

S&P BSE Indices *Methodology*

**S&P Dow Jones
Indices**

A Division of **S&P Global**



July 2018

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Introduction

Partnership

On February 19, 2013, S&P Dow Jones Indices and the BSE Ltd. (formerly Bombay Stock Exchange (“BSE”)) announced their strategic partnership to calculate, disseminate, and license the widely followed BSE suite of indices.

Index Objectives, Highlights, and Index Family

Indices are constructed to consider specific size and liquidity requirements to ensure investability and tradability. Asia Index Private Limited currently maintains indices measuring multiple aspects of the Indian market.

Broad-based. The Broad-based indices act as reliable market indicators for the Indian stock market, covering large-cap, mid-cap, and small-cap companies. Broad-based indices include the following:

- **S&P BSE SENSEX.** The index is designed to serve as both a benchmark and an investable index and is comprised of 30 constituents representing large, well-established and financially sound companies across key sectors. It is the oldest index in the country.
- **S&P BSE 100.** The index is designed to measure the performance of the 100 largest and most liquid Indian companies within the S&P BSE LargeMidCap.¹
- **S&P BSE SENSEX 50.** The index is designed to measure the performance of the 50 largest and most liquid companies within S&P BSE 100.
- **S&P BSE SENSEX Next 50.** The index is designed to measure the performance of the 50 companies within S&P BSE 100 that are not members of the S&P BSE SENSEX 50.
- **S&P BSE SENSEX 50 TMC.** The index is designed to measure the performance of the 50 largest and most liquid companies within the S&P BSE 500, as selected by total market capitalization.
- **S&P BSE SENSEX Next 50 TMC.** The index is designed to measure the performance of the 50 largest and most liquid companies within the S&P BSE 500, as selected by total market capitalization, that are not members of the S&P BSE SENSEX 50 TMC.
- **S&P BSE 200.** The index is designed to measure the performance of 200 of the largest and most well-established companies in India.
- **S&P BSE 500.** The index is designed to be a broad representation of the Indian capital market.

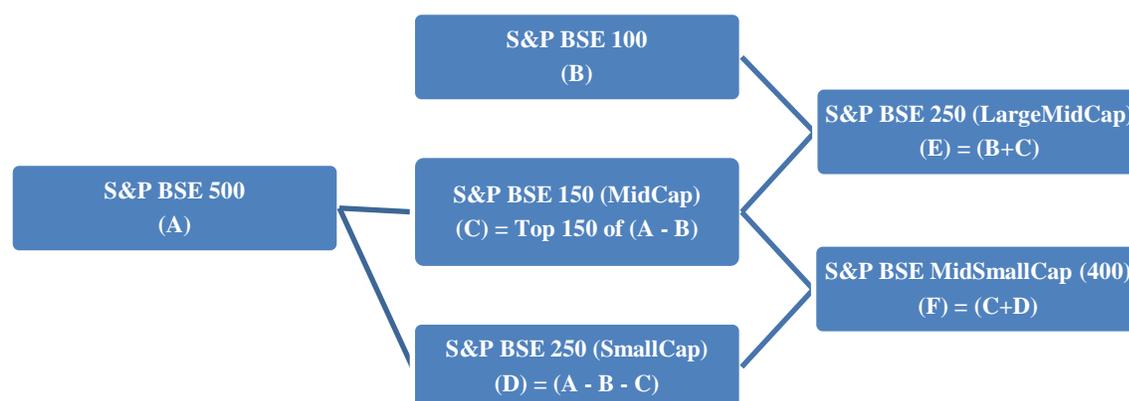
The following indices are intended to represent market capitalization size segments within the Indian market while considering the requirements outlined by SEBI.²

- **S&P BSE 100 LargeCap TMC.** The index is designed to measure the performance of 100 of the largest and most liquid companies within the S&P BSE 500, as selected by total market capitalization
- **S&P BSE 150 Midcap.** The index is designed to measure the performance of 150 midcap companies, by total market capitalization, subject to buffers, in the S&P BSE 500 but not in the S&P BSE 100.

¹ For more information on the eligibility, construction and maintenance of the S&P BSE LargeMidCap, please refer to the *S&P BSE AllCap Methodology* document, available at www.spdji.com.

² Based on SEBI Circular “Categorization and Rationalization of Mutual Fund Schemes” dated October 6, 2017 (http://www.sebi.gov.in/legal/circulars/oct-2017/categorization-and-rationalization-of-mutual-fund-schemes_36199.html).

- **S&P BSE 250 Smallcap.** The index is designed to measure the performance of 250 smallcap companies, by total market capitalization, in the S&P BSE 500 that are not part of the S&P BSE 100 and S&P BSE 150 Midcap.
- **S&P BSE 250 LargeMidcap.** The index is designed to measure the performance of 250 companies, by total market capitalization, in the S&P BSE 100 and S&P BSE 150 Midcap.
- **S&P BSE 400 MidSmallcap.** The index is designed to measure the performance of 400 companies, by total market capitalization in the S&P BSE 500 that are not part of the S&P BSE 100.
- **S&P BSE 250 LargeMidcap, 65:35.** The index is designed to measure the performance of a composite index composed of the S&P BSE 100 and S&P BSE 150 Midcap, with weights assigned to the two underlying indices of 65% and 35%, respectively.



Thematics. Thematic indices include the following:

- **S&P BSE PSU.** The index is designed to measure the performance of India's Public Sector Undertakings (PSUs) listed on the BSE Ltd. and includes all PSUs in the S&P BSE 500.
- **S&P BSE CPSE.** The index is designed to measure the performance of India's Central Public Sector Enterprises (CPSEs) listed on the BSE Ltd. and includes all CPSEs listed on the BSE Ltd.
- **S&P BSE Bharat 22 Index.** The index is designed to measure the performance of select companies disinvested by the Central Government of India according to the disinvestment program.

Investment Strategy. The Investment Strategy indices include BSE and SME listed IPO indices, as well as U.S. dollar versions of the Broad-based indices. The S&P BSE DOLLEX Indices were introduced as a result of the Indian equity markets being increasingly integrated with the global capital markets and the need to assess the market movements in terms of international benchmarks. The dollar-linked indices are useful to overseas investors, as it helps them measure their real returns after accounting for exchange rate fluctuations. Investment Strategy indices include the following:

- **S&P BSE IPO.** The index is designed to track the current primary market conditions in the Indian capital market and measure the growth in investor wealth within a period of one year after the listing of a company subsequent to the successful completion of an initial public offering (IPO).
- **S&P BSE SME IPO.** The Index is designed to track the performance of Small and Medium Enterprises (SMEs) listed via IPOs on BSE's SME Platform, over a one-year period from its listing date.
- **S&P BSE DOLLEX Indices.** The indices are designed for use by overseas investors seeking to measure real returns after accounting for exchange rate fluctuations. The series consists of three separate indices:
 - The S&P BSE DOLLEX 30 is a U.S. dollar linked version of S&P BSE SENSEX, which represents 30 of the largest companies trading on the BSE.

