SECURITIES AND EXCHANGE COMMISSION (Release No. 34-65256; File No. SR-C2-2011-008)

September 2, 2011

Self-Regulatory Organizations; C2 Options Exchange, Incorporated; Order Approving Proposed Rule Change to Establish a Pilot Program to List and Trade a p.m.-Settled Cash-Settled S&P 500 Index Option Product

I. <u>Introduction</u>

On February 28, 2011, C2 Options Exchange, Incorporated (the "Exchange" or "C2") filed with the Securities and Exchange Commission ("Commission"), pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 ("Act"), 1 and Rule 19b-4 thereunder, 2 a proposed rule change to permit the listing and trading of p.m.-settled, cash-settled options on the Standard & Poor's 500 Index ("S&P 500"). The proposed rule change was published for comment in the Federal Register on March 8, 2011. The Commission received seven comment letters on the proposal, some of which urged the Commission to disapprove the proposal. C2 responded to the comment letters in a response letter dated April 20, 2011. To ensure that the Commission had sufficient time to consider and take action on the Exchange's proposal in light of, among other things, the comments received on the proposal, the Commission extended the time period in

¹ 15 U.S.C. 78s(b)(1).

² 17 CFR 240.19b-4.

See Securities Exchange Act Release No. 64011 (March 2, 2011), 76 FR 12775 ("Notice").

See Letters to Elizabeth M. Murphy, Secretary, Commission, from Randall Mayne, Blue Capital Group, dated March 18, 2011 and April 28, 2011 ("Mayne Letter 1" and "Mayne Letter 2"); Michael J. Simon, Secretary, International Securities Exchange, LLC ("ISE"), dated March 29, 2011 and May 11, 2011 ("ISE Letter 1" and "ISE Letter 2"); Andrew Stevens, Legal Counsel, IMC Financial Markets, dated March 24, 2011 ("IMC Letter"); John Trader, dated April 20, 2011 ("Trader Letter"); and JP, dated April 30, 2011 ("JP Letter").

See Letter to Elizabeth M. Murphy, Secretary, Commission, from Joanne Moffic-Silver, Secretary, C2, dated April 20, 2011 ("C2 Response Letter").

which to either approve the proposed rule change, disapprove the proposed rule change, or institute proceedings to determine whether to disapprove the proposed rule change, to June 6, 2011.⁶

In order to solicit additional input from interested parties, including relevant data and analysis, on the issues presented by C2's proposed rule change, on June 3, 2011, the Commission instituted proceedings to determine whether to approve or disapprove C2's proposal. In its order instituting the proceedings, the Commission specifically noted its interest in receiving additional data and analysis relating to the potential effect that proposed p.m.-settled index options could have on the underlying cash equities markets. In response to the proceedings, the Commission received an additional three comment letters on the proposal as well as a rebuttal letter from C2. This order approves the proposed rule change on a 14-month pilot basis.

II. Description of the Proposal

The Exchange's proposal would permit it to list and trade cash-settled S&P 500 index options with third-Friday-of-the-month ("Expiration Friday") expiration dates for which the exercise settlement value will be based on the index value derived from the closing prices of component securities ("p.m.-settled"). The proposed contract (referred to as "SPXPM") would use a \$100 multiplier, and the minimum trading increment would be \$0.05 for options trading

See Securities Exchange Act Release No. 64266 (April 8, 2011), 76 FR 20757 (April 13, 2011).

See Securities Exchange Act Release No. 64599 (June 3, 2011), 76 FR 33798 (June 9, 2011).

See Letters to Elizabeth M. Murphy, Secretary, Commission, from Michael J. Simon, Secretary, International Securities Exchange, LLC dated July 11, 2011 ("ISE Letter 3"); William J. Brodsky, Chairman and Chief Executive Officer, C2, dated July 11, 2011 ("CBOE Letter 3"); Thomas Foertsch, President, Exchange Capital Resources, dated July 11, 2011; and William J. Brodsky, Chairman and Chief Executive Officer, C2, dated July 25, 2011.

below \$3.00 and \$0.10 for all other series. Strike price intervals would be set no less than 5 points apart. Consistent with existing rules for index options, the Exchange would allow up to twelve near-term expiration months, as well as LEAPS. Expiration processing would occur on the Saturday following Expiration Friday. The product would have European-style exercise and would not be subject to position limits, though there would be enhanced reporting requirements.

The Exchange proposes that the SPXPM product be approved on a pilot basis for an initial period of fourteen months. As part of the pilot program, the Exchange committed to submit a pilot program report to the Commission at least two months prior to the expiration date of the program (the "annual report"). The annual report would contain an analysis of volume, open interest, and trading patterns. The analysis would examine trading in the proposed option product as well as trading in the securities that comprise the S&P 500 index. In addition, for series that exceed certain minimum open interest parameters, the annual report would provide analysis of index price volatility and share trading activity. In addition to the annual report, the Exchange committed to provide the Commission with periodic interim reports while the pilot is in effect that would contain some, but not all, of the information contained in the annual report. In its filing, C2 notes that it would provide the annual and interim reports to the Commission on a confidential basis. 9

III. Comments Received

In response to the initial notice of C2's proposal, the Commission received seven comment letters, some of which expressed concern with the proposal.¹⁰ One commenter specifically urges the Commission to disapprove the proposal.¹¹ Commenters expressing

⁹ <u>See Notice, supra note 3, at 12777.</u>

See Mayne Letter 1, ISE Letter 1, ISE Letter 2, and Trader Letter, supra note 4.

See ISE Letter 1 and ISE Letter 2, supra note 4.

concern with the proposal raised several issues, including: the potential for adverse effects on the underlying cash markets that could accompany the reintroduction of p.m. settlement; concern with the similarity (but lack of fungibility) between the existing S&P 500 index option traded on the Chicago Board Options Exchange, Incorporated ("CBOE") and the proposed S&P 500 index option that would be traded on C2; the lack of proposed position limits for SPXPM; and issues regarding exclusive product licensing. Three commenters expressed support for the proposal. ¹²

In the proceedings to determine whether to approve or disapprove the proposal, the Commission preliminarily summarized the issues raised by the commenters, and also set forth a series of questions and requests for data on the issue of p.m. settlement. In response to the proceedings, the Commission received three letters, including one from C2, one from ISE that expands on the concerns it previously raised and reiterates its recommendation for the Commission to disapprove the proposal, and one from a new commenter that supports the proposal because it will offer investors greater flexibility. The Commission also received an additional letter from C2 responding to the comments of ISE. The comments received are addressed below.

