



Cboe Global Indices

Cboe S&P 500 Iron Condor Index

METHODOLOGY

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1 Introduction

This document provides a transparent and easily accessible view of the methodology used to calculate the Cboe S&P 500 Iron Condor Index (CNDR), referred to in this document as “the Index”.

1.1 Index Objective

The **Cboe S&P 500 Iron Condor Index (CNDR)** is designed to track the performance of a hypothetical option trading strategy that: (1) sells a monthly Out-of-the-Money (OTM) SPX Put option (delta ≈ -0.20) and a monthly Out-of-the-Money (OTM) SPX Call option (delta ≈ 0.20), (2) buys a monthly OTM SPX Put option (delta ≈ -0.05) and a monthly OTM SPX Call option (delta ≈ 0.05) to reduce the risk and (3) holds a Treasury bill account invested in one-month Treasury bills, which is rebalanced on the option Roll Day and is designed to limit the downside return of the CNDR Index. All SPX options involved are AM-settled and roll on a monthly basis. All option positions are one unit.

1.2 Supporting Documentation

This Methodology should be read in conjunction with the following document:

[Cboe_Index_Policies_Practices](#)

2 Index Construction

The Index is a total return index. The dollar value of option premium deemed received from the sold call and put options are functionally reinvested in the Iron Condor Index portfolio.

On the initial roll date of the Index, an OTM call option and an OTM put option are written with a delta close to 0.20 and -0.20 respectively. Additionally, an OTM call option and an OTM put option are bought with a delta close to 0.05 and -0.05 respectively. A money market account with 1-month treasury bills is set up to limit the downside risk of the portfolio.

On subsequent roll dates, the old options settles and a new option position is entered. The old money market account is liquidated at the same time. The new option is selected following the same rule as on the initial roll date. While the new option position is entered, a treasury bill account is set up.

More index specific information on the positions and selection of the strike prices of the options can be found in section 2.1 below. Details on the option settlement and determination of the option premiums can be found in section 2.2.

2.1 Index Constituents

The strike prices of the option positions are selected before 11 a.m. ET on roll dates. The options are written or purchased against prices specified in section 2.2.

Given the strike prices of the new SPX options, the worst possible payoff from the new option positions is:

$$\text{Max} (K_{\text{Call_P5}} - K_{\text{Call_P20}}, K_{\text{Put_N20}} - K_{\text{Put_N5}}).$$

Where $K_{\text{Call_P5}}$, $K_{\text{Call_P20}}$, $K_{\text{Put_N20}}$ & $K_{\text{Put_N5}}$ stand for the strikes of the SPX Call option with 0.05 delta, the SPX Call option with 0.20 delta, the SPX Put option with -0.20 delta and the SPX Put option with -0.05 delta, respectively. To provide a downside limit of negative return of the Index, a Treasury bill account with initial cash that equals ten times the maximum possible loss of the new option positions is set up at 11:00 a.m. ET. The Treasury bill account is designed such that the maximum possible loss from final settlement of the new option positions is approximately 10% of the total value of the account.

All inputs used in the delta calculation using the Black formula should be the last available values before 11:00 a.m. ET.

Type	Underlying ticker	Underlying name	Option expiration	Option type	Position (Q)	Strike (K)
T-bills	n/a	1-month T-bills	n/a	n/a	+1	n/a
Option	SPX	S&P 500	1 month	Call	-1	Option with delta closest to 0.20.
Option	SPX	S&P 500	1 month	Put	-1	Option with delta closest to -0.20.
Option	SPX	S&P 500	1 month	Call	+1	Option with delta closest to 0.05.
Option	SPX	S&P 500	1 month	Put	+1	Option with delta closest to -0.05.

2.2 Index Parameters

On every roll date, the old option positions is settled and a new option positions is entered. The table below describes how the option settlement is determined, and how the option premium collected from entering into new option positions is calculated.

Index Name	Index Ticker	Option Settlement	Option Premium Determination
Cboe S&P 500 Iron Condor Index	CNDR	Against the Special Opening Quotation (SOQ) of the SPX Index.	At the average of the last bid-ask quote of the applicable option before 11:00 a.m. ET.

2.3 Index Rebalance

Rebalances are performed with monthly frequency, in accordance with the table below.

Index Name	Index Ticker	Roll Date	Strike Determination
Cboe S&P 500 Iron Condor Index	CNDR	The third Friday of each month. Should the third Friday fall on an exchange holiday, the roll date is the preceding Business Day.	Roll Date

2.4 Options Pricing

The option prices are sourced from the Cboe Options Exchange via the Options Pricing Reporting Authority (OPRA) feed.

3 Index Calculations

The Index is calculated according to the following formula:

$$Index_t = Index_{t-1} \times (1 + R_t)$$

where:

- $Index_t$ is the level of the Index on day t ;
- $Index_{t-1}$ is the level of the Index on the previous day; and
- R_t is the return of the Index.

