



Methodology Document of NIFTY50 Value 20 Index

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NIFTY50 Value 20 Index:

Introduction:

The NIFTY50 Value 20 Index is designed to reflect the behaviour and performance of a diversified portfolio of value companies forming a part of NIFTY 50 Index. It consists of the most liquid value blue chip companies. The NIFTY50 Value 20 Index comprises of 20 companies traded (listed & traded and not listed but permitted to trade) on the National Stock Exchange (NSE). Value companies are normally perceived as companies with low PE (Price to Earning), low PB (Price to Book) and high DY (Dividend Yield).

Index Construction & Review Methodology:

The index is calculated using free float market capitalization methodology and has a base date of January 1, 2009 indexed to a base value of 1000. At the time of rebalancing of shares/ change in index constituents/ change in investable weight factors (IWFs), the weightage of the index constituent (where applicable) is capped at 15%. Weightage of such stock may increase beyond 15% between the rebalancing periods.

Selection Criteria

The criteria for the NIFTY50 Value 20 Index include the following:

- Companies forming the part NIFTY 50 on the construction and rebalancing date are taken into consideration for selection of stocks
- Stocks are selected on the basis of ROCE (Return on Capital Employed), PE, PB and DY and final ranking is derived to select the value stocks from NIFTY 50.
- Ranks are assigned to all the NIFTY constituents based on each parameter i.e. ROCE, PE, PB & DY *. Relatively lower PE and PB receives a better rank, while higher DY and ROCE receive a better rank.
- Weights of 0.4, 0.3, 0.2 and 0.1 are assigned to ranks of ROCE, PE, PB and Dividend Yield respectively to derive the final ranking for selection.
- The top 20 companies as per the ascending order of the final ranking are selected to form the index.

Index Review

- The review will take place on 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.
- In order to reduce the number of rebalancing of constituents in a review, a buffer of 50% of total number of the constituents shall be applied at the time of each review. This means that if the existing constituent at the time of the review ranks within the top 30, the same can be retained in the index. However if a stock ranks within the top 5 stocks in the rebalancing pool the stock with the lowest rank from the existing constituents would be replaced with the same.
- Companies which are IRDA dividend norms compliant shall be considered eligible to be included in the index.

Calculation Methodology

The index is calculated using free float market capitalization methodology.

Capping:

Each constituent in the index is capped at 15%. This means that at the time of rebalancing of the index, no single constituent shall have weightage of more than 15%. 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 whose uncapped weight is greater than 15%. Weightage of such constituent may increase beyond 15% 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.

Index Maintenance:

Rebalancing

Index maintenance plays a crucial role in ensuring the stability of the index.

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.

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.

Calculation Frequency

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

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 investible weight factors (IWFs), the weightage of the index constituent (where applicable) is capped at 10%. Weightage of such stock may increase between the rebalancing periods.

Index Market Capitalization = Total shares outstanding * Price * IWF * Capping Factor

PR Index Value = $\frac{\text{Current Index market capitalization}}{\text{Base Market Capital}} * \text{Base Index Value (1000)}$

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 of 1000 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 real-time, 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:

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

Where,

Index dividend for the 'T' day = $\frac{\text{Total Dividends of the scrips in the Index}}{\text{Index divisor for the day}}$

Total dividends of scrips in the Index = $\Sigma (\text{Dividend per share} * \text{Modified index shares})$

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

Calculation of selection parameters:

- PE is calculated by dividing the market capitalization by trailing profits of the last four quarters adjusted for free float of a company.
- PB is calculated by dividing the market capitalization by Net-worth adjusted for free float of a company.
- DY is calculated by dividing annual dividends by market capitalization adjusted for free float of a company.
- Average of 12 months of PE, PB and DY is taken.
- $ROCE = \frac{EBIT}{\text{Average Capital Employed}}$
Where, EBIT is Earnings before Interest & Tax
Capital Employed is sum of all shareholders funds and total borrowings

Corporate Actions and Share Updates

Maintaining the index include monitoring and completing the adjustments for company additions and deletions, share changes, stock splits, stock dividends etc. Some corporate actions, such as stock splits and stock dividends, require simple changes in the common 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.

Adjusting the divisor for a change in market value leaves the value of the index unaffected by the corporate action. This helps keep the value of the index accurate as a barometer of stock market performance, and ensures that the movement of the index does not reflect the 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, 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 free-float market capitalization of the security, are implemented as soon as possible after providing a five days' notice period. Share repurchase (buyback) also have the same rules as applicable to share changes.

Changes entailing less than 5% impact on the free-float market capitalization are accumulated and implemented on quarterly basis from February, May, August and November effective after the expiry of the F&O contracts.

At the time of every rebalancing that is resulted on account of change in the index constituents, change in equity, changes in IWFs and payment of special dividend (defined under Total Return (TR) Index Calculation section), weights of each scrip are realigned to 15% by making a suitable divisor adjustment.

Currency of Calculation

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

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 coordinates 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.

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

$$\text{IWF} = [1,00,00,000 - (19,75,000 + 50,000 + 2,50,000 + 12,575 + 1,45,987 + 14,78,500)] / 1,00,00,000. = \mathbf{0.61}$$

Index Dissemination

Tickers

Index	Bloomberg	Reuters
NIFTY50 Value 20	NSENV20	.NV20

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):

The National Stock Exchange of India Ltd. (NSE) is the leading stock exchange in India and the third largest in the world by nos. of trades in equity shares in 2017, 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, 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 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, Singapore Exchange Ltd. (SGX) and Taiwan Futures Exchange (TAIFEX) 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