IV. Discussion and Commission Findings

After careful consideration of the proposal and the comments received, the Commission finds that the proposed rule change is consistent with the requirements of the Act and the rules and regulations thereunder applicable to a national securities exchange, ¹⁵ and, in particular, the

See Mayne Letter 2, IMC Letter, and JP Letter, supra note 4.

See ECR Letter, supra note 8.

See C2 Rebuttal Letter, supra note 8.

In approving this proposed rule change, the Commission has considered the proposed rule's impact on efficiency, competition, and capital formation. See 15 U.S.C. 78c(f).

requirements of Section 6 of the Act.¹⁶ Specifically, the Commission finds that the proposed rule change is consistent with Section 6(b)(5) of the Act,¹⁷ which requires that an exchange have rules designed to remove impediments to and perfect the mechanism of a free and open market and to protect investors and the public interest.

A. Relationship to the National Market System

One commenter believes that separate a.m. and p.m.-settled S&P 500 index options could potentially bifurcate the market for CBOE's existing a.m.-settled SPX contract. ¹⁸ This commenter notes that the SPX, which trades only on CBOE, accounts for 60% of all index options trading, and argues that the sole difference in settlement between SPX on CBOE and the proposed S&P 500 index options on C2 (i.e., a.m. vs. p.m. settlement) is a "sham" that is intended to "keep them non-fungible," which would "make a mockery of Section 11A of the Act." ¹⁹ The commenter states that the objectives of Section 11A are reflected in a national market system plan for options that requires exchanges to prevent trading through better priced quotations displayed on other options exchanges, and that making a p.m.-settled S&P 500 index option non-fungible with CBOE's SPX would allow the CBOE group to establish two "monopolies" in S&P 500 options, one floor-based (CBOE) and one electronic (C2) that would avoid the application of the limitation on trade throughs. ²⁰ The commenter also contends the proposal is designed to protect CBOE's floor-based SPX trading without having to accommodate

¹⁶ 15 U.S.C. 78f.

¹⁵ U.S.C. 78f(b)(5).

See ISE Letter 1, supra note 4, at 4.

^{19 &}lt;u>Id.</u> at 2. <u>See also ISE Letter 2, supra note 4, at 3-4.</u>

See ISE Letter 1, supra note 4, at 3.

the more narrow quotes that would likely occur on C2 in an electronically-traded p.m.-settled product.²¹

Another commenter asserts that CBOE and C2 should trade a fungible S&P 500 index option in order to address what the commenter describes as "huge customer-unfriendly spreads" in SPX.²² The commenter argues that if the CBOE believes p.m. settlement is superior to a.m. settlement, then CBOE should file to change SPX to p.m. settlement so that the product traded on C2 would be fungible with that proposed to be traded on CBOE.²³

In response, C2 argues that the difference between a.m.-settled and p.m.-settled S&P 500 index option would be a material term and that C2's proposed S&P 500 index option could not be fungible with, nor could it be linked with, CBOE's SPX option.²⁴

The Commission agrees that the difference between a.m.-settled SPX and the proposed p.m.-settled SPXPM involves a materially different term (i.e., settlement time) that makes C2's proposed SPXPM index option a different security than, and thus not fungible with, CBOE's SPX option.²⁵ The Commission notes that it has permitted very similar but different products to

See ISE Letter 1, supra note 4, at 2.

See Trader Letter, supra note 4, at 1. See also JP Letter, supra note 4, at 1.

See Trader Letter, supra note 4, at 1.

See C2 Response Letter, supra note 5, at 3.

Consequently, rules applicable to prevent trading through better priced quotations in the same security displayed on other options exchanges would not be applicable for trading between these two products.

Similarly, in response to a comment that investors would be confused by the presence of an a.m.-settled SPX on CBOE and a p.m.-settled S&P 500 index option on C2 (see ISE Letter 1, supra note 4, at 3), the Commission does not believe that SPX on CBOE and a p.m.-settled S&P 500 index option on C2 would cause investor confusion. The two products would trade under different ticker symbols and any potential for investor confusion could be mitigated though investor outreach and education initiatives. Furthermore, as C2 notes in its response letter, CBOE currently lists two options on the

trade on the same exchange or on different exchanges without those separate products being fungible. For example, the Commission previously approved for CBOE the listing and trading of a.m.-settled S&P 500 index options during a time when CBOE also traded p.m.-settled S&P 500 index options, and the two separate products were not fungible.²⁶

One commenter also raises concerns about the potential effect on competition of C2 listing and trading an option product that is subject to an exclusive license, citing to concerns they express with respect to the SPX product traded on CBOE.²⁷

The Commission recognizes the potential impact on competition resulting from the inability of other options exchanges to list and trade SPXPM. In acting on this proposal,

S&P 100 (American-style OEX and European-style XEO) and is not aware of any investor confusion among the products. <u>See</u> C2 Response Letter, <u>supra</u> note 5, at 3.

The issue of state law intellectual property rights of index developers in the use of their indexes to trade derivatives is the subject of litigation between CBOE and ISE (as well as other parties). See Chicago Board Options Exchange, Incorporated et al. v. International Securities Exchange, et al., Case No. 06 CH 24798 (Cir. Ct. of Cook Cty., Ch. Div. July 8, 2010), appeal docketed, No. 1-10-2228 (Ill. App. Ct. August 9, 2010). See also Board of Trade of the City of Chicago v. Dow Jones & Co., Inc., 98 Ill.2d 109 (1983). In issuing this order, the Commission expresses no view with respect to the matters underlying this ongoing litigation, including their validity or the enforceability of the exclusivity agreement.

See infra note 44 (citing to Securities Exchange Act Release No. 24367). See also Securities Exchange Act Release No. 51619 (Apr. 27, 2005), 70 FR 22947 (May 3, 2005) (order approving ISE's listing and trading of options on various Russell Indexes, including options based upon one-tenth values of the Russell Indexes).

