

# **NSE Indices Limited**

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

# **Methodology Document for NIFTY Indices**

**December 2020** 



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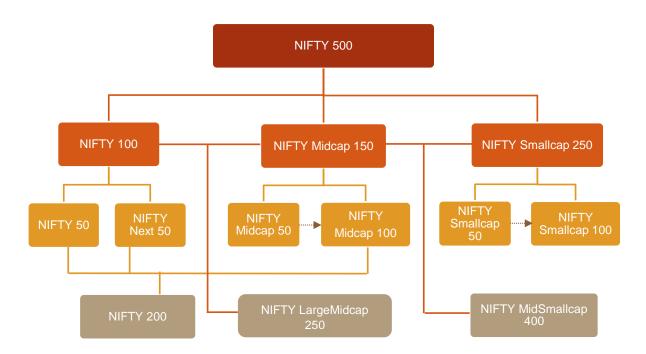


# **NIFTY Broad market indices**

NSE Indices Limited (formerly known as India Index Services & Products Limited-IISL), a NSE group company, was set-up in May 1998 to provide a variety of indices and index related services for the capital markets.

In order to develop, construct and maintain indices on Indian equities that serve as useful market performance benchmarks that may be useful underlying indices for investment products, NSE Indices Limited, an NSE group company has developed a series of broad equity indices introducing a structure that efficiently represents large, mid and small market capitalisation segments of the Indian capital market.

Under this structure, there are 13 broad market indices as shown below:





#### 1. NIFTY 500

NIFTY 500 represents the top 500 companies based on full market capitalisation from the eligible universe.

#### 2. NIFTY 100

NIFTY 100 represents top 100 companies based on full market capitalisation from NIFTY 500. This index intends to measure the performance of large market capitalisation companies.

#### 3. NIFTY Midcap 150

NIFTY Midcap 150 represents the next 150 companies (companies ranked 101-250) based on full market capitalisation from NIFTY 500. This index intends to measure the performance of mid market capitalisation companies.

### 4. NIFTY Smallcap 250

NIFTY Smallcap 250 represents the balance 250 companies (companies ranked 251-500) from NIFTY 500. This index intends to measure the performance of small market capitalisation companies.

#### 5. NIFTY 50

The index represents 50 companies selected from the universe of NIFTY 100 based on free-float market capitalisation and liquid companies having average impact cost of 0.50% or less for 90% of the observations for a basket size of Rs. 10 Crores. The constituents should have derivative contracts available on NSE. <u>Please refer detailed</u> methodology separately given for NIFTY 50 in this document.

#### 6. NIFTY Next 50

It represents the balance 50 companies from NIFTY 100 after excluding the NIFTY 50 companies.

### 7. NIFTY Midcap 50

It includes top 50 companies based on full market capitalisation from NIFTY Midcap 150 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.

### 8. NIFTY Midcap 100

It includes all companies from NIFTY Midcap 50. Remaining companies are selected based on average daily turnover from NIFTY Midcap 150 index.



### 9. NIFTY Smallcap 50

It represents top 50 companies selected based on average daily turnover from top 100 companies selected based on full market capitalisation in NIFTY Smallcap 250 index.

### 10. NIFTY Smallcap 100

It includes all companies from NIFTY Smallcap 50. Remaining companies are selected based on average daily turnover from top 150 companies selected based on full market capitalisation from NIFTY Smallcap 250 index.

#### 11. NIFTY 200

NIFTY 200 includes all companies forming part of NIFTY 100 and NIFTY Midcap 100 index.

### 12. NIFTY LargeMidcap 250

It includes all companies from NIFTY 100 and NIFTY Midcap 150. It intends to measure performance of the large and mid-market capitalisation companies. The aggregate weight of large cap stocks and mid cap stocks is 50% each and is reset on a quarterly basis.

### 13. NIFTY MidSmallcap 400

It includes all companies from NIFTY Midcap 150 and NIFTY Smallcap 250. It intends to measure performance of the mid and small market capitalisation companies.

## 14. Nifty500 Multicap 50:25:25

It tracks a portfolio of large, mid and small capitalization companies with weights of 50%, 25% and 25% respectively assigned to each size segment on quarterly rebalance dates.

#### **Stock Selection Criteria:**

Stocks that form part of the Nifty 500 index also form part of the Nifty500
 Multicap 50:25:25 Index at all points in time

#### Weights and Capping:

- Nifty500 Multicap 50:25:25 Index shall have the following size segment weights as on quarterly rebalance dates:
  - Large Cap stocks (Stocks part of Nifty 100 index) Total Weight 50%



- Mid Cap stocks (Stocks part of Nifty Midcap 150 index) Total Weight
   25%
- Small Cap stocks (Stocks part of Nifty Smallcap 250 index) Total
   Weight 25%
- Weight of each stock within each of the 3 size segments will be based on its free-float market capitalization
- For capping purposes, a DVR would be classified as part of either Nifty 100, Nifty Midcap 150 or Nifty Smallcap 250 depending on whether its parent stocks is a member of Nifty 100, Nifty Midcap 150 or Nifty Smallcap 250 and the weight of the DVR and its parent stock would be derived in the following way:
  - Aggregate the Free Float Market Capitalization of the DVR security and its parent
  - The combined entity will be classified as Large cap, Mid cap or Small cap depending on whether the parent security is a member of Nifty 100, Nifty Midcap 150 or Nifty Midcap Smallcap 250 for capping purposes
  - The weight of the combined entity will be split into the weight of the parent security and the DVR security in the proportion of the Free Float Market Capitalization of the parent and DVR
- Weight of the stocks shall be rebalanced on a quarterly basis after the expiry of F&O contracts in March, June, September and December

#### **Reconstitution:**

- The index will follow the composition of the Nifty 500 Index at every point in time
- 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 is excluded from Nifty 500 index or undergoes suspension or delisting or scheme of arrangement
- 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

### Index review and eligibility criteria

The review of broad market indices is undertaken semi-annually based on data for six months ending January and July.

To be considered for inclusion in NIFTY 500 index, companies must form part of eligible universe. The eligible universe includes:

- The company must be domiciled in India and 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, and preferred stock that provide a guaranteed fixed return, stocks under suspension and stocks categorized under BZ series are not eligible for inclusion in the NIFTY indices.
- Equity securities with Differential Voting Rights (DVR) are eligible for inclusion in the index subject to fulfilment of specified DVR related <u>criteria</u>.
- Companies ranked within top 800 based on both average daily turnover and average daily
   full market capitalisation based on previous six months period data
- The investible weight factor (IWF) of stock should be at least 0.10 (10% free float); OR 6 month average free float market capitalization of the stock should be at least 25% of the 6 month average full market capitalization of the existing smallest index constituent (prior to index review) by full market capitalization in NIFTY 500 as of the cut-off date
- Companies traded for at least 90% of days during the previous six months period
- Eligibility criteria for newly listed security is checked based on the data for a three-month period instead of a six-month period.

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.



#### The eligible universe for NIFTY 100 includes:

- The company should be a constituent of NIFTY 500
   AND
- Investible weight factor (IWF) of stock should be at least 0.10 (10% free float)
   OR
- 6 month average free float market capitalization of the stock should be at least 25%
  of the 6 month average full market capitalization of the of the existing smallest index
  constituent (prior to index review) by full market capitalization in NIFTY 100 as of the
  cut-off date

#### The eligible universe for NIFTY Midcap 150 includes:

- The company should be a constituent of NIFTY 500
   AND
- Investible weight factor (IWF) of stock should be at least 0.10 (10% free float)
   OR
- 6 month average free float market capitalization of the stock should be at least 25%
  of the 6 month average full market capitalization of the of the existing smallest index
  constituent (prior to index review) by full market capitalization in NIFTY Midcap 150
  as of the cut-off date

	Securities will be included if	Securities will be excluded if	Maximum Replacements per review
NIFTY 500	<ul> <li>Rank based on full market capitalisation is among top 350</li> <li>Full market capitalisation is 1.5 times the full market capitalization of the smallest index constituent (based on full market capitalization) in NIFTY 500</li> </ul>	capitalisation or average turnover falls below 800	25
NIFTY 100	<ul> <li>Rank based on average full market capitalization is among top 90</li> <li>Average full market capitalization is 1.5 times the</li> </ul>		5



	average full market capitalization of the smallest index constituent (based on full market capitalization) in NIFTY 100 as of the cut-off date  In case the number of compulsory exclusions exceed those of compulsory inclusions in the steps above, the replacements to fill up the deficit are identified based on below:  Within the eligible replacement pool of stocks sorted based on their full market capitalization, companies that are available for trading in NSE's Futures & Options segment will be first selected based on their average full market capitalization  Additional replacement stocks, if required, will be selected from the remaining eligible replacement pool stocks (ranked 91 to 110 based on Average Full MCap) based on their Average Daily Turnover (ADT)	<ul> <li>Rank based on average full market capitalization falls below 110 (i.e. beyond 110)</li> <li>In case the number of compulsory inclusions exceed those of compulsory exclusions in the steps above, the replacement stocks to be excluded are identified based on below:         <ul> <li>Within the eligible replacement pool of stocks (ranked 91 to 110 based on Average Full MCap) sorted based on their full market capitalization, the smallest companies that are not available for trading in NSE's Futures &amp; Options segment will be first selected for exclusions</li> <li>Additional stocks for exclusion, if required, will be selected from the remaining eligible replacement pool stocks based on lowest Average Daily Turnover (ADT)</li> </ul> </li> </ul>	
NIFTY Midcap 150	<ul> <li>Rank based on full market capitalisation is among top 225</li> <li>Full market capitalisation is 1.5 times the full market capitalization of the smallest index constituent (based on full market capitalization) in NIFTY 150</li> </ul>	NIFTY 500*	15



NIFTY Smallcap 250	Constituents in NIFTY 500 not for 150	-	
NIFTY 50	Its meets the impact cost criteria and free-float market capitalisation is 1.5 times the free-float market capitalization of the smallest constituent in NIFTY 50	available in the replacement pool, which meets inclusion criteria	5 Annually
NIFTY Next 50	Constituents in NIFTY 100 not for	ming part of NIFTY 50	-
NIFTY Midcap 50	<ul> <li>Rank of any F&amp;O constituent in NIFTY Midcap 150 based on full market capitalisation is among top 30</li> <li>Full market capitalisation of any F&amp;O constituent in NIFTY Midcap 150 is 1.5 times of the smallest index constituent (based on full market capitalization) in NIFTY Midcap 50</li> <li>In case of any shortfall (in the event F&amp;O stocks are not available for inclusion in the index), securities with highest average daily turnover will be selected from top 30 non-F&amp;O constituents in NIFTY Midcap 150 index based on full market capitalization</li> </ul>	NIFTY Midcap150*  • Rank based on full market capitalisation falls below 70 among F&O constituents in	5
NIFTY Midcap 100	<ul> <li>Constituents added in NIFTY Midcap 50 which are not in NIFTY Midcap 100*</li> <li>Rank based on average daily turnover is among top 70 from constituents in NIFTY Midcap 150</li> </ul>	<ul> <li>Constituents excluded from NIFTY Midcap 150*</li> <li>Rank based on average daily turnover of existing constituent is below 130 among constituents in NIFTY Midcap 150</li> </ul>	10
NIFTY Smallcap 50	Rank based on average daily turnover is among top 30 from	<ul> <li>Constituents excluded from NIFTY Smallcap 250*</li> </ul>	10



	top 100 constituents selected based on full market capitalisation in NIFTY Smallcap 250	<ul> <li>Rank based on full market capitalisation falls below 130 from NIFTY Smallcap 250 constituents</li> <li>Rank based on full market capitalisation is among top 130 from NIFTY Smallcap 250 constituents but rank based on average daily turnover falls below 80 (from top 130 constituents)</li> </ul>	
NIFTY Smallcap 100	<ul> <li>Rank based on average daily turnover is among top 70 from top 150 constituents selected based on full market capitalisation in NIFTY Smallcap 250</li> <li>All constituents of NIFTY Smallcap 50 not forming part of NIFTY Smallcap 100*</li> </ul>	NIFTY Smallcap 250*	15
NIFTY 200	Constituents forming part of NIFTY	rt of NIFTY 100 and NIFTY Midcap 100	
NIFTY LargeMidcap 250	Constituents forming part of NIFTY 100 and NIFTY Midcap 150		-
NIFTY MidSmallcap 400	Constituents forming part of NIFTY Midcap 150 and NIFTY Smallcap 250		-
Nifty500 Multicap 50:25:25	Constituents forming part of NIFTY	-	

<sup>\*</sup> Limits on replacement are not applicable for inclusion/exclusion on account of this rule and exclusions due to corporate actions such as merger, spin-offs, delisting, trading suspension etc.



In case of reconstitution of child indices, latest index composition including most recent changes in respective parent index whether announced or yet to be announced shall be considered. Child indices are defined as those indices where constituents are selected from a list of any other index. Example: NIFTY 50 would be considered as a child index as constituents of NIFTY 50 are selected from a list of NIFTY 100 index.

### **Currency of Calculation**

NIFTY 50 is computed in four currencies namely Indian Rupee (INR), US Dollar (USD), Australian Dollar (AUD) and Canadian Dollar (CAD). All other broad market indices are computed in Indian Rupee (INR).

#### Also see:

- Index characteristics: Click here
- Index reconstitution frequency: Click here
- Corporate Actions and Share Updates: Click here
- Investible weight factors: Click here
- Index Calculation Formula: Click here
- Index Factsheet: Click here



### **NIFTY 50 Index**

The NIFTY 50 is the flagship index on the National Stock Exchange of India Ltd. (NSE). The Index tracks the behavior of a portfolio of blue-chip companies, the largest and most liquid Indian securities. It includes 50 of the all companies listed and/ or traded on the NSE, captures approximately 66% of its float-adjusted market capitalization and is a true reflection of the Indian stock market.

The NIFTY 50 covers major sectors of the Indian economy and offers investment managers exposure to the Indian market in one efficient portfolio. The Index has been trading since April 1996 and is well suited for benchmarking, index funds and index-based derivatives.

The NIFTY 50 is owned and managed by NSE Indices Limited (formerly known as India Index Services & Products Limited-IISL), India's first specialized company focused on an index as a core product.

### **Highlights**

The NIFTY 50 is a 50 stock, float-adjusted market-capitalization weighted index for India. It is used for a variety of purposes, such as benchmarking fund portfolios, index-based derivatives and index funds.

The NIFTY 50 is derived from economic research and is created for those interested in investing and trading in Indian equities.

**Market Representation:** The NIFTY 50 stocks represent about 66% of the total float-adjusted market capitalization of the National Stock Exchange (NSE).

**Turnover Representation:** The NIFTY 50 stocks represent about 54% of the total float-adjusted market capitalization of the National Stock Exchange (NSE).



#### **Trading in derivative contracts based on NIFTY 50:**

The National Stock Exchange of India Limited (NSE) commenced trading in derivatives with index futures on June 12, 2000. The futures contracts on the NSE are based on the NIFTY 50. The exchange introduced trading on index options based on the NIFTY 50 on June 4, 2001. Additionally, exchange traded derivatives contracts linked to NIFTY 50 are traded at Singapore Exchange Ltd. (SGX).

#### **Index Computation:**

The NIFTY 50 is computed using a float-adjusted, market capitalization weighted methodology\*, wherein the level of the index reflects the total market value of all the stocks in the index relative to a particular base period. The methodology also takes into account constituent changes in the index and corporate actions such as stock splits, rights issuance, etc., without affecting the index value.

\* Beginning June 26, 2009, the NIFTY 50 is being computed using float-adjusted market capitalization weighted method, wherein the level of index reflects the float-adjusted market capitalization of all stocks in the Index.



### Index review and eligibility criteria

#### **Index Review frequency:**

The review of NIFTY 50 is undertaken semi-annually based on data for six months ending January and July. The replacement of stocks in NIFTY 50 (if any) is 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 merger, spin-off, delisting, specific cases of capital restructuring which may result into change in the stock prices etc., in case any of the index constituent is moved to BZ series, if trading permission of any of the index constituent is withdrawn from F&O segment, if a security is suspended for trading from Capital Market for any reason and in case of any adverse regulatory findings or orders/ governance related issues, order issued against any of the index constituent that necessitates removal of such stock from the index in the larger interest of investors/ stakeholders as may be determined by the Index Maintenance Sub-Committee (IMSC). In case of a merger, spin-off, capital restructuring or voluntary delisting, equity shareholders' approval is considered as a trigger to initiate the replacement of such stock from the index through additional index reconstitution. For all other cases, replacements will be initiated based on notifications issued by the Exchange.

#### **Eligible Securities:**

Constituents of NIFTY 100 index that are available for trading in NSE's Futures & Options segment are eligible for inclusion in the NIFTY 50 index. The latest composition of NIFTY 100 including most recent changes whether announced or yet to be announced shall be considered eligible subject to availability of trading in NSE's Futures & Options segment in such stocks.

#### **Differential Voting Rights:**

Equity securities with Differential Voting Rights (DVR) are eligible for inclusion in the index subject to fulfilment of specified DVR related <u>criteria</u>.

#### **Trading Frequency:**

The company's trading frequency should be 100% in the last six months.

#### **Liquidity:**

For inclusion in the index, the security should have traded at an average impact cost of 0.50 % or less during the last six months for 90% of the observations for a portfolio of Rs. 10 crores.

Impact cost is the cost of executing a transaction in a security in proportion to its index weight, measured by market capitalization at any point in time. This is the percentage mark-up suffered while buying/selling the desired quantity of a security compared to its ideal price -- (best buy + best sell)/2. Please refer section on 'Impact Cost' within this document.

#### **Float-Adjusted Market Capitalization:**



Companies will be eligible for inclusion in NIFTY 50 index provided the average free-float market capitalisation is at least 1.5 times the average free-float market capitalization of the smallest constituent in the index.

#### **Buffer:**

As part of the semi-annual reconstitution of the index, a maximum of 10% of the index size (number of companies in the index) may be changed in a calendar year. However, the limit of maximum 10% change shall not be applicable for any exclusion of a company on account of scheme of arrangement as stated above.

#### **Currency of Calculation**

NIFTY 50 is computed in four currencies namely Indian Rupee (INR), US Dollar (USD), Australian Dollar (AUD) and Canadian Dollar (CAD).

#### Also see:

• Index characteristics: Click here

• Index reconstitution frequency: Click here

• Corporate Actions and Share Updates: Click here

Investible weight factors: <u>Click here</u>
 Index Calculation Formula: <u>Click here</u>

• Index Factsheet: Click here



# **NIFTY Sectoral Indices**

NSE Indices has developed a series of sectoral indices that represent the collective performance of stocks in respective sectoral index. All sectoral indices are capped as per the details provided under 'Index characteristics' on subsequent pages.

- 1. **NIFTY Auto:** 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.
- 2. **NIFTY Bank:** 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.
- 3. **NIFTY Consumer Durables:** 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.
- 4. NIFTY Financial Services: The index is designed to reflect the behaviour and performance of the Indian financial market such as banks, financial institutions, housing finance, other financial services companies etc. The index comprises of maximum of 20 stocks. (Other variant: NIFTY Financial Services 25/50 Details given below)
- 5. **NIFTY FMCG:** 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.
- 6. **NIFTY IT:** 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. The base value of the index was revised from 1000 to 100 with effect from May 28, 2004.



- 7. **NIFTY Media:** 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.
- 8. **NIFTY Metal:** 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.
- 9. **NIFTY Oil & Gas:** 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.
- 10. **NIFTY Pharma:** 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.
- 11. **NIFTY PSU Bank:** 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.
- 12. **NIFTY Private Bank**: 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).
- 13. **NIFTY Realty:** 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.



