SECURITIES AND EXCHANGE COMMISSION

[Release No. 34-106030; File No. SR-OCC-2026-005]

Self-Regulatory Organizations; The Options Clearing Corporation; Order Approving Proposed Rule Change by The Options Clearing Corporation to Amend its System for Theoretical Analysis and Numerical Simulation Methodology Description to Incorporate Options Implied Interest Rates as an Additional Source of Interest Rates Inputs for Constructing the Interest Rate Discount Curve Used in Options Pricing.

August 3, 2026.

I. INTRODUCTION

On June 5, 2026, the Options Clearing Corporation ("OCC"), filed with the Securities and Exchange Commission ("Commission"), pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 ("Exchange Act")[1] and Rule 19b-4 thereunder,[2] a proposed rule change to amend OCC's System for Theoretical Analysis and Numerical Simulation ("STANS") Methodology Description to incorporate options implied interest rates as an additional source of interest rates inputs for constructing the interest rate discount curve used in options pricing (hereinafter "Proposed Rule Change"). The Proposed Rule Change was published for comment in the *Federal Register* on June 23, 2026.[3] The Commission did not receive comments regarding the Proposed Rule

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1 15 U.S.C. 78s(b)(1).

2 17 CFR 240.19b-4.

3 *See* Exchange Act Release No. 105712 (Jun. 17, 2026), 91 FR 37461 (Jun. 23, 2026) (File No. SR-OCC-2026-005) ("Notice").

Change. For the reasons discussed below, the Commission is approving the Proposed Rule Change.

II. BACKGROUND

OCC is a central counterparty ("CCP"), which means that, as part of its function as a clearing agency, it interposes itself as the buyer to every seller and seller to every buyer for certain financial transactions. As the CCP for the listed options markets in the United States,[4] as well as for certain futures and stock loans, OCC is exposed to various risks arising from providing clearance and settlement services to its Clearing Members.[5] Because OCC is obligated to perform on the contracts it clears, one such risk that OCC is exposed to is credit risk, including the risk that OCC would not maintain sufficient financial resources to cover exposures if one of its Clearing Members defaults. OCC manages such credit risk, in part, through financial safeguards, including the collection of margin collateral designed to cover the market risk associated with a Clearing Member's positions during the period that OCC would take to liquidate those positions in the event of a Clearing Member default. OCC employs its proprietary risk management system, STANS, to calculate each Clearing Member's margin requirements.[6]

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4 OCC describes itself as "the sole clearing agency for standardized equity options listed on national securities exchanges registered with the Commission." *See* Notice, 91 FR at 37462.

5 Capitalized terms used but not defined herein have the meanings specified in OCC's Rules and By-Laws, *available at* https://www.theocc.com/company-information/documents-and-archives/by-laws-and-rules.

6 An overview of the STANS methodology is posted on OCC's public website, *available at* https://www.theocc.com/Risk-Management/Margin-Methodology. OCC makes the confidential STANS Methodology Description available to Clearing Members who execute a non-disclosure agreement. *See also* Exchange Act Release No. 91079 (Feb. 8, 2021), 86 FR 9410 (Feb. 12, 2021) (File No. SR-OCC-2020-016).

In the STANS methodology, the interest rate discount curve ("discount curve") is a critical input for OCC's pricing models. OCC constructs the discount curve using industry standard benchmark rates and instruments. Currently, OCC states that it uses only the Secured Overnight Financing Rate ("SOFR") based discount curve.[7] However, OCC has observed that the SOFR-based discount curve may not always align with the rates implied by the options market, and market participants likewise have reported similar discrepancies in OCC's in-the-money options marks for long-dated SPX option expiries, specifically that the SOFR rates used by OCC are systematically below the options implied interest rates.[8]

To address this misalignment, OCC proposes to amend its STANS Methodology Description to incorporate box rates implied by the SPX options market as an additional input to the discount curve construction used in options pricing.[9] As a supplement to the current methodology, these market-derived box rates would allow OCC to incorporate box rates into its theoretical mark calculations and, thus, would increase smoothing output adherence to market quotations.[10] OCC states that it expects the proposed change to improve pricing accuracy for deep-in-the-money options with medium- to long-term

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7 *See* Notice, 91 FR at 37462, n. 6. *See also* Exchange Act Release No. 93371 (Oct. 18, 2021), 86 FR 58704, 58705 (Oct. 22, 2021) (SR-OCC-2021-011) (transitioning OCC's discount curve methodology to SOFR-based rates).

