



INDEX METHODOLOGY

NASDAQ INSPEREX DYNAMIC BUFFERED HIGH INCOME™ INDEX

NDXDBHI™

INDEX DESCRIPTION

The Nasdaq InspereX Dynamic Buffered High Income Index (NDXDBHI), the "Index", tracks the performance of a systematic enhanced collar strategy. The strategy aims to generate income through periodic selling of upside participation using Nasdaq-100® (NDX®) Index call options, typically with five days to expiration, and delta replicated long put options using the Nasdaq-100 Futures Excess Return™ Index (NDXNQER™) to provide downside protection.

On each Index Day, the strategy has exposure to the Nasdaq-100 Total Return Index® (XNDX®), a short call option on the Nasdaq-100 Index® (NDX®), and delta replicated long put options using the Nasdaq-100 Futures Excess Return™ Index (NDXNQER™), as well as a cash balance.

Unless stated otherwise, all capitalized terms used in this document are defined in Appendix A: Definitions.

INDEX CALCULATION

On the Index Base Date, the Index value is initialized to the Index Base Value. Thereafter, on each Index Day t , the value of the Index is calculated in accordance with the following formula:

$$I_t = U_t \times XNDX_t + CB_t - \sum_{i=1}^{N(Calls_t)} V_{i,t}^C \times C_{TWP,i,t}^{4pm} - V_t^F \times NDXNQER_t$$

where:

I_t = the Index value for Index Day t .

U_t = the number of units of the Nasdaq-100 Total Return Index® in the Index for Index Day t .

$XNDX_t$ = the closing level of the Nasdaq-100 Total Return Index® for Index Day t .

CB_t = the cash balance in the Index for Index Day t .

$N(Calls_t)$ = the number of short call options for Index Day t .

$V_{i,t}^C$ = the number of units of each selected short call option in the Index for Index Day t .

$C_{TWAP,i,t}^{4pm}$ = the Time Weighted Average Price of each non-expiring short call option for Index Day t , calculated using the TWAP window on Index Day t .

V_t^F = the number of units of the Nasdaq-100 Futures Excess Return™ Index in the Index for Index Day t .

$NDXNQER_t$ = the closing level of the Nasdaq-100 Futures Excess Return™ Index for Index Day t .

Please refer to Appendix C: TWAP and TWAV Calculations for further details regarding TWAP and TWAV calculations, including respective windows.

Please refer to Appendix E: Disruption Handling for details regarding fallback rules and disruption handling treatments when one or more variables are unavailable.

INDEX CONSTRUCTION

Index parameters

The table below details parameters specific to the construction and calculation of the Index.

Index (Symbol)	Components	Exposure	Strike/Expiry Selection	Transaction Costs
Nasdaq InspereX Dynamic Buffered High Income™ Index (NDXDBHI™)	Nasdaq-100 Total Return Index® (XNDX®)	100%	--	--
	NDX® Short Call	(100%)	See Appendix B: Option Selection	See Appendix D: NDX Short Call Transaction Costs
	Nasdaq-100 Futures Excess Return™ Index (NDXNQER™)	Determined by Delta	--	.02%
Nasdaq InspereX Dynamic Buffered High Income Option Only™ Index (NDXDBHIO™) ¹	NDX® Short Call	(100%)	See Appendix B: Option Selection	See Appendix D: NDX Short Call Transaction Costs
	Nasdaq-100 Futures Excess Return™ Index (NDXNQER™)	Determined by Delta	--	.02%
Nasdaq InspereX Dynamic Buffered High Income Distribution Only™ Index (NDXDBHII™) ²	Dividends from Nasdaq-100 Total Return Index® (XNDX®)	--	--	--
	Options Premiums from NDX® Short Call	--	See Appendix B: Option Selection	See Appendix D: NDX Short Call Transaction Costs

For information on the Nasdaq-100 Total Return Index® and Nasdaq-100 Futures Excess Return™ Index, please refer to the [Nasdaq-100 Index Methodology document](#) and [Nasdaq-100 Futures Excess Return Index methodology document](#), respectively.

¹ Please refer to Appendix F: Option Only Index for calculation details for the Nasdaq InspereX Dynamic Buffered High Income Option Only™ Index (NDXDBHIO™).

² Please refer to Appendix G: Distribution Only Index for calculation details for the Nasdaq InspereX Dynamic Buffered High Income Distribution Only™ Index (NDXDBHII™).

Call option units

For each Roll Date t , the units of the new call option selected to be sold on that date are calculated in accordance with the following formulae:

$$V_{i,t}^C = \frac{1}{5} \times \frac{U_{t-1} \times XNDX_{TWAV,t}^{230pm} - \sum_{i=1}^{N(Calls_t)} V_{i,t-1}^C \times C_{TWAP,i,t}^{230pm} - V_{t-1}^F \times NDXNQER_{TWAV,t}^{230pm\sim} + \widetilde{CB}_t}{NDX_{TWAV,t}^{230pm}}$$

$$NDXNQER_{TWAV,t}^{230pm\sim} = NDXNQER_{t-1} \times \left[\frac{XNDX_{TWAV,t}^{230pm}}{XNDX_{t-1}} - FS_{t-1} \times \frac{Days_{t-1,t}}{360} \right]$$

$$FS_t = RF_t + \frac{1}{10} \times \max \left(0, \sum_{k=0}^9 \left(\frac{ERI_{XNDX,t-k}}{ERI_{XNDX,t-k-65}} - \frac{NDXNQER_{t-k}}{NDXNQER_{t-k-65}} \right) \times \frac{360}{Days_{t-k-65,t-k}} \right)$$

$$ERI_{XNDX,t} = ERI_{XNDX,t-1} \times \left(\frac{XNDX_t}{XNDX_{t-1}} - RF_{t-1} \times \frac{Days_{t-1,t}}{360} \right)$$

$$ERI_{XNDX,t_0} = XNDX_{t_0}$$

where:

U_{t-1} = the number of units of Nasdaq-100 Total Return Index® in the Index for Index Day $t - 1$.