- The S&P BSE DOLLEX 100 is a U.S. dollar linked version of the S&P BSE 100, which represents the top 100 companies listed on the BSE ranked by float-adjusted market cap, value traded, and impact cost.
- The S&P BSE DOLLEX 200 is a U.S. dollar linked version of the S&P BSE 200, representing 200 large, well established and financially sound companies across sectors.
- **S&P BSE SENSEX Futures Index.** The index is designed to model the returns realized through an investment in the near-month futures contract on the S&P BSE SENSEX.
- **S&P BSE Arbitrage Rate Index.** The index consists of a position with a 100% long index weight in the S&P BSE SENSEX Total Return Index and a 100% short index weight in the S&P BSE SENSEX Futures Excess Return Index.
- **S&P BSE SENSEX 2X Leverage Daily Index.** The index is designed to generate a multiple of the underlying index return, minus the cost of borrowing capital to generate excess index exposure. The S&P BSE SENSEX 2X Leverage Daily Index reflects 200% of the return of the S&P BSE SENSEX, including dividends and price movements.
- **S&P BSE SENSEX Inverse Daily Indices.** The indices are designed to assist investors who are seeking a short position on Indian equities.
 - The S&P BSE SENSEX 1X Inverse Daily Index provides inverse returns of the S&P BSE SENSEX by taking a short position in the index.
 - The S&P BSE SENSEX 2X Inverse Daily Index provides two times the inverse performance of the S&P BSE SENSEX.

Sectors. The Sector indices are designed as equity benchmarks for BSE traded securities in several broadly defined economic sectors. The indices include companies in the S&P BSE 500 that represent nine sectors of the economy and contain a minimum of 10 companies per index. Sector indices include the following:

- S&P BSE AUTO
- S&P BSE OIL & GAS
- S&P BSE METAL
- S&P BSE BANKEX
- S&P BSE POWER
- S&P BSE CAPITAL GOODS
- S&P BSE CONSUMER DURABLES
- S&P BSE REALTY
- S&P BSE TECK

Realized Volatility. Realized Volatility indices provide market participants an accurate measure of the historic volatility of the S&P BSE SENSEX over fixed 1, 2, and 3 month time horizons, which are synchronized with BSE's 1, 2, and 3 month futures and options expiration cycles. The indices can be used to create derivative products enabling traders to make directional bets on volatility, profit from volatility arbitrage trades, and hedge gamma exposure. They can also be used to measure the difference in expected and actual volatility, providing a more effective tool for hedging. The indices are used to improve volatility and correlation forecasts useful for portfolio allocation and risk management.

- S&P BSE REALVOL-1MTH
- S&P BSE REALVOL-2MTH
- S&P BSE REALVOL-3MTH

Supporting Documents

This methodology is meant to be read in conjunction with supporting documents providing greater detail with respect to the policies, procedures and calculations described herein. References throughout the methodology direct the reader to the relevant supporting document for further information on a specific topic. The list of the main supplemental documents for this methodology and the hyperlinks to those documents is as follows:

Supporting Document	URL
S&P Dow Jones Indices' Equity Indices Policies & Practices Methodology	Equity Indices Policies & Practices
S&P Dow Jones Indices' Index Mathematics Methodology	Index Mathematics Methodology
S&P Dow Jones Indices' Float Adjustment Methodology	Float Adjustment Methodology

The methodology is created by S&P Dow Jones Indices to achieve the aforementioned objective of measuring the underlying interest of each index governed by this methodology document. Any changes to or deviations from this methodology are made in the sole judgment and discretion of S&P Dow Jones Indices so that the index continues to achieve its objective.

Eligibility Criteria and Index Construction

Approaches

Most of the indices in this series employ a float-adjusted market capitalization-weighting scheme, using the divisor methodology used in S&P Dow Jones Indices' equity indices. The following indices employ a non-market capitalization weighting scheme:

- S&P BSE BANKEX
- S&P BSE OIL & GAS
- S&P BSE Bharat 22 Index

The S&P BSE 250 LargeMidcap, 65:35 and S&P BSE Arbitrage Rate Index employ a weighted return scheme.

For more information on weighting schemes, please refer to S&P Dow Jones Indices' Index Mathematics Methodology document.

Asia Index Private Limited believes turnover in index membership should be avoided when possible. At times, a company may appear to temporarily violate one or more of the addition criteria. However, the addition criteria are for addition to an index, not for continued membership. As a result, an index constituent that appears to violate criteria for addition to that index will not be deleted unless ongoing conditions warrant an index change.

Multiple Share Classes

Differential Voting Rights Shares (DVRs) are eligible for inclusion in the following indices provided that the ordinary share class is part of the index and the DVR shares outstanding are greater than 10% of the ordinary shares outstanding.³ In addition, the DVRs must individually satisfy all other index eligibility criteria as detailed in the following pages.

- S&P BSE SENSEX
- S&P BSE 200
- S&P BSE 250 Smallcap
- S&P BSE 400 MidSmallcap
- S&P BSE 500
- S&P BSE 150 Midcap
- S&P BSE 250 LargeMidcap
- S&P BSE 250 LargeMidcap, 65:35

DVRs are eligible for inclusion in the following indices provided that the ordinary share class is part of the respective Index Universe for each of the indices and the DVRs individually pass the liquidity criteria as detailed in the following pages:

- S&P BSE 100
- S&P BSE SENSEX 50
- S&P BSE SENSEX Next 50
- S&P BSE 100 LargeCap TMC
- S&P BSE SENSEX 50 TMC
- S&P BSE SENSEX Next 50 TMC

Only common stocks are eligible for inclusion in the following indices:

- S&P BSE PSU
- S&P BSE CPSE
- S&P BSE IPO
- S&P BSE SME IPO
- S&P BSE Sector Indices
- S&P BSE Bharat 22 Index

³ Effective with the June 2015 rebalancing.

S&P BSE SENSEX

The S&P BSE SENSEX is comprised of 30 constituent companies representing large, well-established and financially sound companies across key sectors. It is the oldest index in the country.

Eligible Universe. The index is derived from the constituents of the S&P BSE 100. The inclusion of DVRs in the index will result in more than 30 stocks in the index. However, the number of companies in the index remains fixed at 30. Stocks in the eligible universe must satisfy the following eligibility factors in order to be considered for index inclusion:

- **Listing History.** Stocks must have a listing history of at least six months at BSE. An exception may be granted if the average float-adjusted market capitalization of a newly listed stock ranks in the top 10 of all stocks listed at BSE. In such cases, the minimum listing history required is one month.
- **Trading Days.** The stock must have traded on every trading day at BSE during the six month reference period.
- **Revenue.** Eligible companies must have reported revenue in the last four quarters.
- **Multiple Share Classes.** DVRs satisfying the above eligibility criteria are aggregated with the company's common stock and index construction is done based on the aggregated company data as detailed below.

Index Construction. All companies meeting the eligibility factors listed above are ranked based on their average six month float-adjusted market capitalization. The top 75 are identified.

All companies meeting the eligibility factors listed above are then ranked again based on their average six month total market capitalization. The top 75 are identified.

All companies identified based on both float and total market capitalizations are then combined and sorted based on their average six month value traded. Companies with a cumulative value traded greater than 98% are excluded.

The remaining companies are then sorted by float-adjusted market capitalization. Companies with a weight of less than 0.5% are excluded.

All remaining companies are classified by sector and then sorted in descending order of rank by float-adjusted market capitalization. These companies make up the replacement pool, to be included in the index if an existing constituent is removed.

Industry/Sector Representation. An index addition generally is made only if a vacancy is created by an index deletion. Index additions are made according to size and liquidity, while generally attempting to maintain index sector weights that are broadly in-line with the overall market. All additions and deletions are made at the discretion of index committee.

Constituent Weightings. Index constituents are weighted based on their float-adjusted market capitalization.

S&P BSE SENSEX Futures Index

The S&P BSE SENSEX Futures Index tracks the returns generated from investment in the near-month (one month) futures contract. The underlying index for the futures contract is the S&P BSE SENSEX. The futures contract is traded on BSE Ltd. under the symbol 'BSX'.

