

CORRECTED

SECURITIES AND EXCHANGE COMMISSION  
(Release No. 34-67091; File No. 4-631)

May 31, 2012

Joint Industry Plans; Order Approving, on a Pilot Basis, the National Market System Plan to Address Extraordinary Market Volatility by BATS Exchange, Inc., BATS Y-Exchange, Inc., Chicago Board Options Exchange, Incorporated, Chicago Stock Exchange, Inc., EDGA Exchange, Inc., EDGX Exchange, Inc., Financial Industry Regulatory Authority, Inc., NASDAQ OMX BX, Inc., NASDAQ OMX PHLX LLC, The Nasdaq Stock Market LLC, National Stock Exchange, Inc., New York Stock Exchange LLC, NYSE MKT LLC, and NYSE Arca, Inc.

I. Introduction

On April 5, 2011, NYSE Euronext, on behalf of New York Stock Exchange LLC (“NYSE”), NYSE Amex LLC (“NYSE Amex”),<sup>1</sup> and NYSE Arca, Inc. (“NYSE Arca”), and the following parties to the proposed National Market System Plan: BATS Exchange, Inc., BATS Y-Exchange, Inc., Chicago Board Options Exchange, Incorporated (“CBOE”), Chicago Stock Exchange, Inc., EDGA Exchange, Inc., EDGX Exchange, Inc., Financial Industry Regulatory Authority, Inc., NASDAQ OMX BX, Inc., NASDAQ OMX PHLX LLC, the Nasdaq Stock Market LLC, and National Stock Exchange, Inc. (collectively with NYSE, NYSE MKT, and NYSE Arca, the “Participants”), filed with the Securities and Exchange Commission (the “Commission”) pursuant to Section 11A of the Securities Exchange Act of 1934 (“Act”),<sup>2</sup> and Rule 608 thereunder,<sup>3</sup> a proposed Plan to Address Extraordinary Market Volatility (as amended, the “Plan”).<sup>4</sup> A copy of the Plan is attached as Exhibit A hereto. The Participants requested that

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<sup>1</sup> On May 14, 2012, NYSE Amex filed a proposed rule change on an immediately effective basis to change its name to NYSE MKT LLC (“NYSE MKT”). See Securities Exchange Act Release No. 67037 (May 21, 2012) (SR-NYSEAmex-2012-32).

<sup>2</sup> 15 U.S.C. 78k-1.

<sup>3</sup> 17 CFR 242.608.

<sup>4</sup> See Letter from Janet M. McGinness, Senior Vice President, Legal and Corporate Secretary, NYSE Euronext, to Elizabeth M. Murphy, Secretary, Commission, dated April 5, 2011 (“Transmittal Letter”).

the Commission approve the Plan as a one-year pilot.<sup>5</sup> The Plan was published for comment in the Federal Register on June 1, 2011.<sup>6</sup> The Commission received eighteen comment letters in response to the proposal.<sup>7</sup> On September 27, 2011, the Commission extended the deadline for

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<sup>5</sup> Id. at 1.

<sup>6</sup> See Securities Exchange Act Release No. 64547 (May 25, 2011), 76 FR 31647 (“Notice”).

<sup>7</sup> See Letter from Steve Wunsch, Wunsch Auction Associates, LLC, to Elizabeth M. Murphy, Secretary, Commission, dated June 2, 2011 (“Wunsch Letter”); Letter from Peter J. Driscoll, Investment Professional, Chicago, IL, to Elizabeth M. Murphy, Secretary, Commission, dated June 17, 2011 (“Driscoll Letter”); Letter from Stuart J. Kaswell, Executive Vice President & Managing Director, General Counsel, Managed Funds Association (“MFA”), to Elizabeth M. Murphy, Secretary, Commission, dated June 21, 2011 (“MFA Letter”); Letter from George U. Sauter, Managing Director and Chief Investment Officer, The Vanguard Group, Inc. (“Vanguard”), to Elizabeth M. Murphy, Secretary, Commission, dated June 22, 2011 (“Vanguard Letter”); Letter from Karrie McMillan, General Counsel, Investment Company Institute (“ICI”), to Elizabeth M. Murphy, Secretary, Commission, dated June 22, 2011 (“ICI Letter”); Letter from Manisha Kimmel, Executive Director, Financial Information Forum (“FIF”), to Elizabeth M. Murphy, Secretary, Commission, dated June 22, 2011 (“FIF Letter”); Letter from Craig S. Donohue, Chief Executive Officer, CME Group Inc., to Elizabeth M. Murphy, Secretary, Commission, dated June 22, 2011 (“CME Letter”); Letter from Joseph N. Cangemi, Chairman, and Jim Toes, President and Chief Executive Officer, Security Traders Association, to Elizabeth M. Murphy, Secretary, Commission, dated June 22, 2011 (“STA Letter”); Letter from Leonard J. Amoruso, General Counsel, Knight Capital Group, Inc. (“Knight”), to Elizabeth M. Murphy, Secretary, Commission, dated June 22, 2011 (“Knight Letter”); Letter from Ann L. Vlcek, Managing Director and Associate General Counsel, Securities Industry and Financial Markets Association (“SIFMA”), to Elizabeth M. Murphy, Secretary, Commission, dated June 22, 2011 (“SIFMA Letter”); Letter from Jamie Selway, Managing Director, and Patrick Chi, Chief Compliance Officer, ITG Inc., to Elizabeth M. Murphy, Secretary, Commission, dated June 23, 2011 (“ITG Letter”); Letter from Jose Marques, Managing Director and Global Head of Electronic Equity Trading, Deutsche Bank Securities Inc. (“Deutsche Bank”), to Elizabeth M. Murphy, Secretary, Commission, dated June 23, 2011 (“Deutsche Bank Letter”); Letter from Kimberly Unger, Esq., Executive Director, The Security Traders Association of New York, Inc., to Elizabeth M. Murphy, Secretary, Commission, dated June 23, 2011 (“STANY Letter”); Letter from James J. Angel, Ph.D., CFA, Associate Professor of Finance, Georgetown University, McDonough School of Business, to Commission, dated June 24, 2011 (“Angel Letter”); Letter from John A. McCarthy, General Counsel, GETCO, to Elizabeth M. Murphy, Secretary, Commission, dated June 24, 2011 (“GETCO Letter”); Letter from Andrew C. Small, Executive Director and General Counsel, Scottrade, Inc., to Elizabeth M. Murphy, Secretary, Commission, dated July 5, 2011 (“Scottrade Letter”); Letter from Peter Skopp, President, Molinete Trading

Commission action on the Plan and designated November 28, 2011 as the new date by which the Commission would be required to take action.<sup>8</sup> The Commission found that such extension was appropriate in order to provide sufficient time to consider and take action on the Plan, in light of, among other things, the comments received on the proposal.<sup>9</sup> On November 2, 2011, the Participants to the Plan, other than CBOE, responded to the comment letters and proposed changes to the Plan that were subsequently reflected in an amendment.<sup>10</sup> On November 18, 2011, the Participants consented to the Commission's request that the deadline for Commission action on the Plan be extended an additional three months, to February 29, 2012.<sup>11</sup> On February 27, 2012, the Participants consented to the Commission's request that the deadline for Commission action on the Plan be extended an additional three months, to May 31, 2012.<sup>12</sup> On

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Inc., to Elizabeth M. Murphy, Secretary, Commission, dated July 19, 2011 ("Molinete Letter"); and Letter from Sal Arnuk, Joe Saluzzi, and Paul Zajac, Themis Trading, LLC, to Elizabeth M. Murphy, Secretary, Commission ("Themis Letter"). Copies of all comments received on the proposed Plan are available on the Commission's website, located at <http://www.sec.gov/comments/4-631/4-631.shtml>. Comments are also available for website viewing and printing in the Commission's Public Reference Room, 100 F Street, NE, Washington, DC 20549, on official business days between the hours of 10:00 a.m. and 3:00 p.m ET.

<sup>8</sup> See Securities Exchange Act Release No. 65410 (September 27, 2011), 76 FR 61121 (Oct. 3, 2011)

<sup>9</sup> Id.

<sup>10</sup> See Letter from Janet M. McGinness, Senior Vice President, Legal and Corporate Secretary, NYSE Euronext, to Elizabeth M. Murphy, Secretary, Commission, dated November 2, 2011 ("Response Letter").

<sup>11</sup> See Letter from Janet M. McGinness, Senior Vice President and Corporate Secretary, NYSE Euronext, to Elizabeth M. Murphy, Secretary, Commission, dated November 18, 2011.

<sup>12</sup> See Letter from Janet M. McGinness, Senior Vice President and Corporate Secretary, NYSE Euronext, to Elizabeth M. Murphy, Secretary, Commission, dated February 27, 2012.

May 24, 2012, the Participants submitted an amendment that proposed several changes to the Plan.<sup>13</sup> This order approves the Plan, as amended, on a one-year pilot basis.

## II. Background

On May 6, 2010, the U.S. equity markets experienced a severe disruption.<sup>14</sup> Among other things, the prices of a large number of individual securities suddenly declined by significant amounts in a very short time period, before suddenly reversing to prices consistent with their pre-decline levels. This severe price volatility led to a large number of trades being executed at temporarily depressed prices, including many that were more than 60% away from pre-decline prices and were broken by the exchanges and FINRA. The Commission was concerned that events such as those that occurred on May 6 could seriously undermine the integrity of the U.S. securities markets. Accordingly, Commission staff has worked with the exchanges and FINRA since that time to identify and assess the causes and contributing factors of the May 6 market disruption<sup>15</sup> and to fashion policy responses that will help prevent a recurrence.

One such response to the events of May 6, 2010, was the development of the single-stock circuit breaker pilot program, which was implemented through a series of rule filings by the Exchanges and FINRA. This pilot was introduced in three stages, beginning in June 2010. In

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<sup>13</sup> See Letter from Janet M. McGinness, Senior Vice President, Legal and Corporate Secretary, NYSE Euronext, to Elizabeth M. Murphy, Secretary, Commission, dated May 24, 2012 (“Amendment”).

<sup>14</sup> The events of May 6 are described more fully in a joint report by the staffs of the Commodity Futures Trading Commission (“CFTC”) and the Commission. See Report of the Staffs of the CFTC and SEC to the Joint Advisory Committee on Emerging Regulatory Issues, “Findings Regarding the Market Events of May 6, 2010,” dated September 30, 2010, available at <http://www.sec.gov/news/studies/2010/marketevents-report.pdf>.

<sup>15</sup> Id.

the first stage, the Commission approved, on an accelerated basis, proposed rule changes by the Exchanges and FINRA to pause trading during periods of extraordinary market volatility in stocks included in Standard & Poor's 500 index.<sup>16</sup> In the second stage, the Commission approved the Exchanges' and FINRA's proposals to add securities included in the Russell 1000 index, as well as specified exchange traded products ("ETPs"), to the pilot.<sup>17</sup> In the third stage, the Commission approved the Exchanges' and FINRA's proposals to add all remaining NMS stocks, as defined in Rule 600(b)(47) of Regulation NMS under the Act ("NMS Stocks")<sup>18</sup> to the pilot.<sup>19</sup> The Exchanges and FINRA each subsequently filed, on an immediately effective basis, proposals to exempt all rights and warrants from the pilot.<sup>20</sup> The single-stock circuit breaker pilot is currently set to expire on July 31, 2012.<sup>21</sup>

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<sup>16</sup> See Securities Exchange Act Release Nos. 62252 (June 10, 2010), 75 FR 34186 (June 16, 2010) (File Nos. SR-BATS-2010-014; SR-EDGA-2010-01; SR-EDGX-2010-01; SR-BX-2010-037; SR-ISE-2010-48; SR-NYSE-2010-39; SR-NYSEAmex-2010-46; SR-NYSEArca-2010-41; SR-NASDAQ-2010-061; SR-CHX-2010-10; SR-NSX-2010-05; and SR-CBOE-2010-047); 62251 (June 10, 2010), 75 FR 34183 (June 16, 2010) (SR-FINRA-2010-025).

<sup>17</sup> See Securities Exchange Act Release Nos. 62884 (September 10, 2010), 75 FR 56618 (September 16, 2010) (File Nos. SR-BATS-2010-018; SR-BX-2010-044; SR-CBOE-2010-065; SR-CHX-2010-14; SR-EDGA-2010-05; SR-EDGX-2010-05; SR-ISE-2010-66; SR-NASDAQ-2010-079; SR-NYSE-2010-49; SR-NYSEAmex-2010-63; SR-NYSEArca-2010-61; and SR-NSX-2010-08); and Securities Exchange Act Release No. 62883 (September 10, 2010), 75 FR 56608 (September 16, 2010) (SR-FINRA-2010-033).

<sup>18</sup> 17 CFR 242.600(b)(47).

<sup>19</sup> See Securities Exchange Act Release No. 64735 (June 23, 2011), 76 FR 38243 (June 29, 2011) (File Nos. SR-BATS-2011-016; SR-BYX-2011-011; SR-BX-2011-025; SR-CBOE-2011-049; SR-CHX-2011-09; SR-EDGA-2011-15; SR-EDGX-2011-14; SR-FINRA-2011-023; SR-ISE-2011-028; SR-NASDAQ-2011-067; SR-NYSE-2011-21; SR-NYSEAmex-2011-32; SR-NYSEArca-2011-26; SR-NSX-2011-06; SR-Phlx-2011-64).

<sup>20</sup> See, e.g., Securities Exchange Act Release No. 65810 (November 23, 2011) 76 FR 74080 (November 30, 2011) (SR-NYSE-2011-57).

<sup>21</sup> See, e.g., Securities Exchange Act Release No. 66134 (January 11, 2012), 77 FR 2592 (January 18, 2012) (SR-NYSE-2011-68).

The Plan is intended to replace the single-stock circuit breaker pilot that is currently in place.

### III. Description of the Proposal

The Participants filed the Plan to create a market-wide limit up-limit down mechanism that is intended to address extraordinary market volatility in NMS Stocks.<sup>22</sup> The Plan sets forth procedures that provide for market-wide limit up-limit down requirements that would be designed to prevent trades in individual NMS Stocks from occurring outside of the specified price bands.<sup>23</sup> These limit up-limit down requirements would be coupled with trading pauses, as defined in Section I(X) of the Plan, to accommodate more fundamental price moves (as opposed to erroneous trades or momentary gaps in liquidity).

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In addition to the trading pause pilot for individual securities, the Commission and the SROs also implemented other regulatory responses to the events of May 6, 2010. For example, the Commission approved proposed rule changes that set forth clearer standards and reduced the discretion of self-regulatory organizations with respect to breaking erroneous trades. See e.g., Securities Exchange Act Release No. 62886 (September 10, 2010), 75 FR 56613 (September 16, 2010). Further, the Commission approved proposed rule changes that enhanced the minimum quoting standards for equity market makers to require that they post continuous two-sided quotations within a designated percentage of the inside market to eliminate market maker “stub quotes” that are so far away from the prevailing market that they are clearly not intended to be executed. See Securities Exchange Act Release No. 63255 (November 5, 2010), 75 FR 69484 (November 12, 2010).

<sup>22</sup> See Section I(H) of the Plan.

<sup>23</sup> As set forth in Section V of the Plan, the price bands would consist of a Lower Price Band and an Upper Price Band for each NMS Stock. The price bands would be based on a Reference Price that equals the arithmetic mean price of Eligible Reported Transactions for the NMS stock over the immediately preceding five-minute period. As defined in the proposed Plan, Eligible Reported Transactions would have the meaning prescribed by the Operating Committee for the proposed Plan, and generally mean transactions that are eligible to update the sale price of an NMS Stock.

As set forth in Section V of the Plan, the price bands would consist of a Lower Price Band and an Upper Price Band for each NMS Stock.<sup>24</sup> The price bands would be calculated by the Securities Information Processors (“SIPs” or “Processors”) responsible for consolidation of information for an NMS Stock pursuant to Rule 603(b) of Regulation NMS under the Act.<sup>25</sup> Those price bands would be based on a Reference Price<sup>26</sup> for each NMS Stock that equals the arithmetic mean price of Eligible Reported Transactions for the NMS Stock over the immediately preceding five-minute period. The price bands for an NMS Stock would be calculated by applying the Percentage Parameter for such NMS Stock to the Reference Price, with the Lower Price Band being a Percentage Parameter<sup>27</sup> below the Reference Price, and the Upper Price Band being a Percentage Parameter above the Reference Price. Between 9:30 a.m. and 9:45 a.m. ET and 3:35 p.m. and 4:00 p.m. ET, the price bands would be calculated by applying double the Percentage Parameters.

The Processors would also calculate a Pro-Forma Reference Price for each NMS Stock on a continuous basis during Regular Trading Hours. If a Pro-Forma Reference Price did not

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<sup>24</sup> Capitalized terms used herein but not otherwise defined shall have the meaning ascribed to such terms in the Plan.

<sup>25</sup> 17 CFR 242.603(b). The Plan refers to this entity as the Processor.

<sup>26</sup> See Section I(T) of the Plan.

<sup>27</sup> As initially proposed by the Participants, the Percentage Parameters for Tier 1 NMS Stocks (*i.e.*, stocks in the S&P 500 Index or Russell 1000 Index and certain ETPs) with a Reference Price of \$1.00 or more would be five percent and less than \$1.00 would be the lesser of (a) \$0.15 or (b) 75 percent. The Percentage Parameters for Tier 2 NMS Stocks (*i.e.*, all NMS Stocks other than those in Tier 1) with a Reference Price of \$1.00 or more would be 10 percent and less than \$1.00 would be the lesser of (a) \$0.15 or (b) 75 percent. The Percentage Parameters for a Tier 2 NMS Stock that is a leveraged ETP would be the applicable Percentage Parameter set forth above multiplied by the leverage ratio of such product. On May 24, 2012, the Participants amended the Plan to create a 20% price band for Tier 1 and Tier 2 stocks with a Reference Price of \$0.75 or more and up to and including \$3.00. The Percentage Parameter for stocks with a Reference Price below \$0.75 would be the lesser of (a) \$0.15 or (b) 75 percent.

move by one percent or more from the Reference Price in effect, no new price bands would be disseminated, and the current Reference Price would remain the effective Reference Price. If the Pro-Forma Reference Price moved by one percent or more from the Reference Price in effect, the Pro-Forma Reference Price would become the Reference Price, and the Processors would disseminate new price bands based on the new Reference Price. Each new Reference Price would remain in effect for at least 30 seconds.

