SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–101036; File No. 4–631]

Joint Industry Plan; Order Disapproving the Twenty-Third Amendment to the National Market System Plan To Address Extraordinary Market Volatility

September 16, 2024.

I. Introduction

On October 24, 2023, NYSE Group, Inc., on behalf of the Participants [1] to the National Market System Plan to Address Extraordinary Market Volatility (''Plan''), filed with the Securities and Exchange Commission (''Commission''), pursuant to section 11A(a)(3) of the Securities Exchange Act of 1934 (''Act'' or ''Exchange Act'') [2] and Rule 608 thereunder,[3] a proposal (''Proposal'' or ''Proposed Amendment'') to amend the Plan. The Proposed Amendment was published for comment in the **Federal Register** on November 21, 2023.[4] On February 15, 2024, the Commission instituted proceedings pursuant to Rule 608(b)(2)(i) of Regulation NMS [5] to determine whether to approve or disapprove the Proposed Amendment or to approve the Proposed Amendment with any changes or subject to any conditions the Commission deems necessary or appropriate.[6] On May 14, 2024, the Commission designated a longer period within which to conclude proceedings regarding the Proposed Amendment.[7] On July 18, 2024, the Commission designated a longer period for Commission action on the Proposed Amendment.[8]

This order disapproves the Proposed Amendment.

II. Overview

The Participants adopted the Plan to address extraordinary volatility in the securities markets, *i.e.,* significant fluctuations in individual securities' prices over a short period of time, such as those experienced during the ''Flash Crash'' on the afternoon of May 6, 2010. The Plan sets forth procedures that provide for market-wide limit up-limit down requirements to prevent trades in individual NMS Stocks from occurring outside of the specified Price Bands to address instances of extraordinary volatility in NMS Stocks.[9] These limit up-limit down requirements are coupled with Trading Pauses to accommodate more fundamental price moves.

As set forth in more detail in the Plan, the single plan processor, which is responsible for consolidation of information for an NMS Stock pursuant to Rule 603(b) of Regulation NMS under the Exchange Act, calculates and disseminates a lower Price Band and upper Price Band for each NMS Stock. As set forth in Section V of the Plan, the Price Bands are 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. The Price Bands for an NMS Stock are calculated by applying the Percentage Parameters, as set out in Appendix A to the Plan,[10] 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.

Appendix A to the Plan sets out the definitions of Tier 1 and Tier 2 NMS Stocks and the Percentage Parameters for each. Appendix A currently provides that Tier 1 includes all NMS Stocks included in the S&P 500 Index and the Russell 1000 Index, as well as ''eligible'' ETPs, which are ETPs that trade over $2,000,000 notional consolidated average daily volume (''CADV'') over a period from the first day of the previous fiscal half year up until one week before the beginning of the next fiscal half year. Eligible ETPs are listed in Schedule 1 to Appendix A, and the list is reviewed and updated semi-annually. All ETPs that do not meet the ''eligibility'' definition are currently assigned to Tier 2.

For Tier 1 NMS Stocks, Appendix A defines the Percentage Parameters as:

- 5% for Tier 1 NMS Stocks with a Reference Price more than $3.00;
- 20% for Tier 1 NMS Stocks with a Reference Price equal to $0.75 and up to and including $3.00; and
- The lesser of $0.15 or 75% for Tier 1 NMS Stocks with a Reference Price less than $0.75.

For Tier 2 NMS Stocks, Appendix A defines the Percentage Parameters as:

- 10% for Tier 2 NMS Stocks with a Reference Price of more than $3.00;
- 20% for Tier 2 NMS Stocks with a Reference Price equal to $0.75 and up to and including $3.00; and
- The lesser of $0.15 or 75% for Tier 2 NMS Stocks with a Reference Price less than $0.75.

Appendix A further provides that the Percentage Parameter for a Tier 2 NMS Stock that is a leveraged ETP is the applicable Percentage Parameter set forth above, multiplied by the leverage ratio of such product.

III. Summary of the Proposed Amendment [11]

The Participants propose to amend Appendix A to delete the definition of ETPs ''eligible'' for Tier 1, and to specify that all ETPs except for single-stock ETPs would be assigned to Tier 1. The Proposed Amendment would generally result in tighter Price Bands being applied on Tier 2 ETPs than currently apply. The Participants also propose to delete Schedule 1 to Appendix A as obsolete. Under the Proposal, Appendix A, Section I, paragraph (1) would read as follows:

> Tier 1 NMS Stocks shall include all NMS Stocks included in the S&P 500 Index and the Russell 1000 Index, and all exchange-traded products (''ETP''), except for single stock ETPs, which will be assigned to the same Tier as their underlying stock, adjusted for any leverage factor.

Because all leveraged ETPs (except Tier 2 single-stock ETPs) would be assigned to Tier 1, the Participants also propose to add text into Section I of Appendix A describing how the Percentage Parameters would be set for leveraged ETPs. The Participants propose to insert the following as paragraph (5) of Section I, and to renumber the paragraphs of Section I accordingly:

> Notwithstanding the foregoing, the Percentage Parameters for a Tier 1 NMS

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[1] The Participants are: Cboe BYX Exchange, Inc., Cboe BZX Exchange, Inc., Cboe EDGA Exchange, Inc., Cboe EDGX Exchange, Inc., the Financial Industry Regulatory Authority, Inc., Investors Exchange LLC, Long-Term Stock Exchange, Inc., MEMX LLC, MIAX Pearl, LLC, NASDAQ BX, Inc., NASDAQ PHLX LLC, The NASDAQ Stock Market LLC, New York Stock Exchange LLC, NYSE American LLC, NYSE Arca, Inc., NYSE Chicago, Inc., and NYSE National, Inc. (collectively, ''Participants'').