Both excess return and total return versions are calculated. The total return is calculated using the one month MIBOR rate as the risk free rate of return.

Futures Roll. The index includes a provision for the replacement of the index futures contract as it approaches maturity (also referred to as "rolling" or "the roll"). This replacement occurs over a one-day rolling period every month, which is one business day prior to the expiration of the futures contract.

The near-month futures contract expires on the last Thursday of each month. In case the last Thursday is a holiday, it expires on the immediately preceding business day.

Calculation of the Excess Return Index. The excess return is calculated from the price change of the underlying futures contract. On any trading date, t , the level is calculated as follows:

$$ERI_t = ERI_{t-1} \times (1 + IER_t)$$

where:

ERI_t = Excess return index level on business day t .

ERI_{t-1} = Excess return index level on business day $t-1$.

IER_t = Index excess return on business day t , defined as follows:

$$IER_t = \frac{DCRP_t}{DCRP_{t-1}} - 1$$

where:

$DCRP_t$ = Daily contract reference price of the futures contract on business day t .

$DCRP_{t-1}$ = Daily contract reference price of the futures contract on business day $t-1$.

The daily contract reference price is the official close, as designated by the BSE Ltd.

Calculation of the Total Return Index. For a funded investment, the total return between business days $t-1$ and t includes the risk free return for the initial cash outlay.

$$TRI_t = TRI_{t-1} \times (1 + TR_t)$$

where:

TRI_t = Total return index level on business day t .

TRI_{t-1} = Total return index level on business day $t-1$.

TR_t = Total return on business day t , defined as follows:

$$TR_t = IER_t + RFR_t$$

where:

IER_t = Index excess return on business day t .

RFR_t = Risk free rate on business day t .

The risk free rate is calculated using the one month MIBOR as follows:

$$RFR_t = MIBOR_{t-1} \times \frac{\Delta_t}{365}$$

where:

$MIBOR_{t-1}$ = One month MIBOR on business day $t-1$.

Δ_t = Number of calendar days between business day t and business day $t-1$.

Note: Effective after the close on April 15, 2015, the risk free rate calculation is based on a 365-day year convention. Prior to this, it was based on a 360-day year convention.

S&P BSE Arbitrage Rate Index

The index consists of a position with a 100% long index weight in the S&P BSE SENSEX Total Return Index and a 100% short index weight in the S&P BSE SENSEX Futures Excess Return Index.

Underlying Indices. S&P BSE SENSEX Total Return Index and S&P BSE SENSEX Futures Excess Return Index.

Underlying Index	Index Code	Index Weight
S&P BSE SENSEX Total Return Index	SPBSESST	100%
S&P BSE SENSEX Futures Excess Return Index	SPBSSFIE	-100%

Index Calculation. On the trading date, t , the index is calculated as follows using the component indices as detailed above.

$$Index_t = Index_{PB} * (1 + IndexReturn_t)$$

$$IndexReturn_t = \sum_{i=1}^n W_i R_i$$

where:

$Index_{PB}$ = Index value on the previous rebalancing date.

w_i = Weight of an asset class i .

R_i = Cumulative return of the representative asset class i at t from the previous rebalancing date.

Rebalancing. The index is rebalanced monthly, effective after the close one business day prior to the expiration of the futures contract. The near-month futures contract expires on the last Thursday of each month. If the last Thursday is a holiday, the contract expires on the immediately preceding business day. At each rebalancing, the weights of the underlying indices are reset to the weights above.

Index Maintenance. All index adjustments and corporate action treatments follow the rules of the S&P BSE SENSEX.

S&P BSE SENSEX 2X Leverage Daily Index

The index is designed to generate a multiple of the underlying index return, minus the cost of borrowing capital to generate excess index exposure. The S&P BSE SENSEX 2X Leverage Daily Index reflects 200% of the return of the S&P BSE SENSEX, including dividends and price movements.

Daily Index Returns. The daily return for the S&P BSE SENSEX 2X Leverage Daily Index consists of the return on the total position in the underlying index, the S&P BSE SENSEX, less the borrowing costs for leverage.

The formula for calculating the leveraged index return is as follows:

$$LIR_t = K \times \left(\frac{UITR_t}{UITR_{t-1}} - 1 \right) - (K - 1) \times \left(\frac{BR_{t-1}}{365} \right) \times D_{t,t-1}$$

where:

LIR_t = Leveraged index return at time t .

$K (K \geq 1)$ = Leverage ratio.

- $K = 2$, Exposure = 200%.

$UITR_t$ = Underlying index total return value at time t .

$UITR_{t-1}$ = Underlying index total return value at time $t-1$.

BR_{t-1} = Borrowing rate (overnight MIBOR) at time $t-1$.

$D_{t,t-1}$ = Number of calendar days between date t and $t-1$.

In the equation above, the borrowing rate is applied to the leveraged index return to account for the cost of capital of the funds borrowed to generate leverage.

Daily Index Values. Leveraged index values are calculated each day by applying the current day's leveraged index return to the previous day's leveraged index value, as follows:

$$LIV_t = LIV_{t-1} \times (1 + LIR_t)$$

where:

LIV_t = Leveraged index value at time t .

LIV_{t-1} = Leveraged index value at time $t-1$.

LIR_t = Leveraged index return at time t .

The leveraged position is rebalanced daily. This is consistent with the payoff from futures based replication.

S&P BSE SENSEX Inverse Daily Indices

The indices are designed to assist investors who are seeking a short position on Indian equities and represent a short position in the underlying index. When an investor holds a short position, he/she must pay dividends and interest for the borrowed stock.

- The S&P BSE SENSEX 1X Inverse Daily Index provides inverse returns of the S&P BSE SENSEX by taking a short position in the index.
- The S&P BSE SENSEX 2X Inverse Daily Index provides two times the inverse performance of the S&P BSE SENSEX.

Daily Index Returns. The calculation follows the same general approach as the S&P BSE SENSEX 2X Leverage Daily Index with certain adjustments as follows:

1. The return on the underlying index, the S&P BSE SENSEX, is reversed and is based on the total return of the underlying index so that dividends and price movements are included.
2. While the costs of borrowing the securities are not included, there is an adjustment to reflect the interest earned on both the initial investment and the proceeds from selling short the securities in the underlying index. These assumptions reflect normal industry practice.

The formula for calculating the inverse index return is as follows:

$$IIR_t = -K \times \left(\frac{UITR_t}{UITR_{t-1}} - 1 \right) + (K + 1) \times \left(\frac{LR_{t-1}}{365} \right) \times D_{t,t-1}$$

where:

IIR_t = Inverse index return at time t .

$K (K \geq 1)$ = Leverage ratio.

- $K = 1$, Exposure = -100%.
- $K = 2$, Exposure = -200%.

$UITR_t$ = Underlying index total return value at time t .

$UITR_{t-1}$ = Underlying index total return value at time $t-1$.

LR_{t-1} = Lending rate (overnight MIBOR) at time $t-1$.

$D_{t,t-1}$ = Number of calendar days between date t and $t-1$.

In the equation above, the first right hand side term represents the total return on the underlying index and the second right hand side term represents the interest earned on the initial investment and the shorting proceeds.

Daily Index Values. Inverse index values are calculated each day by applying the current day's inverse index return to the previous day's inverse index value, as follows:

$$IIV_t = IIV_{t-1} \times (1 + IIR_t)$$

where:

IIV_t = Inverse index value at time t .