When one side of the market for an individual security is outside the applicable price band, the Processors would be required to disseminate such National Best Bid<sup>28</sup> or National Best Offer<sup>29</sup> with an appropriate flag identifying it as non-executable. When the other side of the market reaches the applicable price band, the market for an individual security would enter a Limit State,<sup>30</sup> and the Processors would be required to disseminate such National Best Offer or National Best Bid with an appropriate flag identifying it as a Limit State Quotation.<sup>31</sup> All trading would immediately enter a Limit State if the National Best Offer equals the Lower Limit Band and does not cross the National Best Bid, or the National Best Bid equals the Upper Limit Band and does not cross the National Best Offer. Trading for an NMS Stock would exit a Limit State if, within 15 seconds of entering the Limit State, all Limit State Quotations were executed or canceled in their entirety. If the market did not exit a Limit State within 15 seconds, then the Primary Listing Exchange would declare a five-minute trading pause, which would be applicable to all markets trading the security.

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<sup>28</sup> 17 CFR 242.600(b)(42). See also Section I(G) of the Plan.

<sup>29</sup> Id.

<sup>30</sup> A stock enters the Limit State if the National Best Offer equals the Lower Price Band and does not cross the National Best Bid, or the National Best Bid equals the Upper Price Band and does not cross the National Best Offer. See Section VI(A) of the Plan.

<sup>31</sup> See Section I(D) of the Plan.



These limit up-limit down requirements would be coupled with trading pauses<sup>32</sup> to accommodate more fundamental price moves (as opposed to erroneous trades or momentary gaps in liquidity). As set forth in more detail in the Plan, all trading centers<sup>33</sup> in NMS Stocks, including both those operated by Participants and those operated by members of Participants, would be required to establish, maintain, and enforce written policies and procedures that are reasonably designed to comply with the limit up-limit down and trading pause requirements specified in the Plan.

Under the Plan, all trading centers would be required to establish, maintain, and enforce written policies and procedures reasonably designed to prevent the display of offers below the Lower Price Band and bids above the Upper Price Band for an NMS Stock. The Processors would disseminate an offer below the Lower Price Band or bid above the Upper Price Band that nevertheless inadvertently may be submitted despite such reasonable policies and procedures, but with an appropriate flag identifying it as non-executable; such bid or offer would not be included in National Best Bid or National Best Offer calculations. In addition, all trading centers would be required to develop, maintain, and enforce policies and procedures reasonably designed to prevent trades at prices outside the price bands, with the exception of single-priced opening, reopening, and closing transactions on the Primary Listing Exchange.

As proposed, the Plan would be implemented as a one-year pilot program in two Phases. Phase I of the Plan would be implemented immediately following the initial date of Plan operations; Phase II of the Plan would commence six months after the initial date of the Plan or

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<sup>32</sup> The primary listing market would declare a trading pause in an NMS Stock; upon notification by the primary listing market, the Processor would disseminate this information to the public. No trades in that NMS Stock could occur during the trading pause, but all bids and offers may be displayed. See Section VII(A) of the Plan.

<sup>33</sup> As defined in Section I(W) of the Plan, a trading center shall have the meaning provided in Rule 600(b)(78) of Regulation NMS under the Act.

such earlier date as may be announced by the Processors with at least 30 days' notice. Phase I of the Plan would apply only to Tier 1 NMS Stocks, as defined in Appendix A of the Plan. During Phase I of the Plan, the first Price Bands would be calculated and disseminated 15 minutes after the start of Regular Trading Hours, no Price Bands would be calculated and disseminated less than 30 minutes before the end of Regular Trading Hours, and trading would not enter a Limit State less than 25 minutes before the end of Regular Trading Hours. In Phase II, the Plan would fully apply to all NMS Stocks beginning at 9:30 a.m. and ending at 4:00 p.m. each trading day.

As stated by the Participants in the Plan, the limit up-limit down mechanism is intended to reduce the negative impacts of sudden, unanticipated price movements in NMS Stocks,<sup>34</sup> thereby protecting investors and promoting a fair and orderly market.<sup>35</sup> In particular, the Plan is designed to address the type of sudden price movements that the market experienced on the afternoon of May 6, 2010.<sup>36</sup>

#### IV. Comment Letters and Response Letter

The Commission received 18 comment letters on the proposed Plan.<sup>37</sup> Many commenters generally supported the Plan,<sup>38</sup> while others indicated that they did not oppose the Plan and its intended goals, but raised concerns regarding specific details on the terms of the

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<sup>34</sup> 17 CFR 242.600(b)(47).

<sup>35</sup> See Transmittal Letter, supra note 4.

<sup>36</sup> The limit up-limit down mechanism set forth in the proposed Plan would replace the existing single-stock circuit breaker pilot. See e.g., Securities Exchange Act Release Nos. 62251 (June 10, 2010), 75 FR 34183 (June 16, 2010) (SR-FINRA-2010-025); 62883 (September 10, 2010), 75 FR 56608 (September 16, 2010) (SR-FINRA-2010-033).

<sup>37</sup> See supra note 7.

<sup>38</sup> See MFA Letter at 1; Vanguard Letter at 1; ICI Letter at 1; STA Letter at 1; Knight Letter at 1; SIFMA Letter at 1; ITG Letter at 1; Deutsche Bank Letter at 1; STANY Letter at 1; GETCO Letter at 1.

Plan.<sup>39</sup> A few commenters opposed<sup>40</sup> the Plan and suggested different alternatives to achieve the intended goal of the Plan. The Participants responded to the comments regarding the proposal.<sup>41</sup>

A. Reference Price Calculation

As proposed in the Plan, the Processors would be responsible for calculating and disseminating the applicable Price Bands as provided for in Section V of the Plan. The Processors for each NMS stock would calculate and disseminate to the public a Lower Price Band and an Upper Price Band during regular trading hours, as defined in Section I(R) of the Plan, for such NMS Stock. The Price Bands would be based on a Reference Price for each NMS Stock that equals the arithmetic mean price of Eligible Reported Transactions<sup>42</sup> for the NMS stock over the immediately preceding five-minute period (except for periods following openings and reopenings).<sup>43</sup> The Price Bands for an NMS Stock would be calculated by applying the Percentage Parameter<sup>44</sup> for such NMS Stock to the Reference Price, with the lower Price Band

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<sup>39</sup> See Driscoll Letter at 1; FIF Letter at 1; Angel Letter at 1 (stating that the proposed Plan is an improvement over the current single stock circuit breaker pilot); Scottrade Letter at 1 and 5 (supporting the goals of the proposed Plan, but stating that it believes that more work needs to be done before it can support the proposed Plan); Themis Letter at 1 (commending the efforts of the proposed Plan); Molinete Letter at 1.

<sup>40</sup> See Wunsch Letter at 1; CME Group Letter at 1-2 (supporting the proposed Plan's fundamental goal of promoting fair and orderly markets and mitigating the negative impacts of sudden and extraordinary price movements in NMS stocks, but stating that the proposed Plan sets forth an overly complicated and insufficiently coordinated structure that, in a macro-liquidity event, will have the unintended consequence of undermining rather than promoting liquidity).

<sup>41</sup> See Response Letter, supra note 10.

<sup>42</sup> As defined in the proposed Plan, Eligible Reported Transactions shall have the meaning prescribed by the Operating Committee for the proposed Plan, and generally mean transactions that are eligible to update the sale price of an NMS Stock.

<sup>43</sup> See infra, Section III.G. for a discussion on the application of the Price Bands at the open and close of the trading day.

<sup>44</sup> As defined in Section (I)(M) of the proposed Plan, the "Percentage Parameter" means the percentages for each tier of NMS Stocks set forth in Appendix A of the Plan. As such,

being a Percentage Parameter below the Reference Price, and the upper Price Band being a Percentage Parameter above the Reference Price. Some commenters expressed concern about the complexity involved in calculating the Reference Price.<sup>45</sup>

Commenters suggested alternative ways to calculate the Reference Price. In its letter, one commenter suggested simplifying the Reference Price calculation by “calculating a new Reference Price on regular 30 second intervals, regardless of whether it has changed by 1%” and noted that “[t]his simplification also obviates the definition of a Pro-Forma Reference Price.”<sup>46</sup> That commenter also recommended calculating the Reference Prints with a volume weighted average price rather than an arithmetic average price, which would remove the possibility of market participants splitting orders in different ways to affect the calculation of the Reference Price.<sup>47</sup> Another commenter stated that the Participants should consider using the opening price of a stock as the Reference Price because it would be much simpler than the calculation that the

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the Percentage Parameters for Tier 1 NMS Stocks with a Reference Price of \$1.00 or more would be 5%, and the Percentage Parameters for Tier 2 NMS Stocks with a Reference Price of \$1.00 or more would be 10%. For Tier 1 and Tier 2 NMS Stocks with a Reference Price less than \$0.75, the Percentage Parameters would be the lesser of \$0.15 or 75%. The Percentage Parameters for a Tier 2 NMS Stock that is a leveraged exchange-traded product would be the applicable Percentage Parameter multiplied by the leverage ratio of such product.

<sup>45</sup> See Angel Letter at 4; GETCO Letter at 3-4; MFA Letter at 5; Molinete Letter at 1-2 (stating that it is not clear whether the trades used to calculate the Reference Price are weighted by volume, or if this is a strict average of the trade prices reported); Themis Letter at 1. See also SIFMA Letter at 8 (noting that if the market price for an NMS Stock moves by less than one percent, the Price Bands will not change and, as a result, the limit up and limit down prices will be closer to four percent than five percent over the prevailing market price because a new Reference Price will only be disseminated if there is a change of one percent or more in the Pro-Forma Reference Price over the then prevailing Reference Price).

<sup>46</sup> See MFA Letter at 5.

<sup>47</sup> Id.

Participants proposed.<sup>48</sup> Another commenter stated that the Participants should consider using the prior day's closing price as a static Reference Price, rather than constantly updating the Reference Price throughout the trading day, noting that this would be similar to how the futures markets calculate their limit up-limit down Price Bands.<sup>49</sup>

Commenters also stated that certain types of trades should be exempted from the Plan and thus the calculation of the Reference Price. Three commenters noted that certain Regulation NMS-exempt trades should be exempt from the Plan because they are unrelated to the last sale of a stock.<sup>50</sup> More specifically, one commenter stated that “trading centers should be permitted to execute orders internally at prices outside of the specified Price Bands if the executions comply [with certain Regulation NMS exemptions].”<sup>51</sup> That commenter noted that most Regulation NMS exemptions “have corresponding sale conditions that identify those trades as being not eligible for last sale.”<sup>52</sup> Another commenter stated that certain block facilitation trades should be exempted from the Plan.<sup>53</sup> That commenter argued that block facilitation trades tend to stabilize

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<sup>48</sup> See Angel Letter 4.

<sup>49</sup> See GETCO Letter at 3-4. See also SIFMA Letter at 9 (requesting that the Participants clarify how Price Bands will apply to stocks with prices that cross the one dollar threshold during intra-day trading); Molinete Letter at 3-4 (stating its belief that changes in Price Band calculations throughout the trading day can create problems).

<sup>50</sup> See e.g., FIF Letter at 1-2; Deutsche Bank Letter at 3; SIFMA Letter at 2-4.

<sup>51</sup> See FIF Letter at 1-2 (listing the exemptions found in Rule 611(a) – non-convertible preferred securities; Rule 611(b)(2) – not regular way; Rule 611(b)(7) – benchmark derivatively priced; Rule 611(b)(9) – stopped stock; Rule 611(d) – qualified contingent trades; Rule 611(d) – error correction; Rule 611(d) – print protection).

<sup>52</sup> Id.

<sup>53</sup> See Deutsche Bank Letter at 3 (stating that “it is critical for a block facilitator to execute outside a band when the market is moving rapidly or it will lose the ability to trade effectively for its client.”) See also FIF Letter at 2 (requesting an impact analysis on the printing of block transactions accompanied by a Regulation NMS sweep as well as block transactions printed without ISO modifiers in adherence with Regulation NMS FAQ 3.23).

the market because a block positioner is committing capital to absorb a large trading interest that would otherwise impact the market for the underlying stock of the block order.<sup>54</sup> Finally, two commenters suggested that trades that are executed outside of the current Price Bands be exempt from Reference Price calculations.<sup>55</sup>

The Participants noted that alternatives were considered when the Plan was being drafted, but the Participants determined that something more dynamic would be preferable, and that the five percent level is more therefore appropriate, particularly for highly liquid stocks.<sup>56</sup> Moreover, the Participants stated that the proposed one percent requirement would help to reduce quote traffic but still provide for appropriate adjustments of Reference Prices in a rapidly moving market.<sup>57</sup> The Participants also stated that using the arithmetic average would reduce the impact of any erroneous trades that may be included in the calculation of the Reference Price.<sup>58</sup>

As discussed in greater detail below, the Participants recently amended the Plan to clarify that the Reference Price used in determining which Percentage Parameter is applicable during the trading day would be based on the closing price of the subject security on the Primary Listing Exchange on the previous trading day or, if no closing price exists, the last sale on the Primary Listing Exchange reported by the Processors. The Participants also amended the Plan to permit

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<sup>54</sup> Id.

<sup>55</sup> See MFA Letter at 6 (recommend that the Plan include a more explicit definition for which prints are included in calculating a Reference Price); STANY Letter at 2 (noting that clearly erroneous transactions may still occur, and thus suggesting that trades that are executed outside the then existing price bands not be included in the calculation of the Reference Price).

<sup>56</sup> See Response Letter at 4.

<sup>57</sup> The Participants are not proposing to amend the Plan with respect to the calculation of the Reference Price. However, in an effort to keep a rapidly-moving market aware of the current price bands, the Processor would republish the existing price bands every 15 seconds. See Response Letter at 5.

<sup>58</sup> Id.

certain transactions to execute outside of the price bands. Specifically, the Participants proposed that transactions that are exempt under Rule 611 of Regulation NMS,<sup>59</sup> and which do not update the last sale price (except if solely because the transaction was reported late), should be allowed to execute outside of the price bands.<sup>60</sup> As part of the amendment, the Participants also proposed to exclude rights and warrants from the Plan, consistent with the current single-stock circuit breaker pilot.<sup>61</sup>

B. Display of Offers Below the Lower Price Band and Bids Above the Upper Price Band

As proposed in the Plan, offers below the Lower Price Band and bids above the Upper Price Band would not be displayed on the consolidated tape. One commenter disagreed with this aspect of the Plan and stated that all quotes should be displayed, but marked as non-executable if outside the Price Bands.<sup>62</sup> That commenter stated that preventing the display of quotes outside the Price Bands could lead to unusual side effects and that a broker-dealer entering an order on behalf of a customer should have the option of re-pricing or posting the order in accordance with the customer's wishes, rather than a market center re-pricing non-executable orders to a Price Band.<sup>63</sup> Another commenter stated that displaying certain non-accessible quotes that are the result "of an altered price discovery process will have greater negative implications for investor confidence" because the only trades that can be executed during a Limit State "do not represent the true equilibrium of supply and demand."<sup>64</sup>

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<sup>59</sup> 17 CFR 242.611.

<sup>60</sup> See Amendment, supra note 13.

<sup>61</sup> Id.

<sup>62</sup> See MFA Letter at 2-3.

<sup>63</sup> See id.

<sup>64</sup> See Driscoll Letter at 3.

The Participants noted that under the Plan, all trading centers would be required to establish, maintain, and enforce written policies and procedures reasonably designed to prevent the display of offers below the Lower Price Band and bids above the Upper Price Band for an NMS Stock.<sup>65</sup> When one side of the market for an individual security is outside the applicable Price Band, the Processors would be required to disseminate such National Best Bid or National Best Offer with an appropriate flag identifying it as non-executable. When the other side of the market reaches the applicable Price Band, the market for an individual security would enter a Limit State, and the Processor would be required to disseminate such National Best Offer or National Best Bid with an appropriate flag identifying it as a Limit State Quotation. The Participants stated that after considering whether more quotes should be displayed as unexecutable, they determined that any potential benefits arising from such practice would be outweighed by the risk of investor confusion. As a result, the Participants did not believe that the Plan should be amended to permit all quotes outside the Price Bands to be displayed. The Participants stated that they would continue to review this issue and could revisit it after gaining experience during the pilot.<sup>66</sup>

C. Criteria for Entering the Limit State

As set forth in Section VI of the Plan, when one side of the market for an individual security is outside the applicable Price Band (i.e., when the National Best Bid<sup>67</sup> is below the Lower Limit Band or the National Best Offer<sup>68</sup> is above the Upper Limit Band for an NMS Stock), the Processors would be required to disseminate such National Best Bid or National Best

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<sup>65</sup> See Response Letter at 4.

<sup>66</sup> Id.

<sup>67</sup> 17 CFR 242.600(b)(42). See also Section I(G) of the Plan.

<sup>68</sup> Id.



Offer with an appropriate flag identifying it as non-executable. When the other side of the market reaches the applicable Price Band (i.e., when the National Best Offer is equal to the Lower Limit Band or the National Best Bid is equal to the Upper Limit Band for an NMS Stock), the market for an individual security would enter a Limit State,<sup>69</sup> and the Processors would be required to disseminate such National Best Offer or National Best Bid with an appropriate flag identifying it as a Limit State Quotation.<sup>70</sup>

Commenters expressed concern that requiring the National Best Bid or Offer (“NBBO”) to be equal to, but not necessarily cross the applicable Price Band in order to enter a Limit State could create some unusual market discrepancies.<sup>71</sup> One commenter stated that “it does not make sense for a Limit State to be triggered if the national best bid or offer equals a price band, but not if the national best bid or offer has crossed a price band [because the] same rationale for entering a Limit State exists in either case.”<sup>72</sup> Instead, the commenters suggested that if either the best bid or offer is outside the Price Band, the market should enter the Limit State.

