INDEX METHODOLOGY

NASDAQ-100 VOLATILITY CONTROL INDEXES

INDEX DESCRIPTION

The Nasdaq-100 Volatility Control Indexes, each an "Index" and collectively the "Indexes", are designed to provide exposure to the Nasdaq-100 Total Return Index while targeting a specified level of volatility. The Indexes use the truVol® Risk Control Engine to dynamically adjust exposure on a daily basis to the Component with the aim of achieving the volatility target.

The truVol® Risk Control Engine is a proprietary risk management tool designed by Salt Financial LLC to offer higher levels of responsiveness and accuracy in targeting volatility for risk-controlled indices. The mechanism generally increases exposure to the Component when volatility falls and decreases exposure when it rises.

Each Index will be either calculated without any embedded costs (a "Gross Index") or calculated with embedded costs (a "Net Cost Index"). A Net Cost Index includes the assumed costs outlined below in the *Index Calculation* and *Index Construction* sections, while a Gross Index does not.

Each Index is rebalanced daily and calculated in excess of a daily accrual of a reference financing rate.

Although each Index is designed to target a specific level of volatility, there is no guaranty the Indexes will achieve these results.

INDEX CALCULATION

For each Index Day, the value of an Index is calculated in accordance with the following formula:

$$I_{t'} = I_{t-1} + U_{t-1} \times (UI_{t'} - UI_{t-1}) - TC_t - FC_t - AF_t$$

where:

t, t' = an Index Day or time during Index Day t.

$t - 1$ = the Index Day immediately preceding Index Day t.

I_x = the value of the Index value for Index Day x.

U_x = the number of units of the Component for Index Day x (see *Rebalancing process* section below for more details).

UI_x = the value of the Component for Index Day x (rounded to two decimal places).

TC_t = the estimated trading costs for the Component for Index Day t as determined by the following formula:

$$TC_t = |U_t - U_{t-1}| \times UI_t \times CTC$$

Note: For each Gross Index, TC_t is deemed to be 0.

where:

CTC = the assigned Component trading costs as detailed in *Index costs* below.

FC_t = the estimated funding costs for the Component for Index Day t as determined by the following formula:

$$FC_t = |U_{t-1}| \times UI_{t-1} \times (RF_{t-1} + FS) \times \frac{Days_{t-1,t}}{360}$$

where:

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 $t - 1$.

FS = the assigned funding spread as detailed in *Index costs* below.

AF_t = the Index fee for Index Day t as determined by the following formula:

$$AF_t = I_{t-1} \times F \times \frac{Days_{t-1,t}}{360}$$

Note: For each Gross Index, AF_t is deemed to be 0.

where:

F = the assigned fee rate as detailed in *Index costs* below.

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

If the value for an underlying Component is unavailable on a given Index Day t, then such value shall be the last available value for that Component, as determined by the Index Administrator.

INDEX CONSTRUCTION

Index parameters

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

Index (ticker)	Component (Ticker)	Target Volatility	Maximum Exposure[1]	Maximum Change[2]
Gross Indexes:				
Nasdaq-100 Volatility Control 5% Index (XNDX5E)	Nasdaq-100 Total Return Index (XNDX)	5%	150%	15%
Nasdaq-100 Volatility Control 7% Index (XNDX7E)	Nasdaq-100 Total Return Index (XNDX)	7%	150%	20%
Nasdaq-100 Volatility Control 10% Index (XNDX10E)	Nasdaq-100 Total Return Index (XNDX)	10%	150%	20%
Nasdaq-100 Volatility Control 12% Index (XNDX12E)	Nasdaq-100 Total Return Index (XNDX)	12%	150%	20%
Nasdaq-100 Volatility Control 15% Index (XNDX15E)	Nasdaq-100 Total Return Index (XNDX)	15%	200%	25%
Net Cost Indexes:				
Nasdaq-100 Volatility Control 5% NC Index (XNDX5NC)	Nasdaq-100 Total Return Index (XNDX)	5%	150%	15%
Nasdaq-100 Volatility Control 7% NC Index (XNDX7NC)	Nasdaq-100 Total Return Index (XNDX)	7%	150%	20%
Nasdaq-100 Volatility Control 10% NC Index (XNDX10NC)	Nasdaq-100 Total Return Index (XNDX)	10%	150%	20%
Nasdaq-100 Volatility Control 12% NC Index (XNDX12NC)	Nasdaq-100 Total Return Index (XNDX)	12%	150%	20%
Nasdaq-100 Volatility Control 15% NC Index (XNDX15NC)	Nasdaq-100 Total Return Index (XNDX)	15%	200%	25%

Index costs

The table below details assumed costs specific, where applicable, to the construction and calculation of the Indexes.

Gross/Net Cost Indexes	Component Trading Cost (CTC)	Fee Rate (F)	Funding Spread (FS)
Gross Indexes	0.0000	0.0000	0.0000
Net Cost Indexes	0.0001	0.0050	0.0050

Index components and weighting

Each Index may only include the Component as detailed above in *Index parameters*.

For each Index Day, the truVol® Risk Control Engine is employed to determine the exposure to the Component. The Index then rebalances each Index Day into Units of the Component (see *Rebalancing process* section below).

[1] The maximum allowable exposure to the Component.
[2] The maximum daily change in exposure to the Component.

Rebalancing process

Subject to a Hedge Delay, each Index is rebalanced daily as of the market close. The number of Units of the Component is determined in accordance with the following formula:

$$U_t = \frac{FE_{t-1} \times I_{t-1}}{UI_{t-1}}$$

where:

U_t = the number of Units of the Component for Index Day t.