IIV_{t-1} = Inverse index value at time $t-1$.

IIR_t = Inverse index return at time t .

The inverse position is rebalanced daily. This is consistent with the payoff from futures based replication.

S&P BSE 100

A broad-based index, the S&P BSE 100 represents the 100 largest and most liquid companies within the S&P BSE LargeMidCap.⁴

Eligible Universe. The index is derived from the constituents of the S&P BSE LargeMidCap. The inclusion of DVRs in the index will result in more than 100 stocks in the index. However, the number of companies in the index remains fixed at 100. Stocks in the eligible universe must satisfy the following criterion in order to be considered for index inclusion:

- **Listing History.** IPOs ranking in the top 10 of all stocks listed at BSE in terms of average float-adjusted market capitalization require a minimum listing history of one month.

Index Construction. The following company data points are calculated for each eligible company:

1. Average daily float-adjusted market capitalization
2. Annualized traded value
3. Trading frequency

These are calculated based on an observation period defined as the prior six-month period, as of the rebalancing reference date.

Where a company has multiple share classes, the eligible share classes are combined to measure the company's data point 1. Data points 2-3 are measured independently for each of the eligible share classes.

Annualized traded value is calculated by taking the median of the monthly medians of the daily traded values over the observation period. The annualization is calculated using 250 trading days in a year.

Constituents are selected for index inclusion as follows:

1. At each semi-annual rebalancing, eligible companies must satisfy all of the following in order to be considered for index inclusion.
 - a. Have an annualized traded value greater than or equal to INR 10 billion. Current index constituents with an annualized traded value of at least INR 8 billion remain eligible for index inclusion provided they meet the other eligibility criteria.
 - b. Have no more than five non-trading days in the past six months, as of the rebalancing reference date.
2. Companies satisfying the criteria in step 1 are then ranked based on average daily float-adjusted market capitalization. The top 80 companies are selected for index inclusion. Existing constituents ranked 81 – 120 are selected in order of highest rank until the target constituent count of 100 is reached. If after this step the target constituent count is not achieved, then non-constituents ranked 81 – 120 are selected in order of highest rank until the target constituent count is reached.
3. The following derivative market linkage constraints are also taken into account:
 - a. The individual float weight of any share class of a company not linked to derivatives trading cannot exceed 5% of the index.
 - b. The aggregate float weight of the index constituents not linked to derivatives trading cannot exceed 10%.

⁴ For more information on the eligibility, construction and maintenance of the S&P BSE LargeMidCap, please refer to the *S&P BSE AllCap Methodology* document, available at www.spdji.com.

If any of the above derivative market linkage constraints are violated, the next eligible stock is selected for index inclusion based on the rank derived in Step 2 giving preference to those linked to the derivatives market.

In addition, the constituent selection process of the S&P BSE 100 also takes into account the derivative market linkage constraints of the S&P BSE SENSEX 50 and S&P BSE SENSEX Next 50 as detailed in the following pages. The selection process based on derivative market linkage is repeated until the criteria for all three indices are met.

Constituent Weightings. Index constituents are weighted based on their float-adjusted market capitalization.

S&P BSE SENSEX 50

The index is designed to measure 50 of the largest and most liquid companies within the S&P BSE 100.

Eligible Universe. The index is derived from the constituents of the S&P BSE 100. In order to be eligible for index inclusion, the constituent must be linked to derivative trading (i.e. have a derivative contract).

Index Construction. All the companies in the S&P BSE 100 are ranked based on average daily float-adjusted market capitalization. The top 40 companies (whether a current constituent or not) are selected for index inclusion. Existing constituents ranked 41 – 60 are selected in order of highest rank until the target constituent count of 50 is reached. If after this step the target constituent count is not achieved, then non-constituents ranked 41 – 60 are selected in order of highest rank until the target constituent count is reached.

If the derivative market linkage eligibility factor is violated, the lowest-ranked constituent not linked to derivatives trading is excluded and replaced with the highest-ranked eligible constituent from the S&P BSE 100 linked to derivatives trading.

Constituent Weightings. Index constituents are weighted based on their float-adjusted market capitalization.

S&P BSE SENSEX Next 50

The index is designed to measure 50 of the largest and most liquid companies within the S&P BSE 100 that are not members of the S&P BSE SENSEX 50.

Eligible Universe. The index is derived from the constituents of the S&P BSE 100 that are not members of the S&P BSE SENSEX 50. In order to be eligible for index inclusion, the constituent should be linked to derivative trading (i.e. have a derivative contract).

Index Construction. All constituents of the S&P BSE 100 that are not members of the S&P BSE SENSEX 50 are selected and form the index, subject to the following derivative market linkage constraints:

- The individual float-adjusted weight of any share class of a company not linked to derivatives trading cannot exceed 5% of the index.
- The aggregate float-adjusted weight of the index constituents not linked to derivatives trading cannot exceed 20%.

If any of the above derivative market linkage constraints are violated, the lowest-ranked company not linked to derivatives trading is removed and replaced with the highest-ranked eligible company linked to derivatives trading. This process is repeated until the aggregate weight of the index constituents not linked to derivatives trading no longer violates the constraints outlined above.

Constituent Weightings. Index constituents are weighted based on their float-adjusted market capitalization.

S&P BSE 100 LargeCap TMC

Eligible Universe. The index is derived from constituents of the S&P BSE 500.⁵ The inclusion of DVRs in the index will result in more than 100 stocks in the index. However, the number of companies in the index remains fixed at 100.

Index Construction.

1. Eligible companies must satisfy the following criteria for inclusion into the index.
 - a. Have no more than five non-trading days in the past six months, as of the rebalancing reference date. When a company has multiple share classes non-trading days are measured independently for each of the eligible share classes.
 - b. Have an annualized traded value⁶ greater than or equal to INR 10 billion (INR 8 billion for current constituents). Annualized traded value is calculated by taking the median of the monthly medians of the daily traded values over the six-month observation period. The annualization is calculated using 250 trading days in a year. When a company has multiple share classes annualized traded value is measured independently for each of the eligible share classes.
2. Companies satisfying the criteria in step 1 are ranked based on average daily total market capitalization over the prior six-month period. When a company has multiple share classes, total market capitalization is assessed at company level. The top 80 companies are included in the index. Existing constituents ranked 81–120 are selected, by order of highest rank, until the target constituent count of 100 is reached. If after this step the target count is not achieved, non-constituents are selected in order of highest rank until the target count is reached.
3. The following derivative market linkage constraints are also taken into account.⁸
 - a. The individual float weight of any share class of a company not linked to derivatives trading cannot exceed 5% of the index.
 - b. The aggregate float weight of the stocks in the index not linked to derivatives trading cannot exceed 10% of the index

If any of the above derivative market linkage rules are violated, the lowest-ranked stock not linked to derivatives is replaced by the next eligible stock linked to derivatives, based on the rank derived in step 2.

If a stock's listing history is less than six months, as of the rebalancing reference date, all data used in the index construction process is assessed from the listing date. In addition, stocks that have undergone a scheme of arrangement for corporate events such as spin-offs or capital restructurings, use the available data from the scheme's effective date until the reference date.

Constituent Weightings. Index constituents are weighted based on their float-adjusted market capitalization.

⁵ Prior to the June 2018 rebalancing, only companies with a listing history of at least six months have been eligible for constituent selection.

⁶ In the history the annualized traded value rule is only applicable from the December 2011 rebalancing date forward.