$XNDX_{TWAV,t}^{230pm}$ = the Time Weighted Average Value of the Nasdaq-100 Total Return Index® for Index Day t .

$N(Calls_t)$ = the number of short call options for Index Day t .

$V_{i,t-1}^C$ = the number of units of each selected short call option in the Index for Index Day $t - 1$.

$C_{TWAP,i,t}^{230pm}$ = the Time Weighted Average Price of each non-expiring short call option for Index Day t , calculated using the TWAP window on Index Day t .³

V_{t-1}^F = the number of units of the Nasdaq-100 Futures Excess Return™ Index in the Index for Index Day $t - 1$.

$NDXNQER_{TWAV,t}^{230pm\sim}$ = proxy of the Time Weighted Average Value of the Nasdaq-100 Futures Excess Return™ Index for Index Day t .

$\widetilde{CB}_t$ = the cash balance with interest accrual between Index Day $t - 1$ and Index Day t .

$NDX_{TWAV,t}^{230pm}$ = the Time Weighted Average Value of the Nasdaq-100® Index for Index Day t .

$NDXNQER_{t-1}$ = the closing level of the Nasdaq-100 Futures Excess Return™ Index for Index Day $t - 1$.

$XNDX_{t-1}$ = the closing level of the Nasdaq-100 Total Return Index® for Index Day $t - 1$.

FS_t = the funding cost as of Index Day t .

$Days_{t-1,t}$ = the number of calendar days from Index Day $t - 1$ (inclusive) to Index Day t (exclusive).

³ If the call option is AM-settled and expiring on Index Day t , $C_{TWAP,i,t}^{230pm}$ is set to $\max(XQO_t - K_{exp,t-1}^C, 0)$.

RF_{t-1} = the Effective Federal Funds Rate published by the Federal Reserve Bank of New York for Index Day $t - 1$. If such rate is unavailable, then the rate shall be the most recent rate available on an Index Day preceding Index Day $t - 1$.

If Index Day t is not a Roll Date, then the option units do not change:

$$V_{i,t}^C = V_{i,t-1}^C$$

Reference put option units

For each Roll Date t , the units of the new reference put options are calculated in accordance with the following formulae:

$$V_{i,t}^{PNear} = \frac{1}{NSBD_t} \times \frac{RSBD_t}{NSBD_t} \times \frac{U_{t-1} \times XNDX_{TWAV,t}^{230pm} - \sum_{i=1}^{N(Calls_t)} V_{i,t-1}^C \times C_{TWAP,i,t}^{230pm} - V_{t-1}^F \times NDXNQER_{TWAV,t}^{230pm} + \widetilde{CB}_t}{NDX_{TWAV,t}^{230pm}}$$

$$V_{i,t}^{PFar} = \frac{1}{NSBD_t} \times \left(1 - \frac{RSBD_t}{NSBD_t}\right) \times \frac{U_{t-1} \times XNDX_{TWAV,t}^{230pm} - \sum_{i=1}^{N(Calls_t)} V_{i,t-1}^C \times C_{TWAP,i,t}^{230pm} - V_{t-1}^F \times NDXNQER_{TWAV,t}^{230pm} + \widetilde{CB}_t}{NDX_{TWAV,t}^{230pm}}$$

where:

$NSBD_t$ = the number of Index Days from the Monthly Option Expiration Date prior to or on Index Day t (exclusive) to the next Monthly Option Expiration Date after Index Day t (inclusive).

$RSBD_t$ = the number of Index Days from Index Day t (exclusive) to the next Monthly Option Expiration Date after Index Day t (inclusive).

If Index Day t is not a Roll Date, then the option units do not change:

$$V_{i,t}^{PNear} = V_{i,t-1}^{PNear}$$

$$V_{i,t}^{PFar} = V_{i,t-1}^{PFar}$$

Futures contract units

For each Roll Date t , the units of the new futures contract selected to be sold on that date are calculated in accordance with the following formulae:

$$V_t^F = - \frac{NDX_{TWAV,t}^{230pm}}{NDXNQER_{TWAV,t}^{230pm}} \times \sum_{i=1}^{N(Puts_t)} (V_{i,t}^P \times \delta_{i,t} \times e^{-(RF_{t-1} - q_{t-1}) \times \tau_{i,t}})$$

$$\delta_t = -N(-d_{1,t}) \times e^{-q_{t-1} \times \tau}$$

$$d_{1,t} = \frac{\ln\left(\frac{NDX_{TWAV,t}^{230pm}}{K}\right) + (RF_{t-1} - q_{t-1} + \frac{1}{2} \times \sigma_{t-1}^2) \times \tau}{\sigma_{t-1} \times \sqrt{\tau}}$$

$$q_t = \sum_{i=0}^{251} \frac{IDP_{t-i}}{NDX_{t-i-1}}$$

where:

$N(Puts_t)$ = the number of reference puts held whose expiration is greater than $t + 1$ on Index Day t . This includes the new reference put option units for Index Day t .

$V_{i,t}^P$ = the number of units of each selected long put option in the Option Only Index for Index Day t .

q_t = the trailing 12-month dividend yield of the Nasdaq-100® Index as of Index Day t .