[2] 15 U.S.C. 78k–1(a)(3).

[3] 17 CFR 242.608.

[4] *See* Securities Exchange Act Release No. 98928 (Nov. 14, 2023), 88 FR 81131 (''Notice''). Comments received in response to the Notice can be found on the Commission's website at: *https://www.sec.gov/comments/4-631/4-631.htm.*

[5] 17 CFR 242.608(b)(2)(i).

[6] *See* Securities Exchange Act Release No. 99545 (Feb. 15, 2024), 89 FR 13389 (Feb. 22, 2024) (''OIP''). Comments received in response to the OIP can be found on the Commission's website at: *https://www.sec.gov/comments/4-631/4-631.htm*.

[7] *See* Securities Exchange Act Release No. 100127 (May 14, 2024), 89 FR 43969 (May 20, 2024).

[8] *See* Securities Exchange Act Release No. 100556 (July 18, 2024), 89 FR 59779 (July 23, 2024).

[9] *See* Notice, 88 FR at 81144–45 (setting forth the defined terms as used under the Plan). For purposes of this order, all capitalized terms referenced, but not otherwise defined, herein shall have the meanings as defined under the Plan or as defined in the Notice.

[10] *See* Notice, 88 FR at 81148 (Appendix A to the Plan).

[11] This section summarizes the proposed changes to the Plan and the Participants' analysis supporting the proposed changes, as described in the Notice. The Notice contains the Participants' full discussion of the Proposed Amendment, including the Participants' justifications for the Proposed Amendment. *See* Notice, *supra* note 4.

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.

At the request of ETP issuers, the Participants conducted a study concerning the calibration of the Percentage Parameters set forth in the Plan with respect to ETPs in Tier 2.[12] The Participants subsequently conducted additional analysis (''Supplemental Analysis'') on the narrowing of the Percentage Parameters.[13] The Participants reached the following conclusions based on the analysis in the study and the Supplemental Analysis (collectively ''Analyses''):

- Tier 1 non-ETPs are far more likely than Tier 2 ETPs to enter into Limit States and Trading Pauses due to the underlying volatility of these securities. This finding suggests that the Price Band width for Tier 2 ETPs is poorly calibrated relative to their actual trading behavior.[14] The Supplemental Analysis performed by the Participants reached the same conclusion using two different methodologies.[15]
- During the period looked at in the study presented in the Proposed Amendment, the notional value of trades that would have been prevented if Tier 2 ETPs had used tighter Tier 1 Price Bands would have been substantial for such thinly traded products, bounded on the lower end at $36.8 million and the upper end at $711.1 million.[16]
- The Participants calculated theoretical Tier 1 (*i.e.,* 5%, adjusted for the leverage factor) Price Bands for all Tier 2 ETPs in the study presented in the Proposed Amendment (''Theoretical Tier 1 Bands'').[17] In this analysis from the study, the Participants compared the execution price to the midpoint price of the National Best Bid or Offer (''NBBO'') at five and ten minutes after such execution. Using this methodology, in the majority of cases where a trade would have been prevented by the narrower Theoretical Tier 1 Bands, prices reverted by the end of the following five- and ten-minute periods, suggesting that having these thinly traded ETPs in Tier 1 would protect investors from executing trades at inferior prices that may occur due to transitory gaps in liquidity rather than fundamental valuation changes.[18] In the Supplemental Analysis, the Participants used a different methodology, specifically comparing the midpoint of the NBBO at five and ten minutes after the trade to the midpoint of the NBBO[19] at the time of execution, to demonstrate price movement after theorical block trades and again reached conclusions they state support the Proposed Amendment.[20]
- In most cases where ETPs have been reclassified from Tier 2 to Tier 1, market quality improved as evidenced by the lower quote volatility, tighter spreads, and increased liquidity for ETPs that moved from Tier 2 to Tier 1.[21]
- Using tighter Tier 1 bands for all ETPs would provide greater investor protection from temporary liquidity gaps, which are facilitated by the wider Price Bands in Tier 2.[22]
- The number of Limit States and Trading Pauses decreased when Tier 2 ETPs moved to Tier 1, and increased when Tier 1 ETPs moved to Tier 2.[23]

Based on these conclusions, the Participants state that they believe that moving Tier 2 ETPs to Tier 1 would improve market quality, more effectively dampen volatility, decrease the number of unnecessary Limit States and Trading Pauses, and thereby provide greater investor protection.[24]

IV. Discussion

A. The Applicable Standard of Review

Under Rule 608(b)(2) of Regulation NMS, the Commission shall approve a national market system plan or proposed amendment to an effective national market system plan, with such changes or subject to such conditions as the Commission may deem necessary or appropriate, if it finds that such plan or amendment 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 mechanisms of, a national market system, or otherwise in furtherance of the purposes of the Exchange Act.[25] Under Rule 700(b)(3)(ii) of the Commission's Rules of Practice, the ''burden to demonstrate that a NMS plan filing is consistent with the Exchange Act and the rules and regulations issued thereunder that are applicable to NMS plans is on the plan participants that filed the NMS plan filing.''[26] The Commission shall disapprove a national market system plan or proposed amendment if it does not make such a finding.[27]

For the reasons described below, the Participants have not demonstrated that the Proposal meets the standard under Rule 608(b)(2) of Regulation NMS. As such, the Commission is disapproving the Proposed Amendment because it cannot make the finding that the Proposed Amendment 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 mechanisms of, a national market system, or otherwise in furtherance of the purposes of the Exchange Act.[28]

[12] *See* Notice, 88 FR at 81133.