One commenter expressed concern about a scenario where a stock is effectively not trading, but still has not entered a Limit State – for example, where the National Best Bid is below the Lower Price Band, and is thus non-executable, while the National Best Offer remains within the price bands. Since, in this example, the offer has not hit the Lower Price Band, the

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<sup>69</sup> As set forth in Section VI(B) of the Plan, when trading for an NMS Stock enters a Limit State, the Processor shall cease calculating and disseminating updated Reference Prices and Price Bands for the NMS Stock until either trading exits the Limit State or trading resumes with an opening or re-opening as provided in Section V of the proposed Plan.

<sup>70</sup> See Section I(D) of the Plan.

<sup>71</sup> See MFA Letter at 6 (stating that “buyers may not submit orders if the Upper Price Band is sufficiently far away from the market” and recommending that “if either the best bid or ask is outside the Price Band, the market enters a Limit State and has 5 seconds to readjust before a Trading Halt”); Deutsche Bank Letter at 4.

<sup>72</sup> See Deutsche Bank Letter at 4 (emphasis in original).

Limit State has not yet been triggered; however, the market for that stock is essentially one-sided, as the bid cannot be executed against. Since the Limit State has not yet been triggered, the concern is that the market could remain in this condition for an indefinite period of time.<sup>73</sup>

In the situation where a stock is effectively not trading, i.e., because the National Best Bid is below the Lower Price Band, but the National Best Offer is still within the price bands and thus the Limit State would not be triggered, the Participants responded that the National Best Offer would generally follow the National Best Bid downwards, and sellers would be willing to offer the stock at the Lower Price Band, triggering the Limit State.<sup>74</sup> The Participants also responded that, alternatively, the reference price may be recalculated due to transactions occurring in the previous five minutes. This could adjust the price bands downwards, potentially bringing the National Best Bid within the price bands, at which time it may be executed against.<sup>75</sup> The Participants represented that they would monitor these situations during the pilot and consider modifications to the Plan structure if needed.<sup>76</sup>

As discussed below, in response to commenters' concerns, the Participants recently amended the Plan to create a manual override function where the National Best Bid (Offer) for a security is below (above) the Lower (Upper) Price Band, and the security has not entered the Limit State. With this provision, the Primary Listing Exchange has the ability to initiate a trading pause for a stock in this situation.<sup>77</sup>

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<sup>73</sup> See Molinete Letter at 2-3 (discussing a situation where the market may not enter a Limit State due to a market order against an illiquid book that would execute against a quote that is outside the applicable price bands).

<sup>74</sup> See Response Letter at 5.

<sup>75</sup> Id.

<sup>76</sup> Id.

<sup>77</sup> See Amendment, supra note 13.

D. Order Handling During the Limit State

As set forth in the Plan, all trading centers<sup>78</sup> in NMS Stocks, including both those operated by Participants and those operated by members of Participants, would be required to establish, maintain, and enforce written policies and procedures that are reasonably designed to comply with the limit up-limit down and trading pause requirements specified in the Plan. Some commenters stated that clarifications are necessary regarding the Commission's Order Handling Rules so that they could be applied uniformly across all market centers once the Plan is in effect.<sup>79</sup> One commenter noted that market centers would benefit from guidance on best industry standards for handling customer orders during the periods of time when securities are in a Limit State, as well as periods when trading in a security restarts after a trading pause.<sup>80</sup>

E. Duration of the Limit State

By the terms of the Plan, trading for an NMS Stock would exit a Limit State if, within 15 seconds of entering the Limit State, the entire size of all Limit State Quotations is executed or cancelled. If the market does not exit a Limit State within 15 seconds, then the Primary Listing Exchange would declare a five-minute trading pause pursuant to Section VII of the Plan.

Two commenters suggested that the Plan should contemplate a longer Limit State than 15 seconds, such as 30 seconds, because a shorter time period would trigger too many trading

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<sup>78</sup> As defined in Section I(W) of the Plan, a trading center shall have the meaning provided in Rule 600(b)(78) of Regulation NMS under the Exchange Act.

<sup>79</sup> See STA Letter at 3; SIFMA Letter at 6 (stating that the proposal contemplates that broker-dealers may delay, reprice or reject "held" orders, thus implicating the limit order display rule as well as best execution requirements); Angel Letter at 4 (requesting the clarification of best execution requirements during the Limit State).

<sup>80</sup> See STA Letter at 3.

pauses.<sup>81</sup> One commenter advocated for a longer Limit State “[b]ecause the price bands should eliminate significant erroneous trades, and trading halts interfere with the natural interaction of orders and the price discovery process.”<sup>82</sup> That commenter stated that halts should thus “be limited to extraordinary circumstances.”<sup>83</sup> Another commenter noted that “15 seconds is not a sufficient amount of time for most investors to digest information about a limit state condition and to react to the information.”<sup>84</sup> These commenters believe that a 30 second Limit State would provide a more sufficient opportunity for market participants to provide liquidity to the market of an NMS Stock. These commenters stated that, at a minimum, the timeframe should not be shortened from the proposed 15 seconds.

Other commenters proposed shortening the length of the Limit State to 5 seconds, suggesting that this would be ample time for the market to replenish the necessary liquidity given the technological advances in modern trading.<sup>85</sup> One commenter stated that a shorter Limit State is preferable because a longer Limit State could lead to wider spreads and uncertainty in the options markets.<sup>86</sup> Another commenter stated that retail investors may wonder why their orders had not been executed.<sup>87</sup>

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<sup>81</sup> See Vanguard Letter at 2; ICI Letter at 2. One commenter stated it would serve the public to understand why 15 seconds was chosen for the Limit State condition, as opposed to 30 seconds, or perhaps 60 seconds. See Themis Letter at 1.

<sup>82</sup> See Vanguard Letter at 2.

<sup>83</sup> Id.

<sup>84</sup> See ICI Letter at 2.

<sup>85</sup> See SIFMA Letter at 5-6; MFA Letter at 6; and Scottrade Letter at 2.

<sup>86</sup> See SIFMA Letter at 5.

<sup>87</sup> See Scottrade Letter at 2 (stating its confidence that stocks that enter the Limit State Quotation erroneously will be addressed within a 5 second threshold, allowing the security to continue trading).

In response, the Participants stated that the 15-second Limit State should be long enough to reasonably attract additional available liquidity without recourse to a trading pause, while short enough to reasonably limit any market uncertainty that might accompany a Limit State.<sup>88</sup> The Participants represented that, during the pilot period, they will continue to review the length of the Limit State and consider whether, based on that experience, it should be lengthened or shortened.<sup>89</sup>

F. Criteria for Exiting a Limit State

Under the Plan, trading for an NMS Stock would exit a Limit State if within 15 seconds of entering the Limit State, the entire size of all Limit State Quotations is executed or cancelled. Some commenters proposed alternative criteria for exiting a Limit State. One commenter expressed concern “that the exit from a Limit State is arbitrary and may be easily manipulated . . . [because] it’s not clear to market participants from moment to moment whether a trading pause will be declared or whether the Price Bands will suddenly be adjusted. Exiting a Limit State would depend upon the timing of an order that could clear out the Limit State quotation and when a new limit order arrives at the Limit State quotation.”<sup>90</sup> Another commenter suggested that in order to reestablish an orderly market, that the Plan should require a new bid and a new offer that are executable before the expiration of a Limit State period.<sup>91</sup> Another commenter stated that the conditions for exiting a Limit State are not clearly defined in the Plan and further clarifications are necessary.<sup>92</sup>

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<sup>88</sup> See Response Letter at 6.

<sup>89</sup> Id.

<sup>90</sup> See MFA Letter at 5.

<sup>91</sup> See SIFMA Letter at 6.

<sup>92</sup> See Molinete Letter at 3.

The Participants declined to amend the Plan to address these concerns, noting in the Response Letter that adding a requirement that a new executable bid or offer be entered before exiting a Limit State raises the question of who would be obligated to enter such a bid or offer.<sup>93</sup> Moreover, the Participants stated that depending on the price movements during the five minutes prior to entering the Limit State, the Reference Price may have moved, thus moving the Price Bands.<sup>94</sup> The Participants noted that in such a case, executable bids and offers may become available simply by virtue of the recalculated Price Bands.

G. Application of the Price Bands at the Open and Close

During Phase I of the Plan's implementation time period, the terms of the Plan would apply only to Tier 1 NMS Stocks, as defined in Appendix A of the Plan, and the first Price Bands would be calculated and disseminated 15 minutes after the start of Regular Trading Hours, as specified in Section V(A) of the Plan, and no Price Bands would be calculated and disseminated less than 30 minutes before the end of Regular Trading Hours. In Phase II, the Plan would fully apply to all NMS Stocks beginning at 9:30 a.m. ET and ending at 4:00 p.m. ET of each trading day.

Some commenters expressed concerns about the application of the Price Bands at the opening of the trading day. One commenter stated that the approach proposed in Phase I – the first Price Bands would be calculated and disseminated 15 minutes after the start of Regular Trading Hours, and no Price Bands would be calculated and disseminated less than 30 minutes before the end of Regular Trading Hours – should apply to both phases of the Plan.<sup>95</sup> Another

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<sup>93</sup> Id.

<sup>94</sup> Id.

<sup>95</sup> See SIFMA Letter at 8. The commenter also requested clarification on whether it is true that there may be no Price Bands in effect for an NMS Stock during the first five minutes

commenter agreed that the Plan should not be in effect during the first five minutes of the trading day because price information is critical at that time.<sup>96</sup> That commenter also stated that any regulatory gap during this time period could be filled by the clearly erroneous trade rules, which it proposed should only be in effect during the first five (and last five) minutes of the trading day.<sup>97</sup> Rather than placing a specific time limit on the opening, another commenter asserted that it would benefit the market if Price Bands were not established until a single opening price occurs at the Primary Listing Exchange.<sup>98</sup> However, one commenter stated that the Price Bands should be in effect for the entire trading day because long-term investors may appreciate this simplicity.<sup>99</sup>

Commenters also expressed concerns about the application of the Price Bands at the close of the trading day. Six commenters opposed applying the Price Bands at the close of the trading day.<sup>100</sup> These commenters described the close of the trading day as a critical part of the trading day<sup>101</sup> and argued that under the terms of the Plan, exchanges could have inconsistent closing

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if the Opening Price for the stock does not occur on the Primary Market within that period because there will be no Reference Price under such circumstance. See id.

<sup>96</sup> See Knight Letter at 3.

<sup>97</sup> Id.

<sup>98</sup> See Scottrade Letter at 2.

<sup>99</sup> See Themis Letter at 1.

<sup>100</sup> Six commenters generally advocated for the Plan not being in effect during the final 10 minutes of the trading day, *i.e.*, 3:50 p.m. to 4:00 p.m. ET. See FIF Letter at 5; Deutsche Bank Letter at 2 and 4; Knight Letter at 3; SIFMA Letter at 2; ITG Letter at 2; Scottrade Letter at 2-3. Two of these commenters suggested that it would be ideal to suspend the operation of the Plan from 3:35 p.m. to 4:00 p.m. ET. See ITG Letter at 2; Scottrade Letter at 2-3.

<sup>101</sup> See e.g., Knight Letter at 3.

times as a result of a trading pause.<sup>102</sup> According to these commenters, keeping track of various closing times could have serious negative effects for market participants attempting to close positions or hedge by the end of the day.<sup>103</sup> Alternatively, one commenter suggested that if there is a disruptive event immediately prior to the close, regular-way trading and the closing auction should be extended to make sure the closing price is accurate.<sup>104</sup>

The Participants stated in the Response Letter that they believe that the proposed doubling of the Percentage Parameters around the opening and closing periods is appropriate in light of the increased volatility at those times, and that no adjustment to the timing or levels of the Price Bands should be made to the Plan until experience is gained from both Phases I and II.<sup>105</sup>

#### H. Reopenings on the Primary Listing Exchange

Under the terms of the Plan, following a trading pause in an NMS Stock, and if the Primary Listing Exchange has not declared a Regulatory Halt, the next Reference Price would be the Reopening Price on the Primary Listing Exchange if such Reopening Price occurs within ten minutes after the beginning of the trading pause, and subsequent Reference Prices shall be determined in the manner prescribed for normal openings, as specified in Section V(B)(1) of the Plan.

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<sup>102</sup> See e.g., FIF Letter at 5 (stating that exchanges could have different closing times as a result of trading pauses); Deutsche Bank Letter at 2 (advocating for consistent closing times across all of the exchanges).

<sup>103</sup> See Deutsche Bank Letter at 2.

<sup>104</sup> See Angel Letter at 5.

<sup>105</sup> See Response Letter at 4.



One commenter stated, instead of this provision, exchanges could compete for the five to ten minute exclusive window to reopen an issue.<sup>106</sup> The commenter suggested reviewing trading volumes and awarding the reopening rights to the venue with the most average daily volume over the review period.<sup>107</sup>

#### I. Classification and Treatment of Tier 2 Stocks

Pursuant to the Plan, Tier 1 NMS Stocks would include all NMS Stocks included in the S&P 500 Index, the Russell 1000 Index, and the exchange-traded products listed on Schedule 1 to the Plan's Appendix. Tier 2 NMS Stocks would include all NMS Stocks other than those in Tier 1. The Percentage Parameters for Tier 2 NMS Stocks with a Reference Price of \$1.00 or more would be 10% and the Percentage Parameters for Tier 2 NMS Stocks with a Reference Price less than \$1.00 would be the lesser of (a) \$0.15 or (b) 75%.

One commenter stated that a 10% price band may be too restrictive for some Tier 2 stocks and suggested that the Participants reduce the number of Tier 2 stocks to a test group.<sup>108</sup> That commenter also stated that a 10% price band may be too restrictive for thinly traded stocks.<sup>109</sup> Another commenter proposed the creation of a Tier 3 for stocks with a sufficiently low average daily volume ("ADV") and wide bid-offer spreads.<sup>110</sup> That commenter stated that the originally proposed limit up-limit down parameters may be unsuitable for these types of low-liquidity stocks and that they may require a higher percentage parameter.<sup>111</sup>

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<sup>106</sup> See Driscoll Letter at 2-3.

<sup>107</sup> Id. at 4.

<sup>108</sup> See MFA Letter at 4.

<sup>109</sup> Id. (for example, the commenter suggested that reopening rights be awarded to the trading venue with the most average daily volume over the review period).

<sup>110</sup> See Knight Letter at 3.

<sup>111</sup> Id.

As discussed below, the Participants recently amended the Plan to create a 20% price band for Tier 1 and Tier 2 stocks with a Reference Price equal to \$0.75 and up to and including \$3.00. The Participants also proposed a conforming amendment for Tier 1 and Tier 2 stocks with a Reference Price less than \$0.75. The Percentage Parameters for these stocks shall be the lesser of (a) \$0.15 or (b) 75%.<sup>112</sup> As initially proposed, those Percentage Parameters would have applied to Tier 1 and Tier 2 stocks with a Reference Price less than \$1.00.

J. Treatment and Impact of the Plan on Exchange Traded Products (ETPs)

The Commission also received comments on the scope of the Plan as it applies to ETPs. ICI stated that all ETFs should be included in the pilot on an expedited basis.<sup>113</sup> Vanguard seconded this idea and noted that the original list of ETPs was created when the Commission, FINRA, and the exchanges had to act quickly following the market events of May 6, 2010.<sup>114</sup>

MFA suggested that there could be unintended consequences of the Plan on ETFs (or derivatives) because the spreads in such products could increase due to uncertainty in the underlying security, *i.e.*, if the components of an ETF are subject to Limit States or trading pauses, quotes in the ETF would widen accordingly, potentially causing the ETF itself to enter a Limit State.<sup>115</sup> According to MFA, index arbitrageurs may decline to trade because of uncertainty if they do not have a way to hedge risk.<sup>116</sup>

In response, the Participants noted that the proposed phases of the Plan appropriately focus on trading characteristics and volatility rather than instrument type, and that including only

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<sup>112</sup> See Amendment, supra note 13.

<sup>113</sup> See ICI Letter at 2-3.

<sup>114</sup> See Vanguard Letter at 2.

<sup>115</sup> See MFA Letter at 6.

<sup>116</sup> Id.

certain ETPs in Tier 1 was consistent with scope of the current single-stock circuit breaker pilot.<sup>117</sup>

As discussed below, the Participants recently amended the Plan to require a review and update, on a semi-annual basis, of the list of ETPs included in Tier I of the Plan, and re-stated the criteria by which ETPs would be selected for inclusion in Tier I.

K. Coordination of the Plan With Other Volatility Moderating Mechanisms

Five commenters noted that the Plan implicates other volatility moderating mechanisms that currently exist<sup>118</sup> and requested that the interaction of the Plan with these existing mechanisms be clarified.<sup>119</sup> The commenters stated that the Plan could interact with the single-stock circuit breaker pilot,<sup>120</sup> the Regulation SHO circuit breaker,<sup>121</sup> and the exchange-specific volatility guards.<sup>122</sup> One commenter stated that “simultaneous triggering of two or more of these speed bumps during times of heightened market volatility could cause confusion and uncertainty unless there is a scheme in place for handling multiple triggers.”<sup>123</sup> One commenter advocated that as the Participants implement the Plan, the Commission phase out: (1) the NYSE LRPs; (2) the Nasdaq Volatility Guard; (3) the Regulation SHO alternative uptick rule; and (4) the single-stock circuit breakers.<sup>124</sup> Two commenters also requested that the Commission amend clearly

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<sup>117</sup> See Response Letter at 9.

<sup>118</sup> See Scottrade Letter at 3; STANY Letter at 4; Knight Letter at 2-3; SIFMA Letter at 6-7; CME Letter at 1 and 3 (noting that the proposed Plan would replace the existing single-stock circuit breaker pilot program currently in effect); FIF Letter at 5 (noting that under the single-stock circuit breaker pilot, exchanges deal with held orders differently).

<sup>119</sup> See e.g., Scottrade Letter at 3.

<sup>120</sup> See e.g., Scottrade Letter at 3; STANY Letter at 4; FIF Letter at 5.

<sup>121</sup> See e.g., STANY Letter at 4;

<sup>122</sup> See e.g., STANY Letter at 4; Knight Letter at 2-3.

<sup>123</sup> See STANY Letter at 4.

