



INDEX METHODOLOGY

NASDAQ-100 VOLATILITY CONTROL INDEXES

INDEX OVERVIEW

The Nasdaq-100 Volatility Control Indexes (each as “Index”) are designed to deliver exposure to the NASDAQ-100 Total Return Index (ticker: XNDX) (the “Underlying 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 Underlying Index 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 Underlying Index when volatility falls and decreases exposure when it rises.

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

Although each Index within this series is designed to target a specific level of volatility, there are no guarantees each Index will achieve these results.

INDEX PARAMETERS

The table below details parameters specific to the calculation process of each Index.

Index	Ticker	Target Volatility	Maximum Exposure ¹	Maximum Change ²
Nasdaq-100 Volatility Control 5% Index	XNDX5E	5%	150%	15%
Nasdaq-100 Volatility Control 7% Index	XNDX7E	7%	150%	20%
Nasdaq-100 Volatility Control 10% Index	XNDX10E	10%	150%	20%
Nasdaq-100 Volatility Control 12% Index	XNDX12E	12%	150%	20%

¹ The maximum allowable exposure to the Underlying Index.

² The maximum daily change in exposure to the Underlying Index.

INDEX CALCULATION

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

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

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 volatility-controlled index for Index Day x ;

U_x = the number of Units of the Underlying Index for Index Day x ; [See section Rebalancing Process for more details.]

UI_x = the level of the Underlying Index (i.e. XNDX) for Index Day x (rounded to 2 decimal places);

FC_x = the estimated financing costs for Index Day x ;

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

RFR_{t-1} = the Effective Federal Funds Rate published by the Federal Reserve Bank of New York for such day for Index Day $t - 1$;

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

Base Level and Date of the Index

The Index Value is calculated using a base value of 1,000 as of December 31, 2003 (the “Base Date”).

COMPONENTS AND WEIGHTING

Each Index may only include the following components:

- NASDAQ-100 Total Return Index (XNDX)

For each Index and each Index Day, the truVol® Risk Control Engine is employed to determine the exposure to the Underlying Index. Each Index then rebalances each Index Day into Units of the Underlying Index, in accordance with the following Rebalancing Process.

Rebalancing Process

Each Index may be rebalanced daily as of the market close. The number of Units of the Underlying Index in such Index is determined in accordance with the following formula.

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

Where

FE_{t-1} = the Final Exposure for the Underlying Index for Index Day $t - 1$. See Appendix: Weighting Determination Process for more details;

I_t = the Index Value on Index Day t ;

UI_t = the level of the Underlying Index for Index Day t (rounded to 2 decimal places);

APPENDIX: WEIGHTING DETERMINATION PROCESS

In order to consistently target the desired level of volatility, each Index has the ability to adjust the notional exposure to Underlying Index 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 six determination steps:

1. The Daily Exposure Ratio:

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

where

$MaxExposure$ = See Maximum Exposure Index Parameters

$VolTarget$ = See Target Volatility in Index Parameters

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

2. The Smoothed Risk Scalars:

The risk scalars (the *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:

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

$$EWMA_VAR_t = 0.97 * EWMA_VAR_{t-1} + 0.03 * \ln\left(\frac{I_t}{I_{t-1}}\right)^2$$

where

VolTarget = See Target Volatility in Index Parameters;

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*.

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

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 Exposure³:

$$\begin{aligned} Final_Exposure_t &= FE_t \\ &= \min\left(\begin{array}{l} MaxExposure, Final_Exposure_{t-1} + MaxChange, \\ Max(Scaled_Exposure_t, Final_Exposure_{t-1} - MaxChange) \end{array}\right); \end{aligned}$$

where

MaxExposure = See Maximum Exposure in Index Parameters

MaxChange = See Maximum Change in Index Parameters

APPENDIX: SUPPLEMENTAL TRUVOL DEFINITION

This Methodology 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 Index.

³ Prior to the Base Date: *Final_Exposure_t* = *Scaled_Exposure_t*

ADDITIONAL INFORMATION

Related Documentation

Nasdaq Index Methodology Guide

https://indexes.nasdaq.com/docs/Nasdaq_Index_Methodology_Guide.pdf.