3.1 Non-Roll Date Calculations

The non-roll date return of the Index is calculated as:

$$(1 + R_t) = \frac{(M_t + Put_N5_t + Call_P5_t - Put_N20_t - Call_P20_t)}{(M_{t-1} + Put_N5_{t-1} + Call_P5_{t-1} - Put_N20_{t-1} - Call_P20_{t-1})}$$

$$M_t = (1 + R_f) * M_{t-1}$$

$$R_f = \left(\left(\frac{1}{1 - \frac{28}{360} * USB4WTA} \right)^{\frac{t-(t-1)}{28}} \right)$$

where:

- M_t and M_{t-1} are the values of the Treasury bill account on day t and $t-1$, respectively;
- R_f is the one-month T-bill rate de-annualized to the daily rate. *USB4WTA* is the 4-week Bank discount rate obtained from the website of the [U.S. Department of the Treasury](#);
- Put_N20_t is the average of the last bid-ask quote of the -20 delta Put option reported before 4:00 p.m. ET on the current trading day;
- $Call_P20_t$ is the average of the last bid-ask quote of the 20 delta Call option reported before 4:00 p.m. ET on the current trading day;
- Put_N5_t is the average of the last bid-ask quote of the -5 delta Put option reported before 4:00 p.m. ET on the current trading day;
- $Call_P5_t$ is the average of the last bid-ask quote of the 5 delta Call option reported before 4:00 p.m. ET on the current trading day;

- Put_N20_{t-1} is the average of the last bid-ask quote of the -20 delta Put option reported before 4:00 p.m. ET on the previous trading day;
- $Call_P20_{t-1}$ is the average of the last bid-ask quote of the 20 delta Call option reported before 4:00 p.m. ET on the previous trading day;
- Put_N5_{t-1} is the average of the last bid-ask quote of the -5 delta Put option reported before 4:00 p.m. ET on the previous trading day;
- $Call_P5_{t-1}$ is the average of the last bid-ask quote of the 5 delta Call option reported before 4:00 p.m. ET on the previous trading day.

3.2 Roll Date Calculations

The roll date return of the Index is calculated in two steps. The following formula is used to calculate the return from the previous day's market close to present day's morning settlement:

$$R_1 = \frac{(M_{t-1} + Put_N5_old_{settle} - Put_N20_old_{settle} - Call_P20_old_{settle} + Call_P5_old_{settle})}{(M_{t-1} + Put_N5_{t-1} + Call_P5_{t-1} - Put_N20_{t-1} - Call_P20_{t-1})} - 1$$

where:

- $Put_N5_old_{settle} = \text{Max}(0, K_{Put_N5_old} - SOQ_t)$ where $K_{Put_N5_old}$ is the strike price of the expiring put option with -0.05 delta;
- $Put_N20_old_{settle} = \text{Max}(0, K_{Put_N20_old} - SOQ_t)$ where $K_{Put_N20_old}$ is the strike price of the expiring put option with -0.20 delta;
- $Call_P5_old_{settle} = \text{Max}(0, SOQ_t - K_{Call_P5_old})$ where $K_{Call_P5_old}$ is the strike price of the expiring call option with 0.05 delta; and
- $Call_P20_old_{settle} = \text{Max}(0, SOQ_t - K_{Call_P20_old})$ where $K_{Call_P20_old}$ is the strike price of the expiring option with 0.20 delta.

The following formula is used to calculate the return from the moment the new SPX Put options are deemed purchased and sold (11:00 a.m. ET) to market close:

$$R_2 = \frac{(M_{new_t} + Put_N5_{new_t} - Put_N20_{new_t} - Call_P20_{new_t} + Call_P5_{new_t})}{(M_{new_t} + Put_N5_{new_{11am}} - Put_N20_{new_{11am}} - Call_P20_{new_{11am}} + Call_P5_{new_{11am}})} - 1$$

$$M_{new_t} = \text{Max}(K_{Call_P5} - K_{Call_P20}, K_{Put_N20} - K_{Put_N5}) * 10$$

where:

- M_{new_t} is the value of the new Treasury bill account, where K_{Call_P5} , K_{Call_P20} , K_{Put_N20} & K_{Put_N5} stand for the strikes of the call option with 0.05 delta, the call option with 0.20 delta, the put option with -0.20 delta and the put option with -0.05 delta, respectively;
- Each SPX option price with subscript $11am$ is the average of the last bid-ask quote for the applicable option before 11:00 a.m. ET; and

- Each SPX option price with subscript t is the average of the last bid-ask quote for the applicable option before 4:00 p.m. ET on Roll Day t . For intraday calculations, the average of the current reported bid and ask prices of the option is used;

Note: interest is not accumulated in the Treasury bill account on the roll day.

The product of the two parts (i.e., $1 + R_t = (1 + R_1) * (1 + R_2)$) is the total return of the roll day.

3.3 Intraday Calculations

On roll dates, the CNDR index will not be disseminated intraday. A daily closing value will be disseminated on roll dates following the close of U.S. trading hours. On non-roll dates, the non-roll date calculations are followed.

4 Calculation and Dissemination

The Index is calculated and disseminated as follows on each Business day. A Business Day is defined as a day when the Cboe Options Exchange is open for the Cboe Regular Trading Hours (RTH) session.

Index Name	Index Ticker	Dissemination Frequency	Dissemination Hours
Cboe S&P 500 Iron Condor Index	CNDR	15 seconds	Between 09:31 a.m. ET and 4:15 p.m. ET

The Index follows the Cboe Options Exchange holiday schedule.

5 Index Information

Index Name	Index Ticker	Base Date	Launch Date	Base Value	Currency
Cboe S&P 500 Iron Condor Index	CNDR	June 20, 1986	August 3, 2015	100	USD

6 Appendix 1 - Changes

Major changes described in this document since February 14, 2025, are as follows:

Change Summary	Effective Date	Previous Language	Updated Language
-	-	-	-

7 Appendix 2 – Document Information

Version Number	4.1
Last Revised Date	December 12, 2025

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