Methodology Document of

NIFTY Sectoral Index Series

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NIFTY Sectoral Index Series

Introduction:

As part of the suit of index offerings, NSE Indices Limited (formerly known as India Index Services & Products Limited-IISL) calculates & disseminate series of sectoral indices to represent the performance of companies that represent a movement in specific sector. Sectoral indices as listed hereunder are calculated & disseminated by NSE Indices Limited taking into account the stocks traded (listed & traded and not listed but permitted to trade) on National Stock Exchange (NSE). All the sectoral indices are computed using the free-float market capitalization method.

1. **NIFTY Auto Index**: The index is designed to reflect the behaviour and performance of the Automobiles sector which includes manufacturers of cars & motorcycles, heavy vehicles, auto ancillaries, tyres, etc. The index comprises of maximum of 15 stocks and base date of the index is January 1, 2004 and a base value of 1000 points.

2. **NIFTY Bank Index**: The index is designed to reflect the behaviour and performance of the large and liquid banks. The index comprises of maximum of 12 stocks and base date of the index is January 1, 2000 and a base value of 1000 points.

3. **NIFTY Financial Services Index**: The index is designed to reflect the behaviour and performance of the Indian financial market which includes banks, financial institutions and housing finance and other financial services companies. The index comprises of maximum of 20 stocks and base date of the index is January 1, 2004 and base value of 1000 points.

4. **NIFTY FMCG Index**: The index is designed to reflect the behaviour and performance of Fast Moving Consumer Goods (FMCG). They are those goods and products, which are non-durable, mass consumption products and available off the shelf. The index comprises of maximum of 15 companies and base date of the index is January 1, 1996 and base value of 1000 points.

5. **NIFTY IT Index**: The index is designed to reflect the behaviour of companies engaged into activities such as IT infrastructure, IT education and software training, networking infrastructure, software development, hardware, IT support and maintenance etc. The index comprised of 20 companies with base date of the index being January 1, 1996. The base value of the index was revised from 1000 to 100 with effect from May 28, 2004.

Further, effective May 29, 2015, the index is computed with maximum of 10 companies and weights of each company in the index are capped at 25% (until March 29, 2019).

6. **NIFTY Media Index**: The NIFTY Media Index is designed to reflect the behavior and performance of sectors such as media & entertainment, printing and publishing. The index comprises of maximum of 15 companies. The base date of the index is December 30, 2005 and base value of 1000 points.

7. **NIFTY Metal Index**: The NIFTY Metal Index is designed to reflect the behavior and performance of the Metals sector including mining. The index comprises of maximum of 15 stocks. The base date of the index is January 1, 2004 and base value of 1000 points.

   Effective September 28, 2015, the weights of each company in the index is capped at 20% (until March 29, 2019).

8. **NIFTY Pharma Index**: The NIFTY Pharma Index is designed to reflect the behavior and performance of the companies that are engaged into manufacturing of pharmaceuticals. The index comprises of maximum of 10 stocks. The base date of the index is January 1, 2001 and base value of 1000 points.

9. **NIFTY PSU Bank Index**: The NIFTY PSU Bank Index is designed to reflect the behavior and performance of the public sector banks. Effective December 27, 2019, all Public Sector Banks that are traded (listed & traded and not listed but permitted to trade) at the National Stock Exchange (NSE) are eligible for inclusion in the index subject to fulfilment of other inclusion criteria namely listing history and trading frequency. The base date of the index is January 1, 2004 and base value of 1000 points.

10. **NIFTY Private Bank Index**: The NIFTY Private Bank Index is designed to reflect the behavior and performance of the banks from private sector. The index comprises of 10 stocks and weights of each company in the index were capped at 25% (until March 29, 2019). The base date of the index is April 1, 2005 and base value of 1000 points.

11. **NIFTY Realty Index**: The NIFTY Realty Index is designed to reflect the behavior and performance of the companies that are engaged into construction of residential & commercial real estate properties. The index comprises of maximum of 10 stocks. The base date of the index is December 29, 2006 and base value of 1000 points.