<sup>124</sup> See Knight Letter at 1.

erroneous rules so the presumption is that trades executed within the Price Band are not subject to being broken.<sup>125</sup>

Another commenter stated that the Plan does not consider how it would interact with the market-wide circuit breakers being evaluated by the Commission and the U.S. Commodity Futures Trading Commission.<sup>126</sup> This commenter stated that single-stock circuit breaker halts may affect products across markets, and may undermine rather than promote liquidity during market disruptions.<sup>127</sup> Moreover, according to this commenter, halting individual securities without a market-wide halt would, in the case of an index, impair the calculation of that index, which would have cross-market effects. This commenter concluded that market-wide circuit breakers, coupled with automated volatility and risk management functionality, *i.e.*, price bands, protection points, order quantity protections, and stop logic functionality, would be the better alternative.<sup>128</sup>

The Participants noted that some commenters requested that the Participants amend their rules to provide that an execution within a Price Band could not be deemed a clearly erroneous execution. The Participants responded that, while it may be useful to do so and that a key benefit of the limit up-limit down mechanism should be the prevention of clearly erroneous executions, the clearly erroneous trade rules are separate from the Plan and as such the Participants would consider such a change on a separate track.<sup>129</sup>

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<sup>125</sup> See SIFMA Letter at 6-7; STANY Letter at 4. See also Knight Letter at 3 (Knight stated that clearly erroneous rules should only operate during the first and last five minutes of the trading day and that there is also a utility in extending the clearly erroneous rules to after-hours trading).

<sup>126</sup> See CME Letter at 2-3.

<sup>127</sup> Id. at 3.

<sup>128</sup> Id.

<sup>129</sup> See Response Letter at 7.

L. Coordination and Impact on Other Markets

Commenters also expressed opinions regarding the impact of the Plan on other markets, e.g., options,<sup>130</sup> futures,<sup>131</sup> and foreign markets.<sup>132</sup> One commenter suggested that in the options markets, the proposed Limit State for an NMS Stock could create uncertainty and result in wider spreads on the related option.<sup>133</sup> In its letter, that commenter stated that option traders hedge option transactions with the underlying security, so that a Limit State could impact hedging activity as well. This commenter suggested that options market-makers may be unwilling to be subject to normal market-making requirements and minimum quoting widths when the underlying security is in a Limit State. Moreover, options markets do not have uniform clearly erroneous standards. Accordingly, when the underlying security is in a Limit State, some options exchanges may reject all options market orders, while other exchanges may reject only orders on the same side of the market that caused the Limit State.<sup>134</sup>

The Participants responded that the Plan will generally benefit the market for NMS Stocks and protect investors and should not be delayed while further consideration is given to coordination with options and futures markets.<sup>135</sup> The Participants also stated their belief that the Plan strikes appropriate balance in the areas noted. Because the Plan would be adopted as a pilot, the Participants represented that they would have an opportunity to further consider the commenters' suggestions above after gaining experience with the Plan.

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<sup>130</sup> See SIFMA Letter at 7; STANY Letter at 3-4.

<sup>131</sup> See e.g., CME Group Letter, supra note 38.

<sup>132</sup> See Angel Letter at 5 (stating that policy makers should consider how foreign markets address issues of extraordinary market volatility).

<sup>133</sup> See STANY Letter at 3-4.

<sup>134</sup> Id.

<sup>135</sup> See Response Letter at 7.

M. Role of the Processors

The Processors are fundamental to the operation of the Plan. In short, the single plan processor responsible for consolidation of information for an NMS Stock would be responsible for calculating and disseminating the applicable Price Bands as well as marking certain quotations as non-executable.

One commenter stated that the SIPs should run test data to prove that they are up to the tasks required by them under the terms of the Plan.<sup>136</sup> Another commenter questioned the ability of the SIPs to perform the tasks because under the Plan, SIPs would be producing data rather than merely passing through data to the markets for the first time.<sup>137</sup> Another commenter stated that the SIPs should have mechanisms to determine when they have invalid or delayed market data and thus the ability to halt the dissemination of the Price Bands accordingly.<sup>138</sup> Finally, because SIP data is slower than data disseminated directly by an exchange, one commenter questioned whether participants co-located to an exchange could calculate Price Band information faster than the rest of the market and use this information to their advantage.<sup>139</sup>

The Participants responded that the Processor is well-suited to carrying out its responsibilities under the Plan and the Participants will monitor the Processor's performance during the pilot.<sup>140</sup>

N. Operating Committee Composition

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<sup>136</sup> See STA Letter at 4.

<sup>137</sup> See STANY Letter at 5. See also FIF Letter at 5 (noting that it is possible that a trade will be executed at a price within the Price Bands, but will be reported to the SIP after the Price Band has moved and potentially should be studied.)

<sup>138</sup> See SIFMA Letter at 9.

<sup>139</sup> See Themis Letter at 1-2.

<sup>140</sup> See Response Letter at 8.

Section III(C) of the Plan provides for each Participant to designate an individual to represent the Participant as a member of an Operating Committee.<sup>141</sup> No later than the initial date of the Plan, the Operating Committee would be required to designate one member of the Operating Committee to act as the Chair of the Operating Committee. The Operating Committee would monitor the procedures established pursuant to the Plan and advise the Participants with respect to any deficiencies, problems, or recommendations as the Operating Committee may deem appropriate. While the Plan generally provides that amendments to the Plan shall be unanimous, any recommendation for an amendment to the Plan from the Operating Committee that receives an affirmative vote of at least two-thirds of the Participants, but is less than unanimous, would be submitted to the Commission as a request for an amendment to the Plan initiated by the Commission under Rule 608 of Regulation NMS under the Act.<sup>142</sup>

Two commenters suggested that the Operating Committee be supplemented by an advisory committee, made up of a cross-section of users, investors, and agents in the marketplace, that would report to the Operating Committee.<sup>143</sup> One of these commenters stated that this would achieve due process for the both review and recommendations of altering the Plan.<sup>144</sup> In the spirit of transparency, the other commenter recommended that the minutes of the Plan committee meetings be made available to interested parties.<sup>145</sup> Two additional commenters

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<sup>141</sup> See Section I(J) of the proposed Plan.

<sup>142</sup> 17 CFR 242.608.

<sup>143</sup> See STA Letter at 4-5; SIFMA Letter at 7.

<sup>144</sup> See STA Letter at 5.

<sup>145</sup> See SIFMA Letter at 7.

recommended that industry representatives who are not parties to the Plan be added to the Operating Committee of the Plan.<sup>146</sup>

The Participants initially responded that a non-voting advisory committee is unnecessary.<sup>147</sup> Except with respect to the addition of new Participants to the Plan, the Participants stated that any proposed change in, addition to, or deletion from the Plan would have to be effected by means of a written amendment to the Plan that (1) sets forth the change, addition, or deletion; (2) is executed on behalf of each Participant; and (3) is approved by the SEC pursuant to, or otherwise becomes effective under, Rule 608 of Regulation NMS under the Exchange Act. Thus, any person affected by changes to the Plan would have notice and an opportunity to comment as part of the SEC approval process in accordance with Rule 608.<sup>148</sup>

As discussed below, however, the Participants recently proposed an amendment to the Plan to create an Advisory Committee to the Operating Committee. Members of the Advisory Committee would have the right to submit their view on Plan matters to the Operating Committee prior to a decision by the Operating Committee on such matters. Such matters may include, but would not be limited to, proposed material amendments to the Plan. The Operating Committee would be required to select at least one representative from each of the following categories to be members of the Advisory Committee: (i) a broker-dealer with a substantial retail

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<sup>146</sup> See STANY Letter at 5-6; Driscoll Letter at 4 (recommending diverse representation of all key trading groups, retail order execution representation, institutional buy-side representation, representatives of various trading venues and representation of those who focus on small capitalization securities).

<sup>147</sup> See Response Letter at 7.

<sup>148</sup> Id.



investor customer base, (ii) a broker-dealer with a substantial institutional investor customer base, (iii) an alternative trading system, and (iv) an investor.<sup>149</sup>

O. Withdrawal of Participants from the Plan

Section IX of the Plan provides that a Participant may withdraw from the Plan upon obtaining approval from the Commission and upon providing not less than 30 days written notice to the other participants. Four commenters expressed concern about the withdrawal provision and suggested that Commission require FINRA and all trading centers to participate in the Plan because withdrawal could create problems if only some market centers are part of the Plan.<sup>150</sup>

P. Implementation Time-Period

The Participants proposed that the initial date of the Plan operations be 120 calendar days following the publication of the Commission's order approving the Plan in the Federal Register. The Participants would implement that Plan as a one-year pilot program in two Phases, consistent with Section VIII of the Plan. Phase I of Plan implementation would apply immediately following the initial date of Plan operations; Phase II of the Plan would commence six months after the initial date of the Plan or such earlier date as may be announced by the Processor with at least 30 days notice. As discussed below, the Participants recently proposed an amendment to the Plan that included a new implementation date of February 4, 2013.

One commenter stated that the Plan should be implemented as quickly as possible.<sup>151</sup>

Another commenter recommended an implementation date of 12 months instead of 120 days,<sup>152</sup>

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<sup>149</sup> See Amendment, supra note 13.

<sup>150</sup> See FIF Letter at 5; SIFMA Letter at 7; STANY Letter at 5; Molinete Letter at 3.

<sup>151</sup> See Vanguard Letter at 2. See also ICI Letter at 3 (recommending that ETPs be included in the pilot on an expedited basis).

<sup>152</sup> See FIF Letter at 5-6.

while another commenter stated that the Plan should be implemented no earlier than the second quarter of 2012.<sup>153</sup>

Prior to the implementation of Phase II of the Plan, one commenter recommended that the Participants analyze empirical evidence derived from Phase I.<sup>154</sup> Another commenter recommended that the Participants seek comment before implementing the Plan on a permanent basis.<sup>155</sup> Yet another commenter stated that the Commission should have to approve Phase II of the Plan prior to its implementation.<sup>156</sup>

Q. Comments on Rule-making Process of the Plan

The Participants filed the Plan with the Commission pursuant to Section 11A of the Act<sup>157</sup> and Rule 608 thereunder.<sup>158</sup> The Commission solicited comments on the Plan from interested persons. One commenter stated that the process for the creation of a new NMS plan circumvented the formal notice and comment process provided for in The Administrative Procedure Act.<sup>159</sup> The commenter stated that the existence of confidentiality agreements among the Participants in developing the proposal has negative implications for transparency in the rulemaking process.<sup>160</sup>

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<sup>153</sup> See SIFMA Letter at 9. See also Molinete Letter at 5 (stating that the 120-day implementation time period is too ambitious).

<sup>154</sup> See Deutsche Bank Letter at 4.

<sup>155</sup> See SIFMA Letter at 9.

<sup>156</sup> See STANY Letter at 7.

<sup>157</sup> 15 U.S.C. 78k-1.

<sup>158</sup> 17 CFR 242.608.

<sup>159</sup> Pub. Law 79-404, 5 U.S.C. 500 et seq. See Driscoll Letter at 1.

<sup>160</sup> Id. (stating that the narrow focus of the group that developed the regulation may have also allowed some opportunities to increase competition between exchanges to have been overlooked).

Another commenter questioned whether there is a need for a Commission rule instead of an NMS plan and stated that ongoing and direct involvement of the Commission will be important to efficient and effective resolution of interpretive questions relating to the Plan and the reasonable policies and procedures.<sup>161</sup> The same commenter also stated that self-regulatory organizations will need to adopt rules specifying how they plan to handle orders that have been routed to them when such orders present display or execution issues under the Plan.<sup>162</sup>

Finally, one commenter stated that a cost-benefit analysis of the Plan should be conducted to address the anticipated costs of implementing the Plan, the parties that would pay for new systems, whether processors would be allowed to charge more than their costs for the new data components of the consolidated feeds, and the incremental benefits that would be incurred over the existing trading pause rules if the Plan were approved.<sup>163</sup>

#### V. Amendment to the Plan

On May 24, 2012, in response to the comments received on the proposed Plan, the Participants submitted an amendment that proposed several changes to the Plan.<sup>164</sup> First, the participants proposed to amend the Plan to allow transactions that are exempt under Rule 611 of Regulation NMS<sup>165</sup>, and which do not update the last sale price (except if solely because the transaction was reported late), to execute outside of the price bands.<sup>166</sup>

Second, the Participants proposed to amend the Plan to provide for a 20% price band for Tier 1 and Tier 2 stocks with a Reference Price equal to \$0.75 and up to and including \$3.00.

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<sup>161</sup> See SIFMA Letter at 7.

<sup>162</sup> Id. at 9.

<sup>163</sup> See Scottrade Letter at 4.

<sup>164</sup> See Amendment, supra note 13.

<sup>165</sup> 17 CFR 242.611.

<sup>166</sup> See Amendment, supra note 13.

The Participants also proposed a conforming amendment for Tier 1 and Tier 2 stocks with a Reference Price less than \$0.75. The Percentage Parameters for these stocks would be the lesser of (a) \$0.15 or (b) 75%.<sup>167</sup> As initially proposed, those Percentage Parameters would apply to Tier 1 and Tier 2 stocks with a Reference Price less than \$1.00.

Third, the Participants proposed to amend the Plan to exclude rights and warrants from the Plan, consistent with the current single-stock circuit breaker pilot.<sup>168</sup>

Fourth, the Participants proposed to amend the Plan to provide for the creation of an Advisory Committee to the Operating Committee. As set forth in greater detail in the amendment, the Operating Committee would be required to select at least one representative from each of the following categories to be members of the Advisory Committee: (i) a broker-dealer with a substantial retail investor customer base, (ii) a broker-dealer with a substantial institutional investor customer base, (iii) an alternative trading system, and (iv) an investor.<sup>169</sup> Members of the Advisory Committee would have the right to submit their view on Plan matters to the Operating Committee prior to a decision by the Operating Committee on such matters. Such matters could include, but would not be limited to, proposed material amendments to the Plan.

Fifth, the Participants proposed to amend the Plan to provide for a manual override functionality when, for example, the National Best Bid for an NMS Stock is below the Lower Price Band, the NMS Stock has not entered the Limit State, and the Primary Listing Exchange has determined that trading in that stock has sufficiently deviated from its normal trading characteristics such that a trading pause would promote the Plan's core purpose of addressing

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<sup>167</sup> Id.

<sup>168</sup> Id.

<sup>169</sup> Id.

extraordinary market volatility. Upon making this determination, the Primary Listing Exchange would have the ability to declare a trading pause in that stock.<sup>170</sup>

Sixth, the Participants proposed a new implementation date of February 4, 2013. The Participants stated that this date would provide appropriate time to develop and test the technology necessary to implement the Plan, including market-wide testing.

Finally, the Participants proposed to amend the Plan to require the Participants to review and update, on a semi-annual basis, the list of ETPs included in Tier I of the Plan, and re-stated the criteria by which ETPs would be selected for inclusion in Tier I.<sup>171</sup>

The Participants also proposed technical changes to the Plan. For example, the Participants clarified that Regular Trading Hours could end earlier than 4:00 p.m. ET in the case of an early scheduled close. The Participants also provided that Participants may re-transmit the price bands calculated and disseminated by the Processor. Finally, the Participants clarified that the Reference Price used in determining which Percentage Parameter is applicable during the trading day would be based on the closing price of the subject security on the Primary Listing Exchange on the previous trading day or, if no closing price exists, the last sale on the Primary Listing Exchange reported by the Processor.

The Participants also proposed to amend the Plan in order to collect and provide to the Commission various data and analysis throughout the duration of the pilot period. Specifically, the Participants will provide summary statistics to the Commission, including data covering how often stocks enter the Limit State, and how often stocks enter a trading pause as a result of the limit up-limit down mechanism. The Participants will also examine certain parameters of the

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<sup>170</sup>

Id.

<sup>171</sup>

For example, ETPs, including inverse ETPs, that trade over \$2,000,000 consolidated average daily volume would be included in Tier I, as would ETPs that do not meet this volume criterion, but track similar benchmarks.

limit up-limit down mechanism, including the appropriateness of the proposed price bands, and the appropriateness of the duration of the Limit State. Finally, the Participants will provide raw data to the Commission, including the record of every limit price, the record of every Limit State, and the record of every trading pause.

## VI. Discussion and Commission Findings

### A. Section 11A of the Act

In 1975, Congress directed the Commission, through the enactment of Section 11A of the Act,<sup>172</sup> to facilitate the establishment of a national market system to link together the individual markets that trade securities. Congress found the development of a national market system to be in the public interest and appropriate for the protection of investors and the maintenance of fair and orderly markets to assure fair competition among the exchange markets.<sup>173</sup> Section 11A(a)(3)(B) of the Act directs the Commission, “by rule or order, to authorize or require self-regulatory organizations to act jointly with respect to matters as to which they share authority under this title in planning, developing, operating, or regulating a national market system (or a subsystem thereof) or one or more facilities.”<sup>174</sup> The Commission’s approval of a national market system plan is required to be conditioned upon a finding that the plan is “necessary or appropriate in the public interest, for the protection of investors and the maintenance of fair and orderly markets, to remove impediments to, and perfect the mechanism of, a national market system, or otherwise in furtherance of the purposes of the Act.”<sup>175</sup>

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<sup>172</sup> 15 U.S.C. 78k-1.

<sup>173</sup> 15 U.S.C. 78k-1(a)(1)(C).

<sup>174</sup> 15 U.S.C. 78k-1(a)(3)(B).

<sup>175</sup> 17 CFR 242.608(b)(2). See also 15 U.S.C. 78k-1(a).

After carefully considering the proposed Plan and the issues raised by the comment letters, the Commission has determined to approve the Plan, as amended by the Participants, pursuant to Section 11A(a)(3)(B) of the Act<sup>176</sup> and Rule 608.<sup>177</sup> The Commission believes that the Plan is reasonably designed to prevent potentially harmful price volatility, including severe volatility of the kind that occurred on May 6, 2010.<sup>178</sup> The Plan should thereby help promote the

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<sup>176</sup> 15 U.S.C. 78k-1(a)(3)(B).

<sup>177</sup> 17 CFR 242.608. In approving this Plan, the Commission has considered the proposed rule's impact on efficiency, competition, and capital formation. See 15 U.S.C. 78c(f).

