowest 20% of ranked venues ineligible. For orders marked “passive”—reflecting lower priority on receiving an execution and increased priority on price—only the top 60% of venues were eligible. In its marketing materials, on its website, and in direct communications, Deutsche Bank informed its clients of these thresholds.

24. After using the DPRM Rankings to determine the venues eligible to receive an

order, SuperX+ then determined how to route that order to one or more specific venues. Absent client instructions or other limiting factors (such as a venue's minimum order size requirements), SuperX+ made initial routing decisions based on its calculation of historical fill rates at different venues ("Fill Probability"). This calculation was designed to use historical data to measure the likelihood of an order getting executed at each venue. Deutsche Bank intended to perform the Fill Probability calculations at the same time and as part of the same process that generated the DPRM Rankings.

25. If a client order was sufficiently large to allow for allocation to all eligible venues, SuperX+ generally divided that order among all of those venues. For example, if SuperX+ received a passive order for 1,000 shares, and the DPRM Rankings identified ten venues eligible to receive passive orders (because they comprised the top 60% of venues in the DPRM rankings), SuperX+ may have sent 100 shares to each eligible venue.

26. SuperX+ did not make such an allocation with smaller orders. Small orders were divided among a limited subset of eligible venues based on Fill Probability. For example, if SuperX+ received a passive order for 500 shares and the DPRM Rankings identified ten eligible venues, SuperX+ may have initially routed 100 shares to each of the five venues with the highest Fill Probability scores.

27. After Deutsche Bank routed orders it would receive real time market feedback as to whether the order(s) were executed and SuperX+ would reallocate any unfilled portion of the orders. SuperX+ based its reallocation decisions on various factors, including, but not limited to, current market conditions (*i.e.*, venues demonstrating an ability to execute the order immediately received preference over those that did not) or a desire to rotate among additional eligible venues.

28. In sum, the DPRM Rankings determined which venues were eligible to receive an order, whereas Fill Probability determined which of those venues actually received initial orders (or portions thereof).

### **Deutsche Bank's Initial Periodic Updates to Dark Pool Ranking Model**

29. Deutsche Bank designed the DPRM to periodically update its DPRM Rankings and Fill Probability scores. This was done in the following manner: a Deutsche Bank employee would execute a series of computer instructions that would analyze the relevant execution data over the period since the last rankings. That process generated a table containing the DPRM Rankings and Fill Probability scores. Other Deutsche Bank personnel would then download the table into a file for incorporation into SuperX+'s logic.

30. Following the DPRM's inception in April 2010, Deutsche Bank updated the DPRM Rankings (*i.e.*, analyzed the collected data and assigned venues to tiers using the

aforementioned process) and Fill Probability scores for all venues to which SuperX+ routed on five occasions in 2010 and 2011, including four times in 2011, with the last update occurring on December 20, 2011.

31. Each time the calculations were updated in 2010 and 2011, the DPRM Rankings resulted in SuperX being ranked in the highest tier, thus ensuring its eligibility for orders of all categories (passive, neutral, or aggressive).

### **Deutsche Bank's Representations Regarding Dark Pool Ranking Model**

32. Deutsche Bank made a number of statements regarding the DPRM to clients and potential clients from 2010 through February 2014. Those statements included:

- “The quantitative core of the [SuperX+] dark pool allocation algorithm is the Dark Pool Ranking Model (DPRM), a model that determines certain advantages of placing orders in one dark venue over another.”
- “At the core of SuperX Plus is the Dark Pool Ranking Model.”
- “The core of [SuperX+] is a sophisticated dark pool ranking model that profiles dark pools based on transaction cost, statistically determined compatibility for each order, client order attributes, and real time market conditions. This allows users to interact only with dark pools selected by [SuperX+'s] dark pool ranking model.”
- “. . . the relative benefit of two dark pools is calculated from a statistical test . . . that measures the confidence with which realized execution costs are differentiated from pre-trade estimates using a bright-pool market impact model. Dark venues distinguished with greater confidence are ranked higher than those with less. Final rankings are constructed from averages taken over all such pair-wise comparisons.”
- “[SuperX+] utilises our sophisticated ranking model that enables you to achieve smarter executions by profiling each Dark Pool based on transaction cost, order attributes and real-time market conditions. Each order interacts only with Dark Pools that are compatible by our statistically determined ranking model, accessing a smarter source of liquidity unique to each order.”
- “[The DPRM] ranks liquidity on a real-time and historical basis to determine the optimal sources according to the order characteristics and urgency.”
- “Although the higher-ranked dark pool may be a preferred venue, we may still submit orders to the lower-ranked pool. This is determined by the client's overall

objective expressed via the urgency submitted with the order.”