### Index review and eligibility criteria

### **Index Review frequency:**

The review of sectoral indices is undertaken semi-annually based on data for six months ending January and July.

### **Eligibility Criteria**

To be considered for inclusion in NIFTY sectoral indices, companies must form part of eligible universe. The eligible universe includes:

- Companies should form part of NIFTY 500 at the time of review.
- In case of reconstitution of child indices, latest index composition including most recent changes in respective parent index whether announced or yet to be announced shall be considered. Child indices are defined as those indices where constituents are selected from a list of any other index. Example: NIFTY Auto would be considered as a child index as constituents of NIFTY Auto are selected from a list of NIFTY 500 index.
- 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
- Companies should form part of respective sector universe
- 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, 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.



#### **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.

### 14. NIFTY Financial Services 25/50:

NIFTY Financial Services 25/50 is a new capped version of NIFTY Financial Services index, where 25 refers to the maximum value for the % weight of a single stock and 50 refers to maximum value for the aggregate % weight for all stocks with individual weight more than 5%.

#### **Stock Selection criteria**

 Stocks that form part of Nifty Financial Services index also form part of this index at all points in time

#### **Constituent Weights and Capping:**

- Weight of stocks within this index are capped to achieve the following:
  - Weight of the individual stock should not exceed 25%
  - Aggregate weight of all the stocks with individual weight above 5% should not exceed 50%
- A buffer of 10% of the value of each cap limit is used in order to reduce the probability of passive breach of above mentioned capping limits due to stock price movements between two quarterly rebalancing.
- Accordingly, at the time of quarterly rebalancing of Nifty Financial Services 25/50 Index,



- Weight of each stock is capped at 22.5%
- Sum of the top 3 stocks is capped at 45% subject to individual stock floored at 4.6%
- Stocks below top 3 are individually capped at 4.5%#
- Capping will be done quarterly, considering the closing prices of the index constituents 5
  working days prior to the effective date. As a result of which the weight of the index
  constituents may be greater than their capping limits as on the effective date.

#### Reconstitution

- The index will follow the composition of Nifty Financial Services Index at every point in time.
- 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

#### 15. NIFTY Healthcare

The index is designed to reflect the behaviour and performance of Healthcare companies. The index comprises of maximum of 20 companies and base date of the index is April 1, 2005 and a base value of 1000 points.

#### **Eligibility Criteria:**

To form part of the Nifty Healthcare index, stocks should satisfy the following eligibility criteria.

#### **Stock Selection Universe:**

- Stocks forming part / going to be a part of the Nifty 500 index at the time of review
- Stock should form part of "Healthcare" within macro-economic sector

#### **Stock Selection criteria:**

#### Selection of the stocks shall be done in 2 steps:

- **Step 1**: Top 20 stocks based on six-month average free-float market capitalization that are available for trading in NSE's Futures & Options (F&O) segment at the time of review are selected to be the part of the index
- **Step 2:** In case the number of stocks selected in the Step 1 above is less than 20, then the deficit number of stocks is selected based on six-month average free-float market capitalization



#### **Weights and 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
- Weight of the stocks shall be rebalanced on a quarterly basis after the expiry of the F&O contracts in March, June, September and December

#### **Reconstitution:**

- Index rebalancing will be done on a semi-annual basis in March and September and made effective on the next working day after the F&O expiry
- Stocks that move out of the Nifty 500 shall also move out of the Nifty Healthcare Index at the time of the review of the Nifty Healthcare index
- Stocks that are available for trading in F&O segment are compulsorily included in the index and will replace the smallest index constituents which are not available for trading in F&O segment subject to maximum of 20 stocks in the index
- In case all the stocks within the index are available for trading in F&O segment and the non-member eligible stock which is also available for trading in F&O segment, such stock will be included in the index only if its free-float market capitalization is 1.5 times the free-float market capitalization of the smallest index constituent
- Stocks which are not available for trading in F&O segment will be included if its freefloat market capitalization is 1.5 times the free-float market capitalization of the smallest index constituents which are not available for trading in F&O segment
- In case, the no. of eligible stocks within Nifty 500 is less than 20, 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 capitalization based on previous six months period data used for index rebalancing of Nifty 500
- 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 gets excluded from Nifty 500 or undergoes suspension or delisting or scheme of arrangement
- 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

#### Also see:

• Index characteristics: Click here

Index reconstitution frequency: Click here

• Corporate Actions and Share Updates: Click here

• Investible weight factors: Click here

• Index Calculation Formula: Click here

• Index Factsheet: Click here



# **NIFTY Thematic Indices**

NSE Indices has developed a series of thematic indices that represent the collective performance of stocks in respective theme of the index. These thematic indices are capped as per the details provided under 'Index characteristics' on subsequent pages.

- 1. **NIFTY Commodities:** The index is designed to reflect the behaviour and performance of a diversified portfolio of companies representing the commodities segment which includes sectors like Oil, Petroleum Products, Cement, Power, Chemical, Sugar, Metals and Mining. The index comprises of maximum of 30 stocks. Weights of constituents of NIFTY Commodities are capped at 10% (maximum capping limit).
- 2. **NIFTY Energy:** The index is designed to reflect the behaviour and performance of companies that represents petroleum, gas and power sector. The index comprises of maximum of 10 stocks.

Weights of each stock in NIFTY Energy index are 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.

- 3. **NIFTY India Consumption:** The index is designed to reflect the behavior and performance of a diversified portfolio of companies representing the domestic consumption sector which includes sectors like Consumer Non-durables, Healthcare, Auto, Telecom Services, Pharmaceuticals, Hotels, Media & Entertainment, etc. Companies with domestic operating revenue of more than 50% are considered eligible for inclusion in the index. The index comprises of maximum of 30 stocks. Weights of constituents of NIFTY India Consumption index are capped at 10% (maximum capping limit).
- 4. **NIFTY Infrastructure:** The index is designed to reflect the behaviour and performance of companies that represents infrastructure sector such as power, port, air, roads,



railways, shipping and other utility services providers. The index comprises of maximum of 30 companies.

Sr.	Basic Industry	Sr.	Basic Industry
No.		No.	
1	AIRLINES	21	TELECOM - CABLES
2	CONSTRUCTION CIVIL	22	HOTELS/RESORTS
3	ENGINEERING-DESIGNING-CONSTRUCTION	23	SANITARY WARE
4	LOGISTICS SOLUTION PROVIDER	24	COMPRESSORS / PUMPS
5	PORT	25	COMMERCIAL VEHICLES
6	POWER	26	GAS TRANSMISSION/MARKETING
7	POWER - TRANSMISSION	27	LPG/CNG/PNG/LNG SUPPLIER
8	SHIPPING	28	OIL EXPLORATION
9	TELECOM - EQUIPMENT	29	REFINERIES/MARKETING
10	TELECOM - SERVICES	30	BATTERIES - AUTOMOBILE
11	TOLL BRIDGE OPERATOR	31	TYRES & ALLIED
12	TRANSMISSION TOWERS	32	OFFSHORE SUPPORT SOLUTION DRILLING
13	CEMENT PRODUCTS	33	OIL STORAGE & TRANSPORTATION
14	SHIP BUILDING & ALLIED SERVICES	34	TRADING - GAS
15	POWER TRADING	35	TRAVEL
16	RAILWAYS WAGONS	36	LUBRICANTS
1 <i>7</i>	POWER EQUIPMENT	37	HOSPITAL
18	INDUSTRIAL EQUIPMENT	38	OTHER RECREATIONAL ACTIVITIES
19	CEMENT	39	EDUCATION
20	RESIDENTIAL/COMMERCIAL/SEZ Project		

Further, effective September 27, 2019, the index is computed with maximum of 30 companies and weights of each company in the index are capped at 20% (from 34% earlier).

5. **NIFTY MNC:** The index is designed to reflect the behaviour and performance of companies in which the foreign shareholding is over 50% and/ or the management control is vested in the foreign company. The index comprises of maximum of 15 companies and base date of the index is January 2, 1995 and base value of 1000 points.

Further, effective September 28, 2018, the index is computed with maximum of 30 companies and weights of each company in the index are capped at 10%. 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 10%. Weightage of such stock may increase beyond 10% between the rebalancing periods.



6. **NIFTY PSE:** The index is designed to reflect the behaviour of public sector enterprises (PSE) companies. Companies with 51% of their outstanding share capital held by the Central Government and/or State Government, directly or indirectly are considered as PSEs. The index comprises of maximum of 20 companies.

Weights of each stock in NIFTY PSE index are 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.

7. **NIFTY Services Sector**: The NIFTY Services Index is designed to reflect the behavior and performance of service sectors services sector like computers – software, IT education and training, banks, telecommunication services, financial institutions, power, media, courier, shipping etc. The index comprises of maximum of 30 companies.

Weights of each stock in NIFTY Services Sector index are 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.



### Index review and eligibility criteria

### **Index Review frequency:**

The review of these indices is undertaken semi-annually based on data for six months ending January and July.

### **Eligibility Criteria**

To be considered for inclusion in indices listed above, companies must form part of eligible universe. The eligible universe includes:

- 16. Companies should form part of NIFTY 500 at the time of review.
- 17. In case of reconstitution of child indices, latest index composition including most recent changes in respective parent index whether announced or yet to be announced shall be considered. Child indices are defined as those indices where constituents are selected from a list of any other index. Example: NIFTY Infrastructure index would be considered as a child index as constituents of NIFTY Infrastructure are selected from a list of NIFTY 500 index.
- 18. Minimum number of stocks within the index should be 10.
- 19. 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
- 20. Companies should form part of respective theme of indices as mentioned above
- In case of NIFTY Infrastructure index, companies that are allowed to trade in F&O segment at NSE are only eligible to be constituent 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.

#### **Constituent capping:**

Weights of constituents of NIFTY Commodities, NIFTY India Consumption index and NIFTY
 MNC are capped at 10% (maximum capping limit), weights of constituents of NIFTY
 Infrastructure are capped at 20% and weights of each stock in NIFTY Energy, NIFTY PSE



and NIFTY Services Sector index are 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.

#### Also see:

Index characteristics: <u>Click here</u>

Index reconstitution frequency: <u>Click here</u>

• Corporate Actions and Share Updates: Click here

• Investible weight factors: Click here

Index Calculation Formula: <u>Click here</u>

• Index Factsheet: Click here



# 8. NIFTY Shariah Indices

#### What is a Shariah Index?

Shariah Index can be used to construct Socially Responsible Investment (SRI) products that are attractive to investors who do not wish to invest in stocks of companies that engage in activities that they deem to be against their beliefs. Shariah compliant products are particularly attractive to Islamic investors, as these instruments allow followers of the Islamic faith to invest without violating their religious principles.

#### NIFTY50 Shariah:

Based on NIFTY 50, the current constituents of the index are screened for Shariah compliance. Those that are compliant form the NIFTY50 Shariah. The resulting index performance closely tracks the performance of the parent index. The NIFTY includes the largest and most liquid companies listed on the National Stock Exchange.

#### NIFTY500 Shariah:

The NIFTY 500 covers more than 90% of the total market capitalization and more than 80% of total traded volume on the National Stock Exchange. The current constituents of the index are screened for Shariah compliance. The resulting compliant stocks form the NIFTY500 Shariah, which closely tracks the performance of the parent index Representation.

#### NIFTY Shariah25:

25 Shariah compliant stocks forms part the index. The index independent and have fixed number of constituents, unlike other 2 Shariah indices (NIFTY50 Shariah & NIFTY500 Shariah), which are subsets of parent indices (NIFTY 50 & NIFTY 500 respectively) and does not have fixed number of constituents. At the time of periodic review of the index, all index constituents shall be compliant to IRDA prescribed dividend norms for investment.



#### **Screening Partner:**

NSE Indices Limited has contracted with Taqwaa Advisory and Shariah Investment Solutions (TASIS) to provide the Shariah screens and filter the stocks based on these screens.

Taqwaa Advisory and Shariah Investment Solutions (TASIS) is India's premier Shariah Advisory institution in the field of business and finance. For the last many years TASIS is at the forefront in providing shariah consultancy, monitoring and certification to many of India's reputed organizations, including those owned by the central and state government too. TASIS played a key role in promoting India's first shariah index and has now joined National Stock Exchange in providing shariah consultancy and screening services.

#### **TASIS - Shariah Supervisory Board:**

#### Mufti Abdul Kadir Barkatulla

Mufti Barkatulla is a prominent Islamic Sharia law expert with a background in economics and finance as well as social and Muslim Community work. He was trained extensively in Islamic and modern education systems in India and the UK. Mufti has contributed to the British Muslim community as an Imam, Shariah Judge, developer of Islamic Law information databases and Shariah Advisor of Islamic Banks and Funds in Europe and Asia. He is also Chairman of Board of Ulama of Halal Food Authority of UK. He has been commended by members of the British Parliament for his contributions to the Islamic Finance sector of UK.

#### Mufti Khalid Saifullah Rahmani

Mufti Khalid Saifullah Rahmani is General Secretary of Islamic Fiqh Academy, India and a founding member of All India Muslim Personal Law Board. He is founder Director of The Institute of Higher Learning in Islam, Hyderabad. He has written more than 100 books on a wide range of topics and pioneered more than fifteen institutions of Islamic education, research and jurisprudence across the country. His wide reach and broad outlook have made him respectable across wide sections and sects of the Muslim community in India.



#### Dr Hafiz Mohammad Iqbal Nadvi

Dr. Nadvi has a doctorate in Islamic jurisprudence (Fiqh) from Ummul Qura University, Makkah, Saudi Arabia. He has been Asst. Professor at King Saud University Riyadh for six years. He has taught Shariah for two decades in various institutes. He is Resident Imam of Al Nadwa Institute, Toronto, Chairman of Canadian Council of Imam and Chairman of Shariah Board, Canada. For his expertise, Dr Nadvi has been invited by Harvard Law School, London School of Economics and many other prestigious institutions.

### **Shariah Screening Process:**

#### **Business Screening:**

Activities which are not permitted under Shariah are those which involve engaging in interest earning businesses or in those businesses which are mostly harmful to human society and disallowed by Shariah. Thus companies engaged in promoting promiscuity, violence, vulgarity and businesses affecting the environment are also considered Shariah non-compliant. Hence all companies which are primarily into the following activities are screened out on the business parameter.

- Conventional financial services such as banks, insurance companies, finance and investment companies, stock broking etc.
- Production, sale and marketing of non-Halal food and beverages such as Pork, Alcohol,
   Tobacco and such other items etc.
- Companies involved in production or distribution of vulgar entertainment, such as film and other recreational activities where vulgarity, promiscuity is a part and parcel of the business undertaken / promoted
- Hotels and restaurants (providing non-Halal products or entertainment)
- Gambling, Narcotic drugs, etc.

#### **Financial Screening:**

Since interest-based transactions are prohibited by Shariah, companies passing the business screening stage are further screened to ensure that their dealings involving interest-based debt or earnings out of / deployment of funds on interest are within the maximum tolerance limits set by Shariah scholars. There are certain variations in these tolerance limits based on place and time. To remain on the conservative side from a Shariah adherence perspective,



TASIS has adopted financial screening norms which are more conservative than those followed by its peers and also justified by empirical studies of the Indian environment. TASIS norms are given below:

- Interest based-debt should be less than or equal to 25% of Total Assets
- Interest income plus returns (currently considered @7.5%) from interest-based investments should be less than or equal to 3% of the total income
- Receivables plus cash and bank balances should be less than or equal to 90% of Total Assets

### **Income Purification Ratio (IPR):**

For full compliance with Shariah law, investors are required to purge the pro rata portion of interest income accrued on their holding of shares in a company.

#### **Index Eligibility:**

The underlying index constituents are screened for Shariah compliance. Only stocks that are compliant remain in the Shariah compliant indices.

Shariah Index	Parent Index / underlying Index
NIFTY50 Shariah Index	NIFTY 50 Index
NIFTY500 Shariah Index	NIFTY 500 Index

Each of the above two parent indices has its own eligibility criteria. For eligibility criteria for the underlying indices, please refer to the methodology document of NIFTY 50 and NIFTY broad market indices.

## NIFTY Shariah 25 - Eligibility Criteria:

- The company must be domiciled in India and 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, and preferred stock that provide a guaranteed fixed return, stocks under suspension and stocks categorized under BZ series are not eligible for inclusion in the NIFTY indices.



- Equity securities with Differential Voting Rights (DVR) are eligible for inclusion in the index subject to fulfilment of specified DVR related <u>criteria</u>.
- The company's trading frequency should be at least 90% in the last six months
- The company should be Shariah compliant for last 24 months continuously
- At the time of index constituents, companies which are compliant to IRDA prescribed dividend norms for investment shall be considered eligible to be included in the index
- 25 stocks based on six month average free float market capitalization are selected as index base composition
- Shariah compliance screening is done on monthly basis and review of NIFTY Shariah 25 index is undertaken semi-annually based on data for six months ending January and July.
- During monthly review, if any index constituent becomes non-Shariah compliant then,
   Shariah compliant non-index constituent from replacement pool will be included in the index
- During semi-annual review, replacement is made if any non-index Shariah compliant security with 1.5 times free float market capitalization is available in replacement pool than the last index constituent by free float market capitalization.
- If any index constituent is replaced due to corporate action such as spin-off, merger / demerger etc. then, such company becomes eligible for index if it fulfils Shariah compliance norms for 12 months.

#### **Constituent Capping:**

Weights of each stock in NIFTY50 Shariah and NIFTY500 Shariah indices are 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.

Each constituent in the NIFTY Shariah 25 index is capped at 10%. This means that at the time of rebalancing of the index, no single constituent shall have weightage of more than 10%. 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 maximum capping limit. 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.

#### Also see:

• Index characteristics: Click here

• Index reconstitution frequency: Click here

• Corporate Actions and Share Updates: Click here

Investible weight factors: <u>Click here</u>
 Index Calculation Formula: <u>Click here</u>

• Index Factsheet: Click here



#### 9. NIFTY CPSE

NIFTY CPSE Index is constructed in order to facilitate Government of India's initiative to disinvest some of its stake in selected CPSEs. The government opted for ETF route for disinvestment. The ETF shall track the performance of the NIFTY CPSE index.

### **Selection Criteria:**

The CPSEs selected meet below mentioned parameters:

- 1. Included in the list of CPSEs published by the Department of Public Enterprise
- 2. Listed at National Stock Exchange of India Ltd. (NSE)
- 3. Having more than 51% government holding (stake via Govt. of India or President of India) under promoter category.
- 4. Companies having average free float market capitalization of more than 1000 Cr. for six month period ending December 2019 are selected.
- 5. Companies which are IRDA dividend norms compliant shall be considered eligible to be included in the index.

# **Calculation Rules & Methodology:**

#### **Index Construction and Back-Testing:**

- 1. The index has base date of 01-Jan-2009 and base value of 1000.
- 2. Back testing of the index is carried out since 01-Jan-2004.
- 3. Out of the CPSEs shortlisted for forming part of the index, CPSEs which got listed at NSE after 01-Jan-2004 are included in the index on the 1st trading day of next quarter of their listing.
- 4. Weights of constituents are capped at 25% on each rebalancing.



## **Daily Index Value Calculation:**

- 1. Daily index calculation initiated effective February 10, 2014.
- 2. The index is calculated on free float market capitalization methodology.
- 3. Weights of index constituent shall be re-aligned (i.e. capped at 20%) on a quarterly basis after the expiry of the F&O contracts in March, June, September and December.
- 4. Additionally, at the time of rebalancing of shares / change in index constituents / change in investable weight factors (IWFs), the weights of the constituents shall be re-aligned.
- 5. The index values are calculated on real-time basis.
- 6. The total return values of the index are also computed on daily end of day basis.
- 7. The index values shall be calculated on each day when capital market segment of National Stock Exchange is open for trading in equity shares.