12. **NIFTY Consumer Durables Index**: The index aims to reflect the performance of stocks belonging to Consumer Durables industry. The index comprises of

maximum of 15 stocks and base date of the index is April 1, 2005 and a base value of 1000 points.

13. **NIFTY Oil & Gas Index**: The index aims to reflect the performance of stocks belonging to Oil, Gas and Petroleum industry. The index comprises of maximum of 15 stocks and base date of the index is April 1, 2005 and a base value of 1000 points.

Eligible Securities:

All equity shares that are traded (listed & traded and not listed but permitted to trade) at the National Stock Exchange (NSE) are eligible for inclusion in the NIFTY indices. Convertible stock, bonds, warrants, rights, preferred stock that provide a guaranteed fixed return and stocks under BZ series are not eligible for inclusion in the NIFTY indices.

Differential Voting Rights:

Equity securities with Differential Voting Rights (DVR) are eligible for inclusion in the index subject to fulfilment of criteria given below:

- Market capitalisation criteria is measured at a company level by aggregating the market capitalisation of individual class of security meeting the liquidity criteria for the respective index
- Free float of DVR equity class share should be at least 10% of free-float market capitalization of the company (voting equity class share and DVR equity class share) and 100% free-float market capitalization of last security in respective index
- It should meet liquidity criteria applicable for the respective index
- Upon inclusion of DVRs in index, the index may not have fixed number of securities. For example, if DVR of an existing NIFTY 50 constituent is included in NIFTY 50, the NIFTY index will have 51 securities but continue to have 50 companies
- It is possible that the DVR is eligible for inclusion in the index whereas the full voting rights security class is ineligible. In such scenario, the DVRs shall be included in the index irrespective of whether full voting rights share class is part of index

Index Maintenance:

Index Reconstitution:

Index maintenance plays a crucial role in ensuring the stability of the index. The indices are reconstituted semi-annually considering 6 months data ending January and July respectively. The replacement of stocks in broad market indices (if any) are generally implemented from the first working day after F&O expiry of March and September. In case of any replacement in the index, a four weeks' prior notice is given to the market participants.

Additional index reconstitution may be undertaken in case any of the index constituent undergoes a scheme of arrangement for corporate events such as merger, spin-off, compulsory delisting or suspension etc. The equity shareholders' approval to a scheme of arrangement is considered as a trigger to initiate the exclusion of such stock from the index through additional index reconstitution.

Stock Selection Criteria

- Companies ranked within top 800 based on both average daily turnover and average daily full market capitalisation based on previous six months period data
- Companies should form part of respective sector universe.
- The company's trading frequency should be at least 90% in the last six months.
- The company should have a listing history of 6 months. A company which comes out with an IPO will be eligible for inclusion in the index, if it fulfils the normal eligibility criteria for the index for a 3 month period instead of a 6 month period.
- In case of NIFTY Consumer Durables and NIFTY Oil & Gas Index, the companies should form part of NIFTY 500 at the time of review.
    - Minimum number of stocks within the index should be 10.
    - In case, the number of eligible stocks within Nifty 500 falls below 10, then deficit number of stocks shall be selected from the universe of stocks ranked within top 800 based on both average daily turnover and average daily full market capitalisation based on previous six months period data used for index rebalancing of Nifty 500
- At the time of index reconstitution, a company which has undergone a scheme of arrangement for corporate event such as spin-off, capital restructuring etc. would be considered eligible for inclusion in the index if as on the cut-off date for sourcing

data of preceding six months for index reconstitution, a company has completed three calendar months of trading period after the stock has traded on ex. basis subject to fulfilment of all eligibility criteria for inclusion in the index..