<sup>178</sup> The Commission and the Participants have conducted simulations on historical data to examine how a limit up-limit down mechanism might work. The simulations generally support the structure of the proposal. In particular, the proposal would reduce, but not eliminate, extreme short-term price changes, and would not result in an excessive number of trading pauses.

Commission staff, for example, conducted a simulation that suggested that the percentage limits should be larger at the open and close and that the percentage limits should be larger for lower priced stocks. In addition, the simulation suggested that most trades occurring outside of the bands are reversed quickly, providing support for the notion that a limit state may help avoid unnecessary trading pauses. The simulation also showed that an average of slightly more than one large index stock would have a trading pause every four days, based on the structure of the simulation, which was not the same as the proposed structure. A follow-up analysis using the proposed structure showed that only one large index stock would have a trading pause in the three months analyzed.

The NYSE staff also simulated the proposed limit up-limit down mechanism to examine how the mechanism would have worked on May 6<sup>th</sup>, 2010. Given time constraints, the simulation was limited to the price band aspect of the proposal and did not consider the limit state or trading pause provisions of the proposal. This simulation suggested that the price bands alone would have reduced the size of the flash crash significantly, but stocks would still have experienced large five-minute declines. For example, on May 6<sup>th</sup>, Accenture experienced a five-minute decline of 99.98%. The simulation suggests that if there had been price bands in place on May 6<sup>th</sup>, the most extreme five-minute decline in Accenture might have been 6.43%. While the Commission recognizes that this is still a significant decline, it would have much less than the actual decline.

The NYSE simulation also examined the ability of the limit up-limit down price bands to reduce extreme positive and negative returns. In the Tier 1 stocks priced more than \$1.00, the price bands would eliminate five-minute returns more extreme than 10% and -10%. The price bands would reduce but not eliminate these extreme five-minute returns in other stocks. A sensitivity analysis comparing the proposed price limit percentages to

goals of investor protection and fair and orderly markets. The Commission also believes that the Plan is a prudent replacement of the single-stock circuit breaker that is currently in effect, and that it is appropriately being introduced on a pilot basis. The pilot period will allow the public, the Participants, and the Commission to assess the operation of the Plan and whether the Plan should be modified prior to approval on a permanent basis.

As discussed above, commenters raised a variety of thoughtful concerns about the proposal and recommended certain changes. Some of the recommended changes were incorporated in the Amendment. As discussed further below, other comments raised important issues that are difficult to evaluate fully in the absence of practical experience with the Plan. These issues will warrant close consideration during the pilot period.

The Commission believes that it is consistent with the Act to approve the Plan on a pilot basis at this time because the Plan reflects the considered judgments of the Participants on operational issues and clearly represents a significant step forward that builds upon the experience with the current single-stock circuit breaker. The limit up-limit down mechanism set forth in the Plan approved today and the single-stock circuit breaker are broadly similar in some respects. For example, both mechanisms calculate a reference price that is based on a rolling five-minute price band, and both mechanisms incorporate a five-minute trading pause, followed by a reopening auction on the Primary Listing Exchange.

The Plan, however, provides a more finely calibrated mechanism than that of the current single-stock circuit breaker. For example, the single-stock circuit breaker is triggered by trades that occur at or outside of the price band, and erroneous trades have triggered trading halts throughout the current pilot. In contrast, under the Plan, all trading centers in NMS stocks,

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alternative ones suggested that the proposed bands behave at least as well as the alternatives examined.



including both those operated by Participants and those operated by members of Participants, are required to establish policies and procedures that are reasonably designed to prevent trades at prices outside of the price bands. In addition, quotes outside of the price bands will be marked as non-executable. Given that trades should not occur outside of the price bands, the Commission believes that the Plan is reasonably designed to reduce the number of erroneous trades in comparison to the current single-stock circuit breaker.

Moreover, Limit States under the Plan (and, ultimately, trading pauses) will be triggered by movements in the National Best Bid or the National Best Offer, rather than single trades. These quoting-based triggers are designed to be more stable and reliable indicators of a significant market event than the single trades that currently can trigger a single stock circuit breaker. The result of this change should be to reduce the frequency of Limit States (and, ultimately, trading pauses) to those circumstances that truly warrant a check on continuous trading.

In contrast to the current single-stock circuit breaker, the Plan also features a fifteen-second Limit State that precedes a trading pause. In those instances where the movement of, for example, the National Best Bid below the Lower Price Band is due to a momentary gap in liquidity, rather than a fundamental price move, the Limit State is reasonably designed to allow the market to quickly correct and resume normal trading, without resorting to a trading pause. Because a Limit State, rather than a trading pause, may be sufficient to resolve some of these scenarios, the corresponding price bands can be narrower than in the single-stock circuit breaker. As such, the Commission believes that the Plan is reasonably designed to be a more finely

calibrated mechanism than the current single-stock circuit breaker in guarding against market volatility.<sup>179</sup>

While the price bands in the Plan are reasonably designed to be more finely calibrated than the current single-stock circuit breaker, the Commission notes that the Plan is also designed to accommodate more fundamental price moves, albeit in a manner that lessens the velocity of such moves. In this regard, the Commission notes that the Plan provides that the price bands shall not apply to single-priced re-openings, which allows for the stock to enter a trading pause and reopen at a price that is potentially significantly above or below its previous price. The Commission finds that this mechanism is reasonably designed to allow for more fundamental price moves to occur. To the extent that a reopening only may occur following a five-minute trading pause, however, the Plan is still reasonably designed to reduce the velocity of more significant price moves.

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<sup>179</sup> The Commission also finds that the Plan is consistent with the requirements of Rule 602 under Regulation NMS. Under that rule, bids and offers must be firm, *i.e.*, brokers and dealers are obligated to execute any order to buy or sell a subject security presented to it by another broker or dealer at a price at least as favorable to such buyer or seller as that broker or dealer's published bid or published offer in any amount up to its published quotation size. Similarly, the best bids and offers collected by national securities exchanges must also be firm. See 17 CFR 242.602. However, Rule 602(a)(3)(i) relieves exchanges of their obligation to collect and make available bids and offers (which are firm) if the existence of "unusual market conditions" makes those bids and offers no longer accurately reflective of the current state of the market. This provision also relieves brokers and dealers of their corresponding obligation to submit firm quotes. The Commission believes that, when the National Best Bid (Offer) crosses the Lower (Upper) Price Band, and such quote becomes non-executable, an unusual market condition exists for purposes of Rule 602. To the extent that this scenario constitutes an unusual market condition, the broker or dealer could submit a quote that is outside of the applicable price band, and is thus not firm (as it is non-executable), and the exchange could collect and display such quote, without violating Rule 602. The Commission notes, however, that the firmness requirement continues to apply to quotes at or within the price bands that are submitted by brokers or dealers and collected by exchanges, as such quotes are executable.

The Amendment improves the initial proposal by addressing a number of concerns raised by commenters. Specifically, it excludes transactions that are exempt under Rule 611 of Regulation NMS and do not update the last sale price (except if solely because the transaction was reported late), from the requirement that such transactions occur within the price bands. This exclusion addresses commenters' concerns that such transactions often are executed at prices unrelated to the current market and do not have the capacity to initiate or exacerbate volatility.

In response to the concerns of commenters about the potential for bids or offers in an NMS stock to become unexecutable without triggering a Limit State, the Amendment authorizes the Primary Listing Exchange manually to declare a trading pause in these circumstances. This mechanism should help ensure that the market for a stock does not remain impaired for an indefinite period of time, while providing the Primary Listing Exchange with the discretion to determine whether such impairment is inconsistent with the stock's normal trading characteristics.

The Amendment assigns wider price bands for Tier 1 and Tier 2 securities that are priced between \$0.75 and \$3.00 that are reasonably designed to reflect more appropriately the characteristics of stocks that trade in that price range. Similarly, the Amendment excludes all rights and warrants from the Plan, which reflects the trading characteristics of such securities and is consistent with the scope of the current single-stock circuit breaker pilot. The Amendment's provision for evaluating, on a semi-annual basis, the ETPs that are included in Tier I helps assure that ETPs meeting the criteria for inclusion are appropriately included in Tier I, and vice versa.

The Amendment also extends the implementation date to February 4, 2013. This extension of time should provide appropriate time to develop and test the technology necessary to implement the Plan, including market-wide testing.

Finally, in response to concerns expressed by commenters, the Amendment establishes an Advisory Committee to the Operating Committee composed of a broad cross-section of market participants. The Advisory Committee members will have the right to submit their views on Plan matters to the Operating Committee and thereby engage in the ongoing assessment of Plan operations and formulation of future proposed amendments to the Plan.

One serious concern raised by comments was the interaction between the limit up-limit down mechanism and the market-wide circuit breakers that apply across all securities and securities-related products, particularly during a “macro market event” that affects a large number of securities and securities-related products. The Commission is approving separately today on a pilot basis SRO proposals to revise these market-wide circuit breakers and make them more meaningful in today’s high-speed electronic markets.<sup>180</sup> These SRO rules include both tighter parameters and shorter halt periods. The Commission recognizes the potential for limit up-limit down trading halts in many securities to affect both the calculation of broader indexes and the trading in products related to such indexes. Nevertheless, it believes that the need for protection against extraordinary volatility in individual equities is essential for both investors in such listed equities and for their listed companies. Accordingly, it is approving the Plan on a pilot basis, but welcomes comments during the pilot period on ways that the Plan could be

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<sup>180</sup> See Securities Exchange Act Release No. 67090 (May 31, 2012) (File Nos. SR-BATS-2011-038; SR-BYX-2011-025; SR-BX-2011-068; SR-CBOE-2011-087; SR-C2-2011-024; SR-CHX-2011-30; SR-EDGA-2011-31; SR-EDGX-2011-30; SR-FINRA-2011-054; SR-ISE-2011-61; SR-NASDAQ-2011-131; SR-NSX-2011-11; SR-NYSE-2011-48; SR-NYSEAmex-2011-73; SR-NYSEArca-2011-68; SR-Phlx-2011-129).

improved to address potential problems in its interaction with market-wide circuit breakers. The Commission also is accepting comment during the pilot period for the market-wide circuit breakers on ways to improve them to address this question on their interaction with the Plan.

The Commission notes that the Participants did not amend the Plan to incorporate some of the recommendations to modify the operational details of the Plan, including the duration of the Limit State, the calculation of the Reference Price, the application of the price bands at the open and the close, the criteria required to enter and exit the Limit State, and the display of quotes outside of the price bands. The Commission recognizes the thoughtfulness of the comments that put forward such recommendations, and indeed believes they raise valid concerns that warrant close scrutiny during the pilot period. At this time, however, the Commission believes that it is consistent with the Act to accept the considered collective judgment of the Participants on these complex issues, particularly given their expertise and responsibility for operating markets on a daily basis.<sup>181</sup>

Approving the Plan on a pilot basis will allow the Participants and the public to gain valuable practical experience with Plan operations during the pilot period. This experience should prove invaluable in assessing whether further modifications of the Plan are necessary or appropriate prior to final approval. The Participants also have agreed to provide the Commission with a significant amount of data bearing on operational questions that should assist the Commission in its evaluation of Plan operations. Finally, the Commission welcomes additional

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<sup>181</sup> The Commission notes that one of the concerns of requiring the National Best Offer (Bid) to trigger the Limit Down (Up) may be partially alleviated by one of the amendments to the Plan. Specifically, if the National Best Bid is outside of the lower price band and is thus non-executable, while the offer remains within the price bands, the stated concern is that the market for that stock is impaired, perhaps for an indefinite period of time, while the stock has not entered the Limit State. The Commission believes that the addition of a manual override, as proposed by the Participants in the amendment to the Plan, may, at least partially, alleviate this concern.

comments, and empirical evidence, on the Plan during the pilot period to further assist it in its evaluation of the Plan. Of course, any final approval of the Plan would require a proposed amendment of the Plan, and such amendment will provide an opportunity for public comment prior to further Commission action.

To the extent that the Participants did not amend the Plan to reflect other operational or procedural concerns, the Commission believes that those suggestions and concerns were generally considered by the Participants in developing a uniform proposal that would not be excessively complicated and yet could still provide important benefits to the markets. For example, one commenter noted that allowing the primary listing market to control the re-opening process in the first five minutes following a trading pause may confer a competitive advantage upon that market. The Commission notes that this aspect of the Plan is consistent with the current procedure for re-opening the market following a trading pause that has been triggered under the single-stock circuit breaker pilot.

Another commenter suggested that a market-wide limit up-limit down mechanism was more appropriately developed through Commission rulemaking than through an NMS plan. While a Commission rulemaking may be an appropriate means for developing such a mechanism, the Commission believes that an NMS plan, which was the means selected by the Participants here, is equally appropriate, particularly given the Participants' expertise in the trading characteristics in individual securities and the operation of market systems.

Some commenters expressed concern over the provision in the Plan governing withdrawal of Participants from the Plan. The Commission notes that withdrawing from the Plan would require an amendment to the Plan, and Commission approval of that amendment. Given the importance of applying a limit up-limit down mechanism uniformly throughout the market,

the Commission would anticipate approving such withdrawal from the Plan only if the Participant seeking to withdraw from the Plan ceased to trade NMS securities.

One commenter suggested that a cost-benefit analysis of the Plan should be conducted. The Commission notes that market participants are welcome to submit additional comments and empirical evidence during the pilot period with respect to, among other things, the operation of the limit up-limit down mechanism, its effectiveness in achieving its intended goals, and the costs associated therewith. The Commission will take such comments into account in considering whether to approve any amendment, in accordance with Rule 608 of Regulation NMS, that proposes to make the Plan permanent.

As such, the Commission believes that the Plan is consistent with the Act, notwithstanding such comments, and that it is reasonably designed to achieve its objective of reducing extraordinary market volatility.

Given that the Plan is being approved on a pilot basis, the Commission expects that the Participants will monitor the scope and operation of the Plan and study the data produced during that time with respect to such issues, and will propose any modifications to the Plan that may be necessary or appropriate. Similarly, the Commission expects that the Participants will propose any modifications to the Plan that may be necessary or appropriate in response to the data being gathered by the Participants during the pilot.<sup>182</sup>

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<sup>182</sup> The Commission notes that some of the comments focused on the relation between the Plan, and other, exchange-specific volatility mechanisms, including the NYSE Liquidity Replenishment Points, and the Nasdaq Volatility Guard. While a stated purpose of the Plan is to replace the current single-stock circuit breaker, the Commission is also aware of the potential for unnecessary complexity that could result if the Plan were adopted, and exchange-specific volatility mechanisms were retained. To this end, the Commission expects that, upon implementation of the Plan, such exchange-specific volatility mechanisms would be discontinued by the respective exchanges. In that regard, the Commission notes that one such mechanism, the Nasdaq Volatility Guard, is currently set to expire on the earlier of July 31, 2012, or the date on which the Plan is approved by the

VII. Conclusion

IT IS THEREFORE ORDERED, pursuant to Sections 11A of the Act,<sup>183</sup> and the rules thereunder, that the Plan (File No. 4-631), as amended, is approved on a one-year pilot basis and declared effective, and the Participants are authorized to act jointly to implement the Plan as a means of facilitating a national market system.

By the Commission.

Elizabeth M. Murphy  
Secretary

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Commission. See Securities Exchange Act Release No. 66275 (January 30, 2012), 77 FR 5606 (February 3, 2012) (SR-Nasdaq-2012-019).

<sup>183</sup> 15 U.S.C. 78k-1.



**EXHIBIT A**

**PLAN TO ADDRESS EXTRAORDINARY MARKET VOLATILITY**

**SUBMITTED TO**

**THE SECURITIES AND EXCHANGE COMMISSION**

**PURSUANT TO RULE 608 OF REGULATION NMS**

**UNDER THE**

**SECURITIES EXCHANGE ACT OF 1934**

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## Preamble

The Participants submit to the SEC this Plan establishing procedures to address extraordinary volatility in NMS Stocks. The procedures provide for market-wide limit up-limit down requirements that prevent trades in individual NMS Stocks from occurring outside of the specified Price Bands. These limit up-limit down requirements are coupled with Trading Pauses to accommodate more fundamental price moves. The Plan procedures are designed, among other things, to protect investors and promote fair and orderly markets. The Participants developed this Plan pursuant to Rule 608(a)(3) of Regulation NMS under the Exchange Act, which authorizes the Participants to act jointly in preparing, filing, and implementing national market system plans.

I. Definitions

(A) “Eligible Reported Transactions” shall have the meaning prescribed by the Operating Committee and shall generally mean transactions that are eligible to update the last sale price of an NMS Stock.

(B) “Exchange Act” means the Securities Exchange Act of 1934, as amended.

(C) “Limit State” shall have the meaning provided in Section VI of the Plan.

(D) “Limit State Quotation” shall have the meaning provided in Section VI of the Plan.

(E) “Lower Price Band” shall have the meaning provided in Section V of the Plan.

(F) “Market Data Plans” shall mean the effective national market system plans through which the Participants act jointly to disseminate consolidated information in compliance with Rule 603(b) of Regulation NMS under the Exchange Act.

(G) “National Best Bid” and “National Best Offer” shall have the meaning provided in Rule 600(b)(42) of Regulation NMS under the Exchange Act.

(H) “NMS Stock” shall have the meaning provided in Rule 600(b)(47) of Regulation NMS under the Exchange Act.

(I) “Opening Price” shall mean the price of a transaction that opens trading on the Primary Listing Exchange, or, if the Primary Listing Exchange opens with quotations, the midpoint of those quotations.

(J) “Operating Committee” shall have the meaning provided in Section III(C) of the Plan.

(K) “Participant” means a party to the Plan.

(L) “Plan” means the plan set forth in this instrument, as amended from time to time in accordance with its provisions.

(M) “Percentage Parameter” shall mean the percentages for each tier of NMS Stocks set forth in Appendix A of the Plan.

(N) “Price Bands” shall have the meaning provided in Section V of the Plan.

(O) “Primary Listing Exchange” shall mean the Participant on which an NMS Stock is listed. If an NMS Stock is listed on more than one Participant, the Participant on which the NMS Stock has been listed the longest shall be the Primary Listing Exchange.