## **Constituent capping:**

Weights of constituents of NIFTY CPSE index are capped at 20% as explained hereunder:

- The capping factor of stocks is realigned upon change in investible weighted factor (IWF),
  replacement of scrips in the index, semi-annual rebalancing and on a quarterly basis,
  which will normally come into effect after the expiry of the F&O contracts in March, June,
  September and December.
- 2. In the event of weight realignment, capping factor will be calculated for all constituents whose uncapped weight is greater than 20%. In between aforementioned periods, the weight of constituents can go above 20% depending on the price movement.

## **Index Maintenance:**

## Rebalancing

- Index will undergo a review (exclusion or replacement) in case of corporate actions such as merger, de-merger etc.
- Revision in the index (change in eligibility criteria, inclusions, exclusions, capping etc.) shall be carried out upon formal request received from the CPSE ETF issuer AMC as appointed by the Ministry of Disinvestment.



## Also see:

• Index characteristics: Click here

• Index reconstitution frequency: <u>Click here</u>

• Corporate Actions and Share Updates: Click here

• Investible weight factors: <u>Click here</u>

• Index Calculation Formula: <u>Click here</u>

• Index Factsheet: Click here



## 10. NIFTY100 Liquid 15

## Introduction

NIFTY100 Liquid 15 Index is designed to provide exposure to the liquid stocks while making the index easily replicable and tradable. All the index constituents have derivatives traded on them. The maximum weight of a single stock is capped at 15%.

## **Eligible Securities:**

Constituents of NIFTY 100 index that are available for trading in NSE's Futures & Options segment are eligible for inclusion in the NIFTY100 Liquid 15 index.

In case of reconstitution of child indices, latest index composition including most recent changes in respective parent index whether announced or yet to be announced shall be considered. Child indices are defined as those indices where constituents are selected from a list of any other index. NIFTY100 Liquid 15 index would be considered as a child index as constituents of this index selected from a list of NIFTY 100 index.

## **Index Review frequency:**

The review of NIFTY100 Liquid 15 is undertaken semi-annually based on data for six months ending January and July.

## **Eligibility Criteria**

- The index shall have 15 stocks from the 100 stocks forming part of NIFTY 100 and are individually eligible in the F&O segment as per the criteria stipulated by SEBI.
- Equity securities with Differential Voting Rights (DVR) are eligible for inclusion in the index subject to fulfillment of specified DVR related <u>criteria</u>.
- For inclusion in the index the stock shall have turnover ratio (TRO) greater than 100% in majority of the last 6 months at time of review.
- The free float market capitalization shall be average daily free float during the month of review.



The turnover ratio (TRO) shall be computed as under

TRO = 
$$\frac{AGGREGATE\ MONTHLY\ TURNOVER}{AVERAGE\ FREE\ FLOAT\ DURING\ THE\ MONTH}$$
 \* 12

• The eligible companies are than ranked in descending order of the free float market capitalization and the top 15 companies are selected to form the base index.

#### **Exclusion criteria**

- If the stock's TRO is less than 100% in 3 out of 6 months then such stock shall be eligible for exclusion. The stock replacing it shall meet the inclusion criteria mentioned above.
- A stock continuing to meet the inclusion criteria may still be excluded if any other stock
  meeting the inclusion criteria has 1.5 times free float market capitalization that of the
  existing stock in the index.
- The total number of stocks which shall be replaced in a review shall be restricted to 2. If there are more than 2 stocks eligible for replacement then stock with lower free float market capitalisation shall be replaced first.
- The review will take place on a semi-annual basis.

#### **Constituent 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.



## Also see:

• Index characteristics: Click here

• Index reconstitution frequency: <u>Click here</u>

• Corporate Actions and Share Updates: Click here

Investible weight factors: <u>Click here</u>Index Calculation Formula: <u>Click here</u>

• Index Factsheet: Click here



## 11. NIFTY Midcap Liquid 15

## Introduction

NIFTY Midcap Liquid 15 Index is designed to provide investors exposure to the liquid midcap stocks while making the index easily replicable and tradable. All the index constituents have derivatives traded on them. The maximum weight of a single stock is capped at 15%.

## **Eligibility Criteria**

The criteria for the NIFTY Midcap Liquid 15 Index include the following:

- Constituents of NIFTY Midcap 50 index that are available for trading in NSE's Futures
   & Options segment are eligible for inclusion in the NIFTY Midcap Liquid 15 index.
- In case of reconstitution of child indices, latest index composition including most recent changes in respective parent index whether announced or yet to be announced shall be considered. Child indices are defined as those indices where constituents are selected from a list of any other index. NIFTY Midcap Liquide 15 index would be considered as a child index as constituents of this index selected from a list of NIFTY Midcap 50 index.
- Equity securities with Differential Voting Rights (DVR) are eligible for inclusion in the index subject to fulfilment of specified DVR related <u>criteria</u>.
- Companies are selected on the parameter of Turnover ratio. The turnover ratio is calculated for each month. The companies with a turnover ratio of more than 100% in at least 3 of the last 6 months are considered for index construction.
- The turnover ratio (TRO) shall be computed as under

$$TRO = \frac{AGGREGATE\ MONTHLY\ TURNOVER}{AVERAGE\ FREE\ FLOAT\ DURING\ THE\ MONTH} * 12$$

- The eligible companies are than ranked in descending order of the free float market capitalization and the top 15 companies are selected to form the base index.
- The Base date for the Index is taken as 01-01-2009 and the base value is taken as 1000

#### **Index Review**



• The review of NIFTY Midcap Liquid 15 index is undertaken semi-annually based on data for six months ending January and July.

• The total number of stock to be replaced during a review is capped at 4 stocks.

 During the review, the index constituent is excluded if TRO is less than 100% in 3 out of the previous 6 months.

 A stock continuing to meet the inclusion criteria may still be excluded if any other stock meeting the inclusion criteria has 1.5 times free float market capitalization that of the existing stock in the index.

 However if stocks are excluded from the F&O segment or NIFTY Midcap 50 Index the restriction on number of stocks replaced may not be applicable.

## **Constituent 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.

#### Also see:

Index characteristics: Click here

• Index reconstitution frequency: Click here

• Corporate Actions and Share Updates: Click here

• Investible weight factors: Click here

• Index Calculation Formula: Click here

• Index Factsheet: Click here



## 12. NIFTY ESG Indices

# NIFTY100 ESG Index NIFTY100 Enhanced ESG Index

#### Introduction

Environmental, Social and Governance based investment strategy has gained popularity among investors globally. The underlying drive behind ESG theme-based investing lies in generating superior risk adjusted returns from socially responsible, environment friendly and ethical firms. The construct of NIFTY100 ESG indices results in portfolio with similar sector exposure vis-à-vis NIFTY 100 (parent index), but with stock level ESG tilt. This results in portfolio with higher weightage towards companies with better ESG performance.

## **Highlights**

- Designed to reflect the performance of companies that are part of NIFTY 100 index, based on Environmental, Social and Governance score.
- The companies that are involved in any major Environmental, Social or Governance controversy shall not be considered for selection in the index
- Companies engaged in the business of tobacco, alcohol, controversial weapons and gambling operations shall be excluded
- Sector weights are based on free float market cap. Each index constituent within sector is tilt weighted based on ESG score and is capped at 10%.
- The indices have a base date of April 01, 2011 and a base value of 1000.



## Methodology

## **Eligibility criteria**

To form part of NIFTY100 ESG Index and NIFTY100 Enhanced ESG Index, stocks should qualify the following eligibility criteria(s). The ESG and controversy research is provided by Sustainalytics.

## **Eligible Universe:**

- Stock should form part of NIFTY 100 at the time of index review
- Only ordinary equity shares will be considered.

#### **ESG Score:**

ESG performance of a company is measured on three pillars: environmental, social and governance. Sustainalytics has defined set of indicators which evaluate the company's performance within each criterion. On each applicable indicator, a company is assigned a score of 0 to 100. The weight of each indicator depends on the relevance and importance of the indicator in the sector in which the company operates. Based on the raw score and weight of all applicable indicators across E, S and G pillar, a weighted average company level ESG score is determined, which ranges from 0 to 100.

The companies are assessed annually by Sustainalytics based on annual filings & other sources. Additionally, companies are monitored on an ongoing basis for any controversy pertaining to ESG.

Based on ESG scores following companies are eligible for inclusion in NIFTY100 ESG Indices:

- Companies should have an ESG score at the time of review
- For inclusion in NIFTY100 Enhanced ESG Index, the company should have normalized ESG score of at least 50%.



#### **Controversy:**

A key component of Sustainalytics ESG research focuses on assessing a company's involvement in incidents and controversies which may potentially imply higher risk to the investors. Events are classified into 10 areas across E, S and G pillars and are scored on a scale from one to five, depending on the reputational risk to the company and potential impact on stakeholders. "Category 1" controversy event has low impact whereas "Category 5" controversy event has the highest, indicating a severe impact on the involved stakeholders.

 Companies with controversy category of 4 and 5 shall be excluded (scale: 1-5, category 1 being least controversial)

## **Business Involvement:**

Companies engaged in the business of tobacco, alcohol, controversial weapons and gambling operations are excluded. Controversial Weapons include chemical weapons, biological weapons, anti-personnel mines and cluster bombs. Information for excluding companies based controversial weapons is provided by Sustainalytics.

## **Reconstitution & Rebalancing criteria**

- Index will be reconstituted semi-annually in June and December based on data for six months ending May and November respectively.
- Stocks that meet the above eligibility criteria will be considered eligible
- Stocks that do not form part of NIFTY 100 at the time of review are excluded
- An existing constituent is compulsorily excluded if it has controversy category of 4 or 5
  (scale: 1-5, category 1 being least controversial)
- For constituents of 'NIFTY100 Enhanced ESG Index', if the normalized ESG score falls below 49%, such stocks shall be excluded from the index
- Apart from the scheduled review, additional ad-hoc reconstitution and rebalancing of the index will be initiated in case of
  - the index constituents ceases to form part of NIFTY 100 due to suspension,
     delisting or scheme of arrangement
  - o If an index constituent is flagged for controversy category 5.



## **Weight and Constituent Capping:**

- Weight of sectors will be based on free float market capitalization of the eligible constituents.
- Sector with weight > 25% in the parent index, will be capped at the same weight in the ESG indices.
- Sector with weights < 25% in the parent index, will be capped at 25% in the ESG Indices (in case of breach)
- Each constituent within sector is tilt weighted based on ESG score i.e. the constituent weight is derived from its free float market capitalization and ESG score
- Constituent weight is capped at 10%
- The weights may drift between rebalancing due to the movement in stock prices

## Also see:

- Index characteristics: Click here
- Index reconstitution frequency: Click here
- Corporate Actions and Share Updates: Click here
- Investible weight factors: Click here
- Index Calculation Formula: Click here
- Index Factsheet: Click here



#### NIFTY100 ESG Sector Leaders Index

## Introduction

Nifty100 ESG Sector Leaders Index aims to track the performance of select companies within each sectors of the Nifty 100 which have scored well on management of ESG risk and which do not have involvement in any major controversies.

## Highlights

- The index tracks the performance of the stocks that are part of the Nifty 100 index and which have scored well on management of Environmental, Social and Governance risk
- The companies that are involved in any major Environmental, Social or Governance controversy shall not be considered for selection in the index
- Companies with ESG risk score greater than Global Subindustry average ESG risk score shall be excluded
- Companies engaged in the business of tobacco, alcohol, controversial weapons and gambling operations shall be excluded
- Provides ~75% coverage of Free Float Market Cap of eligible stocks within each sector of Nifty 100
- Weight of the stock is based on free-float market capitalization with a maximum stock cap of 10%
- The index has a base date of January 01, 2014, with a base value of 1000

## Methodology

## **Eligibility criteria**

To form part of Nifty100 ESG Sector Leaders index, stocks should qualify the following eligibility criteria:

- All stocks forming part of Nifty100 at the time of review are eligible to be the part of this index (June and December)
- Only ordinary equity shares will be considered
- Companies with 'ESG risk score' greater than or equal to 40, which are categorised as 'severe' category shall be excluded
- Companies whose 'ESG risk score' is greater than the 'Global Subindustry Average ESG risk score' shall be excluded
- Companies with controversy category of 4 and 5 shall be excluded
- Companies which derive 25% or more of their revenues from cigarettes, breweries, weapons, gambling, and nuclear power or any revenue from 'controversial weapons' subject to the company disclosures made under segment revenue break up in its annual report shall be excluded



#### **Stock Selection Criteria:**

- The stocks within the eligible universe are ranked in the ascending order of their ESG risk rating within their respective sectors<sup>1</sup>
- The stocks are then selected from the ranked universe until the 75% coverage by cumulative weight of six month average free-float market capitalisation of the eligible stocks within the sector<sup>1</sup> is reached

1. Banks and Non-Banks are considered as separate sectors for stock selection

## **Reconstitution & Rebalancing criteria**

- The index is reconstituted semi-annually in June and December and effective on the next working day after the F&O expiry using the following data cut-off:
  - The stock selection is based on 6 month average free-float market capitalization ended May and November for the reconstitution in June and December respectively
  - The ESG risk score, controversy level, Global Subindustry Average ESG risk score and controversial business involvement exclusions should be based on latest available data at the time of review
- Stocks forming part of Nifty100 at the time of review are eligible to be the part of the universe
- Stocks with ESG risk score greater than 40 are excluded
- Stocks with controversy category of 4 and 5 are excluded
- Stocks which derive 25% or more of their revenue from cigarettes, breweries, weapons, gambling, and nuclear power, or any revenue from 'controversial weapons' are excluded
- Stocks with ESG risk score greater than 'Global Subindustry Average ESG risk score' shall be excluded, however, an existing constituent shall be excluded from the eligible universe if its 'ESG risk score' exceeds 1.05 times the 'Global Subindustry Average ESG risk score'
- Stocks that meet the above eligibility criteria will be considered eligible
- The following guidelines are used in order to achieve the target sector coverage of 75%
  - The eligible stocks are sorted in the following order within their respective sectors:
    - Stocks are sorted in the ascending order of the ESG risk score
    - In case there are two stocks with equal ESG Risk score, the stocks are then sorted such that existing constituent are at the top and new stocks at the bottom
    - Within the above, if there are two existing constituent or two new stocks with equal ESG risk score, stocks are then sorted based on their 6-month avg. free-float market capitalization



- Based on above sorting, the cumulative % free-float sector coverage is calculated
- In each sector, the companies are selected until the cumulative sector coverage of the selected securities crosses 75% following the below guidelines,
  - 1. The company that increases the cumulative sector coverage above 75% is termed as 'marginal company'
  - 2. If the marginal company is an existing index constituent, it is retained in the index
  - 3. If the marginal company is a new constituent, it will be included in the index:
    - Only if the cumulative weight of companies before the addition of marginal company is less than 70%
    - If, the cumulative weight exceeds 75% after the addition of the marginal stock, such that the excess weight above 75% is lower than the earlier deficit below 75% (i.e. 75% minus the cumulative weight *before* including the marginal stock). For instance, if the cumulative weight of the stocks before the addition of marginal stock is 72.5% and on the addition of the marginal stock, the cumulative weight becomes 77%, the stock will be included in the index (as the excess weight of 2% is lower than the deficit of 2.5%). But if on the addition of marginal stock the weight becomes 78%, the new constituent will not be included in the index (as the excess weight of 3% is higher than the deficit of 2.5%)
    - If there is only 1 eligible stock within the sector, it is included in the index
- Apart from the scheduled review, additional ad-hoc reconstitution and rebalancing of the index will be initiated with a notice of 5 working days in case of:
  - The index constituents ceases to form part of NIFTY 100 due to suspension, delisting or scheme of arrangement
  - If an index constituent is flagged for controversy category 4 or 5

#### Weight and Constituent Capping:

- The weight of the stock in the index is calculated based on its free-float market-capitalisation subject to stock cap of 10%
- Capping will be done considering the closing prices of the index constituents 5 working days prior to the effective date. As a result of which the weight of the index constituents may be greater than their capping limits as on the effective date.
- Index weight will be rebalanced on a semi-annual basis and implemented on the first working day after the F&O expiry in June and December
- The weights may drift between the two rebalancing periods due to stock price movements



## Also see:

• Index characteristics: Click here

• Index reconstitution frequency: Click here

• Corporate Actions and Share Updates: Click here

Investible weight factors: <u>Click here</u>Index Calculation Formula: <u>Click here</u>

• Index Factsheet: Click here



## 13. NIFTY Corporate Group Indices

NIFTY Aditya Birla Group NIFTY Mahindra Group NIFTY Tata Group

#### Introduction

The corporate group indices are designed to reflect performance of companies belonging to a particular corporate group. Globally index providers have developed indices on corporate groups and some of these indices also have Exchange Traded Funds (ETFs).

In India too, there are big corporate groups and some of the group companies are listed on National Stock Exchange of India (NSE). Various categories of market participants have invested in the companies forming part of these groups.

Indices on 3 corporate groups namely Tata Group, Aditya Birla Group and Mahindra Group have been developed by NSE Indices Limited and they are named as NIFTY Aditya Birla Group index, NIFTY Mahindra Group Index and NIFTY Tata Group index. The indices will include all the listed companies of the respective groups.

Additional index series of Tata Group namely 'NIFTY Tata Group 25% Cap' based on free float market capitalisation is also developed.

These indices serve variety of purposes such as benchmarking fund portfolios, launching of index funds, ETFs and structured products.



## Index Construction & Review Methodology:

#### **Calculation method:**

Corporate Group indices namely **NIFTY Aditya Birla Group**, **NIFTY Mahindra Group** and **NIFTY Tata Group** Indices are calculated using full market capitalisation method. This method is used to measure the total equity value of the companies in the respective group. The indices have a base date of April 01, 2005 and a base value of 1000

#### **Initial Universe & security selection:**

All companies forming part of the respective corporate group that are domiciled in India
and traded (listed & traded and not listed but permitted to trade) at the National Stock
Exchange (NSE) are eligible to form part of the respective index. DVR shares of eligible
companies will also form part of the index.

## Rebalancing & replacement rule:

- A new company which comes out with an IPO / new listing
- A company gone out of the index due to corporate actions such as scheme of arrangement/ demerger/acquisition, take-over etc.

will be screened for inclusion on quarterly basis (Jan-Apr-Jul-Oct end cycle) and if eligible, will get included in the index effective after the expiry of the F&O contracts (March-June-September-December)

 Scrips will be excluded from the index in case of suspension or delisting or in case of corporate event such as scheme of arrangement / demerger / acquisition

#### Also see:

Index characteristics: <u>Click here</u>

• Index reconstitution frequency: Click here

• Corporate Actions and Share Updates: Click here

• Investible weight factors: Click here

• Index Calculation Formula: Click here

Index Factsheet: <u>Click here</u>



## **NIFTY Tata Group 25% Cap**

#### Introduction

The NIFTY Tata Group 25% Cap Index consists of 10 Tata group companies listed at NSE that meet market capitalization and liquidity criteria.

#### Selection criteria

- Companies must rank within the top 800 companies by average free float market capitalisation and average turnover for the last six months.
- Final selection of 10 companies shall be done based on free float market capitalisation

\*The index is calculated on free float market capitalization basis since October 01, 2010; prior to which it was calculated on full market capitalization. Top 10 companies are selected based on full market capitalisation prior to October 01, 2010 and then based on free float market capitalisation.

#### **Constituent Capping:**

Each constituent in the NIFTY Tata Group 25% Cap index is capped at 25% 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 25%. 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 25%. Weightage of such constituent may increase beyond 25% 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.