[13] The Participants submitted a letter with the Supplemental Analysis in support of the Proposed Amendment. *See* Letter from Robert Books, Chair, Operating Committee of the Plan, dated June 17, 2024 (''Participants' Letter'').

[14] *See* Notice, 88 FR at 81142.

[15] *See* Participants' Letter at 3 (''When combined with the data in the Proposal's Table 2 concerning the incidence of Limit States and Trading Pauses among Tier 1 non-ETPs and Tier 2 ETPs and non-ETPs, these additional volatility statistics provide further support for the Participant's conclusion in the Proposal . . . that the current Price Bands are not well-calibrated to the realized volatility for Tier 2 ETPs and should not be twice as wide as those for Tier 1 non-ETPs.'').

[16] *See* Notice, 88 FR at 81142. *See also id.* at 81135–36 (explaining how the Participants calculated the upper and lower ranges of the notional value of trades).

[17] *Id.* at 81135.

[18] *Id.* at 81142.

[19] While the Supplemental Analysis stated that it compared the midpoint of the NBBO at five and ten minutes after the trade to the midpoint of the quote at the time of execution, in the context of the analysis performed, the Commission understands that ''quote'' meant the NBBO at the time of execution, given the use of the midpoint at five and ten minutes in the Supplemental Analysis and the use of the NBBO midpoint in the Participant's study that was part of the Proposal.

[20] *See* Participants' Letter at 4 (stating that the results of the Supplemental Analysis show that ''more than 60% of the time, prices 5 and 10 minutes after a theoretically prevented trade reverted away from the offending trade price towards prior prices. Share volume reversion remained above 50% after five minutes and above 60% after 10 minutes. This tendency toward reversion is further evidence in support of narrowing the bands to Tier 1-levels.''). The Participants state they conducted this additional price reversion analysis to account for concerns with the prior analysis, which compared the execution prices of Tier 2 ETPs to the midpoint of the NBBO five and ten minutes after such execution. *See* Participants' Letter at 4.

[21] *See* Notice, 88 FR at 81142.

[22] *Id.*

[23] *Id.*

[24] *See* Notice, 88 FR at 81142. *See also* Participants' Letter at 6.

[25] 17 CFR 242.608(b)(2).

[26] 17 CFR 201.700(b)(3)(ii). In addition, Rule 700(b)(3)(ii) of the Commission's Rules of Practice states that ''[a]ny failure of the plan participants that filed the NMS plan filing to provide such detail and specificity may result in the Commission not having a sufficient basis to make an affirmative finding that a NMS plan filing is consistent with the Exchange Act and the rules and regulations issued thereunder that are applicable to NMS plans.'' *Id.*

[27] 17 CFR 242.608(b)(2). Approval or disapproval of a national market system plan, or an amendment to an effective national market system plan (other than an amendment initiated by the Commission), shall be by order. *Id.*

[28] 17 CFR 242.608(b)(2).

B. Comments Received

Certain commenters express support for the Proposed Amendment.[29] One commenter states that it is important to maintain the leverage factor adjustment when moving leveraged ETPs into Tier 1.[30] Another commenter, writing on behalf of a ''diverse cross-section of market participants,'' states that using Tier 1 Percentage Parameters for all ETPs would better protect investors during temporary liquidity gaps.[31] The commenter states that the risk of an inefficient execution away from the fair value of the ETP's holdings (as far as 10% away from a Tier 2 ETP's Reference Price) rises in the case of a liquidity gap resulting from an outsized or aggressive order, temporary uncertainty about any inputs into the calculation of the ETP's fair value, or lower levels of market participation.[32] This commenter also states that the application of Tier 1 Percentage Parameters may enhance investor protection, provide a better ETP execution experience for market participants, and would improve transparency and efficiency, particularly during periods of extreme volatility.[33] Another commenter states that the Participants' data presented in the Proposed Amendment showed that while narrow Price Bands resulted in more trading halts in the time period studied, had narrower Price Bands been in place for ETPs during periods of extreme volatility, retail investor executions at inferior prices would likely have been prevented.[34] Some commenters that support the proposal state that ETPs are assigned to tiers based on an assumption that lower-volume ETPs are more suited for wider Price Parameters, and state that the data presented in the Proposed Amendment suggest that this assumption was wrong.[35] Some commenters that support the Proposal state that the analysis from the study in the Proposed Amendment demonstrated that on average, Tier 2 ETPs across asset classes exhibit lower quote volatility than Tier 1 non-ETP stocks.[36] In light of the findings derived from the study, some commenters state that the imposed semi-annual migration of ETPs from one tier to the other appears to be overly complex, arbitrary, and unnecessary.[37] One commenter states that there is no reason to expect the Tier 1 Price Band is inappropriate for Tier 2 ETPs that are based on a single reference asset, stating that approximately 33% of single asset commodity based ETPs representing a wide range of commodity types are Tier 1 securities.[38]

Some commenters oppose the Proposed Amendment,[39] with some commenters stating that the proposed tighter Price Bands would effectively limit the natural price discovery process, which would infringe upon free market principles[40] and may lead to increased volatility.[41] One commenter further states that leveraged derivatives, such as options and futures, allow significant positions to be taken with relatively less capital.[42] The same commenter states that the Proposal caters to the interests of larger, institutional investors who may benefit from reduced volatility and more predictable price movements at the expense of smaller, retail investors.[43] Some commenters state that the Proposal enables the Participants to control the price of a security inappropriately.[44]