- In case of NIFTY Bank index, companies that are allowed to trade in F&O segment at NSE are only eligible to be a constituent of the index.
- In case of NIFTY IT and NIFTY Private Bank index, a preference shall be given to companies that are available for trading in NSE's Futures & Options segment at the time of final selection.
- The companies are sorted in the descending order of the Free-Float Market capitalization (FF MCap) and final selection of companies shall be made based on the FF MCap to form part of the index.
- Companies will be included if free-float market capitalisation is 1.5 times the free-float market capitalization of the smallest index constituent in respective index.
- The review will take place on a semi-annual basis.
- Further, on a quarterly basis indices will be screened for compliance with the portfolio concentration norms for ETFs/ Index Funds announced by SEBI on January 10, 2019. In case of non-compliance, suitable corrective measures will be taken to ensure compliance with the norms.

When a stock is replaced by another stock in the index, the index divisor is adjusted so the change in index market value that results from the addition and deletion does not change the index level.

Constituent capping:

- Weights of each stock in these indices will be calculated based on its free-float market capitalization such that no single stock shall be more than 33% and weights of top 3 stocks cumulatively shall not be more than 62% at the time of rebalancing.
- This means that at the time of rebalancing of the index, no single constituent shall have weightage of more than maximum capping limits as stated above. The capping factor of stocks is realigned upon change in equity, investible weighted factor (IWF), replacement of scrips in the index, periodic rebalancing and on a quarterly basis after the expiry of the F&O contracts in March, June, September and December.
- In the event of weight realignment, capping factors will be calculated for all constituents (for capped indices) whose uncapped weight is greater than maximum capping limits as stated above. Weightage of such constituent may increase beyond maximum capping limit between the rebalancing periods depending on the price movement. The capping factor is calculated considering the closing prices of the index constituents 5 working days prior to the effective date of the changes for all constituents.

Changes in the index level reflect changes in the market capitalization of the index which are caused by stock price movements in the market. They do not reflect changes in the market capitalization of the index, or of the individual stocks, that are caused by corporate actions such as dividend payments, stock splits, mergers, or acquisitions etc.

Calculation and dissemination

The index is calculated online on all days that the National Stock Exchange of India is open for trading in equity shares and disseminated through trading terminals and website.

Corporate Actions and Share Updates

Maintenance of NIFTY indices includes carrying out adjustments for corporate actions like stock splits, stock dividends, share changes and scheme of arrangements. Some corporate actions, such as stock splits and stock dividends, require simple changes in the equity shares outstanding and the stock prices of the companies in the index.

Other corporate actions, such as share issuances, change the market value of an index and require a divisor adjustment to prevent the value of the index from changing.

This helps in keeping the value of the index accurate and ensures that the movement of the index does not get impacted due to corporate actions of the companies in it. Divisor adjustments are made after the close of trading and after the calculation of the closing value of the index. Corporate actions such as splits, stock dividends, spin-offs, rights offerings, and share changes are applied on the ex-date.

All singular instances of share changes arising out of additional issue of capital, such as ESOPs, QIPs, ADR/GDR issues, private placements, warrant conversions, and FCCB conversions, which have an impact of 5% or more on the issued share capital of the security are implemented after providing a five working days' prior notice. Share repurchase (buyback) also have the same rules as applicable to share changes.

Changes entailing less than 5% impact on the issued share capital or a free-float are accumulated and implemented from the first working day after F&O expiry of March, June, September and December after providing five working days' prior notice.

At the time of every rebalancing that is resulted on account of change in the index constituents, change in equity, changes in IWFs, rights offerings and payment of special dividend (defined under Total Return (TR) Index Calculation section), weights of each scrip are realigned to maximum capping level (in case of capped indices) by making a suitable divisor adjustment.

Currency of Calculation

For calculation of the index, all prices in Indian rupees are considered

Index Calculation:

Price Index Calculations:

The index is calculated using free float market capitalization methodology. At the time of rebalancing of shares/ change in index constituents/ change in investable weight factors (IWFs), the weightage of the index constituents (where applicable) are capped at applicable levels. Weightage of such stock may increase between the rebalancing periods.