8 *See* Notice, 91 FR at 37462.

9 Box rates are interest rates derived from box spread trades. A box spread is a delta-neutral options strategy that involves simultaneously holding a bull call spread and a bear put spread with the same strike prices and expiration dates, which essentially creates a synthetic loan with an implied interest rate. *See* Notice, 91 FR at 37462-63, notes 15-17.

10 *See* Notice, 91 FR at 37462, note 8. ("Smoothing refers to OCC's Implied Volatility Smoothing algorithm, which generates implied volatilities for all listed and FLEX options. The discount curve serves as an input to this algorithm and is used in computing forward prices and option valuations throughout the smoothing process.")

expirations, resulting in more realistic margin requirement calculations that more precisely reflect the risk of Clearing Member portfolios.[11]

A. Overview of Discount Curve Inputs

The STANS methodology utilizes large-scale Monte Carlo simulations to forecast price and volatility movements in determining a Clearing Member's margin requirement.[12] OCC's pricing model within its STANS methodology uses the discount curve, along with dividends and implied volatility, to specify underlying price dynamics. OCC uses this data, along with Exchange-listed option price data, to calibrate the implied borrow cost and implied volatility parameters used in its option pricing models. In general, the discount curve is used to project expected future cash flows for option derivatives and to discount them back to present value.

OCC has observed that a SOFR-based discount curve may not always align with the rates implied by the options market, resulting in pricing discrepancies, particularly for deep-in-the-money options.[13] OCC states that, according to its analysis, the SOFR rate it uses generally is at a discount compared to the rate implied from put-call parity i.e., box rates, and historical data shows that box rates generally exceed SOFR-based rates by approximately 20 to 40 basis points across tenors, with varied spreads observed at shorter tenors.[14] OCC also states that market participants have reported discrepancies between

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11 *See* Notice, 91 FR at 37462.

12 *See* OCC Rule 601.

13 *See* Notice, 91 FR at 37462. OCC states that at-the-money options and out-of-the-money options are relatively less affected because the calibration of implied borrow costs largely absorbs the interest rate differences and it dampens the impact on the calculated implied forwards. *Id.*

14 *Id.*

OCC's end-of-day option marks and observed market prices for deep-in-the-money SPX options with long-dated expiries across all option types.[15]

B. Proposal to Incorporate Box Rates

To address these pricing discrepancies, OCC proposes to amend the STANS Methodology Description to incorporate interest rates implied by the SPX options market as inputs for constructing the discount curve. The incorporation of box rates would supplement OCC's current methodology, which uses SOFR rates as the primary input for discount curve modeling.

First, OCC would estimate such implied interest rates by sourcing market quotes for SPX European-style options and calculating their mid-prices from the average of the bid and ask. Then, using these mid-prices, OCC would apply a proprietary regression technique to derive box rates.[16] SPX options typically extend to approximately five years out; as such, OCC would extend the term structure of the discount curve by applying a basis adjustment to longer term SOFR swap rates to create a curve that extends to approximately 50 years.[17] OCC states that this approach would capture the market's cost of capital for equity options, which OCC has observed would typically run 20 to 40 basis points higher than SOFR-based rates.[18]

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15 *Id.*

16 OCC states that using mid-prices is consistent with common market practice and produces more stable and reliable results than working directly with bid and ask spreads because midpoint prices provide a neutral estimate of prevailing market value by mitigating the effect of bid-ask spread variability. *See* Notice, 91 FR at 37463.

17 *See* Notice, 91 FR at 37463, note 19. ("The basis adjustment would be calculated as the observed spread between box rates and SOFR rates at the longest available box rate expiry, applied as a constant adjustment to SOFR rates beyond that point.")