See ISE Letter 1, supra note 4, at 6-7 (arguing in part that "CBOE's monopoly in the product imposes significant harm to investors," including the fact that "CBOE charges for trading SPX options that are much greater than the fees for multiply listed options" and "the quotes in SPX options are much wider than they would be if there was competition from other exchanges," as well as that "CBOE is able to use the monopolistic revenue stream from these options to subsidize other products....") and ISE Letter 2, supra note 4, at 3-4 (arguing in part that "[t]he Proposal is harmful to investors because it... perpetuates the unreasonably high monopolistic pricing and artificially wide spreads that result from the lack of competition in this product.").

however, the Commission has balanced the potentially negative competitive effects with the countervailing positive competitive effects of C2's proposal. The Commission believes that the availability of SPXPM on the C2 exchange will enhance competition by providing investors with an additional investment vehicle, in a fully-electronic trading environment, through which investors can gain and hedge exposure to the S&P 500 stocks. Further, this product could offer a competitive alternative to other existing investment products that seek to allow investors to gain broad market exposure. Also, we note that it is possible for other exchanges to develop or license the use of a new or different index to compete with the S&P 500 index and seek Commission approval to list and trade options on such index.

Accordingly, with respect to the Commission's consideration of C2's proposed rule change at this time, the Commission finds that it does not impose any burden on competition not necessary or appropriate in furtherance of the purposes of the Act. ²⁸

B. <u>Position Limits</u>

Under C2's proposal, position limits would not apply to SPXPM. One commenter argues that position limits should apply to SPXPM.²⁹ This commenter notes that, since 2001 when the Commission approved a CBOE rule filing to remove all position limits for SPX options,³⁰ the Commission has generally expected exchanges to apply a model, such as the Dutt-Harris model,

The Commission may in the future determine it appropriate to consider or address competitive issues related to exclusive licensing of index option products on a more comprehensive level.

See ISE Letter 1, supra note 4, at 6.

See Securities Exchange Act Release No. 44994 (October 26, 2002), 66 FR 55722 (November 2, 2001). In this filing, the Commission relied in part on CBOE's ability to provide enhanced surveillance and reporting safeguards to detect and deter trading abuses arising from the elimination of position and exercise limits in options on the S&P 500.

to determine the appropriate position limits for all new index options products.³¹ Because C2 claims that the product is new and non-fungible, the commenter argues that the Commission should apply the Dutt-Harris model to require C2 to impose position limits on SPXPM.³²

In its response to comments, C2 notes that the Dutt-Harris Paper acknowledges that S&P 500 options have, and should have, extraordinarily large position limits and Dutt-Harris observes that position limits are most useful when market surveillance is inadequate.³³ C2 argues that position limits suggested by the Dutt-Harris model for an S&P 500 index option would be so large as to be irrelevant and that positions of such magnitude would attract scrutiny from surveillance systems that would, as a consequence, serve as an effective substitute for position limits.³⁴ Further, in its response letter, C2 summarizes the circumstances and considerations relied upon by the Commission when it approved the elimination of position limits on CBOE's S&P 500 index option, including the enormous capitalization of the index and enhanced

³¹ See ISE Letter 1 are rested to 1 at 2005 are rested to 1 and 2 and contained

See ISE Letter 1, supra note 4, at 6. In a 2005 paper from Hans Dutt and Lawrence Harris, titled "Position Limits for Cash-Settled Derivative Contracts" ("Dutt-Harris Paper") the authors developed a model to determine appropriate position limits for cash-settled index derivatives. The authors concluded that the then-prevailing position limits were lower than the model suggested would be appropriate for many derivative contracts. The authors also concluded, however, that position limits are not as important for broadbased index derivative contracts that are cash settled because they are composed of highly liquid and well-followed securities. As such, the authors note that it would require very high trading volumes to manipulate the underlying securities and, consequently, any attempted manipulation would be more easily detectable and prosecutable.

See ISE Letter 1, supra note 4, at 6.

See C2 Response Letter, supra note 5, at 5.

See id. Generally, position limits are intended to prevent the establishment of options positions that could be used or that might create incentives to manipulate or disrupt the underlying market to benefit the holder of the options. See, e.g., Securities Exchange Act Release Nos. 39489 (December 24, 1997), 63 FR 276 (January 5, 1998) (SR-CBOE-97-11) (approving increases to the position and exercise limits for options on the Standard & Poor's 100 Stock Index ("OEX"), the OEX firm facilitation exemption, and the OEX index hedge exemption); Dutt-Harris Paper, supra note 31 ("Position limits directly limit manipulation by limiting the size of derivative positions that would benefit from manipulative practices.").

reporting and surveillance for the product.³⁵ Thus, because of the enhanced reporting and surveillance for this product, described below, C2 argues that the absence of position limits on its proposed S&P 500 index option would not be inconsistent with Dutt-Harris.³⁶

The Exchange represents, however, that it will implement enhanced reporting requirements pursuant to its Rule 4.13 (Reports Related to Position Limits) and Interpretation and Policy .03 to its Rule 24.4 (Position Limits for Broad-Based Index Options), which sets forth the reporting requirements for certain broad-based indexes that do not have position limits.³⁷

In 2001, when the Commission permanently approved a CBOE rule (which had been in place for a two-year pilot period) to eliminate position limits on SPX (as well as options on the Dow Jones Industrial Average and the S&P 100 index), ³⁸ the Commission stated that because the S&P 500 index is a broad-based index with a considerable capitalization, manipulation of the 500 component stocks underlying the index would require extraordinarily large positions that would be readily detectable by enhanced surveillance procedures. In its approval order, the Commission relied in part on CBOE's enhanced surveillance and reporting procedures that are intended to allow CBOE to detect and deter trading abuses in the absence of position limits. In particular, CBOE requires its members to submit a report to CBOE when the member builds a position of 100,000+ contracts. Among other things, the report includes a description of the option position, whether the position is hedged (and, if so, a description of the hedge), and whether collateral was used (and, if so, a description of the collateral). This enhanced

³⁵ See C2 Response Letter, supra note 5, at 5-6. C2 represents in its response letter that it would monitor trading in p.m.-settled S&P 500 index options in the same manner as CBOE does for other broad-based index options with no position limits. See id. at 6.

³⁶ See id.

³⁷ See Notice, supra note 3, at note 4 and accompanying text.

