INDEX METHODOLOGY

NASDAQ-100 5% TARGET VOLATILITY INDEX

XNDX5E

INDEX DESCRIPTION

The Nasdaq-100 5% Target Volatility Index (the "Index") is designed to deliver exposure to the NASDAQ-100 Total Return Index (XNDX) while targeting a constant five percent (5%) level of volatility. The Index uses the truVol® Risk Control Engine (RCE) to dynamically allocate between XNDX and non-remunerating cash in aiming to achieve the volatility target. Developed by Salt Financial, the RCE is designed to offer higher levels of responsiveness and accuracy in targeting volatility for risk-controlled indices. The mechanism generally allocates more to XNDX when volatility falls and more to cash when it rises.

The Index is rebalanced daily and calculated in excess of a daily accrual of the Federal Funds Effective Rate (Excess Return). Although the Index is designed to target a specific risk level, there are no guarantees the Index will achieve these results.

INSTRUMENT ELIGIBILITY CRITERIA

The Index may only include the following two components:

- NASDAQ-100 Total Return Index (XNDX)
- Non-Interest-Bearing Cash (Cash)[1]

INDEX CALENDAR

Reconstitution and rebalance schedule

The Index is reconstituted and rebalanced daily at market close according to the process described in Constituent Selection and Weighting.

[1] Any exposure to cash is non-remunerating, meaning the Index does not accrue (decrement) interest in the case where the Index exhibits positive (negative) cash exposure. The greater the exposure to cash, the smaller the impact on the Index from market fluctuations and consequently, the lower the potential for gains or losses.

Reconstitution and rebalance reference dates

The Index is reconstituted and rebalanced using Last Sale Prices ("LSP") each day.

CONSTITUENT SELECTION AND WEIGHTING

The Index always includes the equity index (XNDX). Under certain conditions, as described below when its final weight is determined to be greater than zero, it also includes Non-Interest-Bearing Cash (Cash).

Each day the truVol® Risk Control Engine (RCE) is employed to determine the component weights. The truVol® RCE is a proprietary risk management toolkit designed to enhance risk-controlled index strategies.

Daily weighting process

The Index is rebalanced on a daily basis, with December 31, 2003, represented as *t*=0.

In an effort to consistently target the desired level of risk, the Index has the ability to scale up notional exposure to XNDX, subject to a maximum of 150%. In other words, when volatility is below the target level, the Index has the potential to apply leverage. Alternatively, when volatility is above the target level, the Index may reduce exposure. This scaling mechanism, denoted as the "$Leverage\ Ratio_t$", is calculated as:

$$Leverage\ Ratio_t = Min\left(1.5, \frac{5\%}{Max(\hat{y}_t^{\lambda_1}, \hat{y}_t^{\lambda_2})}\right)$$

where

$$\lambda_1 = 0.93$$
$$\lambda_2 = 0.97$$

The $Leverage\ Ratio_t$ is applied with the $SmoothedRiskScalars_t$ (available in the truVol Calculation Module; see Appendix) to determine the scaled weights, capped by the maximum leverage[2]:

$$ScaledWeight_t^i = Weight_t^i * \left[1 - Max\left(0, 1 - \frac{MaxLeverage}{\sum_i Weight_t^i}\right)\right]$$

$$Weight_t^i = SmoothedRiskScalars_t \times Leverage\ Ratio_t \times VAF_t^{Final}$$

where

$$MaxLeverage = 1.5$$

Lastly, the Index uses a volatility adjustment factor (VAF) deployed at the end of the process 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 index level itself.

[2] The Risk Scalars are proprietary elements of the truVol RCE with calculation steps available to authorized individuals in the truVol Calculation Module (See Appendix).

$$VAF_t^{Final} = \begin{cases} Min(VAF^{Cap}, VAF_t), & if\ |Min(VAF^{Cap}, VAF_t) - 1| > VAF^{Threshold} \\ 1, & else \end{cases}$$

$$VAF_t = \frac{Vol\ Target}{\sqrt{252 * EWMA_t^{Index}}}$$

$$EWMA_t^{Index} = \begin{cases} 0.97 * EWMA_{t-1}^{Index} + 0.03 * \text{Ln}\left(\frac{ER\ Level_t^{Index}}{ER\ Level_{t-1}^{Index}}\right)^2, & if\ t > 1 \\ \frac{Vol\ Target^2}{252}, & else \end{cases}$$

where

$VAF^{Cap} = 1.5$
$VAF^{Threshold} = 0$
$Vol\ Target = 5\%$
$days(t, t-1) = Actual\ day\ count\ between\ day\ t\ and\ day\ t-1\ (previous\ business\ day)$
$ER\ Level_t^{Index} =\ The\ final\ risk\ control\ index\ level\ on\ day\ t$

