



NSE Indices Limited

(Formerly known as India Index Services & Products Limited-IISL)

Methodology Document of NIFTY 10 yr Benchmark G-Sec Index August 2018

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Contents

Introduction:	3
Index methodology:	3
Index Calculation:	4

NIFTY 10 yr Benchmark G-Sec Index

INTRODUCTION:

The NIFTY 10 yr Benchmark G-Sec Index is constructed using the price of 10 year bond issued by the Central Government, India. The index seeks to track the performance of the 10 year benchmark security. The index has a base date of Jan 03, 2011 and base value of 1000.

Transparent, investable and replicable index construction

NSE Indices Limited (formerly known as India Index Services & Products Limited-IISL), has constituted a Committee, which is involved in policy and guidelines for managing the indices. The Committee takes all decisions on addition/ deletion of securities in any Index.

The security in the index shall change when a new 10 year bond is declared as a Nodal points by Fixed Income Money Market and Derivatives Association of India (FIMMDA). A notice of one week is given to the market before making change to the index. The prices are sourced from the CCIL and FIMMDA.

Daily Index value is published on NSE website.

INDEX METHODOLOGY:

- Index represents Government of India Bond as identified as “Benchmark” security by FIMMDA
- The index is computed using the total returns methodology
- The index is calculated & disseminated on real time basis
- The prices are sourced from the Clearing Corporation of India Ltd. (CCIL) and FIMMDA for valuation of the bonds for calculation of real time and end of day index values respectively
- Accrued interest is calculated using 30/360 day count convention Index is reviewed on monthly basis

Base Date and base value:

- The base date of index is Jan 03, 2011
- Base value is 1000

Index Calculation:

Formula for index computation is as under:

$$\text{Index Value}_T = \text{Index Value}_{T-1} \times (1 + \text{IndexTR}_T)$$

where

Index Return for a day T is calculated as

$$\text{IndexTR}_T = \frac{\sum_0^i \text{MV}_{i,\text{Beg}} \times \text{TR}_{i,t}}{\sum_0^i \text{MV}_{i,\text{Beg},T}}$$

where

1. Beginning market value (MV) of benchmark bond is calculated based on the units and beginning of day clean price and accrued interest (i.e. previous day close price & accrued interest):

$$\text{MV}_{\text{Beg},T} = (\text{Units}_{\text{Bond},i} \times (\text{AI} + \text{Price})_{T-1,\text{Bond},i})$$

2. Units for computation of market value (MV) for benchmark bond is calculated on the basis of the previous day dirty price of the bond (T-1) i.e. beginning of the rebalancing day price. The units will remain constant between two rebalancing periods. As the index is represented by a single bond, 100% weight will be assigned to benchmark bond.

$$\text{Units}_{\text{Bond},i} = \frac{\text{Portfolio Value}_T \times \text{Weight}_{\text{Bond},i,T}}{\text{Dirty Price}_{T-1,\text{Bond},i}}$$

3. Total return (TR) for benchmark bond is calculated as:

$$\text{TR}_{\text{Bond},i,T} = \text{IR}_{\text{Bond},i,T} + \text{PR}_{\text{Bond},i,T}$$

where

Interest return (IR) of benchmark bond is calculated as:

$$\text{IR}_{\text{Bond},i,T} = \frac{\text{Unit} \times (\text{AI}_T - \text{AI}_{T-1}) + \text{Unit} \times \text{Coupon}_T}{\text{MV}_{\text{Beg},T}}$$

and

Price return (PR) of benchmark bond is calculated as:

$$\text{PR}_{\text{Bond},i,T} = \frac{\text{Unit} \times (\text{Price}_T - \text{Price}_{T-1})}{\text{MV}_{\text{Beg},T}}$$

Index Policy

The NIFTY indices uses transparent, researched and publicly documented rules for index maintenance. These rules are applied regularly to manage changes to the index. Index reviews are carried out semi-annually to ensure that each security in the index fulfils eligibility criteria.

Announcements

All index-related announcements are posted on the websites of NSE Indices Limited and NSE. Changes impacting the constituent list are also posted on the Web site. Please refer to the www.niftyindices.com and www.nseindia.com.

Holiday Schedule

For the calculation of indices, the NSE Indices Limited follows the official holiday schedule. A complete holiday schedule for the year is available on the NSE Indices Limited and NSE website. Please refer to the www.niftyindices.com and www.nseindia.com.

Index Precision

Index values are disseminated up to two decimal places.

Index Recalculations

All NIFTY family of indices are recalculated whenever errors occur. Users of the NIFTY indices are notified through appropriate channel of communication.

Market Feedback & Index Methodology Review

NSE Indices Limited is committed to ensure that all NIFTY indices are relevant for the market participants. In order to ensure this, NSE Indices Limited on an on-going basis interacts with the stakeholders inviting the feedback through various channels of communication. The feedback received from the market participants forms a key input for all index related aspects.

Review of methodology of NIFTY indices is carried out on an annual basis. Additionally, NSE Indices Limited also considers any feedback that it may receive with regards to index methodology as part of on-going market interactions. Any changes to the index methodology is approved by the Committee and the same is announced through a press release.

Other

In case of a market stress or disruption, NSE Indices Limited will review and deal with the situation on consultative basis with the respective source of price data for computation of these indices.

All indices are expected to reflect the performance of a basket of stocks selected based on the defined guidelines and theme. Every index user is advised to evaluate the benefits of index and take an informed decision before using the index for self or creation of index-linked products. NSE Indices Limited does not accept any liability for any losses, claims, expenses etc. that may be incurred by any person as a result of usage of NIFTY family of indices as a result of reliance of the ground rules, any errors or inaccuracies.