## **Eligibility criteria:**

- Index is rebalanced semi-annually based on data for six months ending January and July.
- A company which comes out with an IPO / new listing will be eligible for inclusion in the index after it fulfils the eligibility criteria for a 3 month period instead of a period of 6 months
- Final selection of 10 companies shall be done based on free float market capitalisation
- Companies will be included if free-float market capitalisation is 1.50 times the free-float market capitalization of the smallest index constituent in the index.
- Constituent will be excluded from the index if it is excluded from NIFTY Tata Group Index.
   Such impacted security will be removed and replaced by the next higher ranked security
   (on the basis of free float market capitalization post fulfilling other eligibility criteria)

#### Also see:

- Index characteristics: Click here
- Index reconstitution frequency: Click here
- Corporate Actions and Share Updates: Click here
- Investible weight factors: Click here
- Index Calculation Formula: Click here
- Index Factsheet: Click here



# 14. NIFTY SME Emerge

#### Introduction

Small and Medium Enterprises (SME) plays a crucial role in growth of the Indian economy by producing diverse range of products & services and creating employment opportunities. 'NIFTY SME EMERGE Index' is designed to reflect the performance of a portfolio of eligible small and medium enterprises that are listed on NSE EMERGE platform.

## **Highlights**

- The index has a base date of December 01, 2016 and a base value of 1000
- The index captures the performance of select liquid SMEs listed on NSE EMERGE platform
- Constituents are weighted based on free float market capitalization
- Index is reconstituted on a quarterly basis

## Methodology

## **Eligibility criteria**

- To form part of the NIFTY SME Index, stocks should qualify the following eligibility criteria:
  - o Stocks should be listed under NSE EMERGE platform
  - At the time of quarterly review, stocks should have traded for a minimum of 25% of trading days subject to a minimum of 10 trading days during the previous 3 months
  - Minimum number of constituents in the index is 20. In case less than 20 stocks are available to form part of the index, the minimum trading frequency threshold of 25% is lowered by 1% at a time till minimum of 20 stocks are available to form part of the index.



#### **Reconstitution criteria**

- Index shall be reconstituted quarterly based on data for three months ending February,
   May, August and November; where
  - 2 out of the 4 quarterly reviews are aligned with semi-annual review of NIFTY broad market Indices, effective next working day post the last Thursday of March and September.
  - Remaining 2 quarterly reviews shall be effective in next working day post the last
     Thursday of June and December
- An existing index constituent is excluded if its trading frequency calculated using the method mentioned above falls below 10%
- Apart from scheduled reviews, additional ad-hoc reconstitution of the index shall be initiated in case any index constituent undergoes suspension/delisting/ scheme of arrangement or if they move to NSE Mainboard

#### Also see:

- Index characteristics: Click here
- Index reconstitution frequency: Click here
- Corporate Actions and Share Updates: Click here
- Investible weight factors: Click here
- Index Calculation Formula: Click here
- Index Factsheet: Click here



# **NIFTY Strategy Indices**

# 1. NIFTY Dividend Opportunities 50

## Introduction

The NIFTY Dividend Opportunities 50 Index is designed to provide exposure to high yielding companies listed on NSE while meeting stability and tradability requirements. The index comprises of 50 companies. A key feature of the index is the methodology of selection of stocks i.e. the method employs a yield driven selection criteria that aims to maximize yield while providing stability and tradability.

The index is calculated using free float market capitalization methodology with a base date of October 1, 2007 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 10%. Weightage of such stock may increase beyond 10% between the rebalancing periods

## Index Construction & Review Methodology:

#### **Index Review frequency:**

The review of NIFTY Dividend Opportunities 50 index is undertaken annually based on data for six months ending January.

## **Eligibility Criteria**

- The company must be domiciled in India and 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, and preferred stock that provide a guaranteed fixed return, stocks under suspension and stocks categorized under BZ series are not eligible for inclusion in the NIFTY indices.
- Equity securities with Differential Voting Rights (DVR) are eligible for inclusion in the index subject to fulfilment of specified DVR related <u>criteria</u>.



- Companies must rank within the top 300 companies by average free-float market capitalisation and average daily turnover for the last six months.
- The company's trading frequency should be at least 90% in the last six months.
- The company should have a listing history of 1 year.
- 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.
- Companies must have reported net profit as per latest annual audited results.
- A dividend yield of each company is calculated using total dividend amount in the last 12 months (calculated based on ex-dividend date) prior to the rebalancing reference date using average market capitalization for one-year period ending January.
- Top 25 companies ranked by annual dividend yield will be compulsorily included in index and companies ranked below 75 by annual dividend yield will be compulsorily excluded from the index.
- After making the selection as stated above, any shortfall in arriving at a list of 50 companies shall be filled by selecting companies based on higher annual dividend yield rank.

#### **Constituent Capping:**

Each constituent in the index is capped at 10%. This means that at the time of rebalancing of the index, no single constituent shall have weightage of more than 10%. 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 10%. Weightage of such constituent may increase beyond 10% 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.

## Also see:

• Index characteristics: Click here

• Index reconstitution frequency: Click here

• Corporate Actions and Share Updates: Click here

Investible weight factors: <u>Click here</u>
 Index Calculation Formula: <u>Click here</u>

• Index Factsheet: Click here



# 2. NIFTY Dynamic Asset Allocation indices

# NIFTY 50 & Short Duration Debt – Dynamic P/E NIFTY 50 & Short Duration Debt – Dynamic P/B

## Introduction

The NIFTY Dynamic Asset Allocation Index series includes hybrid indices that track multiple asset-classes (namely equity and debt). The dynamic asset allocation model assigns weights between the two asset classes based on relative market valuation. The index series presently consists of 2 indices namely NIFTY 50 & Short Duration Debt – Dynamic P/E Index and NIFTY 50 & Short Duration Debt – Dynamic P/B Index.

Within NIFTY 50 & Short Duration Debt – Dynamic P/E and NIFTY 50 & Short Duration Debt – Dynamic P/B indices, asset allocation between equity and debt is done by a model that uses Price-Earnings ratio (P/E) or Price-Book ratio (P/B) of NIFTY 50 index. While the allocation is primarily between equity and debt, in case the model prescribes allocation to equity that is lower than 65%, the equity arbitrage is used to maintain the equity allocation at 65%. Arbitrage is done by giving equal allocation to NIFTY 50 TR index and NIFTY 50 Futures index (short). In case arbitrage is used, 10% of the asset allocated to NIFTY 50 Futures index (short) is additionally allocated to NIFTY 1D Rate index (CBLO component) in order to capture the margin requirement.

# Highlights

- The Indices have a base date of April 01, 2005 and base value of 1000
- Asset allocation is based on a model that compares current Price-Earnings ratio (P/E) or Price-Book ratio (P/B) with the average, maximum and minimum Price-Earnings ratio (P/E) or Price-Book ratio (P/B) of NIFTY 50 in previous 7 years
- Maximum allocation to equity component is 80% and minimum allocation is 65% (including arbitrage).
- Maximum allocation to debt (including CBLO) component is 35% and minimum allocation is 20%

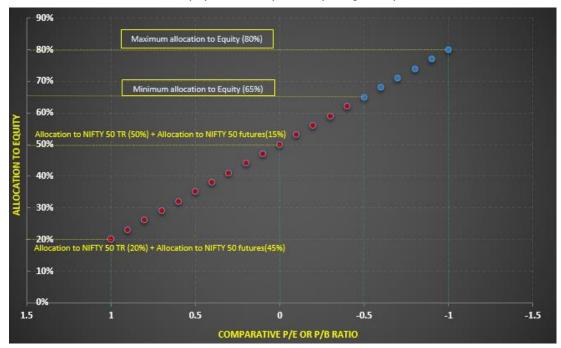


- In case arbitrage is used, 10% of the asset allocated to NIFTY 50 Futures index (short) is allocated to NIFTY 1D Rate index (CBLO).
- The asset allocation in the index is rebalanced on a monthly basis
- Weights of the equity, fixed income, CBLO and arbitrage component can drift between monthly reset dates due to underlying asset price movement.

## Methodology

- The NIFTY Dynamic Asset Allocation Indices present consist of 2 indices namely
  - NIFTY 50 & Short Duration Debt Dynamic P/E Index where asset allocation is based on the comparison of NIFTY 50 P/E with the average, maximum, minimum P/E of NIFTY 50 in previous 7 years
  - NIFTY 50 & Short Duration Debt Dynamic P/B Index where asset allocation is based on the comparison of NIFTY 50 P/B with the average, maximum, minimum P/B of NIFTY 50 in previous 7 years
- For both indices, the assets are allocated among following components:
  - Equity component NIFTY 50 TR Index
  - o Debt component NIFTY Short duration debt index
  - o Arbitrage Component NIFTY 50 TR Index and NIFTY 50 Futures index (short)
  - o CBLO Component NIFTY 1D Rate Index

Exhibit 1: Allocation between equity and debt components depending on comparative ratio





## **Asset Allocation rules:**

In case of NIFTY 50 & Short Duration Debt – Dynamic P/E and NIFTY 50 & Short Duration Debt – Dynamic P/B indices:

- Equity allocation (NIFTY 50 TR) is determined by an asset allocation model which compares the current value of P/E or P/B of NIFTY 50 with the average, maximum and minimum P/E or P/B of NIFTY 50 in previous 7 years
- Maximum allocation to equity component is 80% and minimum allocation is 65%
- In case, the model prescribes an allocation to equity that is lower than 65%, the equity arbitrage is used to maintain the equity allocation at 65%. Arbitrage is done by giving equal allocation to NIFTY 50 TR index and NIFTY 50 Futures index (short)
- In case arbitrage is used, 10% of the asset allocated to NIFTY 50 Futures index (short) is additionally allocated to NIFTY 1D Rate index (CBLO component) in order to capture the margin requirement
- Remaining allocation is given to debt component (NIFTY Short duration debt index), hence maximum allocation to debt (including CBLO) component is 35% and minimum allocation is 20%
- The asset allocation in the index is rebalanced on a monthly basis
- The month over month change in allocation to equity component (NIFTY 50 TR, excluding arbitrage component) by asset allocation model at the time of rebalancing is capped at 10%



## 3. NIFTY Growth Sectors 15

## Introduction

NIFTY Growth Sectors 15 Index is designed to provide investors exposure to the liquid stocks from sectors of market interest. The index is easily replicable and tradable. All the index constituents have derivatives traded on them. The weight of a single stock is capped at 15%.

#### **Selection Criteria**

The criteria for the NIFTY Growth Sectors 15 Index include the following 2 steps:

#### 1. Sector Selection:

#### **Base Composition:**

Sectors are selected based on P/E and P/B values of NSE Indices Limited (formerly known as India Index Services & Products Limited-IISL) sector indices, which are compared to NIFTY 50. The yearly avg. P/E and avg. P/B values are compared with NIFTY's yearly avg. P/E and avg. P/B values and if, out of the 4 observations, sector that have higher P/E and P/B in 3 out of 4 observations are shortlisted.

For the purpose of clarity, for 2 years period, there will be 4 observations (i.e. 2 yearly avg. P/E numbers and 2 avg. P/B numbers for each index). Out of 4 observations, sectors that have higher P/E and P/B in 3 out of 4 observations are selected.)

#### **Stock Selection:**

#### **Base Composition:**

- Securities having derivatives available on them, from selected sectors for base period
   (i.e. July-December 2008) are identified
- The securities are then ranked as per Free float market capitalization and top 50% of the securities are carried forward for further scrutiny
- The securities identified in step 2 are then ranked by EPS growth frequency
- Any security which had negative EPS for base review period of not considered
- Top 15 companies are selected as base composition



#### **Index Review:**

## Stock review: (Periodicity: semi-annually)

- Once in six months, stocks are reviewed in order to find out the better replacement available from the selected sectors based on data for six months ending January and July.
- From selected sectors, securities on which derivatives are available and has positive EPS
   shall form part of replacement pool
- At the time of semi-annual review, replacement shall be made from the same sector with greater EPS growth frequency and greater free float market capitalization than the stock that is being replaced.
- Further, replacement shall also be made from the same sector with same EPS growth frequency and free float market capitalization 1.5 times higher than the stock that is being replaced.
- In case of scheme of arrangement or non-availability of F&O in any of the index constituent, a replacement shall be made from the list of stocks arranged in descending order of EPS growth frequency and free-float market capitalization within the same sector subject to minimum EPS growth frequency of 3.
- In case of non-availability of stocks meeting the above requirement, replacement shall be made based on greater EPS growth frequency and free float market capitalization across all eligible sectors.
- At the time of review, stocks meeting dividend norms specified by IRDA are considered eligible.

## Sector and stock review: (Periodicity: once in 2 years)

- Sectors are screened once in 2 years in order to identify sectors, which are of market interest.
- For 2 year period, there will be 4 observations (i.e. 2 yearly P/E numbers and 2 P/B numbers for each index). Out of 4 observations, sectors that have higher P/E and P/B in 3 out of 4 observations are selected for inclusion in index.
- From selected sectors, securities having derivatives available are identified
- The securities are then ranked as per Free float market capitalization and top 50% of the securities are carried forward for further scrutiny
- Securities having positive EPS are only considered



- The remaining stocks after above step are then ranked in the descending order of EPS growth frequency and then free-float market capitalization. EPS growth frequency is measured as number of instances, a company would have reported positive quarter on quarter growth in preceding 4 quarters.
- From the above list, include one stock each from the eligible sectors based on greater EPS growth frequency (subject to minimum EPS growth frequency of 3) and within same EPS growth frequency, based on free float market capitalization across all eligible sectors.
- Remaining stocks shall be selected based on greater EPS growth frequency and within same EPS growth frequency, based on free float market capitalization across all eligible sectors.
- Effective 3rd March 2014 at the time of review, stocks meeting dividend norms specified
   by IRDA are considered eligible.

## **Constituent 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.



## Also see:

• Index characteristics: Click here

• Index reconstitution frequency: <u>Click here</u>

• Corporate Actions and Share Updates: Click here

• Investible weight factors: Click here

• Index Calculation Formula: <u>Click here</u>

• Index Factsheet: Click here



# 4. NIFTY50 Equal Weight

## 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 flagship 'NIFTY 50' index is widely tracked and traded as the benchmark for Indian Capital Markets. The NIFTY 50 is based on free float market capitalization methodology.

NIFTY50 Equal Weight Index represents an alternative weighting strategy to its market capitalization based parent index, the NIFTY 50 Index. The index includes the same companies as its parent index, however, weighted equally. The index aims to measure the performance of constituents forming part of the parent index, the NIFTY 50 Index, where each company in the index will be assigned equal weights at the time of review. The index has a base date of November 03, 1995 and a base value of 1000.

## Index Construction & Review Methodology:

## **Eligibility criteria**

- All constituents forming part of NIFTY 50 will form part of the NIFTY50 Equal Weight Index
- Any change in composition of NIFTY 50 will be incorporated in the index

#### **Reconstitution & Rebalancing criteria**

- Index will be reconstituted semi-annually based on January and July ending data along with the review of NIFTY 50.
- The replacement of stocks in NIFTY 50 (if any) is 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.
- Weightage of stocks in equal weighted indices are aligned equally at the time of change in the index composition in March and September.
- Additionally, weightage will be aligned equally on a quarterly basis considering the closing prices of the index constituents 5 working days prior to the effective date of changes and



implemented from the first working day after F&O expiry of March, June, September and December after providing five working days' prior notice.

- Weights may drift between rebalancing due to movement in stock prices
- Apart from the scheduled review, additional ad-hoc reconstitution and rebalancing of the index will be initiated in case any of the index constituents ceases to form part of NIFTY 50 due to suspension, delisting or scheme of arrangement

## **Constituent Weights:**

 At each rebalancing and reconstitution, all the companies in the index are given equal weights.

$$w = \frac{1}{N}$$

Where, N = Number of companies in the index.

• In case there are multiple securities (e.g. DVR) of the same company in the index, the company will be equal weighted and the securities will be weighted in proportion to free float-adjusted market capitalization.

## Also see:

• Index characteristics: Click here

• Index reconstitution frequency: Click here

• Corporate Actions and Share Updates: Click here

• Investible weight factors: Click here

• Index Calculation Formula: Click here

• Index Factsheet: Click here



# 5. NIFTY100 Equal Weight

## Introduction

The NIFTY100 Equal Weight Index comprises of the constituents forming part of NIFTY 100 Index (free float market capitalization based Index). The NIFTY 100 tracks the behavior of combined portfolio of two indices viz. NIFTY 50 and NIFTY Next 50. It is a diversified 100 stock index.

The constituents of NIFTY100 Equal Weight Index are assigned equal weight at each periodic re-balancing (quarterly re-balancing and semi-annual review) of the Index. Under this methodology, at the time of rebalancing every constituent would get an equal representation regardless of the size of each company in the Index. The base date of the index is January, 01 2003 (Same as NIFTY 100 Index).

## Index Construction & Review Methodology:

## **Eligibility criteria**

- All constituents forming part of NIFTY 50 and NIFTY Next 50 (together constitutes NIFTY 100) will form part of the NIFTY100 Equal Weight Index
- Any change in composition of NIFTY 100 will be incorporated in the index

## **Reconstitution & Rebalancing criteria**

- Index will be reconstituted semi-annually based on January and July ending data along with the review of NIFTY 100.
- The replacement of stocks in NIFTY 100 (if any) is 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.
- Weightage of stocks in equal weighted indices are aligned equally at the time of change in the index composition in March and September.
- Additionally, weightage will be aligned equally on a quarterly basis considering the closing prices of the index constituents 5 working days prior to the effective date of changes and



implemented from the first working day after F&O expiry of March, June, September and December after providing five working days' prior notice.

- Weights may drift between rebalancing due to movement in stock prices
- Apart from the scheduled review, additional ad-hoc reconstitution and rebalancing of the index will be initiated in case any of the index constituents ceases to form part of NIFTY 100 due to suspension, delisting or scheme of arrangement

## **Constituent Weights:**

 At each rebalancing and reconstitution, all the companies in the index are given equal weights.

$$w = \frac{1}{N}$$

Where, N = Number of companies in the index.

• In case there are multiple securities (e.g. DVR) of the same company in the index, the company will be equal weighted and the securities will be weighted in proportion to free float-adjusted market capitalization.

## Also see:

- Index characteristics: Click here
- Index reconstitution frequency: Click here
- Corporate Actions and Share Updates: <u>Click here</u>
- Investible weight factors: Click here
- Index Calculation Formula: Click here
- Index Factsheet: Click here



# 6. NIFTY Alpha 50

## Introduction

The index aims to measure the performance of securities listed on NSE with high Alphas. In order to make the 50 stocks index investible and replicable, criteria such as turnover and market capitalization are applied while selection of securities. Weights of securities in the index are assigned based on the alpha values. Security with highest alpha in the index gets highest weight.

## Index Construction & Review Methodology:

## **Calculation Methodology**

The index is constructed using divisor methodology where weights are assigned based on alpha values of the securities.

## **Index Review frequency:**

The review of NIFTY Alpha 50 index is undertaken on quarterly basis using data of six month period ending last trading day of February, May, August and November.

#### **Selection Criteria**

- 1. The company must be domiciled in India and traded (listed & traded and not listed but permitted to trade) at the National Stock Exchange (NSE) are eligible for inclusion in the NIFTY indices.
- 2. Convertible stock, bonds, warrants, rights, and preferred stock that provide a guaranteed fixed return, stocks under suspension and stocks categorized under BZ series are not eligible for inclusion in the NIFTY indices.
- 3. Companies must rank within the top 300 companies by average free-float market capitalization and average daily turnover for the last six months ending February, May, August and November.
- 4. The company should have a listing history of 1 year.
- 5. 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 twelve months for index reconstitution, a company has completed twelve 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.