- “Our statistical dark pool ranking model smartly routes and selects optimal pools of liquidity on an order by order basis . . .”
- “We study the performance of the various external dark pools we connect to broken into categories based on market cap and volatility of the names. We then periodically rank the pools based on their performance in each category. Performance is calculated by comparing the average price per venue versus the arrival price of the order aggregated within each category of stocks.”

### **Deutsche Bank Did Not Update the Dark Pool Ranking Model for 14 Months**

33. Between December 20, 2011 and February 19, 2013, Deutsche Bank did not update the DPRM Rankings and Fill Probability calculations.<sup>9</sup> Deutsche Bank was unable to do so due to an inadvertent coding error, discussed below.

34. Because Deutsche Bank did not update the DPRM, SuperX+ continued to route client orders based on the DPRM Rankings and Fill Probability scores from December 20, 2011. Between January 1, 2012, and February 28, 2013, SuperX+ routed more than 452 million orders, constituting more than 431 billion shares.

35. Deutsche Bank did not inform clients or potential clients that it was unable to update its DPRM between December 20, 2011, and February 19, 2013, and that it instead used Rankings and Fill Probability scores from December 20, 2011. Nevertheless, during this time period, Deutsche Bank continued to provide materials to clients and potential clients indicating that the DPRM was a tool that the firm relied on in routing orders, stating, among other things, that the DPRM “ranks liquidity,” is “[a]t the core of SuperX Plus,” is used “to determine the optimal sources” for routing the order, and Deutsche Bank “periodically rank[s] the pools based on their performance.” Deutsche Bank also did not correct prior similar statements it had made regarding the DPRM’s operations.

### **Deutsche Bank Added New Venues to the DPRM and Ranked Them Based on Subjective Assessment**

36. During this first time period when Deutsche Bank did not generate new Rankings or Fill Probability scores (January 2012 through February 2013), Deutsche Bank connected SuperX+ to seven venues to which it had not previously routed orders.

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<sup>9</sup> On March 26, 2012, Deutsche Bank attempted to update the DPRM using the process outlined above, but it was able to update the DPRM Rankings and Fill Probability scores for only one of the 27 venues subject to the DPRM at that time.

37. Because Deutsche Bank had not previously routed orders to those venues, it did not have historical execution data to use in calculating Rankings and Fill Probability scores for inclusion in the DPRM. Instead, Deutsche Bank personnel chose existing venues they believed to be similar to the new venues, copied those existing venues' Rankings and Fill Probability scores, and assigned them to the new venues.

38. For certain new venues, Deutsche Bank used Fill Probabilities that, as it turned out, overstated or understated the newly-added venues' actual performance. For example, upon connecting to a new venue in May 2012, Deutsche Bank copied the high Fill Probabilities for a significantly larger dark pool and assigned those scores to the new venue. When Deutsche Bank next ran the DPRM in February 2013, the data demonstrated that the new venue did not mirror the dark pool Deutsche Bank had copied in May 2012, and, in fact, had much lower Fill Probability scores. However, because Deutsche Bank had applied the overstated scores for nine months, the new venue was one of the first pools selected by SuperX+ when initially routing smaller orders. This condition persisted until February 2013.

39. Deutsche Bank did not inform clients or potential clients that it added new venues to the DPRM based on subjective judgment rather than historical execution data, and then retained those Rankings and Fill Probabilities until February 19, 2013. Deutsche Bank also did not inform clients or potential clients that, as a result, SuperX+ made routing decisions for nine months or more based on numbers that diverged meaningfully from venues' actual performance.

40. Deutsche Bank did not correct prior representations to clients and potential clients, such as those stating that the DPRM was a "quantitative" model and that "each order interacts only with Dark Pools that are compatible by our statistically determined ranking model, accessing a smarter source of liquidity unique to each order."

#### **Deutsche Bank Updated the Model, Overrode Its Own Ranking, and Failed to Update for Another Year**

41. On February 19, 2013, Deutsche Bank tried to update the DPRM. Deutsche Bank was able to update the DPRM only by deviating from its normal procedure and running the process in batches.

42. In this update, Deutsche Bank's own dark pool, SuperX, received a ranking in the lowest tier, meaning that it would be ineligible to receive orders marked as "neutral" or "passive."

43. At the time, Deutsche Bank personnel did not know what caused this drop in SuperX's DPRM Ranking, but they believed that it was an error of some sort. Deutsche Bank

personnel manually overrode SuperX's DPRM Ranking, placing SuperX at the top of the Rankings.<sup>10</sup> Deutsche Bank did not disclose this override, which remained in place until July 2014. Deutsche Bank did not override the DPRM Rankings of any other venues. Deutsche Bank also did not attempt to determine the cause of its difficulties in updating the DPRM until July 2014.