C. Participants' Findings and Commission Response

The Commission approved the Plan in 2012 on a pilot basis, recognizing that after the Participants and the public gain experience with the operations of the Plan, modifications may be necessary or appropriate.[45] At the time the Commission permanently approved the Plan in 2019, the Commission recognized that robust, data-driven assessments of the Plan's effectiveness are important to ensure that the Plan remains designed to achieve its objective,[46] and the Commission supports continuing efforts to improve the operation of the Plan consistent with Rule 608 of Regulation NMS under the Exchange Act.[47]

The Participants state that assigning all ETPs, except for single stock ETPs, to Tier 1 would improve market quality, more effectively dampen volatility, provide greater investor protection, and decrease the number of unnecessary Limit States and Trading Pauses for Tier 2 ETPs.[48] For these reasons, the Participants state that the Proposed Amendment is consistent with Rule

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[29] *See* Letters from Samara Cohen, Chief Investment Officer of ETF and Index Investments, BlackRock, et al., dated Dec. 18, 2023 (''BlackRock Letter''); Kenneth Fang, Associate General Counsel, and Kevin Ercoline, Assistant General Counsel, Investment Company Institute, dated Mar. 14, 2024 (''ICI Letter'') (expressing support for the comments made in the BlackRock Letter); Ellen Greene, Managing Director, Equities & Options Market Structure, Securities Industry and Financial Markets Association (''SIFMA'') and Kevin Ehrlich, Managing Director, SIFMA Asset Management Group, dated Apr. 22, 2024 (''SIFMA Letter'').

[30] *See* ICI Letter at 4. *See also* SIFMA Letter at 3 (stating that multiplying the Tier 1 Percentage Parameters by an ETP's leverage ratio, as proposed, would address potential volatility in these products).

[31] *See* BlackRock Letter at 1.

[32] *Id.* at 2.

[33] *See id.* at 1–2. Some commenters state that, in instances of sustained order imbalances and/or gaps in liquidity in the market for an ETP, a trading pause would help attract liquidity from diverse market participants and promote price discovery through the reopening mechanism, helping to keep ETP prices in line with the value of underlying holdings. *See* BlackRock Letter at 2. *See also* ICI Letter at 3 (stating that during periods of extreme volatility and transitory gaps in liquidity, it may be beneficial for a trading pause to be triggered); SIFMA Letter at 2.

[34] *See* ICI Letter at 3.

[35] *See* BlackRock Letter at 2. *See also* ICI Letter at 4 (stating that the Participants' data demonstrate that an assumption that lower-volume ETPs were more suited for wider Price Bands was not accurate).

[36] *See* BlackRock Letter at 2. *See also* ICI Letter at 4 (stating Tier 2 ETPs on average exhibit lower quote volatility than Tier 1 non-ETP stocks); SIFMA Letter at 2–3 (stating that the Participants' study showed that ETPs assigned to Tier 2 had quote volatilities lower than both Tier 1 ETPs and Tier 2 non-ETPs).

[37] *See* BlackRock Letter at 2. *See also* SIFMA Letter at 4 (stating that approval of the Proposed Amendment ''would benefit investors by reducing complexity and enhancing fair and orderly markets for trading ETPs'').

[38] *See* SIFMA Letter at 3 (stating additionally that several ETPs consisting of currency products are also assigned to Tier 1).

[39] *See, e.g.,* Letters from Alexander Kuchta dated Nov. 27, 2023 (''Kuchta Letter''); Rax Nahali dated Nov. 27, 2023 (''Nahali Letter''); and Rene Wright dated Nov. 27, 2023 (''Wright Letter'').

[40] *See* Kuchta Letter. *See also* Joe Edwards dated Nov. 27, 2023 (''Edwards Letter'') (stating that ''[t]his rule goes against the ideals of a free and fair market''); Nahali Letter (stating that ''[i]f the markets are as free and fair as the SEC suggests they are, there is no need for this rule to be in place'').

[41] *See* Kuchta Letter (stating that ''as trades accumulate at the band limits, the resumption of trading could trigger sudden and sharp price movements, contrary to the proposal's intent to reduce volatility'').

[42] *See id.*

[43] *See id.*

[44] *See* Mazundar Letter. *See also* Nahali Letter (stating the rule ''would allow the exchanges to collude and set prices where they want them.'').

[45] *See* Securities Exchange Act Release No. 67091 (May 31, 2012), 77 FR 33498, 33510 (June 6, 2012) (''LULD Plan Approval Order'').

[46] *See* Securities Exchange Act Release No. 85623 (Apr. 11, 2019), 84 FR 16086, 16090 (Apr. 17, 2019).

[47] 17 CFR 242.608.

[48] *See* Notice, 88 FR at 81141. The Participants state that when ETPs moved from Tier 2 to Tier 1 there was an improvement in market quality and a decrease in the number of Trading Pauses, Limit States, or the amount of time spent in Limit States, as compared with ETPs that remained in Tier 2 during the period studied by the Participants. The Participants state that this is likely because market participants will change their behavior and provide more liquidity to ETPs if the bands are tightened. The Participants also state that market participants adjusted to tighter Price Bands after Amendment 18 to the Plan narrowed the Price Bands near the open and close of trading. However, the Participants state that this analysis concerning Trading Pauses and Limit States may not offer strong support for its conclusions given the relatively small number of ETPs that move between Tier 1 and Tier 2 designations; further, the Participants state that, ''in some cases, changes in the volume of trades are what cause an ETP to change from one tier to another, and the improvements in market quality may be attributable to that increased volume, and not the tier change in and of itself.'' *Id.*

608(b)(2). As discussed in detail below, the Participants have not carried their burden of demonstrating why the Proposed Amendment is consistent with Rule 608 of Regulation NMS.