S&P BSE SENSEX 50 TMC and S&P BSE SENSEX Next 50 TMC

S&P BSE SENSEX 50 TMC. The index is designed to measure 50 of the most liquid and largest companies, by total market capitalization, within the S&P BSE 500.

S&P BSE SENSEX Next 50 TMC. The index is designed to measure 50 of the most liquid and largest companies, by total market capitalization, within the S&P BSE 500 that are not members of the S&P BSE SENSEX 50 TMC.

Eligible Universe. The indices are derived from constituents of the S&P BSE 500⁷ by forming a 'Selection Universe', as detailed below:

1. Calculate the following company data points, based on an observation period defined as the prior six-month period as of the rebalancing reference date, for each eligible company in the Eligible Universe:
 - a. Average daily total market capitalization
 - b. Annualized value traded⁸
 - c. Number of non-trading days⁸

Where a company has multiple share classes, the eligible share classes are combined to calculate company data point a. Company data points b and c are measured independently for each of the eligible share classes.

Annualized traded value is calculated by taking the median of the monthly medians of the daily traded values over the observation period. The annualization is calculated using 250 trading days in a year.

2. Eligible companies must satisfy the following criteria for inclusion into the Selection Universe.
 - a. Have an annualized traded value greater than or equal to INR 10 billion (INR 8 billion for current constituents).
 - b. Have no more than five non-trading days in the past six months, as of the rebalancing reference date.
3. Companies satisfying the criteria in step 2 are ranked based on average daily total market capitalization. The top 80 companies are included in the Selection Universe. Existing constituents from the two indices ranked 81–120 are selected, by order of highest rank, until the target count of 100 is reached. If after this step the target count is not achieved, non-constituents are selected in order of highest rank until the target count is reached.
4. The following derivative market linkage constraints are also taken into account:⁸
 - a. The individual float weight of any share class of a company not linked to derivatives trading cannot exceed 5% of the 'Selection Universe'.
 - b. The aggregate float weight of the stocks in the 'Selection Universe' not linked to derivatives trading cannot exceed 10% of the 'Selection Universe'

If any of the above derivative market linkage rules are violated, the lowest-ranked stock not linked to DVRs is replaced by the next eligible stock from the 'Selection Universe' linked to DVRs, based on the rank derived in step 3.

In addition, the selection process also takes into account the derivative market linkage constraints of the S&P BSE SENSEX 50 as detailed in the following pages.

The selection process based on derivative market linkage is repeated until all the criteria are met.

⁷ In the history, only companies with a listing history of six months or more have been eligible for constituent selection.

⁸ In the history, this rule is applicable from the December 2011 rebalancing date forward.

The inclusion of DVRs may result in more than 100 stocks in the 'Selection Universe' and more than 50 stocks in the S&P BSE SENSEX 50 TMC and S&P BSE SENSEX Next 50 TMC indices. However, the number of companies in the Selection Universe, and each index, remains fixed at 100 and 50 respectively.

Index Construction. Constituents are selected for index inclusion as follows:

- **S&P BSE SENSEX 50 TMC.** Companies in the 'Selection Universe' that are not linked to derivative trading (i.e. do not have a derivative contract) are excluded. All remaining companies are ranked based on average daily total market capitalization. The top 40 companies (whether a current constituent or not) are selected for index inclusion. Existing constituents ranked 41–60 are selected in order of highest rank until the target constituent count of 50 is reached. If after this step the target constituent count is not achieved, then non-constituents are selected in order of highest rank until the target constituent count is reached.
- **S&P BSE SENSEX Next 50 TMC.** All companies in the Selection Universe that are not members of the S&P BSE SENSEX 50 TMC are selected and form the index.

Constituent Weightings. Index constituents are weighted based on their float-adjusted market capitalization.

S&P BSE 200

The S&P BSE 200 represents 200 large, well established and financially sound companies across sectors.

Eligible Universe. The index is derived from the constituents of the S&P BSE 500. The inclusion of DVRs in the index will result in more than 200 stocks in the index. However, the number of companies in the index remains fixed at 200. Stocks in the eligible universe must satisfy the following criterion in order to be considered for index inclusion:

- **Listing History.** Stocks must have a listing history of at least three months at BSE. An exception may be granted if the average float-adjusted market capitalization of a newly listed stock ranks in the top 10 of all stocks listed at BSE. In such cases, the minimum listing history required is one month.

If a stock's listing history is less than six months, as of the rebalancing reference date, all data used in the eligible universe screening and index construction process are from the listing date, subject to the minimum listing requirement stated above being met.

Index Construction. The following company data points are calculated for each eligible company:

1. Average daily total market capitalization
2. Annualized traded value
3. Trading frequency

These are calculated based on an observation period defined as the prior six-month period, as of the rebalancing reference date.

Where a company has multiple share classes, the eligible share classes are combined to measure the company's data point 1. Data points 2-3 are measured independently for each of the eligible share classes.

Annualized traded value is calculated by taking the median of the monthly medians of the daily traded values over the observation period. The annualization is calculated using 250 trading days in a year.

Constituents are selected for index inclusion as follows:

1. At each semi-annual rebalancing, eligible companies must satisfy all of the following in order to be considered for index inclusion.
 - a. Have an annualized traded value greater than or equal to INR 5 billion. Current index constituents with an annualized traded value of at least INR 4 billion remain eligible for index inclusion provided they meet the other eligibility criteria.
 - b. Stocks must have traded for at least 90% of the trading days at BSE during the six month reference period.
2. Companies satisfying the criteria in step 1 are then ranked based on average daily total market capitalization. The top 160 companies are selected for index inclusion. Existing constituents ranked 161 – 240 are selected in order of highest rank until the target constituent count of 200 companies is reached. If after this step the target constituent count is not achieved, then non-constituents are added in order of highest rank until the target constituent count is reached.

Constituent Weightings. Index constituents are weighted based on their float-adjusted market capitalization.

S&P BSE 500

The S&P BSE 500 represents nearly 93% of the total market capitalization on BSE and covers all 20 major industries of the economy. The index is comprised of 500 companies.

Eligible Universe. The index is derived from the constituents of the S&P BSE AllCap.⁹ The inclusion of DVRs in the index will result in more than 500 stocks in the index. However, the number of companies in the index remains fixed at 500. Stocks in the eligible universe must satisfy the following criterion in order to be considered for index inclusion:

- **Listing History.** Stocks must have a listing history of at least three months at BSE. IPOs are eligible if they have a listing history of at least one month.

If a stock's listing history is less than six months, as of the rebalancing reference date, all data used in the eligible universe screening and index construction process are from the listing date, subject to the minimum listing requirement stated above being met.

Index Construction. The following company data points are calculated for each eligible company:

1. Average daily total market capitalization
2. Annualized traded value
3. Trading frequency

These are calculated based on an observation period defined as the prior six-month period, as of the rebalancing reference date.

Where a company has multiple share classes, the eligible share classes are combined to measure the company's data point 1. Data points 2-3 are measured independently for each of the eligible share classes.

Annualized traded value is calculated by taking the median of the monthly medians of the daily traded values over the observation period. The annualization is calculated using 250 trading days in a year.

Constituents are selected for index inclusion as follows:

1. At each semi-annual rebalancing, eligible companies must satisfy all of the following in order to be considered for index inclusion.
 - a. Have an annualized traded value greater than or equal to INR 1 billion. Current index constituents with an annualized traded value of at least INR 800 million remain eligible for index inclusion provided they meet the other eligibility criteria.
 - b. Stocks must have traded for at least 80% of the trading days at BSE during the six month reference period.
2. Companies satisfying the criteria in step 1 are then ranked based on average daily total market capitalization. The top 400 companies are selected for index inclusion. Existing constituents ranked 401-600 are selected in order of highest rank until the target constituent count of 500 companies is reached. If after this step the target constituent count is not achieved, then non-constituents are added in order of highest rank until the target constituent count is reached.