Index Market Capitalization = Total shares outstanding * Price * IWF * Capping Factor (if applicable)

PR Index Value =
Index market capitalization/ Base Market Capital * Base Index Value

Base market capital of the Index is the aggregate market capitalisation of each scrip in the index during the base period. The market capitalization during the base period is equated to an index value known as the base Index value.

Total Return (TR) Index Calculation:

The index reflects the return one would get if an investment is made in the index portfolio. As the index is computed online, it takes into account only the stock price movements. However, the price indices do not consider the return from dividend payments of index constituent stocks. Only the capital gains and losses due to price movement are measured by the price index. In order to get a true picture of returns, the dividends received from the index constituent stocks also need to be included in the index movement. Such an index, which includes the dividends received, is called the total return index. The total return index reflects the returns on the index from stock prices fluctuation plus dividend payments by constituent index stocks.

The total return version of the index is also available, which assumes dividends are reinvested in the index after the close on the ex-date. Corporate actions like dividend announcement do not require any adjustment in the normal price index (other than special dividend). Special dividend refers to a dividend that’s more than 5% of close price of a stock declaring dividend and all cases of dividends (irrespective of the dividend amount), where the entity has sought exemption from the timeline prescribed under the provisions of SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015. A suitable divisor adjustment is made in case of a special dividend.

A separate Total Returns Index (TR) is calculated which shows the returns on Index portfolio, inclusive of dividends.

Calculation of the TR Index:

$$\boldsymbol{TR\ Index} = Previous\ TR\ index * \left[1 + \left(\frac{(Today's\ PR\ Index + Indexed\ Dividend)}{Previous\ PR\ Index} - 1\right)\right]$$

Where,
Index dividend for the ‘T’ day = Total Dividends of the scrips in the Index/ Index divisor for the day

Total dividends of scrips in the Index = Σ (Dividend per share * Modified index shares)

Modified index shares = Total shares outstanding * IWF * Capping Factor (if applicable)

Investible Weight Factors (IWFs):

IWF as the term suggests is a unit of floating stock expressed in terms of a number available for trading and which is not held by the entities having strategic interest in a company. Higher IWF suggest greater number of shares held by the investors as reported under public category within a shareholding pattern reported by each company.

The IWFs for each company in the index are determined based on the public shareholding of the companies as disclosed in the shareholding pattern submitted to the stock exchanges on quarterly basis from March, June, September and December effective after the expiry of the F&O contracts. The following categories are excluded from the free float factor computation:

- Shareholding of promoter and promoter group
- Government holding in the capacity of strategic investor
- Shares held by promoters through ADR/GDRs.
- Strategic stakes by corporate bodies
- Investments under FDI category
- Equity held by associate/group companies (cross-holdings)
- Employee Welfare Trusts
- Shares under lock-in category

Example: For XYZ Ltd.

	Shares	%
Total Shares	1,00,00,000	100.00

	Shares	%
Shareholding of promoter and promoter group	19,75,000	19.75
Government holding in the capacity of strategic investor	50,000	0.50
Shares held by promoters through ADR/GDRs.	2,50,000	2.50
Equity held by associate/group companies (cross-holdings)	12,575	0.13
Employee Welfare Trusts	1,45,987	1.46
Shares under lock-in category	14,78,500	14.79

IWF = [1,00,00,000 – (19,75,000 + 50,000 +2,50,000 +12,575 +1,45,987 +14,78,500)] / 1,00,00,000. = **0.61**

Index Governance:

Index Committee

A professional team at NSE Indices Limited manages the index. NSE Indices Limited has constituted the Index Advisory Committee (Equity), which provides guidance on macro issues pertaining to equity indices. The Index Maintenance Sub-committee makes all decisions on additions and deletions of companies in equity indices and Index Advisory Committee (Debt) provides guidance on macro issues pertaining to fixed income indices. The Committees comprises of representatives from financial market such as Asset Management Company, insurance company, rating agency etc. In order to maintain transparency, the names of the committee member are publicly displayed on the website. None of the member in the above committee except the exchange representative(s) (who co-ordinates between the Index Advisory Committee - Equity and IMSC) represent more than one committee and thereby the independence of each of the committees is maintained.