In the Proposal, the Participants state that, except for single-stock, commodity, and foreign exchange-based ETPs, ETPs are diversified instruments and that the analysis in the Proposal supports the modern portfolio theory that portfolios of securities exhibit lower volatility than individual securities, unless those products are perfectly correlated. At the same time, the Participants acknowledge that the ETPs studied cover several asset classes, including domestic equities, international equities, fixed income, currency, commodity, and digital currency ETPs.[49] The Participants' Analyses, however, provide aggregate statistical information with respect to all Tier 2 ETPs despite securities within this group having different trading characteristics. These Analyses and the resulting aggregate statistical information concern the volatility characteristics of Tier 2 ETPs and the potential costs (*i.e.,* trading activity disruption) and benefits (*i.e.,* protecting investors from trading at inferior prices that may occur because of transitory gaps in liquidity rather than fundamental value changes; market quality improvement) of designating all Tier 2 ETPs as Tier 1 securities. The Commission is concerned that these aggregate statistical analyses for Tier 2 ETPs do not reflect the trading characteristics and potential effects of the Proposed Amendment for many Tier 2 ETPs.

According to the Annual Report for 2023 by the Operating Committee of the Plan, in 2023 there were over two thousand ETPs designated as Tier 2 securities.[50] While the Proposed Amendment would exclude single stock ETPs from automatically being designated as Tier 1 securities,[51] the Proposal would not exclude other Tier 2 ETPs, including those based on other single reference assets,[52] that may exhibit substantially different trading characteristics than those reflected in the Proposal's aggregate statistical analysis concerning the over two thousand Tier 2 ETPs or otherwise provide data demonstrating why these Tier 2 ETPs would be appropriately designated as Tier 1 securities regardless of their different trading characteristics. The above-mentioned issues were raised by the Commission in the Notice and OIP.[53]

For example, key elements of the Analyses aggregate all trades of Tier 2 ETPs together.[54] Such a method will effectively ignore Tier 2 ETPs that trade infrequently—this is because any analysis that uses aggregate trading statistics will be driven by the ETPs with a high level of trading activity, while ETPs with a low level of trading will have a low weight in the statistical analysis. This result is compounded by combining leveraged and non-leveraged Tier 2 ETPs in the same group because trading activity among Tier 2 ETPs is highly skewed by leveraged ETPs. All leveraged ETPs are in Tier 2 regardless of their trading volume, and some have a high level of volume.[55] In contrast, a non-leveraged ETP is only in Tier 2 if it has less than $2 million CADV per day over the past six months. This implies that an aggregate analysis of all Tier 2 ETP trades will be driven by a relatively small number of high-volume leveraged ETPs, and such analysis will effectively ignore the vast majority of Tier 2 ETPs.[56] Because elements of the Analyses are driven by a small number of high-volume leveraged ETPs, it is not appropriate to extend the conclusions from the Analyses to the nearly 2,000 non-leveraged Tier 2 ETPs with substantially less volume; therefore, key analyses—such as the analysis of price dynamics around the Price Bands—do not support moving all 2,000 Tier 2 ETPs into Tier 1. A more granular statistical analysis could show that, for certain ETPs that are currently in Tier 2, the move to Tier 1 and resultant narrower Price Bands would result in excessive Straddle States, Limit States and Trading Pauses that are not due to extraordinary volatility caused by transitory gaps in liquidity, which these measures are designed to mitigate, but instead would unduly interrupt trading activity driven by fundamental value changes. For this reason, the Participants' Analyses do not provide sufficient detail and specificity concerning these securities for the Commission to make an affirmative finding that the Proposed Amendment meets the standard for approval.[57]

In addition to the issues discussed above, in the Notice and OIP the Commission addressed potential issues with respect to the Participants' statements regarding the Proposed Amendment's benefits and analysis concerning the volatility characteristics of Tier 2 ETPs as compared to Tier 1

[49] *Id.* at 81134.

[50] *See* Annual Report for 2023 of the Operating Committee of the Plan to Address Extraordinary Market Volatility, May 3, 2024 (*available at https://www.luldplan.com/studies*).

[51] The Participants state that the purpose of having different LULD tiers is to assign Price Bands that are commensurate with a security's underlying volatility and that single stock ETPs should be assigned to the same LULD tier as the underlying security because the ETP should closely track the price movement and volatility of its underlying security. *See* Notice, 88 FR at 81133.

[52] With respect to the comment that there are many single reference asset ETPs that currently are Tier 1 securities, those securities are designated as Tier 1 securities because their CADV meets the standard set forth in the Plan for ETPs that are designated as Tier 1 securities. *See supra* note 3838 38and accompanying text. The fact that some single reference asset ETPs may be appropriately characterized as Tier 1 securities under the Plan does not demonstrate that all single reference asset ETPs would be appropriately designated as Tier 1 securities because different single reference asset ETPs may have different trading characteristics that result in them being appropriately categorized as Tier 2 securities. The Participants' Analyses do not provide sufficient detail and specificity concerning these securities for the Commission to make an affirmative finding that the Proposed Amendment meets the standard for approval. *See* 17 CFR 201.700(b)(3)(ii). *See also infra* note 56.

