



Cboe Global Indices

Cboe NASDAQ-100 BuyWrite V2 UCITS Index METHODOLOGY

Contents

| | |
|--|---|
| 1. Introduction | 2 |
| 1.1 Index Objective | 2 |
| 1.2 Supporting Documentation | 2 |
| 2. Index Construction | 2 |
| 2.1 Options Pricing | 3 |
| 3. Index Calculations | 3 |
| 3.1 Non-Roll Date Calculations..... | 3 |
| 3.2 Roll Date Calculations | 4 |
| 4. Calculation and Dissemination | 5 |
| 5. Index Information..... | 5 |
| 6. Appendix 1 – Material Changes..... | 5 |

1. Introduction

This document provides a transparent and easily accessible view of the methodology used to calculate the Cboe NASDAQ-100 BuyWrite V2 UCITS Index (BXNTU), referred to in this document as “the Index”.

1.1 Index Objective

The Cboe NASDAQ-100 BuyWrite V2 UCITS Index is designed to track the performance of a covered call strategy with a “long” exposure to the NASDAQ-100 Index (NDX) and a short NASDAQ-100 Call option expiring monthly. Dividends paid on the component stocks underlying the NASDAQ-100 Index are only reinvested at 85% for tax withholdings consideration.

The Index does not use contributed input data, and the input data is readily available via public sources.

1.2 Supporting Documentation

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

[Cboe_Index_Rules_and_Governance.pdf](#)

2. Index Construction

The following describes the methodology for calculating the Index, including applicable formulas and input data.

The Index is a total return index that is rebalanced monthly, and the calculation is return based. Dividends paid on the component stocks underlying the NASDAQ-100 Index and the dollar value of option premium deemed received from the sold call options are re-invested in the NASDAQ-100 Index portfolio. Dividends are only reinvested at 85% for tax withholdings consideration.

The Index consists of a hypothetical portfolio consisting of a “long” position indexed to the NASDAQ-100 Index and a short at the money NASDAQ-100 Call option position, that expires in one month. On the initial roll date of the Index, the “long” NASDAQ-100 Index position and the short at the money NASDAQ-100 Call option position are entered simultaneously. Under this methodology, a business day is a day when the Options Market is scheduled to be open. The Roll Date is the same business day as the standard monthly listed option expiry date. Rebalance timelines are performed according to the following table.

| Index Name | Index Ticker | Roll Date | Strike Determination | Unit Determination |
|--|--------------|---|----------------------|--------------------|
| Cboe NASDAQ-100 BuyWrite V2 UCITS Index | BXNTU | Business day when the standard monthly listed option expiry date occurs | Roll Date | Roll Date |

The expiring Call option is European-Style and AM-settled on the standard monthly listed option expiry date and held to expiration. The strike of the new Call option is the listed option strike with the closest strike price

at or above the last value of the NASDAQ-100 Index reported before 11:00 a.m. ET. The option premium collected should be the time-weighted average price (“TWAP”) of the new call option during the 2-hour period beginning at 11:30 a.m. ET on the Roll Date. CGI determines the TWAP by calculating the midpoint of the last reported new NDX Call option quote every fifteen (15) minutes between 11:30 a.m. and 1:30 p.m. ET and then calculating a weighted average, with weights equal to the fraction of total minutes during this period. The source of the option prices used in the calculation of the TWAP is OPRA. The value of option premium deemed received from the new call option is functionally “reinvested” in the portfolio. CGI also calculates a time weighted average value of the NASDAQ-100 Index during the TWAP period following the same steps where the NASDAQ-100 Index values used in the TWAP calculations are the last reported NASDAQ-100 Index values of every fifteen (15) minutes.

CGI applies transaction costs to the option prices used in the TWAP calculation based on the Vega of the option. The value of the Vega charges per option will be calculated as the Black’s Vega of each option multiplied by the below Volatility Spread. The Vega charges are subtracted from the option price for each observation during the TWAP period based on the implied volatility and Vega of the option at that time. No Vega adjustments to the option TWAP calculation are made on non-roll dates.

| Implied Vol | Vol Spread |
|----------------|------------|
| IV ≤ 20% | 0.60% |
| 20% < IV ≤ 30% | 0.80% |
| 30% < IV ≤ 50% | 0.95% |
| 50% < IV | 1.65% |

2.1 Options Pricing

CGI uses listed option prices of the NASDAQ-100 options based on the National Best Bid and Offer (NBBO) as inputs for the Index.