Constituent Weightings. Index constituents are weighted based on their float-adjusted market capitalization.

⁹ For information on the S&P BSE AllCap, please refer to the S&P BSE AllCap Methodology available at www.spdji.com.

S&P BSE 150 Midcap

The index is designed to track the performance of 150 midcap companies, by total market capitalization, subject to buffers, in the S&P BSE 500 but not in the S&P BSE 100.

Eligible Universe. The index is derived from the constituents of the S&P BSE 500. The inclusion of DVRs in the index may result in more than 150 stocks in the index. However, the number of companies in the index remains fixed at 150. Where a company has multiple share classes, the eligible share classes are combined to measure the company's market capitalization

Index Construction. All the companies in the S&P BSE 500 that are not part of the S&P BSE 100 are ranked based on average six month daily total market capitalization.¹⁰ From the remaining universe of 400 stocks, the top 120 companies (whether a current constituent or not) are selected for index inclusion. Existing constituents ranked 121 – 180 are selected in order of highest rank until the target constituent count of 150 is reached. If after this step the target constituent count is not achieved, then non-constituents ranked are selected in order of highest rank until the target constituent count is reached.

Constituent Weightings. Index constituents are weighted based on their float-adjusted market capitalization.

¹⁰ For history prior to May 29, 2017, full rebalancings were conducted at both the scheduled rebalancing and ad-hoc rebalancing, driven by additions/deletions due to corporate actions. The companies were selected based on total market capitalization as of the open of the rebalancing effective date. In addition, no buffers were applied during that period.

S&P BSE 250 Smallcap

The index is designed to track the performance of the 250 smallcap companies, by total market capitalization, in the S&P BSE 500 that are not part of the S&P BSE 100 and S&P BSE 150 Midcap.

Eligible Universe. The index is derived from the constituents of the S&P BSE 500. The inclusion of DVRs in the index may result in more than 250 stocks in the index. However, the number of companies in the index remains fixed at 250.

Index Construction. All constituents of the S&P BSE 500 that are not members of the S&P BSE 100 and S&P BSE 150 Midcap are selected and form the index.

Constituent Weightings. Index constituents are weighted based on their float-adjusted market capitalization.¹¹

¹¹ For history prior to May 29, 2017, full rebalancings were conducted at both the scheduled rebalancing and ad-hoc rebalancing, driven by additions/deletions due to corporate actions. The companies were selected based on total market capitalization as of the open of the rebalancing effective date. In addition, no buffers were applied during that period.

S&P BSE 250 LargeMidcap

The index is designed to track the performance of the 250 companies, by total market capitalization, in the S&P BSE 100 and S&P BSE 150 Midcap.

Eligible Universe. The index is derived from the constituents of the S&P BSE 500. The inclusion of DVRs in the index may result in more than 250 stocks in the index. However, the number of companies in the index remains fixed at 250.

Index Construction. All constituents of the S&P BSE 100 and S&P BSE 150 Midcap together form the index.

Constituent Weightings. Index constituents are weighted based on their float-adjusted market capitalization.

S&P BSE 400 MidSmallcap

The index is designed to track the performance of the 400 companies, by total market capitalization, in the S&P BSE 500 that are not part of the S&P BSE 100.

Eligible Universe. The index is derived from the constituents of the S&P BSE 500. The inclusion of DVRs in the index may result in more than 400 stocks in the index. However, the number of companies in the index remains fixed at 400.

Index Construction. All constituents of the S&P BSE 500 that are not members of the S&P BSE 100 form the index.

Constituent Weightings. Index constituents are weighted based on their float-adjusted market capitalization.

S&P BSE 250 LargeMidcap, 65:35

Index Objective. The index is designed to simulate a portfolio consisting of a position with a 65% index weight in the S&P BSE 100 and a 35% index weight in the S&P BSE 150 Midcap.

Underlying Indices. S&P BSE 100 and S&P BSE 150 MidCap.

Underlying Index	Index Code	Index Weight
S&P BSE 100	SPBSE1	65%
S&P BSE 150 MidCap	SPB15MIP	35%

Index Eligibility. All constituents of the underlying indices are eligible for index inclusion.

Index Calculation. The index uses the following formula:

On any trading date, t , the index is calculated as follows using the component indices as detailed on the prior pages:

$$Index_t = Index_{PB} * (1 + IndexReturn_t)$$

$$IndexReturn_t = \sum_{i=1}^n W_i R_i$$

where:

$Index_{PB}$ = Index value on the previous rebalancing date.

w_i = Weight of an asset class i .

R_i = Cumulative return of the representative asset class i at t from the previous rebalancing date.

Rebalancing. The index is rebalanced quarterly, effective after the close of the third Friday of March, June, September and December. At each rebalancing, the weights of the underlying indices are reset to 65% and 35% of the total index weight.

Index Maintenance. All index adjustments and corporate action treatments follow the underlying index.

S&P BSE PSU

The S&P BSE PSU Index consists of major Public Sector Undertakings listed on BSE. For purposes of index eligibility, PSU refers to any undertaking where the Central Government holding is equal to or greater than 51%.

Eligible Universe. S&P BSE 500 companies classified as PSU are eligible for the index.

Index Construction. Companies classified under the category “PSU” and are part of S&P BSE 500 after the review form the index.

Constituent Weightings. Index constituents are weighted based on their float-adjusted market capitalization.

Additions. No additions are made to the index between rebalancings.

S&P BSE CPSE

The S&P BSE CPSE Index consists of all the Central Public Sector Enterprises listed on BSE. For purposes of index eligibility, CPSE refers to any public sector undertaking where the Central Government or any other CPSE holding is equal to or greater than 51%. Public Sector Banks are not classified as CPSE.

Eligible Universe. All the companies classified as CPSE by the Ministry of Public Sector Enterprises are eligible for the index.

Index Construction. Companies classified as “CPSE” by the Ministry of Public Sector Enterprise and listed on BSE Ltd. form the index.

Constituent Weightings. Index constituents are weighted based on their float-adjusted market capitalization.

Additions. No additions are made to the index between rebalancings.

S&P BSE Bharat 22 Index

The S&P BSE Bharat 22 Index is designed to measure the performance of select companies disinvested by the Central Government of India according to the disinvestment program, as defined below.

Eligible Universe. The following companies listed on the BSE Ltd. are eligible for index inclusion:

1. All companies classified as Central Public Sector Enterprises (CPSE) by the Government of India.
2. All companies classified as Specific Undertaking of the Unit Trust of India (SUUTI).
3. All Public Sector Undertaking (PSU) Banks.
4. All other companies disinvested by the Government of India.

Index Construction. The Government of India publishes a list¹² of certain stocks from the eligible universe, all of which are under the disinvestment program. These stocks are selected and form the index.

Constituent Weightings. The index employs a non-market capitalization weighting scheme, using the divisor methodology used in S&P Dow Jones Indices' equity indices. The weight of each individual stock is capped at 15% and each BSE sector is capped at 20% of the index. Individual stock and sector weight caps are applied during the annual March rebalancing.