³⁸ See Securities Exchange Act Release No. 44994 (October 26, 2001), 66 FR 55722 (November 2, 2001) (SR-CBOE-2001-22).

surveillance and reporting arrangement allows CBOE to continually monitor, assess, and respond to any concerns at an early stage. To complement its enhanced surveillance and reporting requirements, CBOE has the ability to intervene to impose additional margin or assess capital charges when warranted. Thus, together with the "enormous capitalization" of the S&P 500 index and the deep and liquid markets for the S&P 500 stocks, the Commission found that CBOE's enhanced surveillance procedures "reduce[] concerns regarding market manipulation or disruption in the underlying market."

C2 has represented in this filing that its enhanced surveillance requirements and procedures for SPXPM would be identical to the surveillance and reporting requirements and procedures used by CBOE with respect to SPX. Accordingly, the Commission believes that position limits would not be necessary for SPXPM options as long as C2 has in place and enforces effective enhanced surveillance and reporting requirements. These enhanced procedures will allow the Exchange to see, with considerable advance notice, the accumulation of large positions, which it can then monitor more closely as necessary and take additional action if appropriate.⁴¹

C. Reintroduction of P.M. Settlement

³⁹ Id. at 55723.

⁴⁰ Id.

In addition, the Commission notes that C2 would have access to information through its membership in the Intermarket Surveillance Group with respect to the trading of the securities underlying the S&P 500 index, as well as tools such as large options positions reports to assist its surveillance of SPXPM options.

In approving the proposed rule change, the Commission also has relied upon the Exchange's representation that it has the necessary systems capacity to support new options series that will result from this proposal. <u>See</u> Notice, <u>supra</u> note 3, at 12777.

When cash-settled⁴² index options were first introduced in the 1980s, they generally utilized closing-price settlement procedures (<u>i.e.</u>, p.m. settlement).⁴³ The Commission became concerned about the impact of p.m. settlement on cash-settled index options on the markets for the underlying stocks at the close on expiration Fridays.⁴⁴ These concerns were heightened

The seller of a "cash settled" index option pays out the cash value of the applicable index on expiration or exercise. A "physically settled" option, like equity and ETF options, involves the transfer of the underlying asset rather than cash. <u>See</u> Characteristics and Risks of Standardized Options, <u>available at</u>:

http://www.theocc.com/components/docs/riskstoc.pdf, for a discussion of settlement.

The exercise settlement value for a p.m.-settled index option is generally determined by reference to the reported level of the index as derived from the closing prices of the component securities (generally based on the closing prices as reported by the primary exchange on which the stock is listed) on the last business day before expiration (e.g., the Friday before Saturday expiration). See Characteristics and Risks of Standardized Options, available at: http://www.theocc.com/components/docs/riskstoc.pdf, for a discussion of settlement value.

See, e.g., Securities Exchange Act Release Nos. 45956 (May 17, 2002), 67 FR 36740 (May 24, 2002) (adopting release concerning cash settlement and regulatory halt requirements for security futures products) ("Regulators and self-regulators were concerned that the liquidity constraints faced by the securities markets to accommodate expiration-related buy or sell programs at the market close on expiration Fridays could exacerbate ongoing market swings during an expiration and could provide opportunities for entities to anticipate these pressures and enter orders as part of manipulative or abusive trading practices designed to artificially drive up or down share prices."); 24367 (April 17, 1987), 52 FR 13890 (April 27, 1987) (SR-CBOE-87-11) (order approving a proposal for S&P 500 index options with an exercise settlement value based on an index value derived from opening, rather than closing, prices); and 32868 (September 10, 1993), 58 FR 48687 (September 10, 1993) (notice of filing and order granting accelerated approval of proposed rule change by the New York Stock Exchange, Inc. ("NYSE") relating to changes in auxiliary closing procedures for expiration days) (stating, "[a]s long as some index derivative products continue to expire based on closing stock prices on expiration Fridays, the Commission agrees with the NYSE that such procedures are necessary to provide a mechanism to handle the potential large imbalances that can be engendered by firms unwinding index derivative related positions"). The cash settlement provisions of stock index futures and options contracts facilitated the growth of sizeable index arbitrage activities by firms and professional traders and made it relatively easy for arbitrageurs to buy or sell the underlying stocks at or near the market close on expiration Fridays (i.e., the third Friday of the expiration month) in order to "unwind" arbitragerelated positions. These types of unwinding programs at the close on expiration Fridays often severely strained the liquidity of the securities markets as the markets, and in particular the specialists on the NYSE, faced pressure to attract contra-side interest in the

during the quarterly expirations of the third Friday of March, June, September and December when options, index futures, and options on index futures all expire simultaneously. P.m.-settlement was believed to have contributed to above-average volume and added market volatility on those days, which sometimes led to sharp price movements during the last hour of trading. As a consequence, the close of trading on the quarterly expiration Friday became known as the "triple witching hour." Besides contributing to investor anxiety, heightened volatility during the expiration periods created the opportunity for manipulation and other abusive trading practices in anticipation of the liquidity constraints. 46

In light of the concerns with p.m. settlement and to help ameliorate the price effects associated with expirations of p.m.-settled, cash-settled index products, in 1987, the Commodity Futures Trading Commission ("CFTC") approved a rule change by the Chicago Mercantile

limited time that was permitted to establish closing prices. <u>See</u> Securities Exchange Act Release No. 44743 (August 24, 2001), 66 FR 45904 (August 30, 2001) (File No. S7–15–01) (proposing release concerning cash settlement and regulatory halt requirements for security futures products).

- See, e.g., Securities Exchange Act Release Nos. 24276 (March 27, 1987); 52 FR 10836 (April 3, 1987) (notice of filing and order granting accelerated approval to a proposed rule change by the NYSE relating to opening price settlement of expiring NYSE Composite and Beta Index options); 37894 (October 30, 1996), 61 FR 56987 (November 5, 1996) (notice of filing and order granting accelerated approval of proposed rule change by the NYSE permanently approving the expiration day auxiliary closing procedures pilot program); and 45956 (May 17, 2002), 67 FR 36740 (May 24, 2002) (adopting release concerning cash settlement and regulatory halt requirements for security futures products) (reaffirming the Commission's view of the advantages of a.m. settlement). See also Hans Stoll and Robert Whaley, Expiration Day Effects of Index Options & Futures (March 15, 1986) (noting that share volume on the NYSE was much higher in the last hour of a quarterly expiration Friday when both options and futures expire than on non-expiration Fridays).
- See, e.g., Securities Exchange Act Release No. 45956 (May 17, 2002), 67 FR 36740 (May 24, 2002) (adopting release concerning cash settlement and regulatory halt requirements for security futures products) (explaining that entities could take advantage of illiquidity resulting from the unwinding of arbitrage-related positions on expiration Fridays to manipulate share prices).