- 6. The company's trading frequency should be 100% in the last one-year period.
- 7. Alphas of eligible securities are calculated using 1-year trailing prices (Adjusted for corporate actions) and ranked in descending order.
- 8. Top 50 securities with highest alphas form part of the index.
- 9. In order to reduce the replacements of scrips in the index, a buffer of 100% 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 100, the same can be retained in the index.
- 10. Scrips having negative alpha are not considered for selection. However, an existing constituent having negative alpha would be retained in the index if no scrip having a positive alpha forms part of the eligible pool.

### **Constituent Selection:**

Alpha of eligible securities are calculated using 1-year trailing prices (Adjusted for corporate actions). The eligible securities are then ranked in descending order of Alpha values. Top 50 companies based on alpha rankings form part of the index. In order to reduce the replacements of scrips in the index, a buffer of 100% shall be applied at the time of each review.

## **Constituent weighting:**

At each rebalancing of Alpha index, the weight (w), for each index constituent (i) is set proportional to its alpha:

$$w_i = \frac{\text{Alpha}i}{\sum_{i=1}^{N} \text{Alpha}i}$$

## Also see:

Index characteristics: <u>Click here</u>

• Index reconstitution frequency: Click here

• Corporate Actions and Share Updates: Click here

• Investible weight factors: <u>Click here</u>

• Index Calculation Formula: Click here



# 7. NIFTY High Beta 50

## Introduction:

The index aims to measure the performance of the stocks listed on NSE that have High Beta. Beta can be referred to as a measure of the sensitivity of stock returns to market returns. The market is represented by the performance of the NIFTY 50 index. In order to make the 50 stocks index investible and replicable, criteria such as turnover and market capitalization are applied while selection of securities. Weights of securities in the index are assigned based on the beta values. Security with highest beta in the index gets the highest weight.

# Index Construction & Review Methodology:

## **Calculation Methodology**

The index is constructed using divisor methodology where weights are assigned based on beta values of the securities.

## **Index Review frequency:**

The review of NIFTY High Beta 50 index is undertaken on quarterly basis using data of six month period ending last trading day of February, May, August and November.

#### **Selection Criteria**

- The company must be domiciled in India and 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, and preferred stock that provide a
  guaranteed fixed return, stocks under suspension and stocks categorized under BZ
  series are not eligible for inclusion in the NIFTY indices.
- Companies must rank within the top 300 companies by average free-float market capitalization and average daily turnover for the last six months ending February, May, August and November.
- 4. The company should have a listing history of 1 year.
- 5. 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 twelve months for index reconstitution, a company has completed twelve 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.

- 6. The company's trading frequency should be 100% in the last one-year period.
- 7. Beta of eligible securities is calculated using 1-year trailing prices (Adjusted for corporate actions) are ranked in descending order.
- 8. Top 50 securities with high beta form part of the index.
- 9. In order to reduce the replacements of scrips in the index, a buffer of 100% 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 100, the same can be retained in the index.
- 10. Securities having beta greater than 1 will be selected to form part of the index at each review. In case this criterion is not fulfilled, scrip with highest beta in replacement pool will be considered for selection.

#### **Constituent Selection:**

Beta of eligible securities is calculated using 1-year trailing prices (Adjusted for corporate actions). The eligible securities are then ranked in descending order of beta values. Top 50 companies based on beta rankings form part of the index. In order to reduce the replacements of scrips in the index, a buffer of 100% shall be applied at the time of each review.

## **Constituent weighting:**

At each rebalancing, the weight 'w' for each index constituent 'i' is reset based on its Beta. Constituent with the highest Beta in the index gets the highest weight.

$$w i = \frac{\text{Beta i}}{100}$$

$$\sum_{i=1}^{\infty} \text{Beta}$$

#### Also see:



• Index characteristics: Click here

• Index reconstitution frequency: <u>Click here</u>

• Corporate Actions and Share Updates: Click here

Investible weight factors: <u>Click here</u>
 Index Calculation Formula: <u>Click here</u>



# 8. NIFTY Low Volatility 50

#### Introduction:

The index aims to measure the performance of the least volatile securities listed on NSE. In order to make the 50 stocks index investible and replicable, criteria such as turnover and market capitalization are applied while selection of securities.

Weights of securities in the index are assigned based on the volatility values. Least volatile security in the index gets the highest weight. In order to derive the volatility of the securities, standard deviation of daily price returns (log normal) for last one year is considered.

## Index Construction & Review Methodology:

### **Calculation Methodology**

The index is constructed using divisor methodology where weights are assigned based on volatility values of the securities.

#### **Index Review frequency:**

The review of NIFTY Low Volatility 50 index is undertaken on quarterly basis using data of six month period ending last trading day of February, May, August and November.

#### **Selection Criteria**

- The company must be domiciled in India and traded (listed & traded and not listed but permitted to trade) at the National Stock Exchange (NSE) are eligible for inclusion in the NIFTY indices.
- 2. Convertible stock, bonds, warrants, rights, and preferred stock that provide a guaranteed fixed return, stocks under suspension and stocks categorized under BZ series are not eligible for inclusion in the NIFTY indices.
- 3. Companies must rank within the top 300 companies by average free-float market capitalization and average daily turnover for the last six months ending February, May, August and November.
- 4. The company should have a listing history of 1 year.
- 5. 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 twelve months for index reconstitution, a company has completed twelve 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.

- 6. The company's trading frequency should be 100% in the last one-year period.
- 7. The company should have a positive net worth as per the latest annual audited results.
- 8. Volatility of eligible securities are calculated using 1-year trailing prices (Adjusted for corporate actions) are ranked in ascending order.
- 9. Top 50 securities with least volatility form part of the index.
- 10. In order to reduce the replacements of scrips in the index, a buffer of 100% 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 100, the same can be retained in the index.

#### **Constituent Selection:**

Volatility of eligible securities shall be calculated using 1-year trailing prices (Adjusted for corporate actions). The eligible securities are then ranked in ascending order of volatility values. Top 50 companies based on volatility rankings form part of the index. In order to reduce the replacements of scrips in the index, a buffer of 100% shall be applied at the time of each review.

# **Constituent weighting:**

At each rebalancing, the weight 'W' for each index constituent 'i' is reset based on its volatility. Least volatile constituent in the index gets the highest weight.

$$w_{i} = \frac{\frac{1}{Volatility_{i}}}{\sum_{i=1}^{N} \frac{1}{Volatility}}$$

#### Also see:

Index characteristics: Click here

• Index reconstitution frequency: Click here

• Corporate Actions and Share Updates: Click here

• Investible weight factors: <u>Click here</u>

• Index Calculation Formula: Click here



# 9. NIFTY100 Alpha 30

#### Introduction:

The NIFTY100 Alpha 30 index consists of 30 companies from its parent NIFTY 100 index, selected based on their 'alpha' scores. The alpha score for each company is determined based on Jensen's alpha computed using 1-year trailing prices.

# Index Construction & Review Methodology:

#### **Index Review frequency:**

The review of NIFTY100 Alpha 30 index is undertaken on quarterly basis using data of six month period ending last trading day of February, May, August and November.

#### Selection criteria

To form part of NIFTY100 Alpha 30 Index, stocks should qualify the following eligibility criteria(s):

- Stocks should form part of NIFTY 100 index at the time of review
- In case of reconstitution of child indices, latest index composition including most recent changes in respective parent index whether announced or yet to be announced shall be considered. Child indices are defined as those indices where constituents are selected from a list of any other index. NIFTY100 Alpha 30 index would be considered as a child index as constituents of this index is selected from a list of NIFTY 100 index.
- Constituents should have a minimum listing history of 1 year
- For each eligible stock, Jensen's Alpha is computed using 1-year trailing price (adjusted for corporate actions)
- Only stock's having positive Jensen's Alpha are then ranked in descending order of Alpha values.
- Top 30 companies based on alpha rankings form part of the index.

#### **Constituent Weights and Capping:**

• Weight of the stock in the index is derived by multiplying the square root of free float market cap with the alpha score of that stock.



#### **Calculation of alpha score:**

Z score for Alpha of each selected security is calculated as per following formula

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

Where;

x is Jensen's Alpha of the stock  $\mu$  is mean value of the Jensen's Alpha in the eligible universe  $\sigma$  is std. deviation of Jensen's Alpha in the eligible universe

Alpha score is calculated for all the selected security from the Z score as

Alpha Score = (1+Z score) if Avg. Z score >0 (1- Z score)^-1 if Avg. Z score < 0

- Each stock in the index is capped at the lower of 8% or 5 times the weight of the stock in the index based only on free float Mcap.
- Each Sector in the index is capped at 25%.
- Capping will be done quarterly at the time of rebalancing.

## Rebalancing

- The replacement of stocks in the index (if any) is generally implemented from the first working day after F&O expiry of March, June, September and December.
- Stocks that do not qualify the eligibility criteria mentioned above will be compulsorily excluded from the index and replaced with non-member eligible stocks
- Top 15 ranked stocks on the basis of Jensen's Alpha are compulsorily included in the index, whereas existing stocks in the index whose rank goes beyond 45 are compulsorily excluded from the index
- Apart from the scheduled quarterly 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.



## Also see:

• Index characteristics: Click here

• Index reconstitution frequency: <u>Click here</u>

• Corporate Actions and Share Updates: Click here

• Investible weight factors: Click here

• Index Calculation Formula: <u>Click here</u>



# 10. NIFTY100 Low Volatility 30

## Introduction:

NIFTY100 Low Volatility 30 Index aims to measure the performance of the low volatile securities in the large market capitalisation segment. The selection of securities and its weights in NIFTY100 Low Volatility 30 are based on volatility.

# **Index Construction & Review Methodology:**

## **Eligible Universe:**

- The securities forming part of NIFTY 100 are eligible for inclusion in the index
- In case of reconstitution of child indices, latest index composition including most recent changes in respective parent index whether announced or yet to be announced shall be considered. Child indices are defined as those indices where constituents are selected from a list of any other index. NIFTY100 Low Volatility 30 index would be considered as a child index as constituents of this index selected from a list of NIFTY 100 index.
- Securities should have a minimum listing history of 1 year
- 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 twelve months for index reconstitution, a company has completed twelve 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.
- Securities should be available for trading in derivative segment (F&O).
- DVR shares are not eligible for inclusion in the index

#### **Selection Criteria:**

- Stocks are assessed on the basis of volatility for index inclusion
- Volatility is calculated as the standard deviation of daily price returns (log normal) for last one year
- Eligible stocks are then ranked based on their volatility score, with stock having lowest volatility getting a rank of 1
- Top 30 ranked stocks with least volatility form part of the index



## Rebalancing

The index is reconstituted on a quarterly basis using data of six month period ending last trading day of February, May, August and November. Volatility is calculated using closing prices of last one-year (adjusted for corporate actions) period ending last trading day of February, May, August and November for each review respectively.

At time of review, if the existing constituent of the index is ranked within top 60 based on the low volatility score, then the stock is retained in the index. Stocks based on lowest volatility rank gets included in the index, depending on the number of exclusions from the index due to above rule.

## **Constituent Weights:**

In the first step, weight of the constituents are calculated based on the volatility

$$w = \frac{\frac{1}{Volatility}}{\sum_{1}^{n} \frac{1}{Volatility}}$$

- Weight of the stocks, having 6-month average turnover less than the stock with the lowest
   6 month average turnover in NIFTY 50 Index, are capped at 3%. The excess weight is
   distributed among the non-capped stocks in the proportion of their low volatility weights
- Weights of constituents are capped during the quarterly review. The weights of the constituent can change between the rebalancing periods due to the change in stock prices
- Quarterly rebalancing of weights is carried out considering the closing prices of the index constituents 5 working days prior to the effective date of the changes.

#### Also see:

Index characteristics: <u>Click here</u>

• Index reconstitution frequency: Click here

• Corporate Actions and Share Updates: Click here

• Investible weight factors: <u>Click here</u>

Index Calculation Formula: Click here



# 11. NIFTY200 Momentum 30

## Introduction

Nifty200 Momentum 30 Index which aims to track the performance of the top 30 companies within the Nifty 200 selected based on their Normalised Momentum Score. The Normalised Momentum Score for each company is determined based on its 6-month and 12-month price return, adjusted for volatility. Stock weights are based on a combination of the stock's Normalised Momentum Score and its free-float market capitalization.

## **Highlights**

- The index has a base date of April 01, 2005, with a base value of 1000
- The index tracks the performance of the stocks that are part of the Nifty 200 index, and have high Normalised Momentum Scores
- The Normalised Momentum Score is based on 6-month and 12-month price return,
   adjusted for volatility
- The weight of each stock is based on the factor tilt methodology the weight is derived by multiplying the free float market cap with the Normalised Momentum Score of that stock
- Stock weights are capped at the lower of 5% or 5 times the weight of the stock in the index based only on free float market capitalization
- A buffer based on Normalised Momentum Score ranks is applied to reduce turnover

# **Index Construction & Review Methodology:**

## **Eligibility criteria**

- Stocks forming part / going to be a part of the Nifty 200 index at the time of review
- Constituents should have a minimum listing history of 1 year
- Stock should be available for trading in derivative segment (F&O) as on the effective date

#### Stock selection criteria:

Stocks shortlisted based on above mentioned criteria are further analysed as:



- For each eligible stock, Z Score is calculated on the basis of 6-month momentum
   12-month momentum
  - Momentum Ratio for a stock is calculated as:

Momentum Ratio =  $(Price\ Return)/\sigma_p$ 

- 12 month Momentum Ratio (MR<sub>12</sub>) = 12 month Price return /  $\sigma_p$ 
  - 12 month price return (12 M return): [Price (M-1)/Price (M-13)]-1

Where M is the rebal month, and prices are as of the last working day of M-1 Month and M-13 Month

- Std.Deviation ( $\sigma_p$ ): Annualised standard deviation of lognormal daily returns of the stock for 1 year
- 6 month Momentum Ratio (MR<sub>6</sub>) = 6 month Price return /  $\sigma_p$ 
  - 6 month price return (6 M return): [Price (M-1)/Price (M-7)]-1

Where M is the rebal month, and prices are as of the last working day of M-1 Month and M-7 Month

- Std.Deviation ( $\sigma_p$ ): Annualised standard deviation of lognormal daily returns of the stock for 1 year
- Z Score of the Momentum Ratio for each security is calculated:
  - The 12 month Momentum Z score for each stock is calculated as per the following formula:

[MR<sub>12</sub>- 
$$\mu$$
 MR,12]/  $\sigma$  MR,12

Where;

MR<sub>12</sub> is the 12 month Momentum Ratio of the stock

 $\mu_{MR, 12}$  is the mean of the 12 month Momentum Ratios of the eligible universe

 $\sigma_{\,\text{MR},12}$  is the std. deviation of the 12 month Momentum Ratios of the eligible universe

Similarly, the 6 month Momentum Z score for each stock is calculated as per the following formula:

[MR<sub>6</sub>- 
$$\mu$$
 MR,6]/  $\sigma$  MR,6

Where;

MR<sub>6</sub> is the 6 month Momentum Ratio of the stock

 $\mu_{MR, 6}$  is the mean of the 6 month Momentum Ratios in the eligible universe

 $\sigma_{\rm MR,6}$  is the std. deviation of the 6 month Momentum Ratios in the eligible universe



- The Weighted Average Z score is calculated for each eligible stock as per the following formula:
  - Weighted Average Z Score = 50% \* (12 month Momentum Z Score) + 50% \* (6 month Momentum Z Score)
- The Normalised Momentum Score is calculated for each eligible stock from its Weighted Average Z score as:
  - o Normalised Momentum Score = (1+ Wgt. Avg. Z score) if Wgt. Avg. Z score >=0

(1- Weighted Average Z score)^-1 if Wgt. Avg. Z score < 0

The top 30 stocks with the highest Normalized Momentum Score are selected

## Weights and Capping:

- Weight of the stock in the index is derived by multiplying the free float market cap
   with the Normalised Momentum 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 market capitalization
- Capping will be done semi-annually at the time of rebalancing

#### Reconstitution

- Index rebalancing will be done on a semi-annual basis in June and December
- Stocks that move out of the Nifty 200 shall also move out of the Nifty200 Momentum
   30 Index at the time of the review of the Nifty200 Momentum 30 Index
- From the eligible universe defined above, the top 15 ranked stocks on their Normalised Momentum Score are compulsorily included in the index, whereas existing stocks in the index whose rank goes beyond 45 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 is removed from Nifty 200 due to any corporate action (scheme of arrangement, delisting etc.) or suspension by the exchange etc.
- 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

## Also see:

• Index characteristics: Click here

• Index reconstitution frequency: Click here

• Corporate Actions and Share Updates: Click here

Investible weight factors: <u>Click here</u>
 Index Calculation Formula: <u>Click here</u>



# 12. NIFTY100 Quality 30

## 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 NIFTY100 Quality 30 index includes top 30 companies from its parent NIFTY 100 index, selected based on their 'quality' scores. The quality score for each company is determined based on return on equity (ROE), financial leverage (Debt/Equity Ratio) and earning (EPS) growth variability analysed during the previous 5 years

## **Highlights**

- The index series has a base date of October 01, 2009 and a base value of 1000
- Stocks from NIFTY 100 index at the time of review are eligible for inclusion in the index
- 30 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

# **Index Construction & Review Methodology:**

## **Eligibility criteria**

- Stocks should form part of NIFTY 100 index at the time of review
- In case of reconstitution of child indices, latest index composition including most recent changes in respective parent index whether announced or yet to be announced shall be considered. Child indices are defined as those indices where constituents are selected from a list of any other index. NIFTY100 Quality 30 index would be considered as a child index as constituents of this index selected from a list of NIFTY 100 index.
- Constituents should have a minimum listing history of 1 year
- Stock should be available for trading in derivative segment (F&O)



#### Stock selection criteria:

Stocks shortlisted based on above mentioned criteria are further analysed as given below:

- 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

 $\boldsymbol{\mu}$  is mean value of the parameter in the eligible universe

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

#### For financial services sector:

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

Quality score is calculated for all eligible securities from the weighted average Z score as
 Quality Score = (1+ Average Z score) if Avg. Z score >0

Top 30 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 market capitalization.
- Capping will be done semi-annually at the time of rebalancing.

#### Reconstitution

- Index rebalancing will be done on a semi-annual basis in June and December
- Stocks that moved out of the NIFTY 100 at the time of review shall also move out of the index
- Top 10 ranked stocks on the basis of quality score are compulsorily included in the index,
   whereas existing stocks in the index whose rank goes beyond 50 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.
- 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.

## Also see:

- Index characteristics: Click here
- Index reconstitution frequency: Click here
- Corporate Actions and Share Updates: Click here
- Investible weight factors: Click here
- Index Calculation Formula: Click here
- Index Factsheet: Click here



# 13. NIFTY200 Quality 30

#### Introduction

The NIFTY200 Quality 30 index includes top 30 companies from its parent NIFTY 200 index, selected based on their 'quality' scores. The quality score for each company is determined based on return on equity (ROE), financial leverage (Debt/Equity Ratio) and earning (EPS) growth variability analysed during the previous 5 years

## **Highlights**

- The index series has a base date of April 01, 2005 and a base value of 1000.
- Stocks from NIFTY 200 index at the time of review are eligible for inclusion in the index.
- 30 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.

# Index Construction & Review Methodology:

## **Eligibility criteria**

To form part of NIFTY200 Quality 30 Index, stocks should qualify the following eligibility criteria(s):

#### **Universe:**

- Stocks should form part of NIFTY 200 index at the time of review
- In case of reconstitution of child indices, latest index composition including most recent changes in respective parent index whether announced or yet to be announced shall be considered. Child indices are defined as those indices where constituents are selected from a list of any other index. NIFTY200 Quality 30 index would be considered as a child index as constituents of this index selected from a list of NIFTY 200 index.
- Constituents should have a minimum listing history of 1 year
- Stock should be available for trading in derivative segment (F&O)

#### **Stock selection criteria:**

Stock's shortlisted based on above mentioned criteria 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  $\mu$  is mean value of the parameter in the eligible universe  $\sigma$  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 score of ROE + 0.33 \* - (Z score of D/E) + 0.33 \* - (Z score of EPS growth variability)

## For financial services sector:

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

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

• Top 30 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 market capitalization.
- Capping will be done semi-annually at the time of rebalancing.