τ = the time to maturity in years (based on a 365-day calendar).

σ_{t-1} = the implied volatility, as provided by [OptionMetrics](#), of the put options for Index Day $t - 1$ selected based on *Appendix B: Option Selection*.

IDP_{t-i}^{NDX} = the Nasdaq-100® Index dividend points for Index Day $t - i$.

NDX_{t-i} = the closing level of the Nasdaq-100® Index for Index Day $t - i$.

If Index Day t is not a Roll Date, then the futures contract units do not change:

$$V_t^F = V_{t-1}^F$$

Cash balance

For each Roll Date t , the cash balance receives the proceeds (net of transaction costs) from selling new short call options. The value of the cash balance on the Roll Date t is calculated in accordance with the following formula:

$$\begin{aligned} CB_t = & CB_{t-1} + (CB_{t-1} - V_{t-1}^F \times NDXNQER_{t-1}) \times RF_{t-1} \times \frac{Days_{t-1,t}}{360} \\ & - V_{exp,t-1}^C \times \max(SV_t - K_{exp,t-1}^C, 0) + V_{new,t}^C \times (C_{TWAP,new,t}^{4pm} - TC_t^C) \\ & + (V_t^F - V_{t-1}^F) \times NDXNQER_t - TC^{NDXNQER} \times |V_t^F - V_{t-1}^F| \times NDXNQER_t \\ & - (U_t - U_{t-1}) \times XNDX_t \end{aligned}$$

where:

CB_{t-1} = the cash balance in the Index for Index Day $t - 1$.

$V_{exp,t-1}^C$ = the number of units of the expiring short call option in the Index for Index Day $t - 1$.

SV_t = the Settlement Value for Index Day t . This refers to the Nasdaq-100® Index final settlement value (symbol XQO for AM-settled NDX options and symbol XQC for PM-settled NDX options).

$K_{exp,t-1}^C$ = the strike price of the expiring short call option for Index Day $t - 1$.

$V_{new,t}^C$ = the number of units of newly entered short call options in the Index for Index Day t .

$C_{TWAP,new,t}^{4pm}$ = the Time Weighted Average Price of each newly entered short call option for Index Day t , calculated using the TWAP window on Index Day t .

TC_t^C = the transaction cost applied to the short call option entered for Index Day t (see *Appendix D: NDX Short Call Transaction Costs*).

$TC^{NDXNQER}$ = the assigned transaction costs applied to the Nasdaq-100 Futures Excess Return™ Index positions entered for Index Day t , as detailed in the *Index parameters* section.

The cash balance with interest accrual is defined as:

$$\widetilde{CB}_t = CB_{t-1} + (CB_{t-1} - V_{t-1}^F \times NDXNQER_{t-1}) \times RF_{t-1} \times \frac{Days_{t-1,t}}{360}$$

On the Index Base Date, the cash balance with interest is initialized to the Index Base Value, while the cash balance is defined as:

$$CB_t = \widetilde{CB}_t + V_{new,t}^C \times (C_{TWAP,new,t}^{4pm} - TC_t^C) + V_t^F \times NDXNQER_t - TC^{NDXNQER} \times V_t^F \times NDXNQER_t - U_t \times XNDX_t$$

If Index Day t is not a Roll Date, then the cash balance and cash balance with interest are equal:

$$CB_t = \widetilde{CB}_t$$

Equity units

For each Roll Date t , the units of Nasdaq-100® Total Return Index in the Index are calculated in accordance with the following formula:

$$U_t = \frac{U_{t-1} \times XNDX_t - \sum_{i=1}^{N(Calls_t)} V_{non-exp,t-1}^C \times C_{TWAP,i,t}^{4pm} - V_{exp,t-1}^C \times \max(SV_t - K_{exp,t-1}^C, 0) - V_{t-1}^F \times NDXNQER_t + \widetilde{CB}_t}{XNDX_t}$$

where:

$V_{non-exp,t-1}^C$ = the number of units of the non-expiring short call option in the Index for Index Day $t - 1$.

$C_{TWAP,i,t}^{4pm}$ = the Time Weighted Average Price of each non-expiring short call option for Index Day t , calculated using the TWAP window on Index Day t .

If Index Day t is not a Roll Date, then the equity units do not change:

$$U_t = U_{t-1}$$

INDEX CALENDAR

Holiday schedule

The Index is calculated Monday through Friday, except on days when the Exchange is scheduled to be closed (the “Holiday Schedule”).

Index calculation and dissemination schedule

Index values are made available after the market close on each Index Day via the [Nasdaq Global Index Watch \(GIW\) website](#).

ADDITIONAL INFORMATION

Announcements

Nasdaq announces Index-related information via the [Nasdaq Global Index Watch \(GIW\) website](#).

For more information on the general Index Announcement procedures, please refer to the [Nasdaq Index Methodology Guide](#).

Recalculation and restatement policy

For information on the Recalculation and Restatement Policy, please refer to the [Nasdaq Index Recalculation Policy](#).

Contact information

For any questions regarding an Index, please contact the Nasdaq Index Client Services team at indexservices@nasdaq.com.

Index dissemination

Where applicable, Index values and weightings information are available through the [Nasdaq Global Index Watch \(GIW\) website](#) as well as the Nasdaq Global Index FlexFile Delivery Service (GIFFD) and Global Index Dissemination Services (GIDS). Similar to the GIDS offerings, Genium Consolidated Feed (GCF) provides real-time Index values and weightings for the Nordic Indexes.

For more detailed information regarding Index Dissemination, please see the [Nasdaq Index Methodology Guide](#).

