



INDEX METHODOLOGY

NASDAQ US RISING DIVIDEND ACHIEVERS TARGET INCOME™ INDEX

NQDVRISY

INDEX OVERVIEW

The Nasdaq US Rising Dividend Achievers Target Income Index (the Index) tracks the performance of a systematic weekly rolled, target income strategy.

On each Index calculation day, the strategy has exposure to the Nasdaq US Rising Dividend Achievers Total Return Index (NQDVRIST), a short call option on the SPDR® S&P 500® ETF Trust (SPY) ETF and a hypothetical cash account (a Collateral Account).

INDEX PARAMETERS

Nasdaq US Rising Dividend Achievers Index Parameters:

	Index Component / Reference Component	Symbol	Target Exposure	Strike	Option Type
1	Nasdaq US Rising Dividend Achievers Total Return Index	NQDVRIST	100%	N/A	N/A
2	SPDR® S&P 500® ETF Trust (SPY) ETF	SPY	Variable Short Exposure	ATM	Call

INDEX CALCULATIONS

Index values are calculated on a daily basis in accordance with the following formula:

$$I_t = CA_t + U_t \times P_t^{NQT} + V_t \times P_t^{mid}$$

where I_t = the Index Value for time t . See glossary for details.

Collateral Account

The Collateral Account is a hypothetical cash ledger for the Index. It is credited or debited, as applicable, by the settlement amounts of expired options, as well as the cost of any hypothetical purchases of call options. As a proxy we define the interest adjusted collateral account as follows.

$$\widetilde{CA}_t = CA_{t-1} \times \left(1 + \frac{R_t}{100} \times \frac{DC_t}{365}\right)$$

On non-Roll date:

$$CA_t = \widetilde{CA}_t$$

On Roll date:

$$CA_t = |V_t| \times P_t^{bid}$$

On inception date, the option mid-price is used instead of bid price. See glossary for definitions.

Expiring Option Settlement Value

On the roll date t , the settlement price of the rolling is determined as follows. If the date t is expiration date of the option, then:

$$P_t^{set} = \max(P_t^{SPY} - K_{t-1}, 0)$$

However, if the roll date is before expiration date of the rolling option, then,

$$P_t^{set} = P_{ask,old}_t$$

PERIODIC EVENTS

Rolling Options

The call options are held to expiry and newly selected call options are entered into at the last quoted bid price on the same day (a Roll Day), a process known as “rolling”.

Roll Date

Each week options roll on Friday. If Friday of a week is a scheduled holiday, the roll date in respect of such week is Thursday of the respective week.

Selecting New Options

Each week (Friday), a new SPY call option is selected. The parameters for each short call option will be:

- Underlying: SPY
- Expiration Date: On any roll date, the option expiration is selected to be the following week's Friday. If such a Friday is a scheduled Holiday, prior business date expiration is the target expiration date. Fallback expiration date selection is the closest expiration date (usually also the prior business date) on option chain.
- Exercise Prices: for the short call option: the closest exercise price of the listed options for SPY that is equal to, or nearest to the SPY close price on such Roll Day. In case of SPY close price is exactly equidistant between two closest exercise prices, lower of the two exercise prices is selected.
- All options are PM settled.

Target Exposure

On Roll date, the number of units of the underlying index and options are notionally calculated as follows.

$$U_t = \frac{\widetilde{CA}_t + V_{t-1} \times P_t^{set} + U_{t-1} \times P_t^{NQT}}{P_t^{NQT}}$$

$$V_t = -\frac{TI_t}{100 \times 52} * \frac{\widetilde{CA}_t + V_{t-1} \times P_t^{set} + U_{t-1} \times P_t^{NQT}}{P_t^{bid}}$$

Where TI_t is the target income calculated as follows and P_t^{set} is the settlement value of the expiring option. On inception date, the option mid-price is used instead of bid price. See glossary for definitions.

TARGET INCOME

The Target Income determined on a roll date is used in the target exposure (units) calculation of the short call.

NQDVRIS Yield Rate

On any roll date we look at the index dividend point (IDP) timeseries for NQDVRIS and sum the dividends accrued over the week and divide by the NQDVRIS index level as of that roll date and then annualize it by multiplying by 52.

$$N_t = 100 \times 52 \times \frac{\sum_{\tau(t) < j \leq t} IDP_j^{NQ}}{P_t^{NQ}}$$

Where $\tau(t)$ is the roll date immediately preceding the roll date t . This sum will typically have 5 values if the scheduled roll date lies on a Friday but in the event of a holiday there may be fewer than 5.

SPY Yield Rate

On any roll date t , the SPY ETF yield rate is denoted by S_t and is the annualized yield rate.

$$S_t = \frac{100}{P_t^{SPY}} \times \sum_{t-252 \leq \tau \leq t} Distr_{\tau}^{SPY}$$

$Distr_{\tau}^{SPY}$ is the total distribution paid on SPY on date τ , where total distribution includes regular dividend, special dividend, return of capital/capital gain or any other income from SPY.

$\sum_{t-252 \leq \tau \leq t} Distr_{\tau}^{SPY}$ represents sum of total distribution paid in last 252 days.

Target Income

The target income on a roll date is determined as annualized target yield and is calculated as

$$TI_t = (8 + S_t) - N_t$$

If the calculated value of TI_t is negative, then $TI_t = 0$ on such a date t .

Glossary of Symbols

Symbol	Description
I_t	The Index Value calculated on date t .
CA_t	The value of the Collateral Account on date t .
P^{NQT}_t	The closing level of the NQDVRIST index on date t .
P^{NQ}_t	The closing level of the NQDVRIS index on date t .
P^{SPY}_t	The closing price of the SPY ETF on date t .
P^{mid}_t	The mid-price of the current SPY ETF call option on date t at 4:00pm ET.
P^{bid}_t	The bid price of the current SPY ETF call option on date t at 4:00pm ET.
K_t	The strike price of the current SPY ETF call option on date t .
$P^{ask,old}_t$	The ask price of the old SPY ETF call option on a roll date t at 4:00pm ET.
P_t^{set}	The settlement value of the expiring option on date t .
IDP^{NQ}_t	The Index Dividend Point for index NQDVRIS on date t .
$Distr_{\tau}^{SPY}$	total distribution paid on SPY on date τ , where total distribution includes regular dividend, special dividend, return of capital/capital gain or any other income from SPY.
N_t	The current yield of NQDVRIS index as of date t .
S_t	The current yield of SPY ETF as of date t .
U_t	The units of the NQDVRIST index on date t
V_t	The (signed) units of the SPY short call option on date t .

R_t	The Treasury 3-Month Constant Maturity Rate on date t.
DC_t	The number of calendar days between date t and the previous business date t – 1.

INDEX ROLES

Index Administrator: Nasdaq, Inc.

Index Calculator: Volos Portfolio Solutions, Inc.

INDEX VALUES & DATA

Daily Index values are calculated each business day after the close of listed options markets using prices for Index Components as of 16:00 ET and are made available on the Nasdaq Global Index Website (<https://indexes.nasdaqomx.com/Index/Overview/NQDVRISY>).

DISCLAIMER

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