#### Reconstitution

- Index rebalancing will be done on a semi-annual basis in June and December.
- Stocks that moved out of the NIFTY 200 at the time of review shall also move out of the index.
- Top 10 ranked stocks on the basis of quality score are compulsorily included in the index, whereas existing stocks in the index whose rank goes beyond 50 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.
- 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.

#### Also see:

• Index characteristics: Click here

• Index reconstitution frequency: Click here

• Corporate Actions and Share Updates: Click here

• Investible weight factors: Click here

• Index Calculation Formula: Click here



# 14. NIFTY Midcap150 Quality 50

## Introduction

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.
- In case of reconstitution of child indices, latest index composition including most recent changes in respective parent index whether announced or yet to be announced shall be considered. Child indices are defined as those indices where constituents are selected from a list of any other index. NIFTY Midcap 150 Quality 50 index would be considered as a child index as constituents of this index selected from a list of NIFTY Midcap 150 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 Construction & Review 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 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  $\mu$  is mean value of the parameter in the eligible universe  $\sigma$  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 score of ROE + 0.33 \* - (Z score of D/E) + 0.33 \* - (Z score of EPS growth variability)

#### For financial services sector:

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



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

> Quality Score = (1+ Average Z score) if Avg. Z score >0 (1-Average Z score)^-1 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 and 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.

#### Also see:

Index characteristics: Click here

• Index reconstitution frequency: Click here

• Corporate Actions and Share Updates: Click here

• Investible weight factors: Click here • Index Calculation Formula: Click here



# 15. NIFTY Multi-Factor Indices:

#### Introduction

NIFTY Multi-Factor Index series includes indices that are designed to reflect the performance of portfolio of stocks selected based on combination of 2 or more factors such as Quality, Value, Alpha and Low Volatility.

Investments where stocks are screened based on multiple factors have gained popularity among global investment community. By combing the well-established factors used in active investment and rules-based frame work of passive investment, factor indices tend to deliver risk premium in long term in a transparent, rule-based and cost effective manner. NSE Indices Limited maintains various indices based on single factors including Alpha, Quality, Low Volatility and Value. Below is the list of newly launched NIFTY multi-factor indices:

NIFTY Alpha Low-Volatility 30
NIFTY Quality Low-Volatility 30
NIFTY Alpha Quality Low-Volatility 30
NIFTY Alpha Quality Value Low-Volatility 30

The multi-factor indices intend to capture the long-term risk premia by diversification across 4 factors namely: Alpha, Quality, Low Volatility and Value. By doing so, it intends to counter the cyclicality of single factor index strategy and provides investors a choice to take exposure to multiple factors through a single index product.

# Highlights

- The index series has a base date of April 01, 2005 and a base value of 1000
- Stocks from NIFTY 100 and NIFTY Midcap 50 at the time of review are eligible for inclusion in the indices
- Indices consist of well diversified portfolio of 30 stocks selected based on combination of
   2 or more factors from the 4 factors Alpha, Quality, Value and Low-Volatility
- Stock selection and weights are derived from factor scores resulting in portfolio capturing the essence of underlying factor dynamics



With threshold mechanism that lays down stringent criteria for inclusion and exclusion,
 the index seeks to minimize degree of churning and replication cost

# Methodology

## **Eligibility criteria**

- All constituents forming part of NIFTY 100 and NIFTY Midcap 50 at the time of review are eligible for inclusion in the index
- In case of reconstitution of child indices, latest index composition including most recent changes in respective parent index whether announced or yet to be announced shall be considered. Child indices are defined as those indices where constituents are selected from a list of any other index. NIFTY Multi-Factor indices would be considered as a child indices as constituents of this index selected from a list of NIFTY 100 and NIFTY Midcap 150 index.
- Stocks should be available for trading in derivative segment (F&O)
- Constituents should have a minimum listing history of 1 year

## **Stock Selection and stock weights:**

## **Composition of single factors:**





## **Computation of single factor scores**

Single Factors	Stock Selection and weighing process							
	Parameter score	Weighting	Factor level Z score	Factor level percentile score				
Quality	Return on Equity	33.33%		Percentile Distribution of Quality Z score				
	Debt to Equity Ratio	33.33%	Aggregate Quality Z score					
	EPS growth variability in 5 years	33.33%						
Value	Price to Earnings Ratio*1	30%		Percentile Distribution of Quality Z score				
	Price to Book Value Ratio*1	20%	Aggregate Value Z					
	Return on Capital Employed*1	40%	score					
	Dividend Yield*1	10%						
Alpha	Jensen's Alpha based on CAPM	100%	Alpha Z score	Percentile Distribution of Alpha Z score				
Low Volatility	Inverse of Standard deviation of daily price returns	100%	Low Vol Z score	Percentile Distribution of Low Volatility Z score				

<sup>\*1</sup> Refer to annexure for details on different weight combinations used for the calculation of value z score

## **Factor Weights in Multi-factor Indices**

Index	Factors Weights				Selection	Weights
index	Alpha	Low-Vol.	Quality	Value	Top 30 stocks based	Based on weighted average factor level Z Score. Weights of stocks are capped at 5%
NIFTY Alpha Low-Volatility 30	50%	50%	-	-		
NIFTY Quality Low-Volatility 30	-	50%	50%	-	on weighted	
NIFTY Alpha Quality Low-Volatility 30	33.33%	33.33%	33.33%	-	average percentile	
NIFTY Alpha Quality Value Low-Volatility 30	25%	25%	25%	25%	score	

## **Reconstitution & Rebalancing criteria**

- The Indices will be reconstituted semi-annually in June and December
- Top 10 stocks based on average percentile score are compulsorily included in the index
- An existing constituent is compulsorily excluded if its rank based on Average percentile score drops below 50
- Weights of stocks are capped at the lower of 5% or 5 times the weight of the stock in the index based only on free float Mcap
- Weights may drift between rebalancing due to movement in stock prices
- Apart from the scheduled review, additional ad-hoc reconstitution and rebalancing of the index will be initiated in case any of the index constituents under goes suspension, delisting or scheme of arrangement



 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.

## Also see:

• Index characteristics: Click here

• Index reconstitution frequency: Click here

• Corporate Actions and Share Updates: Click here

Investible weight factors: <u>Click here</u>
 Index Calculation Formula: <u>Click here</u>



#### **Factor Mathematics**

Z score of factors considered for the index are calculated based on the weighted average Z score of underlying parameters which is discussed below.

## 1) Quality Factor:

- Quality 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. D/E is not considered for
  companies belonging to financial services sector
- Companies with negative EPS in the previous 6 years are excluded
- To derive Z-Score, for non-financial service company, equal weightage is given to ROE,
   D/E and EPS growth variability in the previous 5 years. For Financial Service sector company, 50% weightage is given to ROE & EPS growth variability
- Average weighted Z score is calculated for all securities as per the following formula:
   Quality Z score (Non- Financial service sector) = (1/3) \* Z score of ROE + (1/3) \* (-Z score of D/E) + (1/3) \*
   (-Z score of EPS growth variability)

Quality Z score (Financial service sector) = .5 \* Z score of ROE + .5 \* (-Z score of EPS growth variability)

#### 2) Value Factor:

- Value Z score are calculated on the basis of ROCE (Return on Capital Employed), PE, PB and Dividend yield (DY)
- Average weighted Z score is calculated for all securities as per the following formula
   Value Z score = 0.3 \* (-Z score of P/E) + 0.2 \* (-Z score of P/B) + 0.4 \* (Z Score of ROCE)
   + 0.1 \*(Z score of Div. Yield)
- In case quality is also one of the factors in the index then average weighted Z score is calculated for all securities as per the following formula

```
Value Z score = 0.3 * (-Z score of P/E) + 0.3 * (-Z score of P/B) + 0.2 * (Z Score of ROCE) + .2 *(Z score of Div. Yield)
```

#### 3) Low Volatility Factor:

Low Volatility Z score is calculated using the inverse of Std. deviation based on previous
 1-year prices returns



## 4) Alpha Factor:

 Alpha Z score is calculated for all securities on the basis of Jensen's Alpha based on previous 1-year prices, where market portfolio is NIFTY 50.

Calculation of Alpha:  $\alpha s = rs - [rf + \theta s (rm - rf)]$ 

αs: Alpha of the stock

rs: Average of daily return of security during previous 12 months

rf: Average of daily 3 Month MIBOR rate during previous 12 months

rm: Average of daily return of index i.e. NIFTY 50

8s: Beta of the security calculated based on previous 12 month period.

Z score of the factors are converted into Factor score based on the following formula

Factor Score = (1+ Average Z score) if Avg. Z score >0

1/ (1-Average Z score) if Avg. Z score < 0

Percentile score is calculated from the factor score for every eligible security with security having the highest factor score getting the highest percentile score.

#### Also see:

• Index characteristics: Click here

• Index reconstitution frequency: Click here

• Corporate Actions and Share Updates: Click here

• Investible weight factors: <u>Click here</u>

• Index Calculation Formula: Click here



# 12. NIFTY50 Value 20

#### 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 listed 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
- In case of reconstitution of child indices, latest index composition including most recent changes in respective parent index whether announced or yet to be announced shall be considered. Child indices are defined as those indices where constituents are selected from a list of any other index. NIFTY50 Value 20 index would be considered as a child index as constituents of this index selected from a list of NIFTY 50 index.
- 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 index is reviewed annually in December.
- 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.

## **Constituent 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.

## Also see:

• Index characteristics: Click here

• Index reconstitution frequency: <u>Click here</u>

• Corporate Actions and Share Updates: Click here

Investible weight factors: <u>Click here</u>
 Index Calculation Formula: <u>Click here</u>



# 13. NIFTY500 Value 50

#### Introduction

The NIFTY500 Value 50 index consists of 50 companies from its parent NIFTY 500 index, selected based on their 'value' scores. The value score of each company is determined based on Earnings to Price ratio (E/P), Book Value to Price ratio (B/P), Sales to Price ratio (S/P) and Dividend Yield.

# **Highlights**

- The index has a base date of April 01, 2005 and a base value of 1000
- Stocks from NIFTY 500 index at the time of review are eligible for inclusion in the index
- 50 companies with higher Earnings to Price ratio (E/P), Book Value to Price ratio (B/P), Sales to Price ratio (S/P) and Dividend Yield are selected to be part of the index
- The weight of each stock in the index is based on the combination of stock's 'value' score and its free float market capitalization

## Index Construction & Review Methodology:

## **Eligibility criteria**

To form part of NIFTY500 Value 50 Index, stocks should qualify the following eligibility criteria(s)

#### **Universe:**

- Stocks should form part of NIFTY 500 index at the time of review
- In case of reconstitution of child indices, latest index composition including most recent changes in respective parent index whether announced or yet to be announced shall be considered. Child indices are defined as those indices where constituents are selected from a list of any other index. NIFTY500 Value 50 index would be considered as a child index as constituents of this index selected from a list of NIFTY 500 index.
- Constituents should have a minimum listing history of 3 months
- Stocks should have ranked within top 400 based on both average daily turnover and average daily free-float market capitalisation based on previous six months data ending June and December



## **Stock selection criteria:**

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

- For each eligible stock, Z score is calculated on the basis of on Earnings to Price ratio (E/P),
   Book Value to Price ratio (B/P), Sales to Price ratio (S/P) and Dividend Yield.
- Latest fiscal year data is considered for the calculation of Earnings to Price ratio (E/P),
  Book Value to Price ratio (B/P), Sales to Price ratio (S/P) and Dividend Yield. 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

 $\mu$  is mean value of the parameter in the eligible universe

 $\sigma$  is std. deviation of parameter in the eligible universe

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

Weighted Z score = 0.25 \* (Z score of E/P) + 0.25 \* (Z score of B/P) + 0.25 \* (Z score of S/P) + 0.25 \* (Z score of Div. Yield)

• Value score is calculated for all eligible securities from the weighted average Z score as

• Top 50 stocks are selected based on value-score.

## Weights and Capping:

- Weight of the stock in the index is derived by multiplying the free float market cap with the value score of that stock.
- Each sector in the index is capped at 25%
- Each stock in the index is capped at the lower of 5% or 3 times the weight of the stock in the index based only on free float market capitalization.
- Capping will be done semi-annually at the time of rebalancing.



#### Reconstitution

- Index reconstitution will be done on a semi-annual basis in the month of June and
   December based on six months data ending May and November respectively
- Stocks that do not qualify the eligibility criteria mentioned above will be compulsorily excluded from the index and replaced with non-member eligible stocks
- Top 25 ranked stocks on the basis of value 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.
- 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.

#### Also see:

- Index characteristics: <u>Click here</u>
- Index reconstitution frequency: Click here
- Corporate Actions and Share Updates: Click here
- Investible weight factors: Click here
- Index Calculation Formula: Click here
- Index Factsheet: Click here



# 14. NIFTY Equity Savings

### 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.

NIFTY Equity Savings Index captures performance of a portfolio having exposure to equity, equity arbitrage and debt instruments. This index is a total return index capturing price return and dividend/coupon income.

# Methodology

- The index series has a base date of April 01, 2005 and a base value of 1000.
- The NIFTY Equity Savings Index includes the following components:
  - 1) 35% exposure to NIFTY 50 Total Return Index
  - 2) 30% exposure to equity arbitrage (long position in NIFTY 50 Total Return Index and equivalent short position in NIFTY 50 Futures Index)
  - 3) 30% exposure to NIFTY Short Duration Debt Index
  - 4) 5% exposure to NIFTY 1D Rate Index
- Weights of the sub-indices can drift between monthly reset dates due to underlying asset price movement. These weights are reset to their pre-defined levels on a monthly basis.

### Also see:

- Index characteristics: <u>Click here</u>
- Index reconstitution frequency: Click here
- Corporate Actions and Share Updates: Click here
- Investible weight factors: Click here
- Index Calculation Formula: Click here
- Index Factsheet: Click here



# **NIFTY 50 variants:**

### 1. NIFTY50 USD

NIFTY50 USD, a dollar linked variant of NIFTY 50 index has been constructed as an instrument for measuring returns on their equity investment in the US dollar terms. NIFTY50 USD is NIFTY 50, measured in dollars.

#### Index value calculation:

Closing value of NIFTY 50 \* Exchange rate as on base date/ Exchange rate for the day

Base date of NIFTY50 USD is same as NIFTY 50 i.e. November 3, 1995 and the base index value is 1000 points

Exchange rate as on base date: 34.65

Effective April 3, 2017, WM/Reuters 4 pm FX benchmark USD-INR rate on a daily basis is considered in place of 'INR-USD' reference rate as published by Reserve Bank of India for calculation of daily index value.

### Also see:

• Index characteristics: Click here

2. NIFTY50 Dividend Points

The NIFTY 50 Dividend Points is a running total of dividend points of the securities forming

part of NIFTY 50 Index. It is worth noting that the NIFTY 50 Dividend Points is a passive

representation of annual index dividend points. It is not an active index of stocks representing

a quantitative dividend-based investment strategy.

The index measures the total ordinary dividends paid in the securities forming part of the

underlying index since the previous rebalancing date. Indexed dividend of NIFTY 50 Index are

dividends paid by index constituents expressed in terms of the level of NIFTY 50 Index.

The NIFTY50 Dividend Points resets to zero every year after the close of the settlement of

exchange traded derivative contracts linked to NIFTY 50 Index in the month of March every

year (normally the last Thursday in March). It is done to coincide with the expiry of exchange

traded derivative contracts linked to NIFTY 50 Index for the month.

The formula for calculating the dividend index on any date (t) for the NIFTY 50 Index is:

Dividend Index (t) = Previous Dividend Index Value (t-1) + Indexed Dividend (t day)

The indexed dividend of the NIFTY 50 Index is calculated by taking the summation of dividend

payout (adjusted for free float) specified by index constituents divided by the index divisor on

ex-dividend date.

Also see:

Index characteristics: <u>Click here</u>

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### 3. NIFTY50 PR 1x Inverse

The NIFTY50 PR 1x Inverse index aims to provide inverse return of its underlying index. A broader index provides good exposure to an economy, an inverse index on a broader index will provide the desired exposure when the investor is bearish on the markets.

• NIFTY50 PR 1x Inverse Index provides the investor an opportunity to create a position which gives inverse (opposite) returns as compare to NIFTY 50 PR Index.

The index is designed to provide the inverse performance of the NIFTY 50 PR,
 representing a short position in the index

#### Index value calculation:

#### NIFTY50 PR 1x Inverse Index Value =

Previous day's NIFTY50 PR 1x Inverse Index Value \* (1+ NIFTY 50 PR 1x Inverse Index Return)

#### NIFTY50 PR 1x Inverse Index Return =

-1\*((Current NIFTY PR Index Value/previous day NIFTY 50 PR Index Value)-1) + (2\*(previous days TREPS rate /360)\*(diff. in no. of days between today and previous trading day))-(previous days TREPS rate /360)\*(diff. in no. of days between today and previous trading day))

where TREPS is an overnight rate provided through Triparty Repo Dealing System (TREPS) by Clearing Corporation of India Ltd. (CCIL).

#### Also see:

• Index characteristics: Click here

• Index Factsheet: Click here



# 4. NIFTY50 PR 2x Leverage

NIFTY50 PR 2x Leverage Index is designed to generate multiple time return of the underlying index in situations where the investor borrows funds to generate index exposure beyond his/her cash position.

- NIFTY50 PR 2x Leverage Index seeks twice the index return on a daily basis
- Index is designed to provide magnified exposure to NIFTY 50 PR Index value

#### Index value calculation:

### NIFTY50 PR 2x Leverage Index Value =

Previous day's NIFTY50 PR 2x Leverage Index Value \* (1+ NIFTY50 PR 2x Leverage Index Return)

#### NIFTY50 PR 2x Leverage Index Return =

2\*((Current NIFTY 50 PR Index Value/previous day NIFTY 50 PR Index Value)-1)- (previous days TREPS rate /360)\*(diff. in no. of days between today and previous trading day))

where TREPS is an overnight rate provided through Triparty Repo Dealing System (TREPS) by Clearing Corporation of India Ltd. (CCIL).

### Also see:

• Index characteristics: Click here

• Index Factsheet: Click here

5. NIFTY50 TR 1x Inverse

The NIFTY50 TR 1x Inverse index tries to provide inverse return of its underlying index. A

broader index provides good exposure to an economy, an inverse index on a broader index

will provide the desired exposure when the investor is bearish on the markets.

• NIFTY50 TR 1x Inverse Index provides the investor an opportunity to create a position

which gives inverse (opposite) returns as compare to NIFTY 50 TR Index

The index is designed to provide the inverse performance of the NIFTY 50 TR,

representing a short position in the index

Index value calculation:

NIFTY50 TR 1x Inverse Index Value =

Previous day's NIFTY50 TR 1x Inverse Index Value \* (1+ NIFTY50 TR 1x Inverse Index Return)

NIFTY50 TR 1x Inverse Index Return =

-1\*((Current NIFTY 50 TR Index Value/previous day NIFTY 50 TR Index Value)-1) + (2\*(previous

days TREPS rate /360)\*(diff. in no. of days between today and previous trading day))-(previous

days TREPS rate /360)\*(diff. in no. of days between today and previous trading day))

where TREPS is an overnight rate provided through Triparty Repo Dealing System (TREPS) by

Clearing Corporation of India Ltd. (CCIL).