Website

For further information, please refer to the [Nasdaq Global Index Watch \(GIW\) website](#).

FTP and dissemination service

Where applicable, Index values and weightings are available via FTP on the Nasdaq Global Indexes FlexFile Delivery Service (GIFFD). Index values are available via Nasdaq's Global Index Dissemination Services (GIDS).

GOVERNANCE

Index governance

All Nasdaq Indexes are managed by the governance committee structure and have transparent governance, oversight, and accountability procedures for the index determination process. For further details on the Index Methodology and Governance overlay, please refer to the [Nasdaq Index Methodology Guide](#).

APPENDIX A: DEFINITIONS

Term	Description
Calculation Disruption Event	In respect of an Index and a Component, the occurrence of one or more of the following events that affects that Component or any underlying instrument of that Component, and that the Index Administrator deems to be material to the Index: • Price Failure: Any event that impairs or prevents the ability of the Index Administrator to obtain a relevant price, level, rate, value or any other information from an exchange or other source necessary, on a timely basis and in a manner acceptable to the Index Administrator, in order to perform the calculation of the Index. • Inaccurate Data: The price or value of a component, or other input data, used directly or indirectly in the Index that, in the determination of the Index Administrator, is inaccurate, incomplete and/or does not adequately reflect the true market price or value of such component or input data. • Force Majeure: Any event or circumstance (including, without limitation, a systems failure, natural or man-made disaster, act of God, armed conflict, act of terrorism, riot or labor disruption or any similar intervening circumstance, or restrictions due to emergency powers enforced by federal, state or local government agencies), that is beyond the reasonable control of the Index Administrator and that the Index Administrator determines, in its sole discretion, affects the Index, a Component of the Index, any input data required to calculate the Index, or that prevents the ability of the Index Administrator to calculate the Index. • General Moratorium: the Index Administrator observes on any day that there has been a declaration of a general moratorium in respect of banking activities in any relevant jurisdiction.
Components	The equity, futures, and AM-settled monthly option Components for the Index as detailed in the <i>Index parameters</i> section.
Consequences of a Calculation Disruption Event or Market Disruption Event	In respect of an Index, if a Calculation Disruption Event or Market Disruption Event occurs or is occurring on an Index Day that the Index Administrator determines materially affects the Index, the Index Administrator may: • Delay the calculation of the Index and halt the dissemination of the value of the Index and /or other information relating to the Index until such time, which may be a subsequent Index Day, that the Index Administrator determines that such Calculation Disruption Event or Market Disruption Event is no longer occurring. • Determine a good faith estimate of any affected or missing input data required to calculate the Index or the value of the Index for such Index Day or time for such Index Day.
Disrupted Day	In respect of an Index and a Component, an Index Day on which there is a Market Disruption Event.
Exchange	The Nasdaq Stock Exchange.
Half Trading Day	An Index Day on which markets are scheduled to close early at 1:00 PM ET instead of 4:00 PM ET, as published by Nasdaq and subject to change from time to time.
Hedge Delay	In respect of an Index and a Component, if a Trading Disruption or Exchange Disruption, as defined in <i>Market Disruption Event</i> below, occurs on a scheduled Roll Date for such Component, then no change of units of that Component shall occur on that day.
Index Administrator	Nasdaq, Inc.
Index Base Date	August 12, 2022

Index Base Value	<table><tr><th>Index Symbol</th><th>Index Base Value</th></tr><tr><td>NDXDBHI</td><td>100.00</td></tr><tr><td>NDXDBHIO</td><td>100.00</td></tr><tr><td>NDXDBHII</td><td>0.00</td></tr></table>	Index Symbol	Index Base Value	NDXDBHI	100.00	NDXDBHIO	100.00	NDXDBHII	0.00
Index Symbol	Index Base Value								
NDXDBHI	100.00								
NDXDBHIO	100.00								
NDXDBHII	0.00								
Index Day	In respect of an Index and starting with the Index Base Date, each weekday that is not a scheduled holiday according to the Index Holiday Schedule as defined in the <i>Index Calendar</i> section.								
Market Disruption Event	In respect of an Index and a Component, the occurrence of one or more of the following events that affects that Component or any underlying instrument of that Component, and that the Index Administrator deems to be material to the Index: • Exchange Disruption: Any exchange-related event on a relevant exchange that disrupts or impairs the ability of market participants to effect transactions or obtain market values or price discovery of a component used directly or indirectly in the Index. • Trading Disruption: Any unscheduled closure of the relevant exchange; a material suspension, limitation or disruption of trading on such exchange; a failure of such exchange to publish the relevant price, level, value or other information; a halt in trading, such as a circuit breaker or other exchange imposed halt, including an exchange imposed daily “limit price”; or any other event that materially affects the ability of market participants to trade, effect transactions in, maintain or unwind positions in that Component or any underlying instrument of that Component.								
Monthly Option Expiration Date	In respect of an option on the Reference Component and a calendar month, the third Friday of that calendar month. ⁴ If such day is not a scheduled Exchange trading day for that option, then the Exchange trading day immediately preceding such day.								
Reference Component	In respect of an option, the Nasdaq-100® Index (NDX®).								
Regular Trading Day	An Index Day that is not a Half Trading Day.								
Roll Date	The first Roll Date of the Index is August 15, 2022. Thereafter, a Roll Date is each Index Day.								
Roll Date Disruption	If a Market Disruption Event occurs on a scheduled Roll Date for a Component, then no change of units of that Component shall occur on that day.								

For additional key terms not defined above, please refer to the [Nasdaq Index Methodology Guide](#).

⁴ Note that Monthly Option Expiration Dates were on Saturday for options with expiration dates prior to 2015, as well as those with expiration dates in December 2015.