3. Index Calculations

The Index is calculated every 15 seconds during U.S. trading hours according to the following formula:

$$BXNTU_t = BXNTU_{t-1} * (1 + R_t)$$

where:

- $BXNTU_t$ is the level of the BXNTU Index on day t;
- $BXNTU_{t-1}$ is the level of the Index on day t-1; and
- R_t is return of the BXNTU Index.

3.1 Non-Roll Date Calculations

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

$$1 + R_t = \frac{S_t + 0.85 * Div_t - C_t}{S_{t-1} - C_{t-1}}$$

where:

- S_t is the closing value of the NASDAQ-100 Index on date t. For intraday calculations, the current reported value of the NASDAQ-100 Index is used;
- S_{t-1} is the closing value of the NASDAQ-100 Index on date t-1;
- C_t is the arithmetic average of the last bid and ask prices of the call option reported before 4:00 p.m. ET on date t for the closing value. For intraday calculations, the average of the current reported bid and ask prices of the call option is used;
- C_{t-1} is the arithmetic average of the last bid and ask prices of the call option reported before 4:00 p.m. ET on date t-1; and
- Div_t represents the ordinary cash dividends payable on the component stocks underlying the NASDAQ-100 Index that trade “ex-dividend” at date t.

3.2 Roll Date Calculations

The roll rate of return of the index is calculated as:

$$1 + R_t = (1 + R_a) * (1 + R_b) * (1 + R_c)$$

where:

$$(1 + R_a) = \frac{S_{SOQ} + 0.85 * Div_t - C_{Settle}}{S_{t-1} - C_{t-1}};$$

$$(1 + R_b) = \frac{S_{TWAV}}{S_{SOQ}}; \text{ and}$$

$$(1 + R_c) = \frac{S_t - C_t}{S_{TWAV} - C_{TWAP}};$$

where:

- R_a is the rate of return of the covered NASDAQ-100 Index portfolio from the previous close of trading through the settlement of the expiring call option;
- S_{SOQ} is the Special Opening Quotation used in determining the settlement price of the expiring call option;
- $C_{Settle} = \text{Max}(0, SOQ_t - K_{old})$ is the final settlement price of the expiring call option on the roll date, where K_{old} is the strike of the expiring option;
- R_b is the rate of return of the un-covered NASDAQ-100 Index portfolio from the settlement of the expiring option to the time the new call option is deemed sold;
- S_{TWAV} is the time-weighted average value of the NASDAQ-100 Index based on the same time and weights used to calculate the TWAP in the new call option;
- R_c is the rate of return of the covered NASDAQ-100 Index portfolio from the time the new call option is deemed sold to the close of trading on the roll date;
- C_{TWAP} is the time-weighted average price of the new call option between 11:30 a.m. and 1:30 p.m. ET; and
- C_t refers to the average bid/ask quote of the new call option reported before 4:00 p.m. ET on the roll date.

4. Calculation and Dissemination

The Indices are calculated and disseminated as follows on each business day.

| Index Name | Index Ticker | Dissemination Frequency | Trading Hours |
|---|--------------|-------------------------|--------------------|
| Cboe NASDAQ-100 BuyWrite V2 UCITS Index | BXNTU | 15 Seconds | U.S. Trading Hours |

5. Index Information

| Index Name | Index Ticker | Base Date | Launch Date | Base Value | Currency |
|---|--------------|--------------------|------------------|------------|----------|
| Cboe NASDAQ-100 BuyWrite V2 UCITS Index | BXNTU | September 19, 2005 | January 11, 2021 | 100 | USD |

6. Appendix 1 – Material Changes

Material changes described in this document since December 1, 2022 are as follows:

| Change Summary | Effective Date | Previous | Updated |
|--|-------------------|--|--|
| Modification to the Roll Date | December 15, 2022 | The expiring Call option is held until the day before its date of maturity, generally the Thursday prior to the third Friday of the month. | The expiring Call option is European-Style and AM-settled on the standard monthly listed option expiry date (generally the third Friday) and held to expiration. |
| Modification to the Option Premium Calculation | December 15, 2022 | The option premium collected is based on the volume-weighted average price (“VWAP”) of the new call option at the close. | The option premium collected should be the time-weighted average price (“TWAP”) of the new call option during the 2-hour period beginning at 11:30 a.m. ET on the Roll Date. |
| Introduction of Transaction Costs | December 15, 2022 | <i>n/a</i> | Transaction costs are applied to the option prices used in the TWAP calculation based on the Vega of the option. |