18 *See* Notice, 91 FR at 37463. As part of SR-OCC-2026-005, OCC filed confidential Exhibit 3C containing data underlying its impact analysis. OCC states that the proposal would result in a modest reduction in the aggregate margin collected, but that individual portfolios may experience varying effects depending on their composition. *See* Notice, 91 FR at 37463. For example, "a

The proposal would revise Section 3.2 in the STANS Methodology Description, which currently provides for three legacy groups of input data available for constructing the U.S. dollar discount curve: (1) cash rates, such as SOFR, (2) contiguous interest rate futures, and (3) interest rate swaps.[19] The proposal would expand the input data sources by adding a fourth input source to the list, namely, interest rates over the short and medium term implied by market quotes for options and other derivatives. Under the proposal, OCC would be able to use box rates derived from market quotes of standard SPX options, where available. As amended, Section 3.2 also would describe the process of extending the curve beyond available box rates to maintain continuity across the entire term structure, thus allowing OCC to extrapolate beyond the longest available expiration of standard SPX options using adjusted SOFR swap rates.

Further proposed changes to Section 3.2 of the STANS Methodology Description include replacement of specific maturity details with generalized timeframes so that, for example, cash rates would span from "overnight (i.e., one day) to a few months" rather than listing specific tenors. Likewise, under the proposal, the term "contiguous" would be removed from the interest rate futures discussion, as would the last sentence on seamless selection changes. Other changes in Section 3.2 would revise terminology from "yield curve" to "discount curve", as well as provide additional clarifying context and

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single-day impact assessment for a typical business date in November 2025 indicates a modest total margin reduction of approximately $141 million, or approximately 0.27% in relative terms." *Id.* OCC states that portfolios with a greater concentration of deep-in-the-money options are likely to see a more pronounced margin impact since the impact of discount rates is higher in such options. *Id.* OCC also states that "[i]n all cases, these adjustments are a consequence of correcting existing mispricing in option prices thereby aligning margin requirements more closely with actual risk." *Id.*

19 Not all of these sources are used under the current approach nor would be used under the proposal. *See* Notice, 91 FR at 37463.

remove certain references to algorithmic notations. The proposal would eliminate entirely from Section 3.2 the cash instruments subsection, which references legacy instrument-specific details related to the construction of the interest rate curve before OCC transitioned away from LIBOR to SOFR transition.[20]

III. DISCUSSION AND COMMISSION FINDINGS

Section 19(b)(2)(C) of the Exchange Act requires the Commission to approve a proposed rule change of a self-regulatory organization if it finds that the proposed rule change is consistent with the requirements of the Exchange Act and the rules and regulations thereunder applicable to the organization.[21] Under the Commission's Rules of Practice, the "burden to demonstrate that a proposed rule change is consistent with the Exchange Act and the rules and regulations issued thereunder . . . is on the self-regulatory organization ['SRO'] that proposed the rule change."[22]

After carefully considering the Proposed Rule Change, the Commission finds that the Proposed Rule Change is consistent with the requirements of the Exchange Act and the rules and regulations thereunder applicable to OCC. More specifically, the Commission finds that the Proposed Rule Change is consistent with Section 17A(b)(3)(F) of the Exchange Act,[23] and Rule 17ad-22(e)(6)(i) thereunder, as described in detail below.[24]

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20 The proposal would make non-substantive formatting, grammatical, and other minor updates throughout the methodology document, such as renumbering certain numerical computations to accurately reflect proposed deletions. *See* Notice, 91 FR at 37463.

21 15 U.S.C. 78s(b)(2)(C).

22 Rule 700(b)(3), Commission Rules of Practice, 17 CFR 201.700(b)(3).

23 15 U.S.C. 78q-1(b)(3)(F).

24 17 CFR 240.17ad-22(e)(6)(i).

A. Consistency with Section 17A(b)(3)(F) of the Exchange Act

Section 17A(b)(3)(F) of the Act[25] requires, in part, that the rules of a clearing agency be designed to assure the safeguarding of securities and funds which are in the custody or control of the clearing agency or for which it is responsible.