Also see:

• Index characteristics: Click here

• Index Factsheet: Click here

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# 6. NIFTY50 TR 2x Leverage

The NIFTY50 TR 2x Leverage Index is designed to generate multiple time return of the underlying index in situations where the investor borrows funds to generate index exposure beyond his/her cash position.

- NIFTY50 2x Leverage Index seeks twice the index return on a daily basis
- Index is designed to provide magnified exposure to NIFTY 50

#### Index value calculation:

#### NIFTY50 TR 2x Leverage Index Value =

Previous day's NIFTY50 TR 2x Leverage Index Value \* (1+ NIFTY50 TR 2x Leverage Index Return)

#### NIFTY50 TR 2x Leverage Index Return =

2\*((Current NIFTY 50 TR Index Value/previous day NIFTY 50 TR Index Value)-1) - (previous days TREPS rate /360)\*(diff. in no. of days between today and previous trading day))

where TREPS is an overnight rate provided through Triparty Repo Dealing System (TREPS) by Clearing Corporation of India Ltd. (CCIL).

#### Also see:

Index characteristics: <u>Click here</u>

• Index Factsheet: Click here



# 7. NIFTY 50 Arbitrage

The NIFTY 50 Arbitrage Index aims to measure the performance of such arbitrage strategies. The index measures performance of portfolio involving investment in equity and equivalent short position equity futures, short-term debt market investments and cash. Index is constructed representing strategy of long position in NIFTY 50 Price Returns index and equivalent short position in NIFTY 50 index futures contracts traded on NSE in equity and equity derivatives segment respectively

### Methodology

The weights of the index constituents are as under:

- 65% weight is assigned to net returns from investment in long NIFTY 50 index and equivalent NIFTY 50 index short futures.
  - A short position in near month futures contract is considered for computation. The
    near month futures contract expires on last Thursday of each month. Accordingly,
    index will include mid-month contract from the next trading day after the expiry
    of near month contract
    - Close value of NIFTY 50 index and daily settlement price of NIFTY 50 futures contract is considered
- o 30% weight is assigned to returns from 1-month MIBOR. The 1-month MIBOR is considered to represent the short term investments.
- o 5% weight is given to cash
- O Dividends received on equity investment are expressed as dividend points index and are considered for index calculation on the Ex-dividend date. Index dividend points are dividends paid by index constituents expressed in terms of the level of NIFTY 50 Index. The index dividend of the NIFTY 50 Index is calculated by taking the summation of dividend pay-out (adjusted for free float) specified by index constituents divided by the index divisor on ex-dividend date.
- The index is computed at end of the day using the close value of NIFTY 50 index and daily settlement price of NIFTY 50 futures contract.
- o Index has a base date of April 01, 2010 and base value of 1000.



### **Index Calculation**

**Nifty 50 Arbitrage Index** = Index Value  $_{t-1} X$  (1 + Returns<sub>t</sub>)

**Returns** =  $(Equity\ Returns\ X\ 65\%) + (Debt\ Returns\ X\ 30\%) + (Cash\ X\ 5\%)$ 

**Equity Returns** = Nifty 50 Returns + Short Nifty Futures Returns

$$\textit{Nifty 50 Returns} = LN\left(\frac{\textit{Nifty 50 Index Value}_t + \textit{Dividend Points Index}_t}{\textit{Nifty 50 Index Value}_{t-1}}\right)$$

**Dividend Points Index** =  $\left(\frac{\text{Dividend Payout on Ex-dividend date}}{\text{Index Divisor on Ex-dividend date}}\right)$ 

$$\textit{Nifty 50 Short Futures Returns} = LN\left(\frac{\textit{Nifty 50 Index Futures Price}_t}{\textit{Nifty 50 Futures Price}_{t-1}}\right)X-1$$

**Debt Returns** 
$$_{T} = \frac{1 \, Month \, MIBOR \, Rate_{T-1}}{365} X \, Number \, of \, days$$

Where T is the Trading Day

### Also see:

• Index characteristics: Click here

• Index Factsheet: Click here



### 8. NIFTY 50 Futures

NIFTY 50 is the benchmark index for the Indian equity market and also most actively traded index on F&O segment of NSE.

To provide a benchmark to track the performance of NIFTY 50 Futures contract, NIFTY 50 Futures Index has been developed. The NIFTY 50 Futures Index will track the near month NIFTY 50 index futures contract.

Two versions of the index have been created namely NIFTY 50 Futures (Price return) and NIFTY 50 Futures (Total Return).

### Methodology

- Index is constructed using the near month NIFTY 50 futures contract (Symbol: NIFTY)
   traded on NSE
- The near month futures contract expires on last Thursday of each month. Typically, market participants start rolling over the positions to the mid-month contract.
   Accordingly, index will include mid-month contract 3 days prior to expiry day of contract.
- The weights shall shift from Near to Mid-month contract gradually and by expiry the mid-month contract will have 70% weight in the index as given in below table:

Weights	Period before	Expiry – 3	Expiry – 2	Expiry – 1	Expiry day
	Roll over	day	day	day	
Near	100%	75%	60%	45%	30%
Mid	0%	25%	40%	55%	70%

- The percentage shift in weights are based on the 1 year average roll over percentage (rounded to nearest 5%) observed during the expiry week
- The roll over shall be reviewed on semi-annual basis. For example, the average roll over percentage from Jan 2015 Dec 2015 shall be applicable for index calculation between



Jan 2016 to Jun 2016. The average roll over percentage from Jul 2015 –Jun 2016 shall be applicable for index calculation between Jul 2016 to Dec 2016

- Roll over is computed as :  $\frac{Open\ interest\ in\ Next\ month\ contract}{Open\ Interest\ in\ (Near\ month\ +\ Next\ month\ contract)}\ x\ 100$
- The index is computed daily at end of day based on the daily settlement price of NIFTY 50
   Futures contract.
- Index has a base date of April 01, 2005 and base value of 1000.

### **Index Calculation**

### **Price Return Index (PR) Calculation:**

Price Return index is calculated considering only the daily settlement price of the underlying NIFTY 50 Futures contract.

PR Index Value (t) = Index value (t-1) ×  $(1+ PR_{(t)})$ 

$$PR_{(t)} = \frac{CP_{(t)}}{CP_{(t-1)}} - 1$$

Where;

 $PR_{(t)}$  = Price return of the futures contract on current business day

 $CP_{(t)}$  = Daily settlement price of the underlying contract on current business day

 $CP_{(t-1)}$  = Daily settlement price of the underlying contract previous business day

#### On the day of roll:

The weighted price CP<sub>(t)</sub> of the underlying futures contract, is calculated as

$$\begin{aligned} & \text{CP}(\text{Near})_{(t)} * \text{Wt1}_{(t)} \\ & \text{CP}_{(t)} = \frac{ + \text{CP}(\text{Next})_{(t)} * \text{Wt2}_{(t)} }{ \text{CP}(\text{Near})_{(t-1)} * \text{Wt1}_{(t)} } - 1 \\ & + \text{CP}(\text{Next})_{(t-1)} * \text{Wt2}_{(t)} \end{aligned}$$

Where;

CP (Near)  $_{(t)}$  = Price of the near month contract on current business day (t)

CP (Near) (t-1) = Price of the near month contract on previous business day (t-1)

 $CP(Next)_{(t)}$  = Price of the next month contract on current business day (t)

CP (Next)  $_{(t-1)}$  = Price of the next month contract on previous business day (t-1)

 $Wt1_{(t)}$  = Weight assigned to near month contract on current business day (t)

 $Wt2_{(t)}$  = Weight assigned to next month contract on current business day (t)



### **Total Return Index (TR) Calculation:**

The Total Return index can be used to measure total returns from futures and investment in risk free instrument.

The index uses previous 30 day MIBOR as a risk free instrument for computing the total return index. MIBOR is used as a reference rate in money market.

TR Index Value 
$$(t)$$
 = TR Index value  $(t-1)$  \*  $(1+ TR_{(t)})$ 

Total Return (TR) = Price return (t) + Risk free return (t)

Risk free return (t) = MIBOR (t-1) × 
$$\frac{\text{Number of days between t and t-1 business days}}{365}$$

### Also see:

• Index characteristics: Click here

• Index Factsheet: Click here



# 9. NIFTY50 Equal Weight:

Please see detailed methodology under strategy indices category of this document.



### **Index Characteristics**

### **Broad market indices:**

Sr. No.	Index Names	Base Date	Base Index Value	Weighing	Capping	Calculation Frequency
1	NIFTY 50	Nov 03, 1995	1000	Free float	-	Real-time
2	NIFTY NEXT 50	Nov 04, 1996	1000	Free float	-	Real-time
3	NIFTY 100	Jan 01, 2003	1000	Free float	-	Real-time
4	NIFTY 200	Jan 01, 2004	1000	Free float	-	Real-time
5	NIFTY 500	Jan 01, 1995	1000	Free float	-	Real-time
6	NIFTY MIDCAP 150	Apr 01, 2005	1000	Free float	-	Real-time
7	NIFTY MIDCAP 50	Jan 01, 2004	1000	Free float	-	Real-time
8	NIFTY MIDCAP 100	Jan 01, 2003	1000	Free float	-	Real-time
9	NIFTY SMALLCAP 250	Apr 01, 2005	1000	Free float	-	Real-time
10	NIFTY SMALLCAP 50	Apr 01, 2005	1000	Free float	-	Real-time
11	NIFTY SMALLCAP 100	Jan 01, 2004	1000	Free float	-	Real-time
12	NIFTY LARGEMIDCAP 250	Apr 01, 2005	1000	Free float	Yes	End of day
13	NIFTY MIDSMALLCAP 400	Apr 01, 2005	1000	Free float	-	Real-time
14	Nifty500 Multicap 50:25:25	Apr 01, 2005	1000	Free float	Yes	End of day

### **Sectoral indices:**

Sr. No.	Index Names	Base Date	Base Index Value	Weighing	Capping	Calculation Frequency
1	NIFTY Auto	Jan 01, 2004	1000	Free float	33%	Real-time
2	NIFTY Bank	Jan 01, 2000	1000	Free float	33%	Real-time
3	NIFTY Consumer Durables	Apr 01, 2005	1000	Free float	33%	End of day
4	NIFTY Financial Services	Jan 01, 2004	1000	Free float	33%	Real-time
5	NIFTY Financial Services 25/50#	Jan 01, 2004	1000	Free float	22.5%	Real-time
6	NIFTY FMCG	Jan 01, 1996	1000	Free float	33%	Real-time
7	NIFTY Healthcare	Apr 01, 2004	1000	Free float	33%	End of day
8	NIFTY IT	Jan 01, 1996	100	Free float	33%	Real-time
9	NIFTY Media	Dec 30, 2005	1000	Free float	33%	Real-time
10	NIFTY Metal	Jan 01, 2004	1000	Free float	33%	Real-time
11	NIFTY Oil & Gas	Apr 01, 2005	1000	Free float	33%	End of day
12	NIFTY Pharma	Jan 01, 2001	1000	Free float	33%	Real-time
13	NIFTY Private Bank	May 01, 2004	1000	Free float	33%	Real-time
14	NIFTY PSU Bank	Jan 01, 2004	1000	Free float	33%	Real-time
15	NIFTY Realty	Dec 29, 2006	1000	Free float	33%	Real-time

<sup>\*</sup> No single stock shall be more than the capping limit prescribed above and weights of top 3 stocks cumulatively shall not be more than 62% at the time of rebalancing

### **NIFTY 50 Variants:**

Sr. No.	Index Names	Base Date	Base Index Value	Calculation Frequency
1	NIFTY50 USD	Nov 03, 1995	1000	End of day
2	NIFTY50 Dividend Points	-	-	Beginning of day
3	NIFTY50 PR 1x Inverse	Apr 02, 2009	1000	Real-time
4	NIFTY50 PR 2x Leverage	Apr 02, 2009	1000	Real-time
5	NIFTY50 TR 1x Inverse	Apr 02, 2009	1000	Real-time
6	NIFTY50 TR 2x Leverage	Apr 02, 2009	1000	Real-time
7	NIFTY 50 Arbitrage	Apr 01, 2010	1000	End of day

<sup>#</sup> No single stock shall be more than the capping limit prescribed above and cumulative weights of stocks more than 4.5% shall not be more than 45% at the time of rebalancing



8	NIFTY 50 Futures	Apr 01, 2005	1000	End of day
9	NIFTY50 Equal Weight	Nov 03, 1995	1000	Real-time

### **Thematic indices:**

Sr. No.	Index Names	Base Date	Base Index Value	Weighing	Capping*	Calculation Frequency
1	NIFTY Aditya Birla group	Apr 01, 2005	1000	Full Mcap	-	End of day
2	NIFTY Commodities	Jan 01, 2004	1000	Free float	10%	Real-time
3	NIFTY CPSE	Jan 01, 2009	1000	Free float	20%	Real-time
4	NIFTY Energy	Jan 01, 2001	1000	Free float	Yes	Real-time
5	NIFTY India Consumption	Jan 02, 2006	1000	Free float	10%	Real-time
6	NIFTY Infrastructure	Jan 01, 2004	1000	Free float	20%	Real-time
7	NIFTY Mahindra Group	Apr 01, 2005	1000	Full Mcap	-	End of day
8	NIFTY Midcap Liquid 15	Jan 01, 2009	1000	Free float	15%	Real-time
9	NIFTY MNC	Dec 31, 1994	1000	Free float	10%	Real-time
10	NIFTY PSE	Jan 01, 1995	1000	Free float	Yes	Real-time
11	NIFTY Services Sector	Jun 01, 1999	1000	Free float	Yes	Real-time
12	NIFTY Shariah 25	Jan 01, 2009	1000	Free float	10%	End of day
13	NIFTY Tata group	Apr 01, 2005	1000	Full Mcap	-	End of day
14	NIFTY Tata group 25% Cap	Apr 01, 2005	1000	Free float	25%	End of day
15	NIFTY100 Liquid 15	Jan 01, 2009	1500	Free float	15%	Real-time
16	NIFTY50 Shariah	Dec 29, 2006	1000	Free float	33%	End of day
17	NIFTY500 Shariah	Dec 29, 2006	1000	Free float	33%	End of day
18	NIFTY SME EMERGE	Dec 01, 2016	1000	Free float	-	End of day
19	NIFTY100 ESG #	Apr 01, 2011	1000	Tilt weighted	10%	End of day
20	NIFTY100 Enhanced ESG #	Apr 01, 2011	1000	Tilt weighted	10%	End of day
21	NIFTY100 ESG Sector Leaders	Jan 01, 2014	1000	Free float	10%	Real-time

<sup>\*</sup> No single stock shall be more than the capping limit prescribed above and weights of top 3 stocks cumulatively shall not be more than 62% at the time of rebalancing

### **Strategy indices:**

Sr. No.	Index Names	Base Date	Base Index Value	Weighing	Capping	Calculation Frequency
1	NIFTY Alpha 50	Dec 31, 2003	1000	Score	-	Real-time
2	NIFTY Alpha Low Volatility 30 #	Apr 01, 2005	1000	Multi factor	5%	Real-time
3	NIFTY Alpha Quality Low Volatility 30 #	Apr 01, 2005	1000	Multi factor	5%	End of day
4	NIFTY Alpha Quality Value Low Volatility 30 #	Apr 01, 2005	1000	Multi factor	5%	End of day
5	NIFTY Dividend Opportunities 50	Oct 01, 2007	1000	Free float	10%	Real-time
6	NIFTY Growth Sectors 15	Jan 01, 2009	1000	Free float	15%	Real-time
7	NIFTY High Beta 50	Dec 31, 2003	1000	Score	-	End of day
8	NIFTY Low Volatility 50	Dec 31, 2003	1000	Score	-	End of day
9	NIFTY Quality Low Volatility 30 #	Apr 01, 2005	1000	Multi factor	5%	End of day
10	NIFTY100 Equal Weight	Jan 01, 2003	1000	Equal Weight	-	Real-time
11	NIFTY100 Alpha 30	Apr 01, 2005	1000	Score	Yes	End of day
12	NIFTY100 Low Volatility 30 #	Apr 01, 2005	1000	Score	3%	Real-time
13	NIFTY200 Momentum 30 #	Apr 01, 2005	1000	Tilt	5%	Real-time
14	NIFTY100 Quality 30 #	Oct 01, 2009	1000	Tilt	5%	Real-time
15	NIFTY200 Quality 30 #	Apr 01, 2005	1000	Tilt	5%	Real-time
16	NIFTY Midcap150 Quality 50 #	Apr 01, 2005	1000	Tilt	5%	End of day
17	NIFTY50 Equal Weight	Nov 03, 1995	1000	Equal Weight	-	Real-time

<sup>#</sup> See detailed methodology for sector and stock capping under relevant index



18	NIFTY50 Value 20	Jan 01, 2009	1000	Free float	15%	Real-time
19	NIFTY500 Value 50 #	Apr 01, 2005	1000	Tilt	5%	End of day

<sup>#</sup> See detailed methodology for sector and stock capping

### **Index reconstitution frequency**

All NIFTY indices are reviewed at pre-defined periodicity as tabulated hereunder. Unless mentioned otherwise in the methodology document, the additional index reconstitution may be undertaken:

- in case any of the index constituent undergoes merger, spin-off, delisting, specific cases of capital restructuring which may result into change in the stock prices etc.
- in case any of the index constituent is moved to BZ/ SZ series
- if trading permission of any of the index constituent is withdrawn from F&O segment (in case of indices where it is mandatory that all the constituents of an index must be available for trading in F&O)
- if a security is suspended for trading from Capital Market or SME Emerge at NSE for any reason
- in case of any adverse regulatory findings or order/ governance related issues, order issued against any of the index constituent that necessitates removal of such stock from the index in the larger interest of investors/ stakeholders as may be determined by the Index Maintenance Sub-Committee (IMSC)

In case of a merger, spin-off, capital restructuring or voluntary delisting, equity shareholders' approval is considered as a trigger to initiate the replacement of such stock from the index through additional index reconstitution. For all other cases, replacements will be initiated based on notifications issued by the Exchange.

Further, on a quarterly basis, all indices (excluding Nifty Corporate Group and NIFTY SME Emerge index) will be screened for compliance with the portfolio concentration norms for equity ETFs/ Index Funds announced by SEBI on January 10, 2019. In case of non-compliance, suitable corrective measures (replacement in the index for non-compliant stocks) will be taken to ensure compliance with the norms.