(P) “Processor” shall mean the single plan processor responsible for the consolidation of information for an NMS Stock pursuant to Rule 603(b) of Regulation NMS under the Exchange Act.

(Q) “Pro-Forma Reference Price” shall have the meaning provided in Section V(A)(2) of the Plan.

(R) “Regular Trading Hours” shall have the meaning provided in Rule 600(b)(64) of Regulation NMS under the Exchange Act. For purposes of the Plan, Regular Trading Hours can end earlier than 4:00 p.m. ET in the case of an early scheduled close.

(S) “Regulatory Halt” shall have the meaning specified in the Market Data Plans.

(T) “Reference Price” shall have the meaning provided in Section V of the Plan.

(U) “Reopening Price” shall mean the price of a transaction that reopens trading on the Primary Listing Exchange following a Trading Pause or a Regulatory Halt, or, if the Primary Listing Exchange reopens with quotations, the midpoint of those quotations.

(V) “SEC” shall mean the United States Securities and Exchange Commission.

(W) “Straddle State” shall have the meaning provided in Section VII(A)(2) of the Plan.

(X) “Trading center” shall have the meaning provided in Rule 600(b)(78) of Regulation NMS under the Exchange Act.

(Y) “Trading Pause” shall have the meaning provided in Section VII of the Plan.

(Z) “Upper Price Band” shall have the meaning provided in Section V of the Plan.

## II. Parties

### (A) List of Parties

The parties to the Plan are as follows:

- (1) BATS Exchange, Inc.  
8050 Marshall Drive  
Lenexa, Kansas 66214
- (2) BATS Y-Exchange, Inc.  
8050 Marshall Drive  
Lenexa, Kansas 66214
- (3) Chicago Board Options Exchange, Incorporated  
400 South LaSalle Street  
Chicago, Illinois 60605
- (4) Chicago Stock Exchange, Inc.  
440 South LaSalle Street  
Chicago, Illinois 60605
- (5) EDGA Exchange, Inc.  
545 Washington Boulevard  
Sixth Floor  
Jersey City, NJ 07310
- (6) EDGX Exchange, Inc.  
545 Washington Boulevard  
Sixth Floor  
Jersey City, NJ 07310
- (7) Financial Industry Regulatory Authority, Inc.  
1735 K Street, NW

Washington, DC 20006

- (8) NASDAQ OMX BX, Inc.  
One Liberty Plaza  
New York, New York 10006
- (9) NASDAQ OMX PHLX LLC  
1900 Market Street  
Philadelphia, Pennsylvania 19103
- (10) The Nasdaq Stock Market LLC  
1 Liberty Plaza  
165 Broadway  
New York, NY 10006
- (11) National Stock Exchange, Inc.  
101 Hudson, Suite 1200  
Jersey City, NJ 07302
- (12) New York Stock Exchange LLC  
11 Wall Street  
New York, New York 10005
- (13) NYSE MKT LLC  
20 Broad Street  
New York, New York 10005
- (14) NYSE Arca, Inc.  
100 South Wacker Drive  
Suite 1800  
Chicago, IL 60606
- (B) Compliance Undertaking

By subscribing to and submitting the Plan for approval by the SEC, each Participant agrees to comply with and to enforce compliance, as required by Rule 608(c) of Regulation NMS under the Exchange Act, by its members with the provisions of the Plan. To this end, each Participant shall adopt a rule requiring compliance by its members with the provisions of the Plan, and each Participant shall take such actions as are necessary and appropriate as a

participant of the Market Data Plans to cause and enable the Processor for each NMS Stock to fulfill the functions set forth in this Plan.

(C) New Participants

The Participants agree that any entity registered as a national securities exchange or national securities association under the Exchange Act may become a Participant by: (1) becoming a participant in the applicable Market Data Plans; (2) executing a copy of the Plan, as then in effect; (3) providing each then-current Participant with a copy of such executed Plan; and (4) effecting an amendment to the Plan as specified in Section III(B) of the Plan.

(D) Advisory Committee

(1) Formation. Notwithstanding other provisions of this Plan, an Advisory Committee to the Plan shall be formed and shall function in accordance with the provisions set forth in this section.

(2) Composition. Members of the Advisory Committee shall be selected for two-year terms as follows:

(A) Advisory Committee Selections. By affirmative vote of a majority of the Participants, the Participants shall select at least one representatives from each of the following categories to be members of the Advisory Committee: (1) a broker-dealer with a substantial retail investor customer base; (2) a broker-dealer with a substantial institutional investor customer base; (3) an alternative trading system; and (4) an investor.

(3) Function. Members of the Advisory Committee shall have the right to submit their views to the Operating Committee on Plan matters, prior to a decision by the Operating Committee on such matters. Such matters shall include, but not be limited to, proposed material amendments to the Plan.



(4) Meetings and Information. Members of the Advisory Committee shall have the right to attend meetings of the Operating Committee and to receive any information concerning Plan matters; provided, however, that the Operating Committee may meet in executive session if, by affirmative vote of a majority of the Participants, the Operating Committee determines that an item of Plan business requires confidential treatment.

### III. Amendments to Plan

#### (A) General Amendments

Except with respect to the addition of new Participants to the Plan, any proposed change in, addition to, or deletion from the Plan shall be effected by means of a written amendment to the Plan that: (1) sets forth the change, addition, or deletion; (2) is executed on behalf of each Participant; and, (3) is approved by the SEC pursuant to Rule 608 of Regulation NMS under the Exchange Act, or otherwise becomes effective under Rule 608 of Regulation NMS under the Exchange Act.

#### (B) New Participants

With respect to new Participants, an amendment to the Plan may be effected by the new national securities exchange or national securities association executing a copy of the Plan, as then in effect (with the only changes being the addition of the new Participant's name in Section II(A) of the Plan) and submitting such executed Plan to the SEC for approval. The amendment shall be effective when it is approved by the SEC in accordance with Rule 608 of Regulation NMS under the Exchange Act or otherwise becomes effective pursuant to Rule 608 of Regulation NMS under the Exchange Act.

#### (C) Operating Committee

(1) Each Participant shall select from its staff one individual to represent the Participant as a member of an Operating Committee, together with a substitute for such individual. The substitute may participate in deliberations of the Operating Committee and shall be considered a voting member thereof only in the absence of the primary representative. Each Participant shall have one vote on all matters considered by the Operating Committee. No later than the initial date of Plan operations, the Operating Committee shall designate one member of the Operating Committee to act as the Chair of the Operating Committee.

(2) The Operating Committee shall monitor the procedures established pursuant to this Plan and advise the Participants with respect to any deficiencies, problems, or recommendations as the Operating Committee may deem appropriate. The Operating Committee shall establish specifications and procedures for the implementation and operation of the Plan that are consistent with the provisions of this Plan and the Appendixes thereto. With respect to matters in this paragraph, Operating Committee decisions shall be approved by a simple majority vote.

(3) Any recommendation for an amendment to the Plan from the Operating Committee that receives an affirmative vote of at least two-thirds of the Participants, but is less than unanimous, shall be submitted to the SEC as a request for an amendment to the Plan initiated by the Commission under Rule 608 of Regulation NMS.

#### IV. Trading Center Policies and Procedures

All trading centers in NMS Stocks, including both those operated by Participants and those operated by members of Participants, shall establish, maintain, and enforce written policies and procedures that are reasonably designed to comply with the limit up - limit down

requirements specified in Sections VI of the Plan, and to comply with the Trading Pauses specified in Section VII of the Plan.

V. Price Bands

(A) Calculation and Dissemination of Price Bands

(1) The Processor for each NMS stock shall calculate and disseminate to the public a Lower Price Band and an Upper Price Band during Regular Trading Hours for such NMS Stock. The Price Bands shall be based on a Reference Price for each NMS Stock that equals the arithmetic mean price of Eligible Reported Transactions for the NMS stock over the immediately preceding five-minute period (except for periods following openings and reopenings, which are addressed below). If no Eligible Reported Transactions for the NMS Stock have occurred over the immediately preceding five-minute period, the previous Reference Price shall remain in effect. The Price Bands for an NMS Stock shall be calculated by applying the Percentage Parameter for such NMS Stock to the Reference Price, with the Lower Price Band being a Percentage Parameter below the Reference Price, and the Upper Price Band being a Percentage Parameter above the Reference Price. The Price Bands shall be calculated during Regular Trading Hours. Between 9:30 a.m. and 9:45 a.m. ET, and 3:35 p.m. and 4:00 p.m. ET, or in the case of an early scheduled close, during the last 25 minutes of trading before the early scheduled close, the Price Bands shall be calculated by applying double the Percentage Parameters set forth in Appendix A. If a Reopening Price does not occur within ten minutes after the beginning of a Trading Pause, the Price Band, for the first 30 seconds following the reopening after that Trading Pause, shall be calculated by applying triple the Percentage Parameters set forth in Appendix A.

(2) The Processor shall calculate a Pro-Forma Reference Price on a continuous basis during Regular Trading Hours, as specified in Section V(A)(1) of the Plan. If a Pro-Forma

Reference Price has not moved by 1% or more from the Reference Price currently in effect, no new Price Bands shall be disseminated, and the current Reference Price shall remain the effective Reference Price. When the Pro-Forma Reference Price has moved by 1% or more from the Reference Price currently in effect, the Pro-Forma Reference Price shall become the Reference Price, and the Processor shall disseminate new Price Bands based on the new Reference Price; provided, however, that each new Reference Price shall remain in effect for at least 30 seconds.

(B) Openings

(1) Except when a Regulatory Halt is in effect at the start of Regular Trading Hours, the first Reference Price for a trading day shall be the Opening Price on the Primary Listing Exchange in an NMS Stock if such Opening Price occurs less than five minutes after the start of Regular Trading Hours. During the period less than five minutes after the Opening Price, a Pro-Forma Reference Price shall be updated on a continuous basis to be the arithmetic mean price of Eligible Reported Transactions for the NMS Stock during the period following the Opening Price (including the Opening Price), and if it differs from the current Reference Price by 1% or more shall become the new Reference Price, except that a new Reference Price shall remain in effect for at least 30 seconds. Subsequent Reference Prices shall be calculated as specified in Section V(A) of the Plan.

(2) If the Opening Price on the Primary Listing Exchange in an NMS Stock does not occur within five minutes after the start of Regular Trading Hours, the first Reference Price for a trading day shall be the arithmetic mean price of Eligible Reported Transactions for the NMS Stock over the preceding five minute time period, and subsequent Reference Prices shall be calculated as specified in Section V(A) of the Plan.

(C) Reopenings

(1) Following a Trading Pause in an NMS Stock, and if the Primary Listing Exchange has not declared a Regulatory Halt, the next Reference Price shall be the Reopening Price on the Primary Listing Exchange if such Reopening Price occurs within ten minutes after the beginning of the Trading Pause, and subsequent Reference Prices shall be determined in the manner prescribed for normal openings, as specified in Section V(B)(1) of the Plan. If such Reopening Price does not occur within ten minutes after the beginning of the Trading Pause, the first Reference Price following the Trading Pause shall be equal to the last effective Reference Price before the Trading Pause. Subsequent Reference Prices shall be calculated as specified in Section V(A) of the Plan.

(2) Following a Regulatory Halt, the next Reference Price shall be the Opening or Reopening Price on the Primary Listing Exchange if such Opening or Reopening Price occurs within five minutes after the end of the Regulatory Halt, and subsequent Reference Prices shall be determined in the manner prescribed for normal openings, as specified in Section V(B)(1) of the Plan. If such Opening or Reopening Price has not occurred within five minutes after the end of the Regulatory Halt, the Reference Price shall be equal to the arithmetic mean price of Eligible Reported Transactions for the NMS Stock over the preceding five minute time period, and subsequent Reference Prices shall be calculated as specified in Section V(A) of the Plan.

VI. Limit Up-Limit Down Requirements

(A) Limitations on Trades and Quotations Outside of Price Bands

(1) All trading centers in NMS Stocks, including both those operated by Participants and those operated by members of Participants, shall establish, maintain, and enforce written policies and procedures that are reasonably designed to prevent trades at prices that are below the

Lower Price Band or above the Upper Price Band for an NMS Stock. Single-priced opening, reopening, and closing transactions on the Primary Listing Exchange, however, shall be excluded from this limitation. In addition, any transaction that both does not update the last sale price (except if solely because the transaction was reported late) and is excepted or exempt from Rule 611 under Regulation NMS shall be excluded from this limitation.

(2) When a National Best Bid is below the Lower Price Band or a National Best Offer is above the Upper Price Band for an NMS Stock, the Processor shall disseminate such National Best Bid or National Best Offer with an appropriate flag identifying it as non-executable. When a National Best Offer is equal to the Lower Price Band or a National Best Bid is equal to the Upper Price Band for an NMS Stock, the Processor shall distribute such National Best Bid or National Best Offer with an appropriate flag identifying it as a “Limit State Quotation”.

(3) All trading centers in NMS Stocks, including both those operated by Participants and those operated by members of Participants, shall establish, maintain, and enforce written policies and procedures that are reasonably designed to prevent the display of offers below the Lower Price Band and bids above the Upper Price Band for an NMS Stock. The Processor shall disseminate an offer below the Lower Price Band or bid above the Upper Price Band that may be submitted despite such reasonable policies and procedures, but with an appropriate flag identifying it as non-executable; provided, however, that any such bid or offer shall not be included in National Best Bid or National Best Offer calculations.

(B) Entering and Exiting a Limit State

(1) All trading for an NMS Stock shall immediately enter a Limit State if the National Best Offer equals the Lower Price Band and does not cross the National Best Bid, or the National Best Bid equals the Upper Price Band and does not cross the National Best Offer.

(2) When trading for an NMS Stock enters a Limit State, the Processor shall disseminate this information by identifying the relevant quotation (i.e., a National Best Offer that equals the Lower Price Band or a National Best Bid that equals the Upper Price Band) as a Limit State Quotation. At this point, the Processor shall cease calculating and disseminating updated Reference Prices and Price Bands for the NMS Stock until either trading exits the Limit State or trading resumes with an opening or re-opening as provided in Section V.

(3) Trading for an NMS Stock shall exit a Limit State if, within 15 seconds of entering the Limit State, the entire size of all Limit State Quotations are executed or cancelled.

(4) If trading for an NMS Stock exits a Limit State within 15 seconds of entry, the Processor shall immediately calculate and disseminate updated Price Bands based on a Reference Price that equals the arithmetic mean price of Eligible Reported Transactions for the NMS Stock over the immediately preceding five-minute period (including the period of the Limit State).

(5) If trading for an NMS Stock does not exit a Limit State within 15 seconds of entry, the Limit State will terminate when the Primary Listing Exchange declares a Trading Pause pursuant to Section VII of the Plan. If trading for an NMS Stock is in a Limit State at the end of Regular Trading Hours, the Limit State will terminate when the Primary Listing Exchange executes a closing transaction in the NMS Stock or five minutes after the end of Regular Trading Hours, whichever is earlier.

## VII. Trading Pauses

### (A) Declaration of Trading Pauses

(1) If trading for an NMS Stock does not exit a Limit State within 15 seconds of entry during Regular Trading Hours, then the Primary Listing Exchange shall declare a Trading Pause for such NMS Stock and shall notify the Processor.

(2) The Primary Listing Exchange may also declare a Trading Pause for an NMS Stock when an NMS Stock is in a Straddle State, which is when National Best Bid (Offer) is below (above) the Lower (Upper) Price Band and the NMS Stock is not in a Limit State, and trading in that NMS Stock deviates from normal trading characteristics such that declaring a Trading Pause would support the Plan's goal to address extraordinary market volatility. The Primary Listing Exchange shall develop policies and procedures for determining when it would declare a Trading Pause in such circumstances. If a Trading Pause is declared for an NMS Stock under this provision, the Primary Listing Exchange shall notify the Processor.

(3) The Processor shall disseminate Trading Pause information to the public. No trades in an NMS Stock shall occur during a Trading Pause, but all bids and offers may be displayed.

### (B) Reopening of Trading During Regular Trading Hours

(1) Five minutes after declaring a Trading Pause for an NMS Stock, and if the Primary Listing Exchange has not declared a Regulatory Halt, the Primary Listing Exchange shall attempt to reopen trading using its established reopening procedures. The Trading Pause shall end when the Primary Listing Exchange reports a Reopening Price.

(2) The Primary Listing Exchange shall notify the Processor if it is unable to reopen trading in an NMS Stock for any reason other than a significant order imbalance and if it has not



declared a Regulatory Halt. The Processor shall disseminate this information to the public, and all trading centers may begin trading the NMS Stock at this time.

(3) If the Primary Listing Exchange does not report a Reopening Price within ten minutes after the declaration of a Trading Pause in an NMS Stock, and has not declared a Regulatory Halt, all trading centers may begin trading the NMS Stock.

(4) When trading begins after a Trading Pause, the Processor shall update the Price Bands as set forth in Section V(C)(1) of the Plan.

(C) Trading Pauses Within Five Minutes of the End of Regular Trading Hours

(1) If a Trading Pause for an NMS Stock is declared less than five minutes before the end of Regular Trading Hours, the Primary Listing Exchange shall attempt to execute a closing transaction using its established closing procedures. All trading centers may begin trading the NMS Stock when the Primary Listing Exchange executes a closing transaction.

(2) If the Primary Listing Exchange does not execute a closing transaction within five minutes after the end of Regular Trading Hours, all trading centers may begin trading the NMS Stock.

VIII. Implementation

(A) Phase I

(1) Phase I of Plan implementation shall apply immediately following the initial date of Plan operations.

(2) During Phase I, the Plan shall apply only to the Tier 1 NMS Stocks identified in Appendix A of the Plan.

(3) During Phase I, the first Price Bands for a trading day shall be calculated and disseminated 15 minutes after the start of Regular Trading Hours as specified in Section (V)(A)

of the Plan. No Price Bands shall be calculated and disseminated less than 30 minutes before the end of Regular Trading Hours, and trading shall not enter a Limit State less than 25 minutes before the end of Regular Trading Hours.