Additions and Deletions. Additions and deletions to the index occur only where the Government of India notifies the public of a change in government holdings on their website.¹⁰ Changes to the index will be made within a reasonable time frame, subject to five business days advance notice. In addition to the annual March rebalancing, any addition to or deletion from the index will trigger an ad-hoc rebalancing to reweight all individual stock and sector caps. For any ad-hoc rebalancing, constituents' index shares are calculated using closing prices seven business days prior to the rebalancing date.

Please refer to the Corporate Action table in *Index Maintenance* for details on how spin-off additions are treated.

¹² For the publicly available list of constituent stocks at launch, please refer to <http://pib.nic.in/newsite/PrintRelease.aspx?relid=169636>. For notice of changes to the Government of India's disinvestment program, please refer to <http://pib.nic.in/newsite/erelease.aspx>.

S&P BSE IPO

The S&P BSE IPO index was created to track the current primary market conditions in the Indian capital market and measure the growth in investor wealth within a period of one year after the listing of a company subsequent to the successful completion of an initial public offering (IPO).

Eligible Universe. Companies listed on BSE after the completion of their IPO are considered eligible for inclusion in the index. Follow-on public issues are not eligible for inclusion.

Index Construction. A company must have minimum float-adjusted market capitalization of INR 1 billion on the first day of listing.

A company is included in the index on the third day of listing subject to the fulfillment of the minimum float-adjusted market capitalization criteria.

A company is excluded from the index at the open of the Monday following the third Friday of the month after the completion of one year of listing.

A minimum of 10 companies are maintained in the index.

If there are less than 10 companies due to a possible exclusion after one year, the exclusion of the company is delayed until a new inclusion is made to the index

Constituent Weightings. Market capitalization weightings of index constituents are limited to 20%. If a constituent's market capitalization results in a higher weighting, its weight is suitably adjusted to ensure that all constituents are restricted to 20% in the index. However, between rebalancings, an index constituent's weight can exceed 20%. Index constituents that exceed the 20% cap between rebalancings are brought back to 20% at each monthly rebalancing.

S&P BSE SME IPO

The Micro, Small and Medium Enterprises (MSMEs) segment in India plays a pivotal role in the overall growth and development of the economy of the country. In recent years, the MSME segment has consistently registered a higher growth rate compared to the overall industrial sector. The segment has shown innovativeness and adaptability to survive economic downturns and recessions. The S&P BSE SME IPO consists of the IPOs listed on BSE SME Platform, for a period of one year.

Eligible Universe. Companies listed on BSE after completion of their IPO are considered eligible for inclusion in the index. Follow-on public issues are considered ineligible for inclusion.

Index Construction. Any company seeking listing of its equity shares via IPO on the SME Platform of the Exchange is considered eligible for inclusion in the index.

A company is included in the index on the second day of its listing.

A company is excluded from the index at the open of the Monday following the third Friday of the month after completion of one year of listing on the BSE SME Platform.

A company that migrates from the BSE SME Platform to the BSE Mainboard Platform is removed from the index on the effective date of the migration, even if the migration occurs before the completion of three years of listing.

A minimum of 10 companies are maintained in the index at all times.

In cases where there are less than 10 companies on account of a possible exclusion after one year, the exclusion of a company is delayed until a new inclusion is made in the index.¹³

Constituent Weightings. Index constituents are weighted based on their float-adjusted market capitalization.

¹³ The index calculation started with five constituents for its base composition in back testing.

S&P BSE DOLLEX Indices

The S&P BSE DOLLEX index family is comprised of three separate indices.

- The S&P BSE DOLLEX 30 is a U.S. dollar linked version of S&P BSE SENSEX, which represents 30 of the largest companies trading on the BSE.
- The S&P BSE DOLLEX 100 is a U.S. dollar linked version of the S&P BSE 100, which represents the top 100 companies listed on the BSE ranked by float-adjusted market cap, value traded, and impact cost.
- The S&P BSE DOLLEX 200 is a U.S. dollar linked version of the S&P BSE 200, representing 200 large, well established and financially sound companies across sectors.

Index Construction. The S&P BSE SENSEX represents the universe for the S&P BSE DOLLEX 30. The S&P BSE 100 is the universe for the S&P BSE DOLLEX 100, and the S&P BSE 200 is the universe for the S&P BSE DOLLEX 200.

The formula for calculating the indices is:

$$Dollex = \frac{Index\ Value\ (local\ currency) * Base\ USD - INR\ rate}{Current\ USD - INR\ rate}$$

Base Exchange Rates. Based exchange rates are shown in the table below.

Index	Base Rate (INR/USD)
S&P BSE Dollex 30	8.21
S&P BSE Dollex 100	10.345
S&P BSE Dollex 200	16.649

Constituent Weightings. Index constituents are weighted based on their float-adjusted market capitalization.

S&P BSE Sector Indices

The S&P BSE Sector Indices are designed as equity benchmarks for BSE traded securities in several broadly defined economic sectors. The sectors are Auto, Oil & Gas, Metal, Bank, Power, Capital Goods, Consumer Durables, Realty, Media & Publishing, Telecom, and IT. Sectors are determined by BSE. Each sector index contains companies from the S&P BSE 500 and must maintain a minimum number of 10 companies. The relevant sectors are listed below:

Index	Sector
S&P BSE AUTO	Transportation Equipment
S&P BSE OIL & GAS	Oil & Gas
S&P BSE METAL	Metal, Metal Products, & Mining
S&P BSE BANKEX	Banks
S&P BSE POWER	Heavy Electrical Equipment, Electric Utilities
S&P BSE CAPITAL GOODS	Capital Goods
S&P BSE CONSUMER DURABLES	Consumer Durables
S&P BSE REALTY	Realty
S&P BSE TECK ¹⁴	Media & Publishing, Information Technology & Telecommunications

Market Coverage. Eligible stocks are selected based on their average float-adjusted market capitalization rank, until a minimum market coverage of 90% of the average float-adjusted market capitalization per sector is achieved.

Liquidity. Companies must have a minimum trading frequency of 90% in the preceding six months.

Buffers. A buffer of 2% both for inclusion and exclusion in the index is considered to minimize the turnover. For example, a non-constituent is included in the index only if it falls within 88% coverage and an existing index constituent is not excluded unless it falls above 92% coverage. However, the buffer criterion is applied only after the minimum 90% float-adjusted market capitalization coverage is satisfied. To maintain a minimum count of 10 in the index, constituents are retained and non-constituents are included based on their average float-adjusted market capitalization rank.

Constituent Weightings. With the exception of the S&P BSE BANKEX and S&P BSE OIL & GAS, the constituents of each of the S&P BSE Sector Indices are weighted by float-adjusted market capitalization.

The S&P BSE BANKEX and S&P BSE OIL & GAS employ a non-market capitalization weighting scheme.¹⁵ At each quarterly share update, index constituents are weighted based on float-adjusted market capitalization, subject to a 22% and 20% weight cap, respectively. Any excess weight is distributed proportionally across the remaining stocks in the index.

For more information on the weighting schemes, please refer to S&P Dow Jones Indices' Index Mathematics Methodology document.

¹⁴ For the S&P BSE TECK, the index aims for each sector to have a minimum constituent count of 10, with 90% coverage. In cases where there are fewer than 10 eligible constituents, the 90% coverage ratio is still maintained.

¹⁵ The S&P BSE BANKEX and S&P BSE OIL & GAS employ a non-market capitalization weighting scheme effective after the close on January 23, 2015 and April 1, 2015, respectively. Prior to the effective date, the indices employed a float-adjusted market capitalization weighting scheme.