[53] *See* Notice, 88 FR at 81143 and OIP, 89 FR at 13394.

[54] In the analysis in the Proposed Amendment, Table 3, 4, 5, and Chart 1 aggregate all Tier 2 ETP trades into a single group; Table B of the Supplemental Analysis does likewise. These tables quantify the amount of volume that would be affected by tighter bands, and the price dynamics around the tighter bands.

[55] For example, in the second half of 2023, TQQQ, SQQQ, and SOXL averaged daily volume in excess of $1 billion; these are all ETPs with a leverage ratio of three. The 20 Tier 2 ETPs with the highest dollar volume each averaged over $100 million per day during this period. For this analysis, a stock's tier is assigned based on FINRA's OTC Transparency Data, *http://www.finra.org/industry/OTC-Transparency,* which classifies stocks by tier on a weekly basis. A stock is considered an ETP if its security description in the TAQ database is 'ETF,' 'ETN,' or 'ETV.' The TAQ database also contains information on the ETPs' Price Bands, which the Commission uses to infer the ETPs' leveraged ratios (*e.g.,* a Price Band of 30% during the day implies that the ETP has a leverage ratio of three). Finally, trading volume for each stock comes from WRDS intra-day indicators.

[56] The OIP raised the issue that an aggregated approach to evaluating Tier 2 ETPs may not support moving all Tier 2 ETPs into Tier 1. *See* OIP, 89 FR at 13394. In response, the Participants provided a disaggregated analysis of commodity ETPs in the Supplemental Analysis that they believe shows that commodity ETPs should not be excluded from Tier 1 designation under the Proposed Amendment because they have similar characteristics to ETPs already in Tier 1; however, this disaggregated analysis contained only 65 Tier 2 ETPs. *See* Participants' Letter at 4–6. This disaggregated analysis does not sufficiently address the Commission's concerns because it does not provide insight as to whether it is appropriate to move other Tier 2 ETPs to Tier 1. Commission analysis indicates that, in the second half of 2023, the 20 Tier 2 ETPs with the highest share volume comprised 80% of all share volume among Tier 2 ETPs. Those same ETPs account for 74% of all Tier 2 ETP dollar volume, and 76% of all Tier 2 ETP trade volume. This implies that the trade-weighted aggregated analysis in the Proposed Amendment (*see supra* note 54) was likely driven by approximately 20 out of the 2,000 Tier 2 ETPs; separately analyzing 65 Tier 2 ETPs still overlooks the vast majority of Tier 2 ETPs.

[57] *See* 17 CFR 242.608(b)(2). *See also* 17 CFR 201.700(b)(3)(ii).

securities that are not ETPs.[58] The Participants state that the Proposed Amendment would protect investors from executing trades at inferior prices that may occur due to transitory gaps in liquidity rather than fundamental valuation,[59] and some commenters state their support for this element of the Proposal's analysis.[60] However, as discussed further below, the study presented in the Proposed Amendment and the Supplemental Analysis supporting this investor protection benefit are not robust or compelling. The Participants rely on the Analyses, which documented price reversion after Theoretical Tier 1 Bands had been breached in Tier 2 ETPs, as evidence that investors transacted at inferior prices and would have benefited from tighter Price Bands.[61]

There are three concerns with the price reversion analysis provided in the study presented in the Proposed Amendment and the Supplemental Analysis. First, as stated above, the price reversion analyses in the study in the Proposed Amendment and Supplemental Analysis are done on an aggregate basis for all Tier 2 ETPs. Many Tier 2 ETPs may show different price reversion results than reflected in the Analyses. Second, the conclusions from the study's price reversion analysis are not robust because that price reversion analysis compared *trade prices* that occurred outside of the Theoretical Tier 1 Bands to *subsequent midpoint prices.* This methodology is flawed because by comparing the execution price to a subsequent midpoint price, the methodology could incorrectly identify a price reversion—which is cited as evidence of inferior trades—even if nothing else changes with respect to the security (*e.g.,* fundamental value, bid and ask prices stay constant) or even if the midpoint price continues to move in the same direction.[62] The Commission requested comment concerning the analysis included with the Proposal in the Notice and OIP,[63] and the Participants performed a Supplemental Analysis to address concerns that the Proposal's analysis could overestimate the degree of price reversion.[64] In particular, the Participants performed a price reversion analysis that compared the midpoint of the NBBO at five and ten minutes after the trade to the midpoint of the NBBO at the time of execution.[65] While this methodology in the Supplemental Analysis[66] is more robust than the methodology of the study included in the Proposed Amendment, it also showed a decrease in the amount of price reversion experienced by Tier 2 ETPs. This raises a third concern. In particular, the additional price reversion analysis reflects some reversion metrics dropping from 74% in the Proposal to 52% in the Supplemental Analysis. Given that prices fluctuate unpredictably over such short horizons, prices should revert 50% of the time and continue in the same direction 50% of the time; therefore, this estimated reversion probability of 52% in the Supplemental Analysis is little better than chance and does not support the Participants' statement that investors would have been protected by the tighter band.[67] The reduction in the estimated amount of price reversion also increases the likelihood that some individual Tier 2 ETPs experience price continuation—rather than reversion—near the Theoretical Tier 1 Bands, but this possibility cannot be detected when all two thousand Tier 2 ETPs are included in the aggregate statistical analysis.

