



NSE Indices Limited

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

Nifty Midcap150 Quality 50 Index

Methodology Document

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Introduction

NSE Indices Limited (formerly known as India Index Services & Products Limited- IISL), a NSE group company provides a variety of indices and index related services and products for the Indian capital markets.

The Nifty Midcap150 Quality 50 index includes top 50 companies from its parent Nifty Midcap 150 index, selected based on their 'quality' scores. The quality score for each company is determined based on return on equity, financial leverage (except for financial services companies) and earning per share (EPS) growth variability of each stock analysed during the previous 5 financial years. The weight of each stock in the index is based on a combination of stock's quality score and its free float market capitalization.

Highlights

- The index series has a base date of April 01, 2005 and a base value of 1000.
- Stocks from Nifty Midcap 150 index at the time of review are eligible for inclusion in the index.
- 50 companies with higher profitability, lower leverage and more stable earnings are selected to be part of the index.
- The weight of each stock in the index is based on the combination of stock's quality score and its free float market capitalization.
- Index is rebalanced semi-annually.

Methodology

Eligibility criteria

To form part of Nifty Midcap150 Quality 50 Index, stocks should qualify the following eligibility criteria(s).

Universe:

- Stocks should form part of Nifty Midcap 150 index at the time of review
- Constituents should have a minimum listing history of 1 year

Stock selection criteria:

Stock's shortlisted based on above mentioned criteria's are further analysed as

- For each eligible stock, Z score is calculated on the basis of return on equity (ROE), debt-to-equity (D/E) ratio and EPS growth variability in the previous 5 years. Debt-to-equity ratio is not considered for companies belonging to financial services sector.
- Latest fiscal year data is considered for the calculation of return on equity (ROE) and debt-to-equity (D/E) ratio. EPS growth variability in previous 5 financial years is calculated using adjusted EPS of previous 6 years. Consolidated financial data is used wherever available else standalone financial data is taken into consideration.
- Z score of each parameter for each security is calculated as per following formula

$$(x - \mu) / \sigma$$

Where;
x is parameter value of the stock
 μ is mean value of the parameter in the eligible universe
 σ is std. deviation of parameter in the eligible universe
- EPS growth variability is not calculated for stocks with negative EPS in any of the previous 6 fiscal years. Such stocks are not considered for selection.
- In case of an IPO, company will be considered for selection, if adjusted EPS data is available to at least calculate EPS growth variability in previous 3 financial years.

- Weighted average Z score is calculated for all securities as per the following formula

For Non-Financial Service sector company:

Weighted Z score= $0.33 * Z \text{ score of ROE} + 0.33 * -(Z \text{ score of D/E}) + 0.33 * -(Z \text{ score of EPS growth variability})$

For financial services sector:

Weighted Z score= $0.5 * Z \text{ score of ROE} + 0.5 * -(Z \text{ score of EPS growth variability})$

- Quality score is calculated for all eligible securities from the weighted average Z score as

$$\text{Quality Score} = (1 + \text{Average Z score}) \text{ if Avg. Z score} > 0$$

$$(1 - \text{Average Z score})^{-1} \text{ if Avg. Z score} < 0$$

- Top 50 stocks are selected based on quality-score.

Weights and Capping:

- Weight of the stock in the index is derived by multiplying the square root of the free float market cap with the quality score of that stock.
- Each stock in the index is capped at the lower of 5% or 5 times the weight of the stock in the index based only on free float Mcap.
- Capping will be done semi-annually at the time of rebalancing.

Reconstitution

- Index reconstitution will be done on a semi-annual basis in June & December. Changes shall be effective on the first working after the expiry of the derivative cycle in June & December.
- At the time of review, stocks forming part of Nifty Midcap 150 are eligible to form part of this index.
- Top 25 ranked stocks on the basis of quality score are compulsorily included in the index, whereas existing stocks in the index whose rank goes beyond 75 are compulsorily excluded from the index.
- Apart from the scheduled semi-annual review, additional ad-hoc reconstitution and rebalancing of the index shall be initiated in case any of the index constituents undergoes suspension or delisting or scheme of arrangement.

Calculation Frequency:

The index is calculated on an end of day basis for all days National Stock Exchange of India is open for trading in equity shares.

Corporate Actions:

Maintaining the index include monitoring and completing the adjustments for company additions and deletions, stock splits, stock dividends etc. Some corporate actions, such as stock splits and stock dividends, require changes only in the stock prices and shares of the companies in the index. Other corporate actions, such as special dividend and rights issue of shares 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.

Index Governance:

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 Nifty family of 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.

Data Source

Prices of index constituents are sourced from NSE

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.

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:

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, sectorial 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

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