Calculation Manual – Equities and Commodities

https://indexes.nasdaq.com/docs/calculation_manual_equities_and_commodities.pdf

Nasdaq Index Recalculation Policy

<https://nasdaq.com/docs/RecalculationPolicy.pdf>

Announcements

Nasdaq announces Index-related information via the Nasdaq Global Index Watch (GIW) website at <http://indexes.nasdaq.com>.

For more information on the general Index Announcement procedures, refer to the **Nasdaq Index Methodology Guide**.

Holiday schedules

Each Index is scheduled to be calculated on each day that Nasdaq Stock Exchanges are scheduled to be open.

Unexpected market closures

Please also refer to the **Nasdaq Index Methodology Guide**.

For information on the Underlying Index (Nasdaq-100 Total Return Index, ticker XNDX) calculation types as well as the mathematical approach used to calculate the Index(es), refer to the **Calculation Manual – Equities and Commodities**.

Recalculation and restatement policy

Nasdaq will communicate to the Calculation Agent when recalculations or restatements are required, for information on the Recalculation and Restatement Policy, refer to the **Nasdaq Index Recalculation Policy**.

Data sources

Nasdaq for the Nasdaq-100 Total Return Index values.

Federal Reserve Bank of New York for the daily effective federal funds rate (EFFR).

Contact information

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

Index dissemination

Index values and weightings information are available through Nasdaq Global Index Watch (GIW) website at <https://indexes.nasdaq.com/> 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, refer to the **Nasdaq Index Methodology Guide**.

Index calculation and dissemination schedule

End of Day values are disseminated to Nasdaq's website by the Calculation Agent, along with the base XNDX position.

Website

For further information, refer to Nasdaq GIW website at <https://indexes.nasdaq.com/>.

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, refer to the **Nasdaq Index Methodology Guide**.

Nasdaq Index Management Committee

The Nasdaq Index Management Committee is responsible for the overall oversight of activities related to the development, issuance, and operation of Nasdaq Indexes. The Committee reviews and approves all new Index Methodologies as well as updates to existing methodologies. For a detailed overview of the Index Management Committee, refer to the **Nasdaq Index Methodology Guide**.

Nasdaq U.S. Oversight Committee

The U.S. Oversight Committee is responsible for the oversight of the overall Benchmark determination process and is responsible for the overall governance of the U.S.-based Index business including review

and approval of the control framework, certain policies and procedures, certain methodologies and methodology changes and other Index management oversight.

For a detailed overview of the U.S. Oversight Committee, refer to the **Nasdaq Index Methodology Guide**.

Internal reviews of methodology

All new methodologies or updates to existing methodologies must be reviewed by the Index Management Committee. Additionally, all in-scope Index methodologies are subject to an annual review by the Index Management Committee and U.S. Oversight Committee. For a detailed description on internal reviews of the Methodology, refer to the **Nasdaq Index Methodology Guide**.

Communication with stakeholders and consultations

In certain circumstances, Nasdaq will seek feedback from clients and market participants via consultations. For a detailed description on Consultations and Communications with Stakeholders, refer to the **Nasdaq Index Methodology Guide**.

Index cessation

Nasdaq has a documented procedure that is followed for Index Cessation that includes termination/retirement of an Index or Index Family. For more information, refer to the **Nasdaq Index Cessation Policy**.

Discretionary adjustment

This Index Methodology was created by Nasdaq to achieve the aforementioned objective of measuring the underlying purpose of each Index governed by this methodology document. Any deviations from this methodology are made in the sole judgment and discretion of Nasdaq so that the Index continues to achieve its objective.

For more information on potential adjustments including Calculation and Pricing Disruptions, Expert Judgment, and Unexpected Reconstitution/Rebalances, Refer to the **Nasdaq Index Methodology Guide**.

GLOSSARY OF TERMS AS USED IN THIS DOCUMENT

For the glossary of key terms, refer to the **Nasdaq Index Methodology Guide**.

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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Salt Financial LLC licenses its truVol® Risk Control Engine and other methodologies (collectively, “Salt IP”) to Nasdaq as a contributor to the Nasdaq-100 Volatility Control Indexes. Salt Financial LLC and its affiliates, employees, partners, and vendors shall not be liable to any party for any direct, indirect, incidental, exemplary, compensatory, punitive, special or consequential damages, costs, expenses, legal fees, or losses (including, without limitation, lost income or lost profits and opportunity costs) in connection with any use of the Salt IP even if advised of the possibility of such damages.