Exchange to provide for a.m. settlement for index futures, including futures on the S&P 500 index. The Commission subsequently approved a rule change by CBOE to list and trade a.m. settled S&P 500 index options. In 1992, the Commission approved CBOE's proposal to

The exercise settlement value for an a.m.-settled index option is determined by reference to the reported level of the index as derived from the opening prices of the component securities on the business day before expiration.

48 See Securities Exchange Act Release No. 24367 (April 17, 1987), 52 FR 13890 (April 27, 1987) (SR-CBOE-87-11) (order approving a proposal for S&P 500 index options with an exercise settlement value based on an index value derived from opening, rather than closing, prices). At the time it approved CBOE's introduction of a.m. settlement for cash-settled index options, the Commission identified two benefits to a.m. settlement for cash-settled index options. See Securities Exchange Act Release No. 30944 (July 21, 1992), 57 FR 33376 (July 28, 1992) (SR-CBOE-92-09). First, it provides additional time to test price discovery, as market participants have the remainder of the regular trading day to adjust to opening session price movements and determine whether those movements reflect changes in fundamental values or short-term supply and demand conditions. Second, it provides more opportunity to trade out of positions acquired during the opening auction. In this respect, attracting contra-side interest to a singlepriced auction to offset an order imbalance (such as those attributable to index arbitrage) may more readily be achieved in an opening auction on Friday morning than a closing auction on Friday afternoon because the morning session allows market participants that have provided that liquidity to have the remainder of the regular trading day to liquidate their positions. In contrast, positions acquired in a Friday afternoon closing auction generally cannot be liquidated as readily and efficiently until the following Monday. Holding positions overnight, or over a weekend, may entail greater risk than holding intraday positions. To accept such risk (real or perceived), market participants generally will require a greater premium, which may translate into greater price concessions, and thus lead to greater volatility in the closing auction. In other words, a consequence of p.m. settlement may be enhanced volatility at the close. See, e.g., Securities Exchange Act Release No. 44743 (August 24, 2001), 66 FR 45904 at 45908 (August 30, 2001) ("Steep discounts (premiums) were necessary in part because traders who bought (sold) stocks to offset unwinding programs had to maintain their newly acquired long (short) positions over the weekend – during which time they were subject to considerable market risk.").

See Proposed Amendments Relating to the Standard and Poor's 500, the Standard and Poor's 100 and the Standard Poor's OTC Stock Price Index Futures Contract, 51 FR 47053 (December 30, 1986) (notice of proposed rule change from the Chicago Mercantile Exchange). See also Securities Exchange Act Release No. 24367 (April 17, 1987), 52 FR 13890 (April 27, 1987) (SR-CBOE-87-11) (noting that the Chicago Mercantile Exchange moved the S&P 500 futures contract's settlement value to opening prices on the delivery date).

transition all of its European-style cash-settled options on the S&P 500 index to a.m. settlement. Thereafter, the Commission approved proposals by the options markets to transfer most of their cash-settled index products to a.m. settlement. 50

The Commission and the CFTC noted the benefits of a.m. settlement in a 2001 joint release concerning securities futures, where they observed that "the widespread adoption of opening-price settlement procedures in index futures and options has served to mitigate the liquidity strains that had previously been experienced in the securities markets on expirations."⁵¹

Since 1992, the Commission has approved proposals that provide for cash-settled index options with p.m. settlement on a limited basis for options products that generally are characterized by lower relative volume and that generally do not involve settlement on the third Friday of a month. ⁵² At the time of each approval, the Commission stated that limited approvals

See Securities Exchange Act Release No. 30944 (July 21, 1992), 57 FR 33376 (July 28, 1992) (SP, CROE 92, 00) (order approxing CROE's proposal relating to position limits

^{1992) (}SR-CBOE-92-09) (order approving CBOE's proposal relating to position limits for SPX index options based on the opening price of component securities).

CBOE's index options on the S&P 100 (OEX), however, kept their p.m. settlement. <u>See</u> Securities Exchange Act Release No. 30944 (July 21, 1992), 57 FR 33376 (July 28, 1992) (SR-CBOE-92-09). No futures or options on futures trade on the S&P 100 index. Other types of options utilize p.m. settlement, including physically-settled single-stock options and options on ETFs.

See Securities Exchange Act Release No. 44743 (August 24, 2001), 66 FR 45904 at 45908 (August 30, 2001) (proposing release for a joint rule between the Commission and the CFTC generally stipulating, among other provisions, that the final settlement price for each cash-settled security futures product fairly reflect the opening price of the underlying security or securities). See also Securities Exchange Act Release No. 45956 (May 17, 2002), 67 FR 36740 at 36741-42 (May 24, 2002) (adopting release concerning cash settlement and regulatory halt requirements for security futures products in which the Commission reaffirmed the advantages of a.m. settlement) ("[O]pening price settlement procedures offered several features that enabled the securities markets to better handle expiration-related unwinding programs.").

In particular, in 1993, the Commission approved CBOE's proposal to list and trade p.m.-settled, cash-settled options on certain broad-based indexes expiring on the first business day of the month following the end of each calendar quarter ("Quarterly Index Expirations"). See Securities Exchange Act Release No. 31800 (February 1, 1993), 58

on a pilot basis would allow the exchange and the Commission to monitor the potential for adverse market effects and modify or terminate the pilots, if necessary. Notably, with the exception of FLEX Index options, these recently-approved p.m.-settled contracts do not involve expiration on the third Friday of the month. These new contracts, including FLEX, have also been characterized by limited volume, and would not be expected to have a pronounced effect on volatility in the underlying securities at the close as a result.