Index Policy

The indices use transparent, researched and publicly documented rules for its maintenance. These rules are applied regularly to manage changes to the indices. Index reviews are carried out periodically to ensure that each security in the index fulfills 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.

Data Source

Prices of index constituents are sourced from NSE

Index Precision

The level of precision for index calculation is as follows:

- Shares outstanding are expressed in units
- Investible weight factors (IWFs) are expressed in two decimals
- Capping factors are expressed in six decimals
- Float-adjusted market capitalization is stated to two decimal places
- 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 National Stock Exchange of India Ltd. (NSE) as NSE is source for price data for computation of equity 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.

Index Dissemination

Tickers

Index	Bloomberg	Reuters
NIFTY Auto	NSEAUTO	.NIFTYAUTO
NIFTY Bank	NSEBANK	.NSEBANK
NIFTY Financial Services	NSEFIN	.NIFTYFIN
NIFTY FMCG	NSEFMCG	.NIFTYFMCG
NIFTY IT	NSEIT	.NIFTYIT
NIFTY Media	NSEMED	.NIFTYMED
NIFTY Metal	NSEMET	.NIFTYMET
NIFTY Pharma	NSEPHRM	.NIPHARM
NIFTY Private Bank	NSEPBANK	.NIFPVTBNK
NIFTY PSU Bank	NSEPSBK	.NIFTYPSU
NIFTY Realty	NSEREAL	.NIFTYREAL

Web site

Daily index values, index constituents, methodology, and press releases are available on www.niftyindices.com and www.nseindia.com.

About Us:

About National Stock Exchange of India Limited (NSE):

National Stock Exchange of India Ltd. (NSE) is the leading stock exchange in India and the second largest in the world by nos. of trades in equity shares from January to December 2018, according to World Federation of Exchanges (WFE) report. NSE was the first exchange in India to implement electronic or screen-based trading. It began operations in 1994 and is ranked as the largest stock exchange in India in terms of total and average daily turnover for equity shares every year since 1995, based on SEBI data. NSE has a fully-integrated business model comprising exchange listings, trading services, clearing and settlement services, indices, market data feeds, technology solutions and financial education offerings. NSE also oversees compliance by trading and clearing members with the rules and regulations of the exchange. NSE is a pioneer in technology and ensures the reliability and performance of its systems through a culture of innovation and investment in technology. NSE believes that the scale and breadth of its products and services, sustained leadership positions across multiple asset classes in India and globally enable it to be highly reactive to market demands and changes and deliver innovation in both trading and non-trading businesses to provide high-quality data and services to market participants and clients.

For more information, please visit: www.nseindia.com

About NSE Indices Limited:
(Formerly known as India Index Services & Products Limited-IISL)

NSE Indices Limited (formerly known as India Index Services & Products Ltd. - IISL), a subsidiary of NSE, provides a variety of indices and index related services for the capital markets. The company focuses on the index as a core product. The company owns and manages a portfolio of indices under the NIFTY brand of NSE, including the flagship index, the NIFTY 50. NIFTY equity indices comprises of broad-based benchmark indices, sectoral indices, strategy indices, thematic indices and customised indices. NSE Indices Limited also maintains fixed income indices based on Government of India securities, corporate bonds, money market instruments and hybrid indices. Many investment products based on NIFTY indices have been developed within India and abroad. These include index based derivatives traded on NSE, NSE IFSC and Singapore Exchange Ltd. (SGX) and a number of index funds and exchange traded funds. The flagship 'NIFTY 50' index is widely tracked and traded as the benchmark for Indian Capital Markets.

For more information, please visit: www.niftyindices.com