(B) Phase II – Full Implementation

Six months after the initial date of Plan operations, or such earlier date as may be announced by the Processor with at least 30 days notice, the Plan shall fully apply (i) to all NMS Stocks; and (ii) beginning at 9:30 a.m. ET, and ending at 4:00 p.m. ET each trading day, or earlier in the case of an early scheduled close or if the Processor disseminates a closing trade for the Primary Listing Exchange.

(C) Pilot

The Plan shall be implemented on a one-year pilot basis.

IX. Withdrawal from Plan

If a Participant obtains SEC approval to withdraw from the Plan, such Participant may withdraw from the Plan at any time on not less than 30 days' prior written notice to each of the other Participants. At such time, the withdrawing Participant shall have no further rights or obligations under the Plan.

X. Counterparts and Signatures

The Plan may be executed in any number of counterparts, no one of which need contain all signatures of all Participants, and as many of such counterparts as shall together contain all such signatures shall constitute one and the same instrument.

IN WITNESS THEREOF, this Plan has been executed as of the \_\_\_ day of \_\_\_\_\_ 2012 by each of the parties hereto.

BATS EXCHANGE, INC.

BY: \_\_\_\_\_

CHICAGO BOARD OPTIONS  
EXCHANGE, INCORPORATED

BY: \_\_\_\_\_

EDGA EXCHANGE, INC.

BY: \_\_\_\_\_

FINANCIAL INDUSTRY  
REGULATORY AUTHORITY, INC.

BY: \_\_\_\_\_

NASDAQ OMX PHLX LLC

BY: \_\_\_\_\_

NATIONAL STOCK EXCHANGE, INC.

BY: \_\_\_\_\_

NYSE MKT LLC

BY: \_\_\_\_\_

BATS Y-EXCHANGE, INC.

BY: \_\_\_\_\_

CHICAGO STOCK EXCHANGE, INC.

BY: \_\_\_\_\_

EDGX EXCHANGE, INC.

BY: \_\_\_\_\_

NASDAQ OMX BX, INC.

BY: \_\_\_\_\_

THE NASDAQ STOCK MARKET LLC

BY: \_\_\_\_\_

NEW YORK STOCK EXCHANGE LLC

BY: \_\_\_\_\_

NYSE ARCA, INC.

BY: \_\_\_\_\_

## Appendix A – Percentage Parameters

### I. Tier 1 NMS Stocks

(1) Tier 1 NMS Stocks shall include all NMS Stocks included in the S&P 500 Index, the Russell 1000 Index, and the exchange-traded products (“ETP”) listed on Schedule 1 to this Appendix. Schedule 1 to the Appendix will be reviewed and updated semi-annually based on the fiscal year by the Primary Listing Exchange to add ETPs that meet the criteria, or delete ETPs that are no longer eligible. To determine eligibility for an ETP to be included as a Tier 1 NMS Stock, all ETPs across multiple asset classes and issuers, including domestic equity, international equity, fixed income, currency, and commodities and futures will be identified. Leveraged ETPs will be excluded and the list will be sorted by notional consolidated average daily volume (“CADV”). The period used to measure CADV will be from the first day of the previous fiscal half year up until one week before the beginning of the next fiscal half year. Daily volumes will be multiplied by closing prices and then averaged over the period. ETPs, including inverse ETPs, that trade over \$2,000,000 CADV will be eligible to be included as a Tier 1 NMS Stock. To ensure that ETPs that track similar benchmarks but that do not meet this volume criterion do not become subject to pricing volatility when a component security is the subject of a trading pause, non-leveraged ETPs that have traded below this volume criterion, but that track the same benchmark as an ETP that does meet the volume criterion, will be deemed eligible to be included as a Tier 1 NMS Stock. The semi-annual updates to Schedule 1 do not require an amendment to the Plan. The Primary Listing Exchanges will maintain the updated Schedule 1 on their respective websites.

(2) The Percentage Parameters for Tier 1 NMS Stocks with a Reference Price more than \$3.00 shall be 5%.

(3) The Percentage Parameters for Tier 1 NMS Stocks with a Reference Price equal to \$0.75 and up to and including \$3.00 shall be 20%.

(4) The Percentage Parameters for Tier 1 NMS Stocks with a Reference Price less than \$0.75 shall be the lesser of (a) \$0.15 or (b) 75%.

(5) The Reference Price used for determining which Percentage Parameter shall be applicable during a trading day shall be based on the closing price of the NMS Stock on the Primary Listing Exchange on the previous trading day, or if no closing price exists, the last sale on the Primary Listing Exchange reported by the Processor.

## II. Tier 2 NMS Stocks

(1) Tier 2 NMS Stocks shall include all NMS Stocks other than those in Tier 1, provided, however, that all rights and warrants are excluded from the Plan.

(2) The Percentage Parameters for Tier 2 NMS Stocks with a Reference Price more than \$3.00 shall be 10%.

(3) The Percentage Parameters for Tier 2 NMS Stocks with a Reference Price equal to \$0.75 and up to and including \$3.00 shall be 20%.

(4) The Percentage Parameters for Tier 2 NMS Stocks with a Reference Price less than \$0.75 shall be the lesser of (a) \$0.15 or (b) 75%.

(5) Notwithstanding the foregoing, the Percentage Parameters for a Tier 2 NMS Stock that is a leveraged ETP shall be the applicable Percentage Parameter set forth in clauses (2), (3), or (4) above, multiplied by the leverage ratio of such product.

(6) The Reference Price used for determining which Percentage Parameter shall be applicable during a trading day shall be based on the closing price of the NMS Stock on the

Primary Listing Exchange on the previous trading day, or if no closing price exists, the last sale on the Primary Listing Exchange reported by the Processor.

**Appendix A – Schedule 1**

<b>Symbol</b>	<b>Name</b>
AAVX	ETRACS Daily Short 1-Month S&P 500 VIX Futures ETN
AAXJ	iShares MSCI All Country Asia ex Japan Index Fund
ACWI	iShares MSCI ACWI Index Fund
ACWX	iShares MSCI ACWI ex US Index Fund
AGG	iShares Barclays Aggregate Bond Fund
AGZ	iShares Barclays Agency Bond Fund
ALD	WisdomTree Asia Local Debt Fund
AMJ	JPMorgan Alerian MLP Index ETN
AMPLP	Alerian MLP ETF
BAB	PowerShares Build America Bond Portfolio
BDG	PowerShares DB Base Metals Long ETN
BIK	SPDR S&P BRIC 40 ETF
BIL	SPDR Barclays Capital 1-3 Month T-Bill ETF
BIV	Vanguard Intermediate-Term Bond ETF
BKF	iShares MSCI BRIC Index Fund
BKLN	PowerShares Senior Loan Portfolio
BLV	Vanguard Long-Term Bond ETF
BND	Vanguard Total Bond Market ETF
BNO	United States Brent Oil Fund LP
BOND	Pimco Total Return ETF
BOS	PowerShares DB Base Metals Short ETN
BRF	Market Vectors Brazil Small-Cap ETF
BSV	Vanguard Short-Term Bond ETF
BWX	SPDR Barclays Capital International Treasury Bond ETF
BXDB	Barclays ETN+short B Leveraged ETN Linked to S&P 500
CEW	WisdomTree Dreyfus Emerging Currency Fund
CFT	iShares Barclays Credit Bond Fund
CIU	iShares Barclays Intermediate Credit Bond Fund
CLY	iShares 10+ Year Credit Bond Fund
CORN	Teucrium Corn Fund
CSJ	iShares Barclays 1-3 Year Credit Bond Fund
CVY	Guggenheim Multi-Asset Income ETF
CWB	SPDR Barclays Capital Convertible Securities ETF
CWI	SPDR MSCI ACWI ex-US ETF
CYB	WisdomTree Dreyfus Chinese Yuan Fund
DBA	PowerShares DB Agriculture Fund
DBB	PowerShares DB Base Metals Fund
DBC	PowerShares DB Commodity Index Tracking Fund

<b>Symbol</b>	<b>Name</b>
DBE	PowerShares DB Energy Fund
DBO	PowerShares DB Oil Fund
DBP	PowerShares DB Precious Metals Fund
DBV	PowerShares DB G10 Currency Harvest Fund
DEM	WisdomTree Emerging Markets Equity Income Fund
DGL	PowerShares DB Gold Fund
DGS	WisdomTree Emerging Markets SmallCap Dividend Fund
DGZ	PowerShares DB Gold Short ETN
DHS	WisdomTree Equity Income Fund
DIA	SPDR Dow Jones Industrial Average ETF Trust
DJCI	E-TRACS UBS AG Dow Jones-UBS Commodity Index Total Return ETN
DJP	iPath Dow Jones-UBS Commodity Index Total Return ETN
DLN	WisdomTree LargeCap Dividend Fund
DOG	ProShares Short Dow30
DON	WisdomTree MidCap Dividend Fund
DOO	WisdomTree International Dividend Ex-Financials Fund
DTN	WisdomTree Dividend Ex-Financials Fund
DVY	iShares Dow Jones Select Dividend Index Fund
DWM	WisdomTree DEFA Fund
DWX	SPDR S&P International Dividend ETF
DXJ	WisdomTree Japan Hedged Equity Fund
ECH	iShares MSCI Chile Investable Market Index Fund
ECON	EGShares Emerging Markets Consumer ETF
EDIV	SPDR S&P Emerging Markets Dividend ETF
EDV	Vanguard Extended Duration Treasury ETF
EEB	Guggenheim BRIC ETF
EEM	iShares MSCI Emerging Markets Index Fund
EFA	iShares MSCI EAFE Index Fund
EFG	iShares MSCI EAFE Growth Index
EFV	iShares MSCI EAFE Value Index
EFZ	ProShares Short MSCI EAFE
EIDO	iSHARES MSCI Indonesia Investable Market Index Fund
ELD	WisdomTree Emerging Markets Local Debt Fund
ELR	SPDR Dow Jones Large Cap ETF
EMB	iShares JPMorgan USD Emerging Markets Bond Fund
EMLC	Market Vectors Emerging Markets Local Currency Bond ETF
EMM	SPDR Dow Jones Mid Cap ETF
EPHE	iShares MSCI Philippines Investable Market Index Fund



<b>Symbol</b>	<b>Name</b>
EPI	WisdomTree India Earnings Fund
EPP	iShares MSCI Pacific ex-Japan Index Fund
EPU	iShares MSCI All Peru Capped Index Fund
ERUS	iShares MSCI Russia Capped Index Fund
EUM	ProShares Short MSCI Emerging Markets
EWA	iShares MSCI Australia Index Fund
EWC	iShares MSCI Canada Index Fund
EWD	iShares MSCI Sweden Index Fund
EWG	iShares MSCI Germany Index Fund
EWH	iShares MSCI Hong Kong Index Fund
EWI	iShares MSCI Italy Index Fund
EWJ	iShares MSCI Japan Index Fund
EWL	iShares MSCI Switzerland Index Fund
EWM	iShares MSCI Malaysia Index Fund
EWP	iShares MSCI Spain Index Fund
EWQ	iShares MSCI France Index Fund
EWS	iShares MSCI Singapore Index Fund
EWT	iShares MSCI Taiwan Index Fund
EWU	iShares MSCI United Kingdom Index Fund
EWV	iShares MSCI Mexico Investable Market Index Fund
EWX	SPDR S&P Emerging Markets SmallCap ETF
EWY	iShares MSCI South Korea Index Fund
EWZ	iShares MSCI Brazil Index Fund
EZA	iShares MSCI South Africa Index Fund
EZU	iShares MSCI EMU Index Fund
FBT	First Trust NYSE Arca Biotechnology Index Fund
FCG	First Trust ISE-Revere Natural Gas Index Fund
FDL	First Trust Morningstar Dividend Leaders Index
FDN	First Trust Dow Jones Internet Index Fund
FEX	First Trust Large Cap Core AlphaDEX Fund
FEZ	SPDR EURO STOXX 50 ETF
FGD	First Trust DJ Global Select Dividend Index Fund
FLAT	iPath US Treasury Flatteners ETN
FNX	First Trust Mid Cap Core AlphaDEX Fund
FRI	First Trust S&P REIT Index Fund
FVD	First Trust Value Line Dividend Index Fund
FXA	CurrencyShares Australian Dollar Trust
FXB	CurrencyShares British Pound Sterling Trust
FXC	CurrencyShares Canadian Dollar Trust

<b>Symbol</b>	<b>Name</b>
FXD	First Trust Consumer Discretionary AlphaDEX Fund
FXE	CurrencyShares Euro Trust
FXF	CurrencyShares Swiss Franc Trust
FXG	First Trust Consumer Staples AlphaDEX Fund
FXH	First Trust Health Care AlphaDEX Fund
FXI	iShares FTSE China 25 Index Fund
FXL	First Trust Technology AlphaDEX Fund
FXU	First Trust Utilities AlphaDEX Fund
FXY	CurrencyShares Japanese Yen Trust
FXZ	First Trust Materials AlphaDEX Fund
GAZ	iPath Dow Jones-UBS Natural Gas Subindex Total Return ETN
GCC	GreenHaven Continuous Commodity Index Fund
GDX	Market Vectors Gold Miners ETF
GDXJ	Market Vectors Junior Gold Miners ETF
GIY	Guggenheim Enhanced Core Bond ETF
GLD	SPDR Gold Shares
GMF	SPDR S&P Emerging Asia Pacific ETF
GNR	SPDR S&P Global Natural Resources ETF
GOVT	iShares Barclays U.S. Treasury Bond Fund
GSG	iShares S&P GSCI Commodity Indexed Trust
GSP	iPath GSCI Total Return Index ETN
GSY	Guggenheim Enhanced Short Duration Bond ETF
GVI	iShares Barclays Intermediate Government/Credit Bond Fund
GWX	SPDR S&P International Small Cap ETF
GXC	SPDR S&P China ETF
GXG	Global X FTSE Colombia 20 ETF
HAO	Guggenheim China Small Cap ETF
HDGE	Active Bear ETF/The
HDV	iShares High Dividend Equity Fund
HYD	Market Vectors High Yield Municipal Index ETF
HYG	iShares iBoxx \$ High Yield Corporate Bond Fund
HYS	PIMCO 0-5 Year High Yield Corporate Bond Index Fund
IAU	iShares Gold Trust
IBB	iShares Nasdaq Biotechnology Index Fund
ICF	iShares Cohen & Steers Realty Majors Index Fund
ICI	iPath Optimized Currency Carry ETN
IDU	iShares Dow Jones US Utilities Sector Index Fund
IDV	iShares Dow Jones International Select Dividend Index Fund
IDX	Market Vectors Indonesia Index ETF

<b>Symbol</b>	<b>Name</b>
IEF	iShares Barclays 7-10 Year Treasury Bond Fund
IEI	iShares Barclays 3-7 Year Treasury Bond Fund
IEO	iShares Dow Jones US Oil & Gas Exploration & Production Index Fund
IEV	iShares S&P Europe 350 Index Fund
IEZ	iShares Dow Jones US Oil Equipment & Services Index Fund
IGE	iShares S&P North American Natural Resources Sector Index Fund
IGF	iShares S&P Global Infrastructure Index Fund
IGOV	iShares S&P/Citigroup International Treasury Bond Fund
IGS	ProShares Short Investment Grade Corporate
IGV	iShares S&P North American Technology-Software Index Fund
IHE	iShares Dow Jones US Pharmaceuticals Index Fund
IHF	iShares Dow Jones US Healthcare Providers Index Fund
IHI	iShares Dow Jones US Medical Devices Index Fund
IJH	iShares S&P MidCap 400 Index Fund
IJJ	iShares S&P MidCap 400/BARRA Value Index Fund
IJK	iShares S&P MidCap 400 Growth Index Fund
IJR	iShares S&P SmallCap 600 Index Fund
IJS	iShares S&P SmallCap 600 Value Index Fund
IJT	iShares S&P SmallCap 600/BARRA Growth Index Fund
ILF	iShares S&P Latin America 40 Index Fund
INDA	iShares MSCI India Index Fund
INDY	iShares S&P India Nifty 50 Index Fund
INP	iPath MSCI India Index ETN
IOO	iShares S&P Global 100 Index Fund
IPE	SPDR Barclays Capital TIPS ETF
ITB	iShares Dow Jones US Home Construction Index Fund
ITM	Market Vectors Intermediate Municipal ETF
IVE	iShares S&P 500 Value Index Fund
IVOO	Vanguard S&P Mid-Cap 400 ETF
IVOP	iPath Inverse S&P 500 VIX Short-Term Futures™ ETN II
IVV	iShares S&P 500 Index Fund/US
IWV	iShares S&P 500 Growth Index Fund
IWB	iShares Russell 1000 Index Fund
IWC	iShares Russell Microcap Index Fund
IWD	iShares Russell 1000 Value Index Fund
IWF	iShares Russell 1000 Growth Index Fund
IWM	iShares Russell 2000 Index Fund
IWN	iShares Russell 2000 Value Index Fund
IWO	iShares Russell 2000 Growth Index Fund

<b>Symbol</b>	<b>Name</b>
IWP	iShares Russell Midcap Growth Index Fund
IWR	iShares Russell Midcap Index Fund
IWS	iShares Russell Midcap Value Index Fund
IWV	iShares Russell 3000 Index Fund
IWW	iShares Russell 3000 Value Index Fund
IWY	iShares Russell Top 200 Growth Index Fund
IWZ	iShares Russell 3000 Growth Index Fund
IXC	iShares S&P Global Energy Sector Index Fund
IXG	iShares S&P Global Financials Sector Index Fund
IXJ	iShares S&P Global Healthcare Sector Index Fund
IXN	iShares S&P Global Technology Sector Index Fund
IXP	iShares S&P Global Telecommunications Sector Index Fund
IYC	iShares Dow Jones US Consumer Services Sector Index Fund
IYE	iShares Dow Jones US Energy Sector Index Fund
IYF	iShares Dow Jones US Financial Sector Index Fund
IYG	iShares Dow Jones US Financial Services Index Fund
IYH	iShares Dow Jones US Healthcare Sector Index Fund
IYJ	iShares Dow Jones US Industrial Sector Index Fund
IYK	iShares Dow Jones US Consumer Goods Sector Index Fund
IYM	iShares Dow Jones US Basic Materials Sector Index Fund
IYR	iShares Dow Jones US Real Estate Index Fund
IYT	iShares Dow Jones Transportation Average Index Fund
IYW	iShares Dow Jones US Technology Sector Index Fund
IYY	iShares Dow Jones US Index Fund
IYZ	iShares Dow Jones US Telecommunications Sector Index Fund
JJC	iPath Dow Jones-UBS Copper Subindex Total Return ETN
JJG	iPath Dow Jones-UBS Grains Subindex Total Return ETN
JNK	SPDR Barclays Capital High Yield Bond ETF
JXI	iShares S&P Global Utilities Sector Index Fund
JYN	iPath JPY/USD Exchange Rate ETN
KBE	SPDR S&P Bank ETF
KBWB	PowerShares KBW Bank Portfolio
KIE	SPDR S&P Insurance ETF
KOL	Market Vectors Coal ETF
KRE	SPDR S&P Regional Banking ETF
KXI	iShares S&P Global Consumer Staples Sector Index Fund
LAG	SPDR Barclays Capital Aggregate Bond ETF
LQD	iShares iBoxx Investment Grade Corporate Bond Fund
LTPZ	PIMCO 15+ Year US TIPS Index Fund

