# Nasdaq Short Duration Diversified Income Index<sup>SM</sup> Methodology

## **Index Description**

The Nasdaq Short Duration Diversified Income Index is designed to provide exposure to multiple segments of the fixed income segment focused on short duration securities. The Index will gain this exposure to short duration from specific income markets via exchange-traded funds.

## **Index Calculation**

The Nasdaq Short Duration Diversified Income Index is a modified equal dollar weighted index. The value of the Index equals the aggregate value of the Index share weights, also known as the Index Shares, of each of the Index Securities multiplied by each such security's Last Sale Price<sup>1</sup>, and divided by the divisor of the Index. The divisor serves the purpose of scaling such aggregate value to a lower order of magnitude which is more desirable for reporting purposes. The Index began on June 1, 2016 at a base value of 1000.

The formula for index value is as follows:

Aggregate Adjusted Market Value/Divisor

The formula for the divisor is as follows:

(Market Value after Adjustments/Market Value before Adjustments) X Divisor before Adjustments

Two versions of the Index are calculated:

- The price return index (Nasdaq: NQSDDI) is ordinarily calculated without regard to cash dividends on Index Securities.
- The total return index (Nasdaq: NQSDDIT) reinvests cash dividends on the ex-date.

Both Indexes reflect extraordinary cash distributions.

The Indexes are calculated during the trading day and are disseminated once per second from 09:30:01 to 17:16:00 ET. The closing value of the Index may change up until 17:15:00 ET due to corrections to the Last Sale Price of the Index Securities.

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<sup>&</sup>lt;sup>1</sup> For purposes of this document, Last Sale Price refers to the last regular way trade reported on such security's Index Market. The Index Market is the listing market for which prices are received and used by Nasdaq in the Index calculation and generally will represent the most liquid trading market of the Index Security. If a security does not trade on its Index Market on a given day or the Index Market has not opened for trading, the most recent last sale price from the Index Market (adjusted for corporate actions, if any) is used. For securities where Nasdaq is Index Market, the Last Sale Price may be the Nasdaq Official Closing Price (NOCP) when Nasdaq is closed.

# **Eligibility**

Index eligibility is limited to specific security types only. The security types eligible for the Index are exchange-traded funds.

## **Eligibility Criteria**

To be eligible for inclusion in the Index, the exchange-traded fund must meet the following criteria:

- must be listed in the United States;
- be designed to cover specific segments of the fixed income asset classes as defined below:
  - preferred securities
  - senior loans/bank loans
  - o mortgage backed securities
  - convertible bonds
  - short maturity investment grade
- be an exchange-traded fund issued by First Trust Portfolio (if First Trust Portfolios does not have a specific exchange-traded fund covering the asset classes, another provider's exchange-traded fund will be selected.)

### **Index Evaluation**

The Index is evaluated monthly. Securities meeting the above eligibility criteria are included in the Index. The eligibility criteria are applied using market data through the close of trading on the ninth (9<sup>th</sup>) to last business day of the month. Security additions and deletions are made effective at the market close on the 4th to last business day of the month. At each monthly evaluation, a full review of the eligible universe will be enacted to ensure continued and appropriate representation of each eligible security. If at that time a security is no longer viewed to be appropriate representation of short duration alternative fixed income (e.g. security's duration has moved significantly) a different security will come into the universe in its place.

Additionally, if at any time during the year other than the Evaluation, an Index Security no longer meets the Eligibility Criteria, or is otherwise determined to have become ineligible for inclusion in the Index, the security is removed from the Index and is not replaced. Ordinarily, a security will be removed from the Index at its Last Sale Price. If, however, at the time of its removal the Index Security is halted from trading on its primary listing market and an official closing price cannot readily be determined, the Index Security may, in Nasdaq's discretion, be removed at a zero price. The zero price will be applied to the Index Security after the close of the market but prior to the time the official closing value of the Index is disseminated, which is ordinarily 17:16:00 ET.

#### **Index Maintenance**

Index Share changes are not made during the month. However, changes arising from stock dividends and stock splits are made to the Index on the evening prior to the effective date of such corporate action. In the case of certain spin-offs or rights issuances, the price of the Index Security is adjusted and a corresponding adjustment is made to the Index Shares such that the weight of the Index Security does not change as a result of the action.

A special cash dividend announced by the listing exchange, will result in an adjustment to the Last Sale Price of an Index Security prior to market open on the ex-date for the special amount distributed. A special dividend may also be referred to as extra, extraordinary, non-recurring, one-time, unusual, etc.

Ordinarily, whenever there is a change in Index Shares, a change in an Index Security, or a change to the price of an Index Security due to spin-offs, rights issuances or special cash dividends as mentioned above, the divisor is adjusted to ensure that there is no discontinuity in the value of the Index which might otherwise be caused by any such change. All changes are announced in advance and are reflected in the Index prior to market open on the Index effective date.

# **Index Rebalancing**

The Index employs a modified equal dollar weighting methodology such that each security's Index market value is rebalanced on a monthly basis. Index Shares are calculated by dividing the associated dollar value for each Index Security by the corresponding last sale price of the security at the close of trading ninth  $(9^{th})$  to last business day of the month (five business days prior to the rebalance effective date). The changes are made in conjunction with the Index Evaluation, and will become effective after the close of trading on the fourth  $(4^{th})$  to last business day of the month.

The Short Maturity holding receives a static 10% weight. All remaining holdings receive an equal weight of the remaining index weight (22.5% for each holding). If after the initial rebalance is processed and the index is projected to have an effective, weighted duration greater than three (3) the Index will be rebalanced a second time based on a modified duration process which will reduce the weight of the security with the highest, current duration by 5% and the excess weight will be proportionally redistributed across the remaining securities (other than the Short Maturity holding) based on inverse duration. If after this rebalance occurs and the Index still has an effective duration greater than 3, the process will be repeated one more time until that security has a capped weight of 12.5%. If after capping the security with the highest duration down to 12.5% the index still has an effective duration greater than 3, the index reduces the weight of the next security with the highest duration by 5% with the excess weight proportionally redistributed across the remaining two securities based on inverse duration. The process is repeated until the Index has an effective duration below 3.

Nasdaq may, from time to time, exercise reasonable discretion as it deems appropriate in order to ensure Index integrity.

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