The Participants also state that Tier 2 ETPs are less volatile than Tier 1 non-ETP securities, and that this lesser volatility is evidence that the current Price Bands for Tier 2 ETPs are poorly calibrated.[68] Some commenters supported this element of the Proposal's analysis.[69] However, that volatility analysis is also flawed.[70] First, as discussed above, the Participants' Analyses are insufficiently granular as they combine nearly two thousand non-leveraged Tier 2 ETPs into a single group and compare them to all Tier 1 non-ETPs. Yet there may be many non-leveraged Tier 2 ETPs that reflect substantially different trading characteristics, and the Participants' Analyses do not provide sufficient detail and specificity concerning these securities for the Commission to make an affirmative finding that the Proposed Amendment meets the standard for approval.[71]

Some non-leveraged Tier 2 ETPs—due to their relatively low trading volume—may experience trades that are spread out over time. When the time between trades is longer, the amount of new information in the market since the last trade will generally be higher, resulting in greater price changes—*i.e.,* greater volatility—from trade-to-trade.[72] A tighter Price Band for these securities will be likely to inhibit this new information from being incorporated into trade prices and the Participants' Analyses do not address this possibility and its potential impact.[73] Second, volatility is an imprecise metric for determining Price Bands. This is because volatility is averaged over many days and many stocks, while the Price Bands are meant to curb extraordinary volatility (*e.g.,* the velocity of significant price moves).[74] Average levels of volatility, therefore, are a coarse metric in determining whether a stock can sustain tighter Price Bands.[75] Third, the

[58] *See* Notice, 88 FR at 81143 and OIP, 89 FR at 13395.

[59] *See* Notice, 88 FR at 81137–38.

[60] *See supra* notes 31–33 and accompanying text.

[61] *See* Notice, 88 FR at 81137; Participants' Letter at 4.

[62] For example, consider a trade that crosses below the lower Theoretical Tier 1 Band. It is likely that this trade executed at the bid (because the bid price is lower than the ask). Assume the bid is at $9 and the ask is at $11. If there is no price reversion—that is, the bid ($9) and ask ($11) stay the same after this trade—then the subsequent midpoint price ($10) would be higher than the trade price ($9), resulting in the methodology incorrectly identifying this as a price reversion. It is also possible that prices exhibited continuation—that is, prices continued to fall—but the subsequent midpoint did not fall below the original bid. Both of these cases would incorrectly be coded as a ''price reversion'' in the Proposal's analysis; the Proposal's analysis therefore appears to overestimate the degree of price reversion.

[63] *See* Notice, 88 FR at 81143 and OIP, 89 FR at 13394–95.

[64] *See* Participants' Letter at 4.

[65] *Id.*

[66] *Id.*

[67] The Supplemental Analysis shows higher reversion when measured as a fraction of trades, which implies that trades with a low number of shares are more likely to revert. This analysis does not calculate reversion on a dollar-weighted basis, so it is unclear what fraction of dollars may have been executed during a transitory gap in liquidity.

[68] *See* Notice, 88 FR at 81134–37.

[69] *See supra* notes 34–36 and accompanying text.

[70] *See* Notice, 88 FR at 81143 and OIP, 89 FR at 13395.

[71] *See* 17 CFR 242.608(b)(2). *See also* 17 CFR 201.700(b)(3)(ii).

[72] Changes in stock valuations are often modelled as a ''random walk.'' In such a model, the stock's value moves randomly at successive steps; as the number of steps increases, the dispersion in the stock's value also increases (*i.e.,* the change in stock value is more volatile when it is measured over a longer horizon (because there are more steps as the horizon increases)). When a stock trades relatively infrequently, there are more such steps between trades, which generates greater volatility from one trade to the next.

[73] As discussed in the previous paragraph, many Tier 2 ETPs may show different price reversion results than reflected in the aggregate statistical analysis. For example, when a stock's trades are spread out over time, it will experience greater price changes trade-to-trade due to the greater amount of information between trades; such price changes will be less likely to revert after crossing the Theoretical Tier 1 Bands because the price change is driven by new information rather than a temporary liquidity gap.

[74] *See* LULD Plan Approval Order, 77 FR at 33508–33510. As the participants' analysis shows in Table 2 of the Proposed Amendment, limit states and trading pauses are rare events.

[75] The methodology studying theoretical blocked trades more precisely captures the relevant periods of extraordinary volatility because this method includes only relatively rare events in which prices move several percentage points within a short time period. But, as discussed previously, this analysis

Continued

Proposal's analysis measured volatility using changes in the midpoint price of Tier 2 ETPs from second-to-second. This method of analysis is not robust for studying the volatility of securities that trade infrequently or have low quoting activity because the estimated volatility will be biased toward zero for these securities.[76] As part of the Supplemental Analysis the Participants provided a new analysis of the volatility Tier 2 ETPs.[77] While this analysis uses a more robust method for evaluating the volatility of Tier 2 ETPs as compared to Tier 1 non-ETPs, it presents the same concerns discussed above. In particular, it is an insufficiently granular statistical analysis of all Tier 2 ETP volatility, and there may be many Tier 2 ETPs that exhibit different trading characteristics, which the Analyses do not take into consideration. This possibility is evident in the distributional statistics in the Supplemental Analysis: the average quote volatilities for Tier 2 ETPs (both leveraged and non-leveraged) are multiples of the median quote volatilities, implying that the distribution is skewed by observations with volatility far higher than the average. Tier 1 ETPs exhibit less evidence of skewness. Therefore, the supplemental volatility analysis does not support moving all Tier 2 ETPs into Tier 1.