44. As a result of Deutsche Bank's continued problems with the DPRM, at least two other dark pools received inflated rankings on February 19, 2013, which remained in place for the next twelve months. If Deutsche Bank had operated the DPRM as it had represented, those pools would have been ineligible (subject to client instructions) to receive certain categories of orders. Instead, the DPRM Rankings erroneously rendered one of the pools eligible to receive passive orders and the other eligible to receive neutral orders. As a result, these pools received millions of orders that should not have been sent to them had Deutsche Bank operated the DPRM as disclosed. Between February 19, 2013, and February 5, 2014, Deutsche Bank sent 1.7 million orders marked as passive, representing 197.9 million shares, to the first dark pool, and 1.9 million orders marked as neutral, representing 327 million shares, to the second dark pool.

45. Deutsche Bank did not perform new calculations of the DPRM Rankings and Fill Probability scores between February 19, 2013, and February 5, 2014.<sup>11</sup> Deutsche Bank instead continued to use the February 19, 2013, DPRM Rankings and Fill Probability scores for all dark pools, with several exceptions.<sup>12</sup> During this time period, SuperX+ routed more than 816 million orders, comprising more than 1.16 trillion shares.

46. Between February 2013 and February 2014, Deutsche Bank continued to reference the DPRM in statements to clients and potential clients, stating, among other things, that it "ranks pools based on execution quality," is "the core of SuperX+," and "periodically rank[s] the pools based on their performance in each category." Deutsche Bank did not inform clients or potential clients that it was unable to update the DPRM during this time period, that it manually ranked its own dark pool at the top of the DPRM Rankings, that at least two venues

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<sup>10</sup> A subsequent analysis commissioned by Deutsche Bank during the course of the investigation that gave rise to this order determined that the same coding error that had prevented Deutsche Bank from updating the DPRM had also caused the erroneous drop in Super X's ranking in February 2013. That analysis demonstrated that had Deutsche Bank updated the DPRM in February 2013 without the coding error, SuperX would have been ranked in the top tier and thus been eligible to receive all classes of client orders during the Relevant Period.

<sup>11</sup> Deutsche Bank attempted to update the DPRM on June 7, 2013 and October 2, 2013, but could not make new calculations of venue performance on these dates.

<sup>12</sup> First, as discussed above, Deutsche Bank manually overrode the DPRM Ranking for SuperX and continued to rank SuperX first until July 2014. In addition, Deutsche Bank did not update the DPRM Rankings for four venues on February 19, 2013. For three of the venues, Deutsche Bank continued to use the December 20, 2011, DPRM Rankings until February 5, 2014. For the fourth, a newly-connected venue, Deutsche Bank used the DPRM Ranking it manually assigned to the venue on May 4, 2012.

received orders that they should not have received had Deutsche Bank operated the DPRM as it had represented, or that Deutsche Bank continued to use the DPRM Rankings from December 2011 for three venues, and manually assigned scores from May 2012 for another venue. Deutsche Bank also did not correct prior statements, described above, regarding the DPRM's operations.

**Deutsche Bank Determined That Stale Dark Pool Rankings Were Caused By Data Errors, and Revised Its Ranking Methodology**

47. In February 2014, after several years of development, Deutsche Bank implemented a new and different statistical methodology for calculating the DPRM Ranking. The new methodology ranked the pools based on a calculation of the amount of price "reversion" in venues to which SuperX+ routes. More specifically, the updated methodology measured the change in price of an order routed by Deutsche Bank between the time of order execution and 20 milliseconds after order execution, and used that metric to determine venue quality. The new methodology has operated continuously since February 2014 and remains in use to the present day.

48. In July 2014, Deutsche Bank discovered why it had had such difficulty updating the DPRM during the Relevant Period. Throughout that time period, a coding error in Deutsche Bank's systems had corrupted the data input into the DPRM and had made it impossible for Deutsche Bank's computers to process the proper execution quality data. Also in July 2014, Deutsche Bank management ordered the immediate removal of the manual override to SuperX's ranking.

49. As initially designed, the first generation DPRM included in its calculations data from only "non-algorithmic" orders, which Deutsche Bank defined, for these purposes, to mean orders that a Deutsche Bank trader or client directed to SuperX+. Thus, prior to February 2014, Deutsche Bank intended to exclude, from the data input into the DPRM, orders that originated in a Deutsche Bank trading or execution algorithm.<sup>13</sup>

50. In 2011, Deutsche Bank began transitioning from one trading platform to another. By late 2011, a coding error that occurred in connection with that transition caused Deutsche Bank's systems to begin unintentionally including algorithmic orders in the data input into the DPRM. By early 2012, those orders appeared in the DPRM's input data set in such large quantities that Deutsche Bank's computer system was unable to process the quantity of data, and

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<sup>13</sup> Deutsche Bank intended to, and did, incorporate algorithmic orders into the input of the new methodology implemented in February 2014.

thus unable to update the Rankings and Fill Probability scores.<sup>14</sup> As discussed above, Deutsche Bank input algorithmic orders into the first generation DPRM for two years (until it changed the DPRM methodology) and did not realize it had done so until July 2014.