And then final weights are calculated as[3]

$$FinalWeight_t^i = Min\left(\begin{matrix} MaxWeight^i, \\ FinalWeight_{t-1}^i + Sign\left(ScaledWeight_t^i - FinalWeight_{t-1}^i\right) \times \\ Min\left(MaxChange^i, abs\left(ScaledWeight_t^i - FinalWeight_{t-1}^i\right)\right) \end{matrix}\right);$$

$$FinalWeight_0^i = ScaledWeight_0^i.$$

Table 1: Component Max Weight and Max Change

Asset	***MaxWeight^i***	***MaxChange^i***
XNDX	150%	15%

APPENDIX: SUPPLEMENTAL TRUVOL DEFINITION

This Index Methodology has a companion document, the Nasdaq-100 5 Target Volatility Index truVol Calculation Module ("truVol Module" or "Calculation Module"), that contains proprietary information designated as trade secrets by Salt Financial LLC. This information is made available to a more limited group of authorized individuals with the banks engaging in hedging activity of the Index. References to specific elements in the truVol Module are made throughout this document and further detailed in footnotes.

[3] The weight allocated to Cash is calculated by subtracting the final XNDX weight from 100%. A positive number indicates Cash is being used to de-leverage the portfolio in an attempt to reduce risk. A negative number indicates the portfolio is being leveraged above 100% exposure, seeking to increase risk.

ADDITIONAL INFORMATION

Excess Return Calculations

The Underlying Equity Component is transformed into an excess return series on a daily basis based on the following formula. These series serve as the building blocks for the final index.

$$ER_t^i = \left(\frac{Close_t^i}{Close_{t-1}^i} - 1\right) - \frac{RFR_{t-1}}{360} * days(t, t-1)$$

where

$ER_t^i = Excess\ return\ of\ Underlying\ Component\ i\ on\ Index\ Calculation\ Day\ t$
$Close_t^i = The\ closing\ level\ of\ Underlying\ Component\ i\ on\ Index\ Calculation\ Day\ t$
$RFR_t = Fed\ Funds\ on\ Index\ Calculation\ Day\ t\ (ticker: USONFFE0 =)$[4]
$days(t, t-1) = Actual\ day\ count\ between\ day\ t\ (inclusive)\ and\ day\ t-1\ (exclusive)$
$t-1 = Index\ Calculation\ Day\ immediately\ preceeding\ t$

Excess Return Index Calculation

On each Index Calculation Day, the excess return level is calculated as follows:

$$ER\ Level_t^{Index} = ER\ Level_{t-1}^{Index} * \left(1 + ER_t^{Index}\right);$$

$$ER_t^{Index} = \sum_{i \in \{XNDX\}} ER_t^i * FinalWeight_{t-2}^i$$

where

$ER\ Level_t^{Index}$
$= Excess\ return\ level\ of\ the\ final\ risk\ control\ Index\ on\ Index\ Calculation\ Day\ t$
$ER_t^{Index} = Excess\ return\ of\ the\ final\ risk\ control\ Index\ on\ Index\ Calculation\ Day\ t$
$ER_t^i = Excess\ return\ of\ Underlying\ Component\ i\ on\ Index\ Calculation\ Day\ t$
$(See\ Excess\ Return\ Calculation\ Section)$
$FinalWeight_t^i = Final\ weight\ of\ Underlying\ Component\ i\ on\ Index\ Calculation\ Day\ t$

truVol Variance

The truVol Variance for a given λ requires a variance ($\hat{y}_t^{\lambda}$) specified under separate cover in the truVol Calculation Module[5].

$$\hat{y}_t^{\lambda} = XNDX\ truVol\ variance\ for\ given\ \lambda$$

[4] The Refinitiv ticker used by the Calculation Agent for Federal Funds, USONFFE=, is equivalent to FEDL01 on Bloomberg.
[5] These inputs are proprietary components of the truVol RCE with calculation steps available in a separate truVol Calculation Module with limited internal distribution.

The Calculation Module may require the exponentially weighted variance, calculated as:

$$\sigma^2 VT_t^{A,B,\lambda} = \lambda \times \sigma^2 VT_{t-1}^{A,B,\lambda} + (1-\lambda) \times \mathrm{Ln}(1+ER_t^A)\,\mathrm{Ln}(1+ER_t^B)$$

where

$$\sigma^2 VT_{Dec\ 31,2003}^{XNDX,XNDX,\lambda} = \frac{17.5\%^2}{252}$$

Base Level and Date of the Index

The Index Value is calculated using a base value of 1,000 as of December 31, 2003.

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

The Index is calculated Monday through Friday, except on days when Nasdaq Exchanges are closed.

Unexpected market closures

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

For information on the underlying XNDX Index 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 supplies the XNDX data to the Calculation Agent.

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/.

FTP and dissemination service

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, 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 (RCE) and other methodologies (collectively, "Salt IP") to Nasdaq as a contributor to the Nasdaq-100 5 Target Volatility Index. 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.