Accordingly, based on the study in the Proposal and the Supplemental Analysis and for the reasons discussed throughout this order, the Commission cannot find that designating over two thousand ETPs as Tier 1 securities and subjecting them to tighter Price Bands 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 mechanisms of, a national market system, or otherwise in furtherance of the purposes of the Act, as required for approval of a plan amendment pursuant to Rule 608(b)(2). Designating Tier 2 ETPs as Tier 1 securities based on an aggregate statistical analysis could result in excessive Straddle States, Limit States and Trading Pauses in certain affected ETPs due to tighter Price Bands, and thus unduly impede trading in many securities for market participants that trade in these securities.

was aggregated in a way that makes its results impossible to generalize to the typical Tier 2 ETP.

[76] For example, consider two ETPs with the same fundamental volatility but different levels of trading activity. Suppose the first ETP is traded frequently with quote updates every second; it therefore has 23,400 second-to-second returns during the trading day (sixty updates per minute for 6.5 hours). Suppose that the second ETP only receives a quote update once per minute; it will have 390 second-to-second returns, and 23,010 seconds with an unchanged midpoint (*i.e.,* a return of 0). The Proposal's methodology is likely to estimate a substantially lower volatility for the second ETP due to the fact that the vast majority of observations are coded as a 0. Using the NBBO files in the TAQ database for the second half of 2023, the Commission estimates that the median non-leveraged Tier 2 ETP receives approximately 2,900 NBBO updates per day; this implies that the second-to-second volatility calculation for the median Tier 2 ETP will use at least 20,500 seconds with a return of 0 due to a lack of data (23,400 seconds per day, less the 2,900 NBBO updates). In contrast, the median Tier 1 security receives over 23,400 NBBO updates per day. It is likely therefore that the Proposal's methodology underestimates the volatility of non-leveraged Tier 2 ETPs due to the prevalence of missing returns. The Participants disagreed with this assessment of their methodology, stating that ''quotes for even thinly-traded ETPs change frequently as market makers update their valuations of ETPs' underlying portfolios, so it is not the case that the computation of quote volatility is biased by many zeroes.'' *See* Participants' Letter at 2. The Participants did not provide any evidence to support this statement.

[77] *See* Participants' Letter at 2–4.

V. Conclusion

For the reasons set forth above, the Commission does not find, pursuant to Section 11A of the Act,[78] and Rule 608(b)(2) thereunder,[79] that the Proposed Amendment 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 mechanisms of, a national market system, or otherwise in furtherance of the purposes of the Act.

It is therefore ordered, pursuant to Section 11A of the Act, and Rule 608(b)(2) thereunder, that the Proposed Amendment (File No. 4–631) be, and it hereby is, disapproved.

By the Commission.

Vanessa A. Countryman,

Secretary.

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[78] 15 U.S.C. 78k–1.

[79] 17 CFR 242.608(b)(2).

SECURITIES AND EXCHANGE COMMISSION

[SEC File No. 270–438, OMB Control No. 3235–0495]

Proposed Collection; Comment Request; Extension: Rule 154

Upon Written Request, Copies Available From: Securities and Exchange Commission, Office of FOIA Services, 100 F Street NE, Washington, DC 20549–2736.

Notice is hereby given that, pursuant to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501–3520), the Securities and Exchange Commission (''Commission'') is soliciting comments on the collection of information summarized below. The Commission plans to submit this existing collection of information to the Office of Management and Budget for extension and approval.

The federal securities laws generally prohibit an issuer, underwriter, or dealer from delivering a security for sale unless a prospectus meeting certain requirements accompanies or precedes the security. Rule 154 (17 CFR 230.154) under the Securities Act of 1933 (15 U.S.C. 77a) (the ''Securities Act'') permits, under certain circumstances, delivery of a single prospectus to investors who purchase securities from the same issuer and share the same address (''householding'') to satisfy the applicable prospectus delivery requirements.[1] The purpose of rule 154 is to reduce the amount of duplicative prospectuses delivered to investors sharing the same address.

Under rule 154, a prospectus is considered delivered to all investors at a shared address, for purposes of the federal securities laws, if the person relying on the rule delivers the prospectus to the shared address, addresses the prospectus to the investors as a group or to each of the investors individually, and the investors consent to the delivery of a single prospectus. The rule applies to prospectuses and prospectus supplements. Currently, the rule permits householding of all prospectuses by an issuer, underwriter, or dealer relying on the rule if, in addition to the other conditions set forth in the rule, the issuer, underwriter, or dealer has obtained from each investor written or implied consent to householding.[2] The rule requires issuers, underwriters, or dealers that wish to household prospectuses with implied consent to send a notice to each investor stating that the investors in the household will receive one prospectus in the future unless the investors

[1] The Securities Act requires the delivery of prospectuses to investors who buy securities from an issuer or from underwriters or dealers who participate in a registered distribution of securities; *see* Securities Act sections 2(a)(10), 4(1), 4(3), 5(b) [15 U.S.C. 77b(a)(10), 77d(1), 77d(3), 77e(b); *see also* rule 174 under the Securities Act (17 CFR 230.174) (regarding the prospectus delivery obligation of dealers); rule 15c2–8 under the Securities Exchange Act of 1934 (17 CFR 240.15c2–8) (prospectus delivery obligations of brokers and dealers).

[2] Rule 154 permits the householding of prospectuses that are delivered electronically to investors only if delivery is made to a shared electronic address and the investors give written consent to householding. Implied consent is not permitted in such a situation. *See* rule 154(b)(4).