DISCLAIMER

Copyright © 2022 Cboe Global Indices, LLC (“CGI”). All rights reserved. Cboe®, Cboe Global Markets®, Cboe Volatility Index®, VIX®, FLEXible EXchange®, FLEX®, Cboe Global IndicesSM, SRVIXSM, XSPSM, Buffer ProtectSM, BuyWriteSM and PutWriteSM are trademarks and service marks of CGI and its affiliates (each a “Cboe Company” and collectively the “Cboe Companies”). Trademarks of the Cboe Companies may only be used with written permission, subject to applicable Cboe Company trademark usage guidelines as published from time to time. Third-party trademarks and service marks used in this document are described below. The information in this document primarily concerns CGI’s index services business. CGI calculates and distributes numerous indices and other values used in the financial services industry, including proprietary and third party-owned indices used for financial products offered by CGI affiliates and unrelated third parties. The values and methodologies for indices branded with the “Cboe” trademark are the property of CGI. CGI receives compensation in connection with licensing its indices and providing calculation services to third parties. This document does not constitute an offer of services in jurisdictions where CGI does not have the necessary licenses. Detailed information about CGI indices can be obtained via e-mail request to indexdata@cboe.com or from the CGI index website at <https://www.cboe.com/us/indices/indicessearch/>.

CGI is in the business of calculating and distributing indices and other values, and is not an investment adviser or tax adviser, and no representation is made regarding the advisability or tax consequences of buying, holding or selling any financial product. CGI is not a broker-dealer or securities exchange, and CGI does not create, sponsor, endorse, manage, offer, list or trade, any financial product. The information in this document pertains only to indices owned and administered by CGI and is provided solely for educational and informational purposes. Past performance of an index is not indicative of future results. Indices are not financial products. It is not possible to invest in an index; however, indices can be used as the basis for financial products such as options, futures, mutual funds and exchange-traded funds. No representation is made that any financial product or portfolio will or is likely to perform similar to an index. No decision to buy, hold or sell any financial product should be made in reliance on any of the information set forth in this document. Prospective investors are advised only to buy, hold or sell a financial product with the help of qualified investment, brokerage and tax advisers, only after carefully considering the characteristics and attendant risks as described in the detailed offering materials prepared by or on behalf of the issuer, sponsor or underwriter of the financial product.

CGI’s operations are guided by written policies and procedures as described in a written control framework and are subject to supervision by an index oversight committee. All CGI indices are calculated pursuant to a written methodology, which is followed without regard to the needs of any person, entity or group of persons. It is common for an index to be based on a hypothetical portfolio of investments, and the index methodology describes, among other things, the hypothetical portfolio constituents, material assumptions and the method by which the index is calculated. Consult the CGI index website for methodologies and other documents pursuant to which indices are calculated and otherwise administered. The values of hypothetical portfolio holdings and other information used to calculate indices are obtained from sources believed to be reliable, which may include exchanges operated by CGI affiliates (such as Cboe Options Exchange). Input data may also be obtained from sources that consolidate data from multiple exchanges (such as the Options Price Reporting Authority) including market data from CGI affiliated exchanges. Certain indices (such as target outcome indices) involve hypothetical investments in customized options called FLEX Options, for which values are not always readily available. CGI calculates those indices using theoretical values of FLEX options that it determines pursuant to a process involving mathematical formulas, assumptions and available market information (including information from exchanges owned and operated by other Cboe Companies) as described in written methodologies available on the CGI index website. CGI may make adjustments to input values received, use alternate values or deviate from a stated methodology in order to compute representative index values where a specified input or other value is not received, is materially incorrect or is deficient (e.g., is distorted due to market disruption or other cause).