In response to C2's proposal, two commenters raise concerns over the reintroduction of p.m. settlement on a potentially popular index derivative and the possible impact that doing so could have on the underlying cash equities markets.⁵³ One commenter urges the Commission to consider why markets went to a.m. settlement in the early 1990s and opines that hindsight

FR 7274 (February 5, 1993) (SR-CBOE-92-13). In 2006, the Commission approved, on a pilot basis, CBOE's listing of p.m.-settled index options expiring on the last business day of a calendar quarter ("Quarterly Options Series"). See Securities Exchange Act Release No. 54123 (July 11, 2006), 71 FR 40558 (July 17, 2006) (SR-CBOE-2006-65). In January 2010, the Commission approved CBOE's listing of p.m.-settled FLEX options on a pilot basis.⁵² See Securities Exchange Act Release No. 61439 (January 28, 2010), 75 FR 5831 (February 4, 2010) (SR-CBOE-2009-087) (order approving rule change to establish a pilot program to modify FLEX option exercise settlement values and minimum value sizes). FLEX options provide investors with the ability to customize basic option features including size, expiration date, exercise style, and certain exercise prices. Prior to 2010, only a.m. settlement based on opening prices of the underlying components of an index could be used to settle a FLEX index option if it expired on, or within two business days of, a third-Friday-of-the-month expiration ("Blackout Period"). Last year, the Commission approved a pilot program to permit FLEX index options with p.m. settlement that expire within the Blackout Period. See Securities Exchange Act Release No. 61439 (January 28, 2010), 75 FR 5831 (February 4, 2010) (SR-CBOE-2009-087). In September 2010, the Commission approved CBOE's listing of p.m.-settled End of Week expirations (expiring on each Friday, other than the third Friday) and End of Month expirations (expiring on the last trading day of the month) for options on broadbased indexes, also on a pilot basis. See Securities Exchange Act Release No. 62911 (September 14, 2010), 75 FR 57539 (September 21, 2010) (SR-CBOE-2009-075).

See ISE Letter 1, supra note 4, at 4-5; ISE Letter 2, supra note 4, at 2-3; and Mayne Letter 1, supra note 4, at 1-2.

supports the conclusion that a.m. settlement has been good for the markets.⁵⁴ While acknowledging that the answer is not clear, the commenter asks the Commission to consider whether it is now safe to return to the dominance of p.m.-settled index options and futures.⁵⁵ However, this commenter submitted a subsequent letter in which he agreed with the Exchange that "conditions today are vastly different" from those that drove the transition to a.m. settlement.⁵⁶ The commenter concludes that C2's proposal should be approved on a pilot basis, which would allow the Commission to collect data to closely analyze the impact of the proposal.⁵⁷

A different commenter describes the history behind the transition to a.m. settlement and criticizes C2 for trivializing that history.⁵⁸ This commenter argues that a mainstream return to the "discredited" p.m. settlement would "risk undermining the operation of fair and orderly financial markets."⁵⁹ The commenter notes that experience with the "flash crash" of May 6, 2010 demonstrates that the current market structure struggles to find price equilibriums, and that dispersed trading is a "mirage" as participants often flock to the same liquidity centers in time of stress.⁶⁰ In its July comment letter, the commenter took a slightly different approach by arguing that fragmentation is the biggest change to the markets since 1987 when markets moved to a.m.

See Mayne Letter 1, supra note 4, at 1 (noting that concerns with p.m. settlement "led to the advent of the far more innocuous, and perhaps more fair 'AM-Print' method of determining the final value for expiring index options. To judge by the abatement of the negative press, hindsight would seem to support that the AM-Print made for a more level playing field.")

See id. at 2

See Mayne Letter 2, supra note 4, at 1.

See id.

See ISE Letter 1, supra note 4, at 4.

⁵⁹ Id.

See id.

settlement. ⁶¹ The commenter notes that even with almost all volume concentrated on one exchange back in the 1980s, the markets could not address closing liquidity and volatility concerns and prevent market disruptions on "triple witch" settlement dates. ⁶² The commenter believes that fragmentation makes it almost impossible for any single market to concentrate liquidity at the close to produce an effective clearing price at times of market volatility. ⁶³ In addition, the commenter argues that exchange-specific closing procedures are only applicable to trading on one exchange, which represents a small fraction of the overall market today, and therefore will have little ability to dampen market volatility. ⁶⁴ The commenter believes that C2's proposal would exacerbate liquidity strains by reintroducing an extraordinary market event – the triple witching hour – and argues that allowing S&P 500 index options to be based on closing settlement prices, even on a pilot basis, would re-introduce the potential for extreme market volatility at expiration. ⁶⁵

In addition, the commenter states that Commission approval of C2's proposal would lead to the reintroduction of multiple p.m.-settled derivatives and argues that while the SPXPM pilot would be troubling, having multiple pilots operating simultaneously would undermine the industry-wide move to a.m. settlement.⁶⁶ The Commission generally considers relevant

See ISE Letter 3, supra note 8, at 2.

See id.

See id.

^{64 &}lt;u>See id.</u>

See ISE Letter 1, supra note 4, at 5. This commenter also notes that recently-imposed circuit breakers in the cash equities markets do not apply in the final 25 minutes of trading. See id.

See ISE Letter 3, supra note 8, at 3.

information available to it at the time it reviews each filing in evaluating whether the filing is consistent with the Act.⁶⁷

Taking the opposite view, two commenters urge the Commission to approve the proposal on a pilot basis. ⁶⁸ One commenter asserts its belief that C2's proposal will not cause greater volatility in the underlying securities of the S&P 500 index. ⁶⁹ This commenter opines that whether an options contract is p.m.-settled as opposed to a.m.-settled is not a contributing factor to volatility, and the commenter notes that there is more liquidity in the securities underlying the S&P 500 index at the close compared to the opening. ⁷⁰ The commenter states that exchanges are well equipped to handle end-of-day volume and that existing p.m.-settled products do not contribute to increased volatility. ⁷¹ The other commenter states that the reintroduction of p.m. settlement is long overdue and would attract liquidity from dark pools, crossing mechanisms, and the over-the-counter markets. ⁷²

In its initial response to comments, C2 argues that the concerns from 18 years ago that led to the transition to a.m. settlement for index derivatives have been largely mitigated.⁷³ C2 argues that expiration pressure in the underlying cash markets at the close has been greatly reduced with the advent of multiple primary listing and unlisted trading privilege markets, and

^{67 &}lt;u>See</u> 15 U.S.C. 78s(b) (concerning Commission consideration of proposed rule changes submitted by self-regulatory organizations).