APPENDIX B: OPTION SELECTION

Call expiration and strike price selection

For each Roll Date t , the options expiration date selected will be the expiration date of the next nearest available PM-settled NDX options at least five Index Days following that Roll Date ($t + 5$).

However, prior to May 2025, there are no Exchange listed PM-settled NDX options on dates when there are Exchange listed AM-settled NDX options, usually the third Friday of each month. Therefore, on the Roll Dates five Index Days before the third Friday of each month, the option expiration date will be the next PM-settled expiration (usually Monday). In the event the third Friday is a scheduled market holiday, the next PM-settled expiration (usually Monday) will be selected.

For each Roll Date t , the strike price K_t^C of the respective option will be equal to the listed strike price (available as of the end-of-day on Index Day $t - 1$) with an expiration equal to the selected expiration date that is closest to 15 delta (with reference to $t - 1$ implied volatility), as determined by the Index Administrator, in accordance with the following formula:

$$K_t^C = ND\bar{X}_{TWAV,t}^{230pm} \times e^{-NCDF^{-1}(\Delta_{Target} \times e^{q_{t-1} \times \tau}) \times \sigma_{t-1} \times \sqrt{\tau} + (RF_{t-1} - q_{t-1} + \frac{1}{2} \times \sigma_{t-1}^2) \times \tau}$$

where:

$ND\bar{X}_{TWAV,t}^{230pm}$ = the Time Weighted Average Value of the Nasdaq-100® Index for Index Day t .

Δ_{Target} = the target delta, which is set at 15.

q_{t-1} = the trailing 12-month dividend yield of the Nasdaq-100® Index for Index Day $t - 1$.

τ = the time to maturity in years (based on a 365-day calendar).

σ_{t-1} = the implied volatility, as provided by [OptionMetrics](#), of the call options for Index Day $t - 1$ selected.

RF_{t-1} = the Effective Federal Funds Rate published by the Federal Reserve Bank of New York for Index Day $t - 1$. If such rate is unavailable, then the rate shall be the most recent rate available on an Index Day preceding Index Day $t - 1$.

Reference put expiration and strike price selection

For each Roll Date t , there will be two expiration dates selected, one near and one far, to synthetically replicate a one-month expiration. The near expiration will be the next monthly Exchange listed AM-settled NDX option expiration greater than $t + 1$. The far expiration will be the next monthly Exchange listed AM-settled NDX option expiration following the near expiration.

For each Roll Date t , the strike price K_t^P of the respective option will be equal to the listed strike price (available as of the end-of-day on Index Day $t - 1$) with an expiration equal to the selected expiration date that is closest to the target strike price $\hat{K}_t^P$, as determined by the Index Administrator, in accordance with the following formula:

$$\hat{K}_t^P = ND\bar{X}_{TWAV,t}^{230pm} \times 0.925$$

where:

$NDX_{TWAV,t}^{230pm}$ = the Time Weighted Average Value of the Nasdaq-100® Index for Index Day t .

If $\widehat{K}_t^P$ is equidistant to two listed strike prices, then K_t^P is equal to the larger of the two listed strike prices.

If Index Day t is not a Roll Date, then no new options are selected. Therefore, the option strike prices do not change:

$$K_t^P = K_{t-1}^P$$

APPENDIX C: TWAP AND TWAV CALCULATIONS

TWAP and TWAV calculation windows

On a Regular Trading Day, the TWAP and TWAV calculation windows for each of the variables are:

Variables	TWAP/TWAV	Lookback Time T_{LB}	Start Time T_S	End Time T_E	Interval ΔT	Time Zone
$XNDX_{TWAV,t}^{230pm}$	TWAV	N/A	14:30:00	14:40:00	15 sec	US/Eastern
$NDX_{TWAV,t}^{230pm}$	TWAV	N/A	14:30:00	14:40:00	15 sec	US/Eastern
$C_{TWAP,t}^{230pm}$	TWAP	13:30:00	14:30:00	14:40:00	15 sec	US/Eastern
$C_{TWAP,t}^{4pm}$	TWAP	15:00:00	15:59:30	16:00:00	1 sec	US/Eastern

For Half Trading Days, the TWAP and TWAV calculation windows are (Note that the same variable names are used for TWAV and TWAP for clarity):

Variables	TWAP/TWAV	Lookback Time T_{LB}	Start Time T_S	End Time T_E	Interval ΔT	Time Zone
$XNDX_{TWAV,t}^{230pm}$	TWAV	N/A	11:30:00	11:40:00	15 sec	US/Eastern
$NDX_{TWAV,t}^{230pm}$	TWAV	N/A	11:30:00	11:40:00	15 sec	US/Eastern
$C_{TWAP,t}^{230pm}$	TWAP	10:30:00	11:30:00	11:40:00	15 sec	US/Eastern
$C_{TWAP,t}^{4pm}$	TWAP	12:00:00	12:59:30	13:00:00	1 sec	US/Eastern

Index TWAV calculations

Index TWAV is the Time Weighted Average Value of an index within a specified time window.

In respect of an Index TWAV calculation, for the intraday time window $W = [T_S, T_E]$ given by 'Start Time' (T_S) and 'End Time' (T_E), the time window W is divided into N intervals each of width equal to ΔT where:

$$N = \frac{T_E - T_S}{\Delta T}$$

For $0 \leq i < N$, the i^{th} -interval is given by the points $[T_S + i \times \Delta T, T_S + (i + 1) \times \Delta T]$. Note that the interval includes the start-point and excludes the endpoint.