All index values are theoretical. They do not show the performance of actual investments, and may not reflect the fees, taxes or other expenses associated with buying, holding and selling theoretical investments or the effect of actual market conditions or events. Each index is launched on a specified date. Starting on that date, index values are calculated and publicly disseminated in accordance with the then current posted methodology. Index values for the period prior to the launch date are calculated by a theoretical approach involving back-testing historical data in accordance with the methodology in place on the launch date (unless otherwise stated). A limitation of back-testing is that it reflects the theoretical application of the index methodology and selection of constituents in hindsight. Back-testing may not result in performance commensurate with prospective application of a methodology, especially during periods of high economic stress in which adjustments might be made. No back-tested approach can completely account for the impact of decisions that might have been made if calculations were made at the same time as the underlying market conditions occurred. There are numerous factors related to markets that cannot be, and have not been, accounted for in the preparation of back-tested index information. Each index methodology is periodically reviewed to ensure that the index reliably measures its defined economic reality. In the event CGI becomes aware of a material calculation error, corrected values will be recalculated and distributed in accordance with written CGI rules and procedures. Index calculations may be halted or the methodology may be modified from time to time in accordance with written CGI rules and procedures. Supporting documentation for any claims, comparisons, statistics or other technical data in this document is available from CGI upon request.

Exposure to an asset class represented by an index may be available through investment funds or other financial products based on the index (each of the foregoing, an “Indexed Financial Product”). While CGI does not create, sponsor, endorse, manage, offer, list or trade any Indexed Financial Products, other Cboe Companies list and trade Indexed Financial Products based on CGI indices thereby generating revenues for those other Cboe Companies. CGI licenses its indices to unaffiliated third parties for third-party Indexed Financial Products, for which CGI receives a licensing fee. Neither CGI nor any other Cboe Company sponsors, endorses, promotes, manages, sells or administers any third-party Indexed Financial Product, and no representation is made regarding the advisability or tax consequences of investing in, holding or selling any investment fund or other third-party Indexed Financial Product. There is no assurance that any Indexed Financial Product will

accurately track the performance of the underlying index or provide positive investment returns. Inclusion of a security within an index is not a recommendation to buy, sell, or hold such security, nor should it be considered investment advice.

This document has been prepared solely for informational purposes based upon information generally available to the public and from sources believed to be reliable. No data, values or other content contained in this document (including without limitation, index values or information, ratings, credit-related analyses and data, research, valuations, strategies, methodologies and models) or any part thereof (“Content”) may be modified, reverse-engineered, reproduced or distributed in any form or by any means, or stored in a database or retrieval system, without the prior written permission of CGI. Content shall not be used for any unlawful or unauthorized purposes. There is no representation or guarantee by any Cboe Company, any Index Provider listed below or any third-party service or data provider (collectively, the “Cboe Parties”) regarding the accuracy, reliability, completeness, timeliness, suitability or availability of Content, index trademarks, strategies or values, or the methodologies or input data used to calculate index values. The Cboe Parties are not responsible for any errors or omissions, regardless of the cause, or for the results obtained from the use of the Content, index strategies or values, methodologies or input data. THE CONTENT, INDICES AND RELATED STRATEGIES AND METHODOLOGIES ARE PROVIDED “AS IS” WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ANY WARRANTY WITH RESPECT TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE. USERS OF CONTENT AND/OR THE INDICES BEAR ALL RISKS OF LOSS. IN NO EVENT SHALL THE CBOE PARTIES BE RESPONSIBLE OR LIABLE TO ANY PERSON OR ENTITY FOR ANY DAMAGES OF ANY KIND, INCLUDING BUT NOT LIMITED TO DIRECT, INDIRECT, SPECIAL, INCIDENTAL, CONSEQUENTIAL, PUNITIVE, LOST PROFITS OR LOST OPPORTUNITIES, WHETHER OR NOT A CBOE PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. THE FOREGOING LIMITATIONS SHALL APPLY REGARDLESS OF WHETHER A CLAIM ARISES IN CONTRACT, TORT, NEGLIGENCE, STRICT LIABILITY, OR OTHERWISE.

Certain activities of various Cboe Companies and/or divisions and business units within Cboe Companies are kept separate in order to avoid conflicts of interest and preserve the independence and objectivity of their respective activities. As a result, certain information is maintained by one Cboe Company, division or business unit that is not known to other Cboe Companies, divisions or business units. CGI has established policies and procedures to maintain the confidentiality of certain non-public information received in connection with the administration of indices. The Cboe Companies (other than CGI) operate markets for the trading of financial products and provide services to many organizations, including issuers of securities, investment advisers, broker-dealers, investment banks, other financial institutions and financial intermediaries, and accordingly may provide or receive fees or other economic benefits to or from those organizations. These organizations may also be CGI index licensees or customers, and CGI may include securities of or relating to such organizations in indices.