See IMC Letter, supra note 4, at 1-2 and JP Letter, supra note 4.

^{69 &}lt;u>See IMC Letter, supra</u> note 4, at 1.

See id.

⁷¹ <u>See id.</u> at 2.

See JP Letter, supra note 4.

See C2 Response Letter, supra note 5, at 4.

that trading is now widely dispersed among many market centers.⁷⁴ C2 further argues that opening procedures in the 1990s were deemed acceptable to mitigate one-sided order flow driven by index option expiration and that today's more sophisticated automated closing procedures should afford a similar, if not greater, level of comfort.⁷⁵ Specifically, C2 notes that many markets, notably The NASDAQ Stock Market LLC ("Nasdaq") and the NYSE, now utilize automated closing cross procedures and have closing order types that facilitate orderly closings, and that these closing procedures are well-equipped to mitigate imbalance pressure at the close.⁷⁶ In addition, C2 believes that after-hours trading now provides market participants with an alternative to help offset market-on-close imbalances.⁷⁷

C2 also notes that for roughly five years (1987-1992) CBOE listed both a.m. and p.m.-settled SPX and did not observe any related market disruptions during that period in connection with the dual a.m./p.m. settlement. Finally, C2 believes that p.m.-settled options predominate in the over-the-counter ("OTC") market, and C2 is not aware of any adverse effects in the underlying cash markets attributable to the considerable volume of OTC trading. C2 asserts that given the changes since the 1980s, concerns with p.m. settlement are "misplaced" and have been "negated" now that closing procedures on the cash equities markets have become more automated with real-time data feeds that are distributed to a wider array of market participants.

74

See id.

See C2 Response Letter, supra note 5, at 4.

See id.

⁷⁷ <u>See id.</u> at 2.

⁷⁸ See Notice, supra note 3, at 12776.

⁷⁹ See id.

See C2 Response Letter, supra note 5, at 2 and 4. In its comment letter, ISE notes that C2's claim that electronic trading can smooth out the price-setting process is

The Commission agrees with C2 that the closing cross mechanisms on the primary listing stock markets have matured considerably since the late 1980s. Closing procedures used by the primary equity markets now offer a more transparent and automated process for attracting contra-side interest and determining closing prices in a manner that is comparable to the process used to determine opening prices. The Commission recognizes, however, that the ability of such procedures to counter-balance any potential negative effects that could stem from p.m. settlement is dependent on their ability to attract liquidity in a fragmented market to the primary

"disingenuous" as recent history suggests that the opposite may be true in some cases (such as the market events of May 6, 2010). See ISE Letter 1, supra note 4, at 5.

Nasdaq (see Nasdaq Rule 4754), NYSE (see NYSE Rule 123C), and NYSE Amex LLC ("NYSE Amex") (see NYSE Amex Rule 123C) all have automated closing cross procedures for their equities markets, which are designed to attract liquidity, to determine a price for a security that minimizes any imbalance, and to match orders at the 4:00 p.m. close. Participants of these exchanges generally receive frequently-disseminated market data reports reflecting any imbalance, which is intended to attract offsetting interest to minimize or eliminate an imbalance heading into the close. NYSE Arca, Inc. has closing procedures (NYSE Arca Rule 7.35), but it only conducts a closing cross for securities in which it is the primary listing market as well as for all exchange-listed derivatives.

Additionally, to minimize the potential for price swings at the close, Nasdaq provides that the closing price must be within an acceptable range of 10% of the midpoint of the NBBO, while the NYSE permits the Designated Market Maker in a stock to request that the exchange extend its trading day to not longer than 4:30 p.m. to allow for the solicitation and entry of orders that are specifically solicited to offset an imbalance existing as of 4:00 p.m. To further minimize selling pressure at the NYSE, market-on-close and limit-on-close orders may be entered after 3:45 p.m. only if they offset an imbalance. The NYSE also provides for closing-only orders that only execute if they offset an imbalance. The Commission views these closing cross procedures as a significant change in how orders are handled at the close of trading that could potentially help reduce volatility at the close caused by p.m. settlement.

C2 also notes that SPXPM expiration dates would be predetermined and known in advance and, as a consequence, this awareness could facilitate the generation of contraside trading interest. See C2 Response Letter, supra note 5, at 3. The potential for reoccurring heightened volatility during these expiration periods may, however, increase the opportunity for manipulation and other abusive trading practices in anticipation of the liquidity constraints. To the extent such volatility was possible, active surveillance and robust enforcement activity by C2 and other self-regulatory organizations around expiration dates would help to address the potential for abusive trading.

listing exchanges during a very concentrated window of time at the close of trading on expiration Fridays. Consequently, the potential effect that p.m.-settlement of cash-settled index options could have on the underlying cash equities markets at expiration remains unclear and the Commission remains concerned about the possible effect on volatility at the close of a return to p.m. settlement for cash-settled index options.⁸²

C2 cites to the Commission's recent approval of a series of proposals that authorized the expansion of a limited subset of options products to p.m. settlement along with data collected in connection with those products as revealing no evidence that p.m. settlement is likely to have a disruptive effect on volatility at the close. We do not believe that such an inference necessarily can be drawn. These prior approvals involved sub-categories of options that are generally characterized by relatively low volume and thus would not be expected to have a pronounced effect on volatility in the underlying securities at the close on expiration. Further, many of these products are not authorized for listing with expiration on the third Friday of a month when other cash-settled index derivatives expire. For example, C2 mentions CBOE's experience with End-of-Week p.m.-settled options (which it notes is the most heavily traded of CBOE's new

⁸²

The Commission's concern with the potential effect that p.m.-settlement of cash-settled index options could have on the underlying cash equities markets at expiration takes into consideration, as C2 notes, that the use of closing prices by retail and institutions investors is widespread. See C2 Letter 3, supra note 8, at 6. For example, mutual funds use closing prices to calculate their net asset values. Therefore, any event or product that potentially introduces additional volatility into the process of determining closing prices has the potential to harm investors and the public interest.

See C2 Letter 3, supra note 8, at 4-5.