OCC uses its proprietary risk management system, STANS, to set risk-based margin requirements for its Clearing Members to address the credit risk it faces as a central counterparty in the event of a Clearing Member default. Pricing models outlined in OCC's STANS Methodology Description help inform the calculation of such margin requirements. The interest rate discount curve is a crucial component of these pricing models and is solely based on the secured overnight financing rate, but OCC and certain Clearing Members have stated the discount curve calculation is misaligned with current markets. They noted that the SOFR rates used by OCC to construct its discount curve are systematically below the options implied interest rates, especially for deep in-the-money SPX options for long-dated expiries across all option types. To address this mispricing and obtain a more accurate modeling of margin requirements, the proposal would incorporate box rates as a supplemental input in the discount curve construction.

Addressing the pricing discrepancies described above would provide a more accurate means of constructing the discount curve as an input to pricing options. More accurate pricing would, in turn, improve OCC's ability to assess its credit exposures and collect an appropriate amount of margin collateral to address such exposures. Collecting an appropriate amount of margin collateral would increase the likelihood that OCC is able to risk manage the default of a Clearing Member without recourse to loss

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[25] 15 U.S.C. 78q-1(b)(3)(F).

mutualization through the use of Clearing Fund assets of non-defaulting Clearing Members, which supports the safeguarding of securities and funds of such non-defaulting members in OCC's custody or control or for which it is responsible.

Accordingly, the Proposed Rule Change is consistent with the requirements of Section 17A(b)(3)(F) of the Act.[26]

B. Consistency with Rule 17ad-22(e)(6) under the Exchange Act

Exchange Act Rule 17Ad-22(e)(6) requires that a covered clearing agency establish, implement, maintain and enforce written policies and procedures reasonably designed to cover its credit exposures to its participants by establishing a risk-based margin system that, among other things, considers, and produces margin levels commensurate with, the risks and particular attributes of each relevant product, portfolio, and market.[27]

As stated above, the proposal seeks to address the discrepancy noted by OCC and certain Clearing Members regarding one of the inputs underlying pricing models used to set margin requirements. OCC and its Clearing Members have observed that the SOFR-based discount curve used in margin-setting pricing models may not always align with the rates implied by the options market and that SOFR rates used by OCC are systematically below the options implied rates, particularly impacting deep in-the-money options marks for long-dated SPX option expiries across all option types. To address this misalignment, OCC proposes to supplement the SOFR-based input with box interest rates implied by the SPX options market. Additionally, OCC proposes to establish a process

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26 *Id.*

27 17 CFR 240.17Ad-22(e)(6)(i).

of extending the curve beyond available box rates, which typically extend to approximately five years out, to maintain continuity across the entire term structure, and allow for extrapolation beyond the longest available expirations of standard SPX options using adjusted SOFR swap rates.

The Proposed Rule Change would help improve pricing accuracy, especially for deep-in-the-money options with medium- to long-term expirations by aligning margin requirements and OCC's credit risk management more closely with the current market. The proposal would, therefore, result in more accurate calculations for margin requirements commensurate with risks and particular attributes of the products it clears.

Accordingly, the Proposed Rule Change is consistent with the requirements of Rule 17ad-22(e)(6) under the Act.[28]

[28] 17 CFR 240.17ad-22(e)(6).

IV. CONCLUSION

On the basis of the foregoing, the Commission finds that the Proposed Rule Change is consistent with the requirements of the Exchange Act, and in particular, with the requirements of Section 17A(b)(3)(F) of the Exchange Act,[29] and Rule 17ad-22(e)(6)(i) thereunder.[30] IT IS THEREFORE ORDERED pursuant to Section 19(b)(2) of the Exchange Act[31] that the proposed rule change (SR-OCC-2026-005) be, and hereby is, approved.[32]

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[33]

Sherry R. Haywood,

Assistant Secretary.

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29 15 U.S.C. 78q-1(b)(3)(F).

30 17 CFR 240.17ad-22(e)(6)(i).

31 15 U.S.C. 78s(b)(2).

32 In approving the Proposed Rule Change, the Commission considered the proposal's impact on efficiency, competition, and capital formation. 15 U.S.C. 78c(f).

33 17 CFR 200.30-3(a)(12).