<b>Symbol</b>	<b>Name</b>
LWC	SPDR Barclays Capital Long Term Corporate BondETF
MBB	iShares Barclays MBS Bond Fund
MBG	SPDR Barclays Capital Mortgage Backed Bond ETF
MCHI	iShares MSCI China Index Fund
MDY	SPDR S&P MidCap 400 ETF Trust
MGC	Vanguard Mega Cap 300 ETF
MGK	Vanguard Mega Cap 300 Growth ETF
MINT	PIMCO Enhanced Short Maturity Strategy Fund
MLPI	UBS E-TRACS Alerian MLP Infrastructure ETN
MLPN	Credit Suisse Cushing 30 MLP Index ETN
MOO	Market Vectors Agribusiness ETF
MUB	iShares S&P National Municipal Bond Fund
MXI	iShares S&P Global Materials Sector Index Fund
MYX	ProShares Short MidCap 400
NKY	MAXIS Nikkei 225 Index Fund ETF
OEF	iShares S&P 100 Index Fund
OIH	Market Vectors Oil Service ETF
OIL	iPath Goldman Sachs Crude Oil Total Return Index ETN
PALL	ETFS Physical Palladium Shares
PBJ	Powershares Dynamic Food & Beverage Portfolio
PCEF	PowerShares CEF Income Composite Portfolio
PCY	PowerShares Emerging Markets Sovereign Debt Portfolio
PDP	Powershares DWA Technical Leaders Portfolio
PEY	PowerShares High Yield Equity Dividend Achievers Portfolio
PFF	iShares S&P US Preferred Stock Index Fund
PFM	PowerShares Dividend Achievers Portfolio
PGF	PowerShares Financial Preferred Portfolio
PGX	PowerShares Preferred Portfolio
PHB	PowerShares Fundamental High Yield Corporate Bond Portfolio
PHO	PowerShares Water Resources Portfolio
PHYS	Sprott Physical Gold Trust
PID	PowerShares International Dividend Achievers Portfolio
PIE	PowerShares DWA Emerging Markets Technical Leaders Portfolio
PIN	PowerShares India Portfolio
PJP	Powershares Dynamic Pharmaceuticals Portfolio
PLW	PowerShares 1-30 Laddered Treasury Portfolio
PPH	Market Vectors Pharmaceutical ETF
PPLT	ETFS Platinum Trust
PRF	Powershares FTSE RAFI US 1000 Portfolio

<b>Symbol</b>	<b>Name</b>
PRFZ	PowerShares FTSE RAFI US 1500 Small-Mid Portfolio
PSLV	Sprott Physical Silver Trust
PSP	PowerShares Global Listed Private Equity Portfolio
PSQ	ProShares Short QQQ
PVI	PowerShares VRDO Tax Free Weekly Portfolio
PXH	PowerShares FTSE RAFI Emerging Markets Portfolio
PZA	PowerShares Insured National Municipal Bond Portfolio
QQQ	Powershares QQQ Trust Series 1
REM	iShares FTSE NAREIT Mortgage Plus Capped Index Fund
REMX	Market Vectors Rare Earth/Strategic Metals ETF
REZ	iShares FTSE NAREIT Residential Plus Capped Index Fund
RFG	Guggenheim S&P Midcap 400 Pure Growth ETF
RJA	ELEMENTS Linked to the Rogers International Commodity Index - Agri Tot Return
RJI	ELEMENTS Linked to the Rogers International Commodity Index - Total Return
RJN	ELEMENTS Linked to the Rogers International Commodity Index - Energy To Return
RJZ	ELEMENTS Linked to the Rogers International Commodity Index - Metals Tot Return
RPG	Guggenheim S&P 500 Pure Growth ETF
RSP	Guggenheim S&P 500 Equal Weight ETF
RSX	Market Vectors Russia ETF
RTH	Market Vectors Retail ETF
RWM	ProShares Short Russell2000
RWO	SPDR Dow Jones Global Real Estate ETF
RWR	SPDR Dow Jones REIT ETF
RWX	SPDR Dow Jones International Real Estate ETF
RYH	Guggenheim S&P 500 Equal Weight Healthcare ETF
SAGG	Direxion Daily Total Bond Market Bear 1x Shares
SCHA	Schwab US Small-Cap ETF
SCHB	Schwab US Broad Market ETF
SCHD	Schwab US Dividend Equity ETF
SCHE	Schwab Emerging Markets Equity ETF
SCHF	Schwab International Equity ETF
SCHG	Schwab U.S. Large-Cap Growth ETF
SCHH	Schwab U.S. REIT ETF
SCHM	Schwab U.S. Mid-Cap ETF
SCHO	Schwab Short-Term U.S. Treasury ETF
SCHP	Schwab U.S. TIPs ETF

<b>Symbol</b>	<b>Name</b>
SCHR	Schwab Intermediate-Term U.S. Treasury ETF
SCHV	Schwab U.S. Large-Cap Value ETF
SCHX	Schwab US Large-Cap ETF
SCHZ	Schwab U.S. Aggregate Bond ETF
SCPB	SPDR Barclays Capital Short Term Corporate Bond ETF
SCZ	iShares MSCI EAFE Small Cap Index Fund
SDY	SPDR S&P Dividend ETF
SEF	ProShares Short Financials
SGG	iPath Dow Jones-UBS Sugar Subindex Total Return ETN
SGOL	ETFS Gold Trust
SH	ProShares Short S&P500
SHM	SPDR Nuveen Barclays Capital Short Term Municipal Bond ETF
SHV	iShares Barclays Short Treasury Bond Fund
SHY	iShares Barclays 1-3 Year Treasury Bond Fund
SIL	Global X Silver Miners ETF
SIVR	ETFS Physical Silver Shares
SJB	ProShares Short High Yield
SJNK	SPDR Barclays Capital Short Term High Yield Bond ETF
SLV	iShares Silver Trust
SLX	Market Vectors Steel Index Fund
SMH	Market Vectors Semiconductor ETF
SOXX	iShares PHLX SOX Semiconductor Sector Index Fund
SPLV	PowerShares S&P 500 Low Volatility Portfolio
SPY	SPDR S&P 500 ETF Trust
SPYG	SPDR S&P 500 Growth ETF
SPYV	SPDR S&P 500 Value ETF
STIP	iShares Barclays 0-5 Year TIPS Bond Fund
STPP	iPath US Treasury Steepener ETN
STPZ	PIMCO 1-5 Year US TIPS Index Fund
SUB	iShares S&P Short Term National AMT-Free Municipal Bond Fund
SVXY	ProShares Short VIX Short-Term Futures ETF
TAN	Guggenheim Solar ETF
TBF	ProShares Short 20+ Year Treasury
TBX	ProShares Short 7-10 Treasury
TFI	SPDR Nuveen Barclays Capital Municipal Bond ETF
THD	iShares MSCI Thailand Index Fund
TIP	iShares Barclays TIPS Bond Fund
TLH	iShares Barclays 10-20 Year Treasury Bond Fund
TLT	iShares Barclays 20+ Year Treasury Bond Fund

<b>Symbol</b>	<b>Name</b>
TUR	iShares MSCI Turkey Index Fund
UDN	PowerShares DB US Dollar Index Bearish Fund
UGA	United States Gasoline Fund LP
UNG	United States Natural Gas Fund LP
URA	Global X Uranium ETF
USCI	United States Commodity Index Fund
USL	United States 12 Month Oil Fund LP
USO	United States Oil Fund LP
UUP	PowerShares DB US Dollar Index Bullish Fund
VAW	Vanguard Materials ETF
VB	Vanguard Small-Cap ETF
VBK	Vanguard Small-Cap Growth ETF
VBR	Vanguard Small-Cap Value ETF
VCIT	Vanguard Intermediate-Term Corporate Bond ETF
VCLT	Vanguard Long-Term Corporate Bond ETF
VCR	Vanguard Consumer Discretionary ETF
VCSH	Vanguard Short-Term Corporate Bond ETF
VDC	Vanguard Consumer Staples ETF
VDE	Vanguard Energy ETF
VEA	Vanguard MSCI EAFE ETF
VEU	Vanguard FTSE All-World ex-US ETF
VFH	Vanguard Financials ETF
VGK	Vanguard MSCI European ETF
VGX	Vanguard Information Technology ETF
VHT	Vanguard Health Care ETF
VIG	Vanguard Dividend Appreciation ETF
VIIX	VelocityShares VIX Short Term ETN
VIOO	Vanguard S&P Small-Cap 600 ETF
VIS	Vanguard Industrials ETF
VIXM	ProShares VIX Mid-Term Futures ETF
VIXY	ProShares VIX Short-Term Futures ETF
VMBS	Vanguard Mortgage-Backed Securities ETF
VNM	Market Vectors Vietnam ETF
VNQ	Vanguard REIT ETF
VO	Vanguard Mid-Cap ETF
VOE	Vanguard Mid-Cap Value Index Fund/Closed-end
VONE	Vanguard Russell 1000
VONG	Vanguard Russell 1000 Growth ETF
VONV	Vanguard Russell 1000 Value



<b>Symbol</b>	<b>Name</b>
VOO	Vanguard S&P 500 ETF
VOOG	Vanguard S&P 500 Growth ETF
VOOV	Vanguard S&P 500 Value ETF
VOT	Vanguard Mid-Cap Growth Index Fund/Closed-end
VOX	Vanguard Telecommunication Services ETF
VPL	Vanguard MSCI Pacific ETF
VPU	Vanguard Utilities ETF
VQT	Barclays ETN+ ETNs Linked to the S&P 500 Dynamic VEQTORTM Total Return Index
VSS	Vanguard FTSE All World ex-US Small-Cap ETF
VT	Vanguard Total World Stock Index Fund ETF
VTHR	Vanguard Russell 3000
VTI	Vanguard Total Stock Market ETF
VTV	Vanguard Value ETF
VTWG	Vanguard Russell 2000 Growth
VTWO	Vanguard Russell 2000
VTWV	Vanguard Russell 2000 Value
VUG	Vanguard Growth ETF
VV	Vanguard Large-Cap ETF
VWO	Vanguard MSCI Emerging Markets ETF
VXAA	ETRACS 1-Month S&P 500 VIX Futures ETN
VXEE	ETRACS 5-Month S&P 500 VIX Futures ETN
VXF	Vanguard Extended Market ETF
VXUS	Vanguard Total International Stock ETF
VXX	iPATH S&P 500 VIX Short-Term Futures ETN
VXZ	iPATH S&P 500 VIX Mid-Term Futures ETN
VYM	Vanguard High Dividend Yield ETF
VZZB	iPath Long Enhanced S&P 500 VIX Mid-Term Futures <sup>TM</sup> ETN II
WDTI	WisdomTree Managed Futures Strategy Fund
WIP	SPDR DB International Government Inflation-Protected Bond ETF
XBI	SPDR S&P Biotech ETF
XES	SPDR S&P Oil & Gas Equipment & Services ETF
XHB	SPDR S&P Homebuilders ETF
XIV	VelocityShares Daily Inverse VIX Short Term ETN
XLB	Materials Select Sector SPDR Fund
XLE	Energy Select Sector SPDR Fund
XLF	Financial Select Sector SPDR Fund
XLG	Guggenheim Russell Top 50 ETF
XLI	Industrial Select Sector SPDR Fund

<b>Symbol</b>	<b>Name</b>
XLK	Technology Select Sector SPDR Fund
XLP	Consumer Staples Select Sector SPDR Fund
XLU	Utilities Select Sector SPDR Fund
XLV	Health Care Select Sector SPDR Fund
XLY	Consumer Discretionary Select Sector SPDR Fund
XME	SPDR S&P Metals & Mining ETF
XOP	SPDR S&P Oil & Gas Exploration & Production ETF
XPH	SPDR S&P Pharmaceuticals ETF
XRT	SPDR S&P Retail ETF
XSD	SPDR S&P Semiconductor ETF
XXV	iPath Inverse S&P 500 VIX Short-Term Futures ETN
ZROZ	PIMCO 25+ Year Zero Coupon US Treasury Index Fund

## **Appendix B – Data**

Unless otherwise specified, the following data shall be collected and transmitted to the SEC in an agreed-upon format on a monthly basis, to be provided 30 calendar days following month end. Unless otherwise specified, the Primary Listing Exchanges shall be responsible for collecting and transmitting the data to the SEC. Data collected in connection with Sections II(E) – (G) below shall be transmitted to the SEC with a request for confidential treatment under the Freedom of Information Act, 5 U.S.C. 552, and the SEC’s rules and regulations thereunder.

### **I. Summary Statistics**

A. Frequency with which NMS Stocks enter a Limit State. Such summary data shall be broken down as follows:

1. Partition stocks by category
  - a. Tier 1 non-ETP issues > \$3.00
  - b. Tier 1 non-ETP issues  $\geq$  \$0.75 and  $\leq$  \$3.00
  - c. Tier 1 non-ETP issues < \$0.75
  - d. Tier 1 non-leveraged ETPs in each of above categories
  - e. Tier 1 leveraged ETPs in each of above categories
  - f. Tier 2 non-ETPs in each of above categories
  - g. Tier 2 non-leveraged ETPs in each of above categories
  - h. Tier 2 leveraged ETPs in each of above categories
2. Partition by time of day
  - a. Opening (prior to 9:45 am ET)
  - b. Regular (between 9:45 am ET and 3:35 pm ET)
  - c. Closing (after 3:35 pm ET)
  - d. Within five minutes of a Trading Pause re-open or IPO open

3. Track reasons for entering a Limit State, such as:
    - a. Liquidity gap –price reverts from a Limit State Quotation and returns to trading within the Price Bands
    - b. Broken trades
    - c. Primary Listing Exchange manually declares a Trading Pause pursuant to Section (VII)(2) of the Plan
    - d. Other
  - B. Determine (1), (2) and (3) for when a Trading Pause has been declared for an NMS Stock pursuant to the Plan.
- II. **Raw Data** (all Participants, except A-E, which are for the Primary Listing Exchanges only)
- A. Record of every Straddle State.
    1. Ticker, date, time entered, time exited, flag for ending with Limit State, flag for ending with manual override.
    2. Pipe delimited with field names as first record.
  - B. Record of every Price Band
    1. Ticker, date, time at beginning of Price Band, Upper Price Band, Lower Price Band
    2. Pipe delimited with field names as first record
  - C. Record of every Limit State
    1. Ticker, date, time entered, time exited, flag for halt
    2. Pipe delimited with field names as first record
  - D. Record of every Trading Pause or halt
    1. Ticker, date, time entered, time exited, type of halt (i.e., regulatory halt, non-regulatory halt, Trading Pause pursuant to the Plan, other)
    2. Pipe delimited with field names as first record
  - E. Data set or orders entered into reopening auctions during halts or Trading Pauses
    1. Arrivals, Changes, Cancels, # shares, limit/market, side, Limit State side

2. Pipe delimited with field name as first record
- F. Data set of order events received during Limit States
- G. Summary data on order flow of arrivals and cancellations for each 15-second period for discrete time periods and sample stocks to be determined by the SEC in subsequent data requests. Must indicate side(s) of Limit State.
1. Market/marketable sell orders arrivals and executions
    - a. Count
    - b. Shares
    - c. Shares executed
  2. Market/marketable buy orders arrivals and executions
    - a. Count
    - b. Shares
    - c. Shares executed
  3. Count arriving, volume arriving and shares executing in limit sell orders above NBBO mid-point
  4. Count arriving, volume arriving and shares executing in limit sell orders  $\leq$  NBBO mid-point (non-marketable)
  5. Count arriving, volume arriving and shares executing in limit buy orders above NBBO mid-point (non-marketable)
  6. Count arriving, volume arriving and shares executing in limit buy orders below NBBO mid-point
  7. Count and volume arriving of limit sell orders priced at or above  $\text{NBBO} + \$0.05$
  8. Count and volume arriving of limit buy orders priced at or below  $\text{NBBO} - \$0.05$
  9. Count and volume of (iii-viii) for cancels
  10. Include: ticker, date, time at start, time of Limit State, data item fields, last sale prior to 1-minute period (null if no trades today), range during 15-second period, last trade during 15-second period

- III. **At least two months prior to the end of the Pilot Period, all Participants shall provide to the SEC assessments relating to impact of the Plan and calibration of the Percentage Parameters as follows:**
- A. Assess the statistical and economic impact on limit order book of approaching Price Bands.
  - B. Assess the statistical and economic impact of the Price Bands on erroneous trades.
  - C. Assess the statistical and economic impact of the appropriateness of the Percentage Parameters used for the Price Bands.
  - D. Assess whether the Limit State is the appropriate length to allow for liquidity replenishment when a Limit State is reached because of a temporary liquidity gap.
  - E. Evaluate concerns from the options markets regarding the statistical and economic impact of Limit States on liquidity and market quality in the options markets. (Participants that operate options exchange should also prepare such assessment reports.)
  - F. Assess whether the process for entering a Limit State should be adjusted and whether Straddle States are problematic.
  - G. Assess whether the process for exiting a Limit State should be adjusted.
  - H. Assess whether the Trading Pauses are too long or short and whether the reopening procedures should be adjusted.