In respect of an Index TWAV calculation, for each i^{th} -interval the $IndexLevel_i$ is defined as:

$$IndexLevel_i = \text{First Index Level in the } i^{th} - \text{interval}$$

If there is no available Index value in the i^{th} -interval, then $IndexLevel_i$ is not defined. Further δ_i is defined as:

$$\delta_i = \begin{cases} 1 & \text{if } IndexLevel_i \text{ is defined} \\ 0 & \text{if } IndexLevel_i \text{ not defined} \end{cases}$$

The TWAV for the given Index and window W is calculated in accordance with the following formula:

$$TWAV(W) = \frac{\sum_{i=0}^{N-1} \delta_i \times IndexLevel_i}{\sum_{i=0}^{N-1} \delta_i}$$

If $IndexLevel_i$ is not defined for all the N intervals, then $TWAV(W)$ for that window is deemed not available.

Options TWAP calculations

Option TWAP is the Time Weighted Average Price of an option contract within a specified time window.

In respect of an option TWAP calculation, for the intraday time window $W = [T_S, T_E]$ given by 'Start Time' (T_S) and 'End Time' (T_E), the time window W is divided into N intervals each of width equal to ΔT where:

$$N = \frac{T_E - T_S}{\Delta T}$$

For $0 \leq i < N$, the i^{th} -interval is given by the points $[T_{LB}, T_S + (i + 1) \times \Delta T]$. Note that the interval always starts at the Lookback Time T_{LB} and ends at $T_S + (i + 1) \times \Delta T$ (excludes the endpoint).

In respect of an option TWAP calculation, for each i^{th} -interval the Ask_i and the Bid_i is defined as:

$Ask_i = \text{Last available NBBO Ask price (non - zero) in the } i^{th} - \text{interval}$

$Bid_i = \text{Last available NBBO Bid price (zero included) in the } i^{th} - \text{interval}$

If for the i^{th} -interval, both Ask_i and Bid_i are available, then the Mid_i price is defined as:

$$Mid_i = \frac{Ask_i + Bid_i}{2}$$

If Ask_i or Bid_i is not defined in the i^{th} -interval, then Mid_i is not defined. Further δ_i is defined as:

$$\delta_i = \begin{cases} 1 & \text{if } Mid_i \text{ is defined} \\ 0 & \text{if } Mid_i \text{ not defined} \end{cases}$$

The TWAP for the given option and window W is calculated in accordance with the following formula:

$$TWAP(W) = \frac{\sum_{i=0}^{N-1} \delta_i \times Mid_i}{\sum_{i=0}^{N-1} \delta_i}$$

If Mid_i is not defined for all the N intervals, then $TWAP(W)$ for that window is deemed not available.

APPENDIX D: NDX SHORT CALL TRANSACTION COSTS

For each Roll Date t , the transaction costs are calculated in accordance with the following formulae:

$$TC_t^C = \min \left(0.0001 \times \max \left(2, \min(8, 0.16 \times \sigma_{Vo24,t}) \right) \times NDX_t, 0.5 \times C_{TWAP,i,t}^{4pm} \right)$$

$$\sigma_{Vo24,t} = \frac{C_{1M,t} \times \sqrt{2\pi} \times 100}{K_{1M,t} \times \sqrt{\frac{DTE_t}{365}}}$$

where:

$\sigma_{Vo24,t}$ = the end of day value of the At-The-Money (ATM) implied volatility approximation for Index Day t .

NDX_t = the closing level of the Nasdaq-100® Index for Index Day t .

$C_{TWAP,i,t}^{4pm}$ = the Time Weighted Average Price of each non-expiring short call option for Index Day t , calculated using the TWAP window on Index Day t .

$C_{1M,t}$ = the 4:00 PM mid-price of the closest to ATM call option with second closest AM-settled monthly expiry as of Index Day t that is used in the Vo24 Index Calculation for Index Day t .

$K_{1M,t}$ = the strike price of the closest to NDX_t (ATM) call option with second closest AM-settled monthly expiry as of Index Day t , that is used in the Vo24 Index Calculation for Index Day t .

DTE_t = the positive integer quantity of calendar days between Index Day t and the second closest monthly listed expiry date.

APPENDIX E: DISRUPTION HANDLING

In the event that one or more required variables are unavailable on a given Index Day t , the following fallback rules or disruption handling treatments shall be applied to ensure index continuity.

Variable	Treatment
$XNDX_{TWAV,t}^{230pm}$	The last available index value shall be used.
$NDX_{TWAV,t}^{230pm}$	The last available index value shall be used.
$C_{TWAP,t}^{230pm}$	The last available option quote shall be used.
$C_{TWAP,t}^{4pm}$	The units for the disrupted option Component will be set to 0.
$\sigma_{Vo24,t}$	The last available σ_{Vo24} shall be used.
σ_{t-1}	The last available σ shall be used.

Unless otherwise stated above, if the value for a variable is unavailable on a given Index Day t , then such value shall be the last available value for that variable, as determined by the Index Administrator.

APPENDIX F: OPTION ONLY INDEX

The Nasdaq-100 InspereX Dynamic Buffered High Income Option Only Index (NDXDBHIO), the “Option Only Index”, tracks the performance from selling call options and delta replication of long put options, without a long underlying position in the Nasdaq-100 Total Return Index®.

On the Index Base Date, the Option Only Index value is initialized to the Index Base Value. Thereafter, on each Index Day t , the value of the Option Only Index is calculated in accordance with the following formula:

$$I_t^O = CB_t^O - \sum_{i=1}^{N(Calls_t)} V_{i,t}^{C,O} \times C_{TWAP,i,t}^{4pm} - V_t^{F,O} \times NDXNQER_t$$

where:

I_t^O = the Option Only Index value for Index Day t .