### **Broad market indices:**

Sr. No.	Index Names	Review Frequency	Reconstitution effective from*
1	NIFTY 50	Semi Annual	March, September
2	NIFTY NEXT 50	Semi Annual	March, September
3	NIFTY 100	Semi Annual	March, September
4	NIFTY 200	Semi Annual	March, September
5	NIFTY 500	Semi Annual	March, September
6	NIFTY MIDCAP 150	Semi Annual	March, September
7	NIFTY MIDCAP 50	Semi Annual	March, September
8	NIFTY MIDCAP 100	Semi Annual	March, September
9	NIFTY SMALLCAP 250	Semi Annual	March, September
10	NIFTY SMALLCAP 50	Semi Annual	March, September
11	NIFTY SMALLCAP 100	Semi Annual	March, September
12	NIFTY LARGEMIDCAP 250	Semi Annual	March, September
13	NIFTY MIDSMALLCAP 400	Semi Annual	March, September
14	Nifty500 Multicap 50:25:25	Semi Annual	March, September

# **Sectoral indices:**

Sr. No.	Index Names	Review Frequency	Reconstitution effective from*
1	NIFTY Auto	Semi Annual	March, September
2	NIFTY Bank	Semi Annual	March, September
3	NIFTY Consumer Durables	Semi Annual	March, September
4	NIFTY Financial Services	Semi Annual	March, September
5	NIFTY Financial Services 25/50	Semi Annual	March, September
6	NIFTY FMCG	Semi Annual	March, September
7	NIFTY IT	Semi Annual	March, September
8	NIFTY Healthcare	Semi Annual	March, September
9	NIFTY Media	Semi Annual	March, September
10	NIFTY Metal	Semi Annual	March, September
11	NIFTY Oil & Gas	Semi Annual	March, September
12	NIFTY Pharma	Semi Annual	March, September
13	NIFTY Private Bank	Semi Annual	March, September
14	NIFTY PSU Bank	Semi Annual	March, September
15	NIFTY Realty	Semi Annual	March, September

### **Thematic indices:**

Sr. No.	Index Names	Review Frequency	Reconstitution effective from*
1	NIFTY Aditya Birla group	Quarterly	March, June, September, December
2	NIFTY Commodities	Semi Annual	March, September
3	NIFTY CPSE	-	-
4	NIFTY Energy	Semi Annual	March, September
5	NIFTY India Consumption	Semi Annual	March, September
6	NIFTY Infrastructure	Semi Annual	March, September
7	NIFTY Mahindra Group	Quarterly	March, June, September, December
8	NIFTY Midcap Liquid 15	Semi Annual	March, September
9	NIFTY MNC	Semi Annual	March, September
10	NIFTY PSE	Semi Annual	March, September
11	NIFTY Services Sector	Semi Annual	March, September
12	NIFTY Shariah 25	Semi Annual	March, September
13	NIFTY Tata group	Quarterly	March, June, September, December



14	NIFTY Tata group 25% Cap	Semi Annual	March, September
15	NIFTY100 Liquid 15	Semi Annual	March, September
16	NIFTY50 Shariah	Semi Annual	March, September
17	NIFTY500 Shariah	Semi Annual	March, September
18	NIFTY SME EMERGE	Quarterly	March, June, September, December
19	NIFTY100 ESG	Semi Annual	June, December
20	NIFTY100 Enhanced ESG	Semi Annual	June, December
21	NIFTY100 ESG Sector Leaders	Semi Annual	June, December

### **Strategy indices:**

Sr. No.	Index Names	Review Frequency	Reconstitution effective from*
1	NIFTY Alpha 50	Quarterly	March, June, September, December
2	NIFTY Alpha Low Volatility 30	Semi Annual	June, December
3	NIFTY Alpha Quality Low Volatility 30	Semi Annual	June, December
4	NIFTY Alpha Quality Value Low Volatility 30	Semi Annual	June, December
5	NIFTY Dividend Opportunities 50	Annual	March
6	NIFTY Growth Sectors 15	Semi Annual	March, September
7	NIFTY High Beta 50	Quarterly	March, June, September, December
8	NIFTY Low Volatility 50	Quarterly	March, June, September, December
9	NIFTY Quality Low Volatility 30	Semi Annual	June, December
10	NIFTY100 Equal Weight	Semi Annual	March, September
11	NIFTY100 Alpha 30	Quarterly	March, June, September, December
12	NIFTY100 Low Volatility 30	Quarterly	March, June, September, December
13	NIFTY200 Momentum 30	Semi Annual	June, December
14	NIFTY100 Quality 30	Semi Annual	June, December
15	NIFTY200 Quality 30	Semi Annual	June, December
16	NIFTY Midcap 150 Quality 50	Semi Annual	June, December
17	NIFTY50 Equal Weight	Semi Annual	March, September
18	NIFTY50 Value 20	Annual	December
19	NIFTY500 Value 50	Semi Annual	June, December

<sup>\*</sup> The effective date for index reconstitution of index is generally the first working day after expiry F&O contracts at NSE in March, June, September and December. The Index Maintenance Sub-Committee may revise the reconstitution dates stated above in case of exceptional cases.



### **Differential Voting Rights**

Equity securities with Differential Voting Rights (DVR) are eligible for inclusion in the index subject to fulfilment of specified DVR related 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



### **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 where identifiable separately:

- 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 (to the extent identifiable)
- 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** 



### **Impact Cost**

Liquidity of a security can be measured through factors such as trading frequency, traded turnover, volume of shares to total shares issued, ratio of turnover to market capitalization, impact cost etc. Generally, securities with higher of each of the above factors (excluding impact cost) suggest superior liquidity on a relative basis.

Impact cost in simple words is a cost that an investor is required to incur for executing his buy or sell order as against the ideal cost of that security. Company with lower impact cost suggest the high liquidity as against the company with higher impact cost. For selection of securities in indices such as Nifty and Nifty Junior, liquidity is screened on the basis of 'impact cost' as criteria.

Liquidity in the context of stock markets means a market where large orders can be executed without incurring a high transaction cost. The transaction cost referred here is not the fixed costs typically incurred like brokerage, transaction charges, depository charges etc. but is the cost attributable to lack of market liquidity as explained subsequently. Liquidity comes from the buyers and sellers in the market, who are constantly on the lookout for buying and selling opportunities. Lack of liquidity translates into a high cost for buyers and sellers.

When a buyer or seller approaches the market with an intention to buy a particular stock, he can execute his buy order in the stock against such sell orders, which are already lying in the order book, and vice versa.

An example of an order book for a stock at a point in time is detailed below:

	Buy	Sell			
Sr.No.	Quantity	Price	Quantity	Price	Sr. No.
1	1000	3.50	2000	4.00	5
2	1000	3.40	1000	4.05	6
3	2000	3.40	500	4.20	7
4	1000	3.30	100	4.25	8

There are four buy and four sell orders lying in the order book. The difference between the best buy and the best sell orders (in this case, ₹0.50) is the bid-ask spread. If a person places an order to buy 100 shares, it would be matched against the best available sell order at ₹4 i.e. he would buy 100 shares for ₹4. If he places a sell order for 100 shares, it would be matched against the best available buy order at ₹3.50 i.e. the shares would be sold at ₹3.5.

Hence if a person buys 100 shares and sells them immediately, he is poorer by the bid-ask spread. This spread may be regarded as the transaction cost which the market charges for the privilege of trading (for a transaction size of 100 shares).



Progressing further, it may be observed that the bid-ask spread as specified above is valid for an order size of 100 shares upto 1000 shares. However for a larger order size the transaction cost would be quite different from the bid-ask spread.

Suppose a person wants to buy and then sell 3000 shares. The sell order will hit the following buy orders:

Sr. No.	Quantity	Price
1	1000	3.50
2	1000	3.40
3	1000	3.40

while the buy order will hit the following sell orders:

Quantity	Price	Sr. No.
2000	4.00	5
1000	4.05	6

This implies an increased transaction cost for an order size of 3000 shares in comparison to the impact cost for order for 100 shares. The "bid-ask spread" therefore conveys transaction cost for a small trade.

This brings us to the concept of impact cost. We start by defining the ideal price as the average of the best bid and offer price, in the above example it is (3.5+4)/2, i.e. 3.75. In an infinitely liquid market, it would be possible to execute large transactions on both buy and sell at prices which are very close to the ideal price of 3.75. In reality, more than 3.75 per share may be paid while buying and less than 3.75 per share may be received while selling. Such percentage degradation that is experienced vis-à-vis the ideal price, when shares are bought or sold, is called impact cost. Impact cost varies with transaction size.

For example, in the above order book, a sell order for 4000 shares will be executed as follows:

Sr. No.	Quantity	Price	Value
1	1000	3.50	3500
2	1000	3.40	3400
3	2000	3.40	6800
	13700		
,	3.43		

The sale price for 4000 shares is ₹3.43, which is 8.53% worse than the ideal price of ₹3.75. Hence we say "The impact cost faced in buying 4000 shares is 8.53%".



**Definition:** Impact cost represents the cost of executing a transaction in a given stock, for a specific predefined order size, at any given point of time.

Impact cost is a practical and realistic measure of market liquidity; it is closer to the true cost of execution faced by a trader in comparison to the bid-ask spread.

It should however be emphasised that:

- impact cost is separately computed for buy and sell
- impact cost may vary for different transaction sizes
- impact cost is dynamic and depends on the outstanding orders
- where a stock is not sufficiently liquid, a penal impact cost is applied

In mathematical terms it is the percentage mark-up observed while buying / selling the desired quantity of a stock with reference to its ideal price (best buy + best sell) / 2.

#### Example A:

ORDER BOOK SNAPSHOT						
Buy Quantity Buy Price Sell Quantity Sell Price						
1000	98	1000	99			
2000	97	1500	100			
1000	96	1000	101			

#### **TO BUY 1500 SHARES**

Ideal Price = 
$$\frac{99 + 98}{2}$$
 = 98.5

Actual Buy Price =  $\frac{(1000 \times 99) + (500 \times 100)}{1500}$  = 99.33

IMPACT COST (FOR 1500 shares) =  $\frac{99.33 - 98.50}{98.50} \times 100$  = 0.84%



### **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 bonus, stock splits and reverse stock splits require simple changes in the equity shares outstanding and the stock prices of the companies in the index.

Other corporate actions such as change in equity, rights issue of shares, special dividend, change in investible weight factor (IWF) / free float results into change in the market value of an index overall 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. Appropriate 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 changes in equity shares arising out of additional issue of capital, such as ESOPs, QIPs, ADR/GDR issues, private placements, warrant conversions, FCCB conversions, buy-back, forfeiture of shares etc. 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.

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.



# **Summary of Corporate Action Adjustments:**

Sr. No.	Type of corporate action	Divisor Adjsutment for Market capitalization based indices (Full or free float)	Divisor Adjustment for Equal Weight/ factor based indices	Revision in the capping factor for Capped Indices
1	Rights	Divisor adjusted. Price and index shares will be adjusted based on ratio.	Divisor adjusted. Price and index shares will be adjusted based on ratio.	No change
2	Bonus	Divisor not adjusted. Price and index shares are adjusted based on bonus ratio resulting into no change in index market capitalization.	Divisor not adjusted. Price and index shares are adjusted based on bonus ratio resulting into no change in index market capitalization.	No change
3	Stock split/ Reverse stock split	Divisor not adjusted. Price and index shares are adjusted based on stock split/reverse stock split ratio resulting into no change in index market capitalization.	Divisor not adjusted. Price and index shares are adjusted based on stock split/ reverse stock split ratio resulting into no change in index market capitalization.	No change
4	Special Dividend	Divisor adjusted. Price will be reduced for special dividend amount resulting into change in the index market capitalization	Divisor adjusted. Price will be reduced for special dividend amount resulting into change in the index market capitalization	No change
5	Change in equity	Divisor adjusted. Index shares will be revised resulting into change in the index market capitalization	Divisor not adjusted as change in equity does not have any impact under this methodology.	New capping factor calculated
6	Change in investible weight factor (IWF) / free float	Divisor not adjusted for all indices except those computed on free-float method. IWF will be revised resulting into change in the index market capitalization	Divisor not adjusted as change in IWF does not have any impact under this methodology	New capping factor calculated
7	Spin-off, De-listing, Suspension	Stock is excluded prior to demerger. Divisor is adjusted on date of replacement of stock.	Stock is excluded prior to demerger. Divisor is adjusted on date of replacement of stock.	New capping factor calculated on date of replacement of stock
8	Replacement of stock	Divisor adjusted	Divisor adjusted	New capping factor calculated



### **Index Calculation Formula**

### Market capitalization-based indices (price return):

Formula for computing price return variant of indices based on market capitalization method (full or free-float mcap method) is as under:

Index Value = Index Market Capitalisation / Base Free Float Market Capitalisation of index \*
Base Index Value

where Index Market Capitalization = Shares outstanding \* IWF \* Capping factor \* Price

- IWF = 1 in case of indices computed based on full market capitalization method
- Capping factor = 1 in case of uncapped indices

where Index market capitalisation is the aggregate of market capitalisation of each scrip in the Index adjusted for free float and/or capping factor depending upon the methodology; and Base index value is the initial value assigned to each index (For example 1000 or 100).

### Equal weight/ factor-based indices (price return):

Using the divisor and modified index market capitalization, Equal weight/ factor-based indices are calculated as follows:

Index Value<sub>t</sub> = (Modified Index Market Capitalization / Index Divisor<sub>t</sub>) \* 1000 Modified Index Market Capitalization =  $\sum$  (Modified Index Shares)<sub>i</sub> \* Price<sub>i</sub> Modified Index Shares<sub>i</sub> = (Weight<sub>i</sub> \* Modified Index Market Capitalization) / Price<sub>i</sub> Modified Index Shares<sub>i</sub> (on Base date) = (Weight<sub>i</sub> \* Base Index Divisor) / Price<sub>i</sub>

#### Notes:

- 1. As on the base date, notional portfolio value of INR 1 billion has been considered as 'modified market capitalization' and 'Base Index Divisor'.
- 2. Modified index shares are calculated considering modified index market capitalization of the day prior to the rebalancing date. Modified shares are calculated whenever the index is rebalanced



#### **Total Return Index Calculation:**

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).

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

Calculation of the TR:

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

where,

$$Indexed\ Divided = \frac{Dividend\ Payout}{Base\ Market\ Capitalisation\ of\ Index}$$

$$Price\ Index\ Returns = \frac{Current\ Price\ Index\ Value}{Previous\ Price\ Index\ Value} - 1$$



### **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, oversees the operational guidelines for managing the equity indices and approves changes to the stock selection criteria. Index Maintenance Sub-Committee reserves the right to take a decision to deal with any exceptional situation that may arise where application of stated methodology may not be practicable".

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 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 at pre-defined periodicity 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 <a href="https://www.niftyindices.com">www.nseindia.com</a>.

### **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. The stock prices are in Indian Rupees
- Currency rates for indices denominated in foreign currency are sourced from Refinitiv

#### **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
- 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.

# **IOSCO Compliance:**

NSE Indices Limited (formerly known as India Index Services and Products Limited - "IISL") is compliant to the International Organization of Securities Commissions ("IOSCO") Principles for Financial Benchmarks. The last assessment was carried out by Deloitte Haskins & Sells LLP ("DHS") in April 2018. Detailed report can be accessed on the <u>website</u>.



### **Index Dissemination**

#### Web site:

Daily index values, index constituents, methodology, and press releases are available on <a href="https://www.niftyindices.com">www.niftyindices.com</a> and <a href="https://www.nseindia.com">www.nseindia.com</a>. Additionally, leading data vendors also carry the indices on its platforms:

#### **Index identifiers:**

Sr. No.	Index Name	Bloomberg Ticker	Refinitiv RIC Code	Index Category
1	Nifty 50	NIFTY	.NSEI	Broad
2	Nifty Next 50	NIFTYJR	.NN50	Broad
3	Nifty 100	NSE100	.NIFTY100	Broad
4	Nifty 200	NSE200	.NIFTY200	Broad
5	Nifty 500	NSE500	.NIFTY500	Broad
6	Nifty Midcap 150	NSEMD150	.NIMI150	Broad
7	Nifty Midcap 50	NIFTYM50	.NIMDCP50	Broad
8	NIFTY Midcap 100	NSEMCAP	.NIFMDCP100	Broad
9	Nifty Smallcap 250	NSES250	.NISM250	Broad
10	Nifty Smallcap 50	NSESM50	.NISM50	Broad
11	NIFTY Smallcap 100	NSESMCP	.NIFSMCP100	Broad
12	NIFTY LargeMidcap 250	NSELM250	-	Broad
13	Nifty MidSmallcap 400	NSEMDSM	.NIMI400	Broad
14	Nifty Auto	NSEAUTO	.NIFTYAUTO	Sectoral
15	Nifty Bank	NSEBANK	.NSEBANK	Sectoral
16	NIFTY Consumer Durable	NISSCODU	-	Sectoral
17	Nifty Financial Services	NSEFIN	.NIFTYFIN	Sectoral
18	Nifty Financial Services 25/50	-	.NIFSER	Sectoral
19	Nifty FMCG	NSEFMCG	.NIFTYFMCG	Sectoral
20	Nifty IT	NSEIT	.NIFTYIT	Sectoral
21	Nifty Media	NSEMED	.NIFTYMED	Sectoral
22	Nifty Metal	NSEMET	.NIFTYMET	Sectoral
23	NIFTY Oil & Gas	NISSOIL	-	Sectoral
24	Nifty Pharma	NSEPHRM	.NIPHARM	Sectoral
25	Nifty Private Bank	NSEPBANK	.NIFPVTBNK	Sectoral
26	Nifty PSU Bank	NSEPSBK	.NIFTYPSU	Sectoral
27	Nifty Realty	NSEREAL	.NIFTYREAL	Sectoral
28	NIFTY Alpha Low Volatility 30	NSELV30	.NIFALV30	Strategy
29	Nifty Alpha 50	NSEAP	.NIFTYALI	Strategy
30	Nifty Dividend Opportunities 50	NSEDIV	.NIFTYDVOP	Strategy
31	Nifty Growth Sectors 15	NSENI15	.NI15	Strategy
32	Nifty High Beta 50	NSEHB	.NIFTYHBI	Strategy



	1	1	1	1
33	Nifty Low Volatility 50	NSELV	.NIFTYLVI	Strategy
34	Nifty100 Equal Weight	NSE100EW	.NIFTY100EW	Strategy
35	NIFTY100 Low Volatility 30	NSELV30	.NIFTY100L30	Strategy
36	NIFTY100 Quality 30	NSEQTY30	.NIF100QL30	Strategy
37	NIFTY200 Quality 30	NSE200Q	.NIQU30	Strategy
38	Nifty50 Dividend Points	NIFTYDVD	.NIFTYDV	Strategy
39	NIFTY50 Equal Weight	NSE50EW	.NIFTY50EW	Strategy
40	Nifty50 PR 1x Inverse	NPR1XI	.NIFPR1X	Strategy
41	Nifty50 TR 1x Inverse	NTR1XI	.NIFTR1X	Strategy
42	Nifty50 TR 1x Leverage	NTR1XL	.NIFTR1X	Strategy
43	NIFTY50 PR 2x Leverage	NPR2XL	.NIFPR2X	Strategy
44	Nifty50 TR 2x Leverage	NTR2XL	.NIFTR2X	Strategy
45	Nifty50 USD	DEFTY	.NSED	Strategy
46	Nifty50 Value 20	NSENV20	.NV20	Strategy
47	NIFTY 50 Arbitrage	NSE50ARB	-	Strategy
48	Nifty Commodities	NSECMD	.NIFTYCOM	Thematic
49	Nifty CPSE	CPSE	.NICPSE	Thematic
50	Nifty Energy	NSENRG	.NIFTYENR	Thematic
51	Nifty India Consumption	NSECON	.NIFTYCONS	Thematic
52	Nifty Infrastructure	NSEINFR	.NIFTYINFR	Thematic
53	Nifty Midcap Liquid 15	NSEMID15	.NIFML15	Thematic
54	Nifty MNC	NSEMNC	.NIFTYMNC	Thematic
55	Nifty PSE	NSEPSE	.NIFTYPSE	Thematic
56	Nifty Services Sector	NSESRV	.NIFTYSER	Thematic
57	Nifty100 Liquid 15	LIX15	.NLIX50	Thematic
58	NIFTY50 Shariah	NSESHTR	-	Thematic
59	NIFTY500 Shariah	NS500STR	-	Thematic
60	NIFTY100 ESG	NSEESG	-	Thematic
61	NIFTY100 Enhanced	ESG NSEESGE	-	Thematic



### **About Us**

### **About National Stock Exchange of India Limited (NSE):**

National Stock Exchange of India Ltd. (NSE) is the world's largest derivatives exchange by trading volume as per the statistics published by Futures Industry Association (FIA) for 2019 and ranked 3rd in the world in the cash equities segment by number of trades as per the statistics published by the World Federation of Exchanges (WFE). 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: <a href="www.nseindia.com">www.nseindia.com</a>

#### **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