### **Deutsche Bank Failed to Amend Its Form ATS**

51. Between August 2009 (when Deutsche Bank filed its Form ATS initial operation report) and May 2015 (when prompted by SEC staff), Deutsche Bank did not attach to its Form ATS a copy of SuperX's subscriber manual and other materials provided to subscribers. Moreover, Deutsche Bank did not amend its Form ATS to correct certain information about the operations of the ATS, including changes to its hours of operations and use of benchmark orders.

## **V.**

### **Violations**

52. As a result of the conduct described above, Deutsche Bank willfully<sup>15</sup> violated:

a. Section 17(a)(2) of the Securities Act, which prohibits, directly or indirectly, in the offer or sale of securities, obtaining money or property by means of any untrue statement of a material fact or any omission to state a material fact necessary in order to make the statements made, in light of the circumstances under which they were made, not misleading; and

b. Rule 301(b)(2) of Regulations ATS, which requires an ATS to file an amendment on Form ATS at least 20 days prior to implementing a material change to the operation of the ATS, within 30 days after the end of a quarter when information contained in an initial operation report filed on Form ATS becomes inaccurate, and promptly upon discovering that an initial operation report filed on Form ATS or an amendment on Form ATS was inaccurate when filed.

## **REMEDIAL EFFORTS**

53. In determining to accept the Offer, the Commission considered remedial acts undertaken by Respondent.

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<sup>14</sup> As discussed above, Deutsche Bank was able to update the DPRM on February 19, 2013, only by running the DPRM in batches. Due to the coding error, the February 2013 DPRM Rankings for two pools were inflated, with these venues receiving millions of orders contrary to the DPRM methodology Deutsche Bank claimed it was using. Also due to the same coding error, SuperX erroneously received a low ranking, which Deutsche Bank manually overrode.

<sup>15</sup> 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)).

## VI.

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

Accordingly, pursuant to Section 8A of the Securities Act, Sections 15(b) and 21C of the Exchange Act, and Section 203(e) of the Advisers Act, it is hereby ORDERED that:

A. Deutsche Bank cease and desist from committing or causing any violations and any future violations of Section 17(a)(2) of the Securities Act and Rule 301(b)(2) of Regulation ATS;

B. Deutsche Bank is censured;

C. Deutsche Bank shall, within 14 days of the entry of this Order, pay a civil money penalty in the amount of \$18,500,000 to the Securities and Exchange Commission for transfer to the general fund of the United States Treasury, subject to Exchange Act Section 21F(g)(3). If timely payment is not made, additional interest shall accrue pursuant to 31 U.S.C. §3717.

Payment must be made in one of the following ways:

- (1) Respondent 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 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 Deutsche Bank 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 Robert Cohen, Co-Chief, Market Abuse Unit, Division of Enforcement, Securities and Exchange Commission, 100 F Street, NE, Washington, DC 20549, or to Joseph G. Sansone, Co-Chief, Market Abuse Unit, Division of Enforcement, Securities and Exchange Commission, Brookfield Place, 200 Vesey Street, Suite 400, New York, NY 10281.

Amounts ordered to be paid as civil money penalties pursuant to this Order shall be treated as penalties paid to the government for all purposes, including all tax purposes. To preserve the deterrent effect of the civil penalty, Respondent agrees that in any Related Investor Action, it shall not argue that it is entitled to, nor shall it benefit by, offset or reduction of any award of compensatory damages by the amount of any part of Respondent's payment of a civil penalty in this action ("Penalty Offset"). If the court in any Related Investor Action grants such a Penalty Offset, Respondent agrees that it shall, within 30 days after entry of a final order granting the Penalty Offset, notify the Commission's counsel in this action and pay the amount of the Penalty Offset to the Securities and Exchange Commission. Such a payment shall not be deemed an additional civil penalty and shall not be deemed to change the amount of the civil penalty imposed in this proceeding. For purposes of this paragraph, a "Related Investor Action" means a private damages action brought against Respondent by or on behalf of one or more investors based on substantially the same facts as alleged in the Order instituted by the Commission in this proceeding.

By the Commission.

Brent J. Fields  
Secretary