FE_{t-1} = the Final Exposure for the Component on Index Day $t-1$. See *Appendix B: Weighting Determination Process* for more details.

I_{t-1} = the Index value on Index Day $t-1$.

UI_{t-1} = the level of the Component for Index Day $t-1$ (rounded to two decimal places).

For the Index Base Date (t_0), the initial Units of the Component are determined based on information from the Index Day prior to the Index Base Date and calculated in accordance with the following formula:

$$U_{t_0} = \frac{FE_{t_0-1} \times 1000}{UI_{t_0-1}}$$

INDEX CALENDAR

Holiday schedule

The Indexes are calculated Monday through Friday, except on days when the Nasdaq Stock 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
Component	In respect of an Index, the Component for that Index as detailed in the *Index parameters* section.
Consequences of a Market Disruption Event	In respect of an Index, if a 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 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.
Evaluation Date	In respect of an Index, each Index Day.
Hedge Delay	In respect of an Index and a Component, if a Trading Disruption or Exchange Disruption, as defined in *Market Disruption Event* below, occurs on a scheduled Rebalance Day for a Component, then no change of units for that Component shall occur on that day.
Index Base Date	December 31, 2003
Index Base Value	1000.00
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 *Index Calendar* 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: • **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. • **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. • **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.
Rebalance Day	In respect of an Index and an Evaluation Date, the Index Day immediately after that Evaluation Date that is not a Disrupted Day.

For additional key terms not defined above, please refer to the Nasdaq Index Methodology Guide.

APPENDIX B: WEIGHTING DETERMINATION PROCESS

In order to consistently target the desired level of volatility, each Index has the ability to adjust the notional exposure to the Component up and down each day, subject to a maximum leverage constraint and a maximum daily change constraint. In other words, when the measured volatility is below the target level, the Index has the potential to increase exposure. Alternatively, when the measured volatility is above the target level, the Index may reduce exposure.

This daily exposure determination mechanism consists of the following determination steps:

1. **The Daily Exposure Ratio:**

$$Exposure\_Ratio_t = Min\left(MaxExposure, \frac{VolTarget}{\sqrt{252 \times Max\left(\hat{y}_t^{\lambda_1}, \hat{y}_t^{\lambda_2}\right)}}\right)$$

where:

$MaxExposure$ = see Maximum Exposure in the *Index parameters* section above.

$VolTarget$ = see Target Volatility in the *Index parameters* section above.

$\hat{y}_t^{\lambda}$ = the truVol Variance of the Component for Index Day t for a specified λ = 0.93 or 0.97 (see the truVol Calculation Module for more details).

2. **The Smoothed Risk Scalars:**

The risk scalars ($Smoothed\_Risk\_Scalars_t$) are proprietary elements of the truVol® Risk Control Engine that are detailed in the truVol Calculation Module, which is made available to relevant authorized individuals by Salt Financial LLC.

3. **The Volatility Adjustment Factor:**

The volatility adjustment factor (VAF) is used to help nudge the realized volatility back to the target and correct for any temporary over- or under-shoots from the risk scaling mechanism. It uses a slow decay $EWMA$ on the volatility-controlled Index:

$$VAF_t = \text{Min}\left(1.5, \text{Max}\left(0, \frac{VolTarget^2}{252 \times EWMA\_VAR_t}\right)\right)$$

$$EWMA\_VAR_t = 0.97 * EWMA\_VAR_{t-1} + 0.03 * \ln\left(\frac{I_t + TC_t + SC_t + AF_t}{I_{t-1}}\right)^2$$

where:

$VolTarget$ = see Target Volatility in the *Index parameters* section above.

$EWMA\_VAR_t$ = the exponential weighted moving average variance of the volatility-controlled Index for Index Day t.

I_t= the level of the final risk control Index level on Index Day t.

TC_t = as defined in the *Index Calculation* section above.

SC_t = the spread costs for the Component for Index Day t as determined by the following formula:

$$SC_t = |U_{t-1}| \times UI_{t-1} \times \frac{Days_{t-1,t}}{360} \times FS$$

Note: For each Gross Index, SC_t is deemed to be 0.

FS = the assigned funding spread as detailed in *Index costs* above.

AF_t = as defined in the *Index Calculation* section above

$$EWMA\_VAR_{t \leq BaseDate} = \frac{VolTarget^2}{252}$$

4. The Exposure:

$$Exposure_t = Exposure\_Ratio_t \times Smoothed\_Risk\_Scalars_t \times VAF_t$$

5. The Scaled Exposure:

$$Scaled\_Exposure_t = Exposure_t \times \left[1 - Max\left(0, 1 - \frac{MaxExposure}{Exposure_t}\right)\right]$$

6. The Final Exposure[3]:

$$Final\_Exposure_t =$$

$$\mathrm{FE_t} = Min\begin{pmatrix} MaxExposure, Final\_Exposure_{t-1} + MaxChange, \\ Max(Scaled\_Exposure_t, Final\_Exposure_{t-1} - MaxChange) \end{pmatrix}$$

where:

$MaxExposure$ = See Maximum Exposure in the *Index parameters* section above.

$MaxChange$ = See Maximum Change in the *Index parameters* section above.

[3] Prior to the Index Base Date, $Final\_Exposure_t = Scaled\_Exposure_t$.

APPENDIX C: SUPPLEMENTAL TRUVOL DEFINITION

This Methodology document has a companion document, the Nasdaq-100 Volatility Control Indexes – truVol Calculation Module ("truVol Calculation Module") that contains proprietary information designated as trade secrets by Salt Financial LLC. The truVol Calculation Module is made available to a more limited group of authorized individuals with the banks engaging in hedging activity of the Indexes.

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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