CB_t^O = the cash balance in the Option Only Index for Index Day t .

$N(Calls_t)$ = the number of short call options for Index Day t .

$V_{i,t}^{C,O}$ = the number of units of each selected short call option in the Option Only Index for Index Day t .

$C_{TWAP,i,t}^{4pm}$ = the Time Weighted Average Price of each non-expiring short call option for Index Day t , calculated using the TWAP window for Index Day t .

$V_t^{F,O}$ = the number of units of the Nasdaq-100 Futures Excess Return™ Index in the Option Only Index for Index Day t .

$NDXNQER_t$ = the closing level of the Nasdaq-100 Futures Excess Return™ Index for Index Day t .

Please refer to Appendix E: Disruption Handling for details regarding fallback rules and disruption handling treatments when one or more variables are unavailable.

Call option units

For each Roll Date t , the units of the new call option selected to be sold on that date are calculated in accordance with the following formula:

$$V_{i,t}^{C,O} = \frac{1}{5} \times \frac{\widehat{CB}_t^O - \sum_{i=1}^{N(Calls_t)} V_{i,t-1}^{C,O} \times C_{TWAP,i,t}^{230pm} - V_{t-1}^{F,O} \times NDXNQER_{TWAV,t}^{230pm}}{NDX_{TWAV,t}^{230pm}}$$

where:

$\widehat{CB}_t^O$ = proxy of the cash balance with interest accrual in the Option Only Index for Index Day t .

$C_{TWAP,i,t}^{230pm}$ = the Time Weighted Average Price of each non-expiring short call option for Index Day t , calculated using the TWAP window for Index Day t .

$NDXNQER_{TWAV,t}^{230pm}$ = proxy of the Time Weighted Average Value of the Nasdaq-100 Futures Excess Return™ Index for Index Day t .

$NDX_{TWAV,t}^{230pm}$ = the Time Weighted Average Value of the Nasdaq-100® Index for Index Day t .

If Index Day t is not a Roll Date, then the option units do not change:

$$V_{i,t}^{C,O} = V_{i,t-1}^{C,O}$$

Reference put option units

For each Roll Date t , the units of the new reference put options are calculated in accordance with the following formulae:

$$V_{i,t}^{PNear,O} = \frac{1}{NSBD_t} \times \frac{RSBD_t}{NSBD_t} \times \frac{\widetilde{CB}_t^O - \sum_{i=1}^{N(Callst)} V_{i,t-1}^{C,O} \times C_{TWAP,i,t}^{230pm} - V_{t-1}^{F,O} \times NDXNQER_{TWAV,t}^{230pm}}{NDX_{TWAV,t}^{230pm}}$$

$$V_{i,t}^{PFar,O} = \frac{1}{NSBD_t} \times \left(1 - \frac{RSBD_t}{NSBD_t}\right) \times \frac{\widetilde{CB}_t^O - \sum_{i=1}^{N(Callst)} V_{i,t-1}^{C,O} \times C_{TWAP,i,t}^{230pm} - V_{t-1}^{F,O} \times NDXNQER_{TWAV,t}^{230pm}}{NDX_{TWAV,t}^{230pm}}$$

where:

$NSBD_t$ = the number of Index Days from the Monthly Option Expiration Date prior to or on Index Day t (exclusive) to the next Monthly Option Expiration Date after Index Day t (inclusive).

$RSBD_t$ = the number of Index Days from Index Day t (exclusive) to the next Monthly Option Expiration Date after Index Day t (inclusive).

If Index Day t is not a Roll Date, then the option units do not change:

$$V_{i,t}^{PNear,O} = V_{i,t-1}^{PNear,O}$$

$$V_{i,t}^{PFar,O} = V_{i,t-1}^{PFar,O}$$

Futures contract units

For each Roll Date t , the units of the new futures contract selected to be sold on that date are calculated in accordance with the following formulae:

$$V_t^{F,O} = - \frac{NDX_{TWAV,t}^{230pm}}{NDXNQER_{TWAV,t}^{230pm}} \times \sum_{i=1}^{N(Puts_t)} (V_{i,t}^{P,O} \times \delta_{i,t} \times e^{-(RF_{t-1} - q_{t-1}) \times \tau_{i,t}})$$

$$\delta_t = -N(-d_{1,t}) \times e^{-q_{t-1} \times \tau}$$

$$d_{1,t} = \frac{\ln\left(\frac{NDX_{TWAV,t}^{230pm}}{K}\right) + (RF_{t-1} - q_{t-1} + \frac{1}{2} \times \sigma_{t-1}^2) \times \tau}{\sigma_{t-1} \times \sqrt{\tau}}$$

$$q_t = \sum_{i=1}^{252} \frac{IDP_{t-i}}{NDX_{t-i-1}}$$

where:

$N(Puts_t)$ = the number of reference puts held whose expiration is greater than $t + 1$ on Index Day t . This includes the new reference put option units for Index Day t .

$V_{i,t}^{P,O}$ = the number of units of each selected long put option in the Option Only Index for Index Day t .

RF_{t-1} = the Effective Federal Funds Rate published by the Federal Reserve Bank of New York for Index Day $t - 1$. If such rate is unavailable, then the rate shall be the most recent rate available on an Index Day preceding Index Day $t - 1$.

q_{t-1} = the trailing 12-month dividend yield of the Nasdaq-100® Index for Index Day $t - 1$.

τ = the time to maturity in years (based on a 365-day calendar).