We note that historical experience with respect to more heavily traded index options and index futures indicates that p.m. settlement carries additional risks for enhanced volatility on settlement days. See, e.g., Hans Stoll and Robert Whaley, Expiration Day Effects of Index Options & Futures (March 15, 1986) (concluding that price effects "are observable on quarterly futures expirations...[and] [t]he volatility of prices is significantly higher on such expiration days, and the stock market indices tend to fall on such expiration days.").

special-dated expiration products), and concludes that they fail to show any evidence of disruptive volatility on the settlement days for these contracts. Bespite the fact that End-of-Week p.m.-settled options constitute over 7% of CBOE's S&P 500 index option volume, their volume does not compare to that of CBOE's SPX product, which accounts for 60% of all index options trading. For this reason, it is difficult to draw any conclusions about the potential impact of p.m.-settled S&P 500 index options on the market for the underlying component stocks based on the existing p.m.-settled cash-settled options. Further, past experience suggests that the potential impact would be more significant if both index options and index futures (and options on index futures) were offered with p.m. settlement.

While the enhanced closing processes on the primary listing markets may serve to mitigate some of the risk that imbalances on the underlying cash markets prior to the close could lead to excess volatility, the extent of that mitigation is unclear. A pilot program would provide an opportunity to observe and analyze the actual effects on the underlying cash markets of SPXPM. Further, to the extent that trading interest is redirected to the primary markets during times of stress, as one commenter noted, it could be conducive to addressing an imbalance to concentrate liquidity on the primary markets during the close. In particular, those markets conduct automated closing cross procedures, described above, ⁸⁶ that are designed to more efficiently disseminate information broadly and attract and offset imbalances. We note, however, that despite C2's emphasis on the higher volumes in today's markets compared with

.

^{85 &}lt;u>See id.</u> at 5.

See supra note 81.

the 1980s and the dispersion of trading to more venues, ⁸⁷ volume statistics are not necessarily indicative or predictive of the level of available liquidity. ⁸⁸

Finally, C2 estimates that 95% of OTC options based on the S&P 500 index are p.m.-settled, ⁸⁹ and states that SPXPM will attract some of that trading interest. C2 notes that doing so would be consistent with the objectives of the Dodd–Frank Wall Street Reform and Consumer Protection Act and could help mitigate counterparty risks faced by OTC market participants. ⁹⁰ The Commission agrees that the proposal could benefit investors to the extent it attracts trading in p.m.-settled S&P 500 index options from the opaque OTC market to the more transparent exchange-listed markets.

Further, C2's proposal will offer investors another investment option through which they could obtain and hedge exposure to the S&P 500 stocks. In addition, C2's proposal will provide investors with the ability to trade an option on the S&P 500 index in an all-electronic market, which may better meet the needs of investors who may prefer to trade electronically. Accordingly, C2's proposal will provide investors with added flexibility through an additional product that may be better tailored to meet their particular investment, hedging, and trading needs.

87

See id.

See, e.g., Findings Regarding the Market Events of May 6, 2010, Report of the Staffs of the CFTC and SEC to the Joint Advisory Committee on Emerging Regulatory Issues, available at http://www.sec.gov/news/studies/2010/marketevents-report.pdf, at page 6 ("As the events of May 6 demonstrate, especially in times of significant volatility, high trading volume is not necessarily a reliable indicator of market liquidity.").

See C2 Letter 3, supra note 8, at 13.

⁹⁰ See id.

See, e.g., Exchange Capital Resources Letter, supra note 8, at 3 (stating in part that "...the addition of the SPXPM product will offer the investor greater flexibility and opportunity to participate in S&P 500 option product line.")

To assist the Commission in assessing any potential impact of a p.m.-settled S&P 500 index option on the options markets as well as the underlying cash equities markets, as discussed above, ⁹² C2 has proposed to submit data to the Commission on a confidential basis in connection with the pilot. The Commission believes that C2's proposed fourteen-month pilot, together with the data and analysis that C2 will provide to the Commission, will allow C2 and the Commission to monitor for and assess the potential for adverse market effects. Specifically, the data and analysis will assist the Commission in evaluating the effect of allowing p.m. settlement for S&P 500 index options on the underlying component stocks.

In light of the fact that approval of C2's proposal would be a change from a.m. settlement for cash-settled index options, the Commission instituted proceedings to determine whether to approve or disapprove the proposal. In particular, through specific requests for comment and data, the Commission solicited input from market participants on the potential impact on the markets, particularly the underlying cash equities markets.

As discussed above, the Commission remains concerned about the potential impact on the market at expiration for the underlying component stocks for a p.m.-settled, cash-settled index option such as SPXPM. The potential impact today remains unclear, given the significant changes in the closing procedures of the primary markets over the past two decades. The Commission is mindful of the historical experience with the impact of p.m. settlement of cash-settled index derivatives on the underlying cash markets, discussed at length above, but recognizes, however, that these risks may be mitigated today by the enhanced closing procedures that are now in use at the primary equity markets.

o

See Section II (Description of the Proposal).

Finally, approval of C2's proposal on a pilot basis will enable the Commission to collect current data to assess and monitor for any potential for impact on markets, including the underlying cash equities markets. In particular, the data collected from C2's pilot program will help inform the Commission's consideration of whether the SPXPM pilot should be modified, discontinued, extended, or permanently approved. It also could benefit investors and the public interest to the extent it attracts trading in p.m.-settled S&P 500 index options from the opaque OTC market to the more transparent exchange-listed markets, where trading in the product will be subject to exchange trading rules and exchange surveillance.

Thus, based on the discussion above, the Commission finds that C2's current proposal is consistent with the Act, including Section 6(b)(5) thereof in that it is designed to remove impediments to and perfect the mechanism of a free and open market, and, in general, to protect investors and the public interest. In light of the enhanced closing procedures and the potential benefits to investors discussed above, the Commission finds that it is appropriate and consistent with the Act to approve C2's proposal on a pilot basis. The collection of data during the pilot and C2's active monitoring of any effects of SPXPM on the markets will help the Commission assess the impact of p.m. settlement in today's market.

VI. Conclusion

IT IS THEREFORE ORDERED, pursuant to Section 19(b)(2) of the Act, ⁹³ that the proposed rule change (SR-C2-2011-008) be, and hereby is, approved on a 14-month pilot basis only.

By the Commission.

26

⁹³ 15 U.S.C. 78s(b)(2).

Elizabeth M. Murphy Secretary