The Cboe Companies have licensed several trademarks from third parties from whom it has also licensed indices (each an “Index Provider”) which may be included in this document or in other materials related to CGI indices, as follows:

- Standard & Poor's®, S&P®, S&P 100®, S&P 500®, Standard & Poor's 500®, SPDR®, Standard & Poor's Depository Receipts®, SPX®, Standard & Poor's 500, Standard & Poor's 100, Standard & Poor's SmallCap 600, S&P SmallCap 600, S&P 500 Dividend Index, Standard & Poor's Super Composite 1500, S&P Super Composite 1500, Standard & Poor's 1500 and S&P 1500 are trade names or trademarks of Standard & Poor's Financial Services, LLC. Any products that have an S&P Index or indices as their underlying interest are not sponsored, endorsed, sold or promoted by S&P OPCO LLC (“Standard & Poor's”).
- Russell, Russell 1000®, Russell 2000®, Russell 3000® and Russell MidCap® are registered trademarks of the Frank Russell Company, used under license.
- FTSE® and the FTSE indices are trademarks and service marks of FTSE International Limited, used under license.
- Dow Jones®, Dow Jones Industrial Average®, DJIA® and Dow Jones Indexes are trademarks or service marks of Dow Jones Trademark Holdings, LLC (“Dow Jones”), have been licensed for use for certain purposes by the Cboe Companies. Derivative indices created, used and distributed by Cboe Companies and any investment products based thereon are not sponsored, endorsed, sold or promoted by Dow Jones, and Dow Jones makes no representation regarding the advisability of investing in any investment product that is based on any such derivative indices.
- The Nasdaq-100 Index®, Nasdaq-100®, The Nasdaq National Market®, Nasdaq®, Nasdaq-100 Shares and Nasdaq-100 Trust are trademarks or service marks of The Nasdaq Stock Market, Inc. (with which its affiliates are the “Corporations”). These marks are licensed for use by Cboe Exchange, Inc. in connection with the trading of products based on the Nasdaq-100 Index. The CBOE Nasdaq-100 Volatility Index (the “Volatility Index”) and CBOE Nasdaq-100 BuyWrite Index (the “BuyWrite Index”) are not derived, maintained, published, calculated or disseminated by the Corporations. Neither the Volatility Index, the BuyWrite Index nor any product based on the Volatility Index or BuyWrite Index has been passed on by the Corporations as to its legality or suitability. Such products are not issued, endorsed, sold, or promoted by the Corporations. THE CORPORATIONS MAKE NO WARRANTIES AND BEAR NO LIABILITY WITH RESPECT TO THE VOLATILITY INDEX OR BUYWRITE INDEX.
- MSCI and the MSCI index names are service marks of MSCI Inc. (“MSCI”) or its affiliates and have been licensed for use by the Cboe Companies. Any derivative indexes and any financial products based on the derivative indexes (“Products”) are not sponsored, guaranteed or endorsed by MSCI, its affiliates or any other party involved in, or related to, making or compiling such MSCI index. Neither MSCI, its affiliates nor any other party involved in, or related to, making or compiling any MSCI index makes any representations regarding the advisability of investing in such Products; or any warranty, express or implied; or bears any liability as to the results to be obtained by any person or any entity from the use of any such MSCI index or any data included therein. No purchaser, seller or holder of any Product, or any other person or entity, should use or refer to any MSCI trade name, trademark or service mark to sponsor, endorse, market or promote this security without first contacting MSCI to determine whether MSCI's permission is required.

v20210909

Copyright © 2022 Cboe. All rights reserved. Page 5 Appendix D



Cboe Global Indices

CONTACT US

IndexData@cboe.com

www.cboe.com/indices



Document Information <DO NOT EDIT>

SharePoint-populated data:

| | |
|--------------------------|-----------|
| Major Version # | 5 |
| Last Revised Date | 12/5/2022 |
| Last Review Date | 12/5/2022 |