σ_{t-1} = the implied volatility, as provided by [OptionMetrics](#), of the put options for Index Day $t - 1$ selected based on *Appendix B: Option Selection*.

IDP_{t-i}^{NDX} = the Nasdaq-100® Index dividend points for Index Day $t - i$.

NDX_{t-i} = the closing level of the Nasdaq-100® Index for Index Day $t - i$.

If Index Day t is not a Roll Date, then the futures contract units do not change:

$$V_t^{F,O} = V_{t-1}^{F,O}$$

Cash balance

For each Roll Date t , the cash balance receives the proceeds (net of transaction costs) from selling new short call options. The value of the cash balance on the Roll Date t is calculated in accordance with the following formula:

$$\begin{aligned} CB_t^O = & CB_{t-1}^O + (CB_{t-1}^O - V_{t-1}^{F,O} \times NDXNQER_{t-1} - I_{t-1}^O) \times RF_{t-1} \times \frac{Days_{t-1,t}}{360} \\ & - V_{exp,t-1}^{C,O} \times \max(SV_t - K_{exp,t-1}^C, 0) + V_{new,t}^{C,O} \times (C_{TWAP,new,t}^{4pm} - TC_t^C) \\ & + (V_t^{F,O} - V_{t-1}^{F,O}) \times NDXNQER_t - TC^{NDXNQER} \times |V_t^{F,O} - V_{t-1}^{F,O}| \times NDXNQER_t \end{aligned}$$

where:

$Days_{t-1,t}$ = the number of calendar days from Index Day $t - 1$ (inclusive) to Index Day t (exclusive).

$V_{exp,t-1}^{C,O}$ = the number of units of the expiring short call option in the Option Only Index for Index Day $t - 1$.

SV_t = the Settlement Value for Index Day t . This refers to the Nasdaq-100® Index final settlement value (symbol XQO for AM-settled NDX options and symbol XQC for PM-settled NDX options).

$K_{exp,t-1}^C$ = the strike price of the expiring short call option for Index Day $t - 1$.

$V_{new,t}^{C,O}$ = the number of units of newly entered short call options in the Option Only Index for Index Day t .

$C_{TWAP,new,t}^{4pm}$ = the Time Weighted Average Price of each newly entered short call option for Index Day t , calculated using the TWAP window on Index Day t .

TC_t^C = the transaction costs applied to the short call option entered for Index Day t (see *Appendix D: NDX Short Call Transaction Costs*).

$TC^{NDXNQER}$ = the assigned transaction costs applied to the Nasdaq-100 Futures Excess Return™ Index positions entered for Index Day t , as detailed in the *Index parameters* section.

The cash balance with interest accrual is defined as:

$$\widetilde{CB}_t^O = CB_{t-1}^O + (CB_{t-1}^O - V_{t-1}^{F,O} \times NDXNQER_{t-1} - I_{t-1}^O) \times RF_{t-1} \times \frac{Days_{t-1,t}}{360}$$

On the Index Base Date, the cash balance with interest accrual is initialized to the Index Base Value, while the cash balance is defined as:

$$CB_t^O = \widetilde{CB}_t^O + V_{new,t}^{C,O} \times (C_{TWAP,new,t}^{4pm} - TC_t^C) + V_t^{F,O} \times NDXNQER_t - TC^{NDXNQER} \times V_t^{F,O} \times NDXNQER_t$$

If Index Day t is not a Roll Date, then the cash balance and cash balance with interest accrual are equal:

$$CB_t^O = \widetilde{CB}_t^O$$

APPENDIX G: DISTRIBUTION ONLY INDEX

The Nasdaq InspereX Dynamic Buffered High Income Distribution Only Index (NDXDBHII), the "Distribution Only Index", tracks the options premiums from selling call options and dividends received on the Nasdaq-100 Total Return Index® Component.

On the Index Base Date, the Distribution Only Index value is initialized to the Index Base Value. Thereafter, on each Index Day t , the value of the Distribution Only Index is calculated in accordance with the following formula:

$$I_t^I = I_{t-1}^I + V_{new,t}^C \times (C_{TWAP,new,t}^{4pm} - TC_t^C) + \frac{U_{t-1} \times XNDX_{t-1}}{NDX_{t-1}} \times IDP_t^{NDX}$$

where:

I_t^I = the Distribution Only Index value for Index Day t .

$V_{new,t}^C$ = the number of units of newly entered short call options for Index Day t .

$C_{TWAP,new,t}^{4pm}$ = the Time Weighted Average Price of each newly entered short call option for Index Day t , calculated using the TWAP window on Index Day t .

TC_t^C = the transaction cost applied to the short call option entered for Index Day t (see *Appendix D: NDX Short Call Transaction Costs*).

U_{t-1} = the number of units of Nasdaq-100 Total Return Index® in the Index for Index Day $t - 1$.

$XNDX_{t-1}$ = the closing level of the Nasdaq-100 Total Return Index® for Index Day $t - 1$.

NDX_{t-1} = the closing level of the Nasdaq-100® Index for Index Day $t - 1$.

IDP_t^{NDX} = the Nasdaq-100® Index dividend points for Index Day t .

Please refer to Appendix E: Disruption Handling for details regarding fallback rules and disruption handling treatments when one or more variables are unavailable.

DISCLAIMER

Nasdaq may, from time to time, exercise reasonable discretion as it deems appropriate in order to ensure Index integrity, including but not limited to, quantitative inclusion criteria. Nasdaq may also, due to special circumstances, if deemed essential, apply discretionary adjustments to ensure and maintain the high quality of the index construction and calculation. Nasdaq does not guarantee that any Index accurately reflects future market performance.

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