S&P BSE Realized Volatility Indices

The first of its kind in India, the Realized Volatility indices provide market participants with an accurate measure of the historic volatility of the S&P BSE SENSEX over fixed 1, 2, and 3 month time horizons, which are synchronized with BSE's 1, 2, and 3 month futures and options expiration cycles. Each index is reset at the end of its respective cycle.

The index is a useful tool for option writers attempting to manage their risk, as their P&L is driven by the difference between realized volatility and implied volatility over the life of options written. Products based on the indices will allow Indian traders to hedge against sudden price movements (i.e. reducing Gamma exposure) and take directional bets on the realized volatility of the S&P BSE SENSEX.

Index Calculations. The formula for realized volatility uses continuously compounded daily returns assuming a mean daily price return of zero. The summation of the squared daily returns is annualized, assuming 252 business days per year.

The following formula is used to calculate the value of the index on the n^{th} day of the underlying option expiration cycle. At BSE, the options expire on the last Thursday of the month.

$$REALVOL_n = \sqrt{252 * \left(\frac{\sum_{t=1}^n R_t^2}{n} \right)}$$

where:

n = n^{th} day of the underlying option expiration cycle; resets to 1 at the start of a new cycle.

$R_t = \ln \frac{P_t}{P_{t-1}}$ = One-day log return of the S&P BSE SENSEX.

P_t = Closing value of the S&P BSE SENSEX on the t^{th} day of the option expiration cycle.

Index Maintenance

Rebalancing

Index rebalancings occur as detailed in the table below. The table is arranged in chronological order.

Note: The Effective dates are at the market open and Reference dates are after the market close.

Category	Index	Frequency	Effective Date	Reference Date
Broad	S&P BSE SENSEX	Semi-annual	Monday following the third Friday of June and December	Last trading day of April and October
	S&P BSE 100			
	S&P BSE SENSEX 50			
	S&P BSE SENSEX Next 50			
	S&P BSE 100 LargeCap TMC			
	S&P BSE SENSEX 50 TMC			
	S&P BSE SENSEX Next 50 TMC			
	S&P BSE 200			
	S&P BSE 500			
	S&P BSE 150 Midcap			
	S&P BSE 250 Smallcap			
S&P BSE 250 LargeMidcap				
S&P BSE 400 MidSmallcap				
	S&P BSE 250 LargeMidcap, 65:35	Quarterly	Monday following the third Friday of March, June, September and December	--
Thematic	S&P BSE PSU	Semi-annual	Monday following the third Friday of June and December	Last trading day of April and October
	S&P BSE CPSE	Semi-annual	Monday following the third Friday of June and December	Last trading day of April and October
	S&P BSE Bharat 22 Index ¹⁶	Annual	Monday following the third Friday of March	--
Investment Strategy	S&P BSE DOLLEX 30	Semi-annual	Monday following the third Friday of June and December	Last trading day of April and October
	S&P BSE DOLLEX 100			
	S&P BSE DOLLEX 200			
	S&P BSE IPO	Monthly	Monday following the third Friday of the month	--
	S&P BSE SME IPO			
	S&P BSE SENSEX Futures Index	Daily	One day before the futures contract expiration date	--
	S&P BSE Arbitrage Rate Index			
	S&P BSE SENSEX 2X Leverage Daily Index			
S&P BSE SENSEX 1X Inverse Daily Index	Daily	--	--	
S&P BSE SENSEX 2X Inverse Daily Index				
Sector	S&P BSE AUTO	Semi-annual	Monday following the third Friday of June and December	Last trading day of April and October
	S&P BSE BANKEX			
	S&P BSE CAPITAL GOODS			
	S&P BSE CONSUMER DURABLES			
	S&P BSE METAL			
	S&P BSE OIL & GAS			
	S&P BSE POWER			
	S&P BSE REALTY			
S&P BSE TECK				

For non-market capitalization weighted indices, constituents' index shares are calculated using closing prices on the Wednesday prior to the second Friday of the rebalancing month as the reference price. Index share amounts are calculated and assigned to each stock to arrive at the weights determined on the reference date. Since index shares are assigned based on the reference prices, the actual weight of each stock at the rebalancing differs from these weights due to market movements.

¹⁶ If an ad-hoc rebalancing occurs within the three months prior to the annual March rebalancing then the annual March rebalancing for that year is not conducted.

Share Updates. Changes in shares outstanding of less than 5% are accumulated and made quarterly at the open of the Monday following the third Friday of March, June, September and December. Changes in shares outstanding of 5% or more are made as soon as reasonably possible after the data has been verified.

For more information, please refer to S&P Dow Jones Indices' Equity Indices Policies & Practices document.

Float Adjustment. Investable Weight Factors (IWFs), which define the available float for a company, are reviewed on an annual basis and are implemented at the open of the Monday following the third Friday of September. Changes to a company's IWF of five percentage points or more (for example from 0.80 to 0.85) are made as soon as reasonably possible after the data has been verified.

Foreign investment limits are not applied while calculating the IWF for S&P BSE index constituents.

For details on float adjustment and Investable Weight Factors, please refer to S&P Dow Jones Indices' Float Adjustment Methodology.

Ongoing Maintenance

The indices are also reviewed on an ongoing basis to account for corporate events such as mergers, takeovers, delistings, group changes, suspensions, spin-offs/demergers or bankruptcies. Changes to index composition and related weight adjustments are made as soon as they are effective. These changes are typically announced one to five business days prior to the implementation date.

Additions

Broad-based Indices. Between rebalancings, if a company's ordinary share class is added to a Broad-based index, its DVR share class is also eligible for index inclusion provided it meets all of the criteria as specified in *Eligibility Criteria and Index Construction*. If a company is dropped from an index due to a corporate action, the most eligible non-constituent company as of the last business day of the previous month based on the specific index's eligibility and construction criteria is added to the index as a replacement in order to maintain the target count.¹⁷

In addition, to allow for the immediate inclusion or "fast-track" of significantly sized IPOs into the S&P BSE SENSEX 50, the IPO must be among the top 10 companies based on its average daily float-adjusted market capitalization, be a part of the S&P BSE 100, have a minimum listing history of at least one month, and satisfy the derivatives market linkage rule. Companies meeting these criteria are added to the S&P BSE SENSEX 50 with five days' notice to clients. If a fast-tracked IPO is added to the S&P BSE SENSEX 50, then the smallest company by weight in the index is dropped and added to the S&P BSE SENSEX Next 50. In such a case, the smallest company by weight in the S&P BSE SENSEX Next 50 is dropped so that the index maintains its target count of 50.

In addition, to allow for the immediate inclusion or "fast-track" of significantly sized IPOs into the S&P BSE 100 LargeCap TMC and S&P BSE SENSEX 50 TMC, the IPO must be among the top 10 companies based on its average daily total market capitalization, and be part of the selection universe.¹⁸ Also, the stock should have a minimum listing history of at least one month, and satisfy the derivatives market linkage rule. Companies meeting these criteria are added to the S&P BSE 100 LargeCap TMC and S&P BSE SENSEX 50 TMC with five days' notice to clients. If a fast-tracked IPO is added to the S&P BSE 100 LargeCap TMC, then the smallest company by weight is dropped from the index to maintain the target count of 100 companies. If a fast-tracked IPO is added to the S&P BSE SENSEX 50 TMC, then the smallest company, by weight, in the index is dropped and added to the S&P BSE SENSEX Next 50 TMC.

¹⁷ For back-tested data for the S&P BSE SENSEX 50, the largest eligible company by float-adjusted market capitalization that was not selected for index inclusion at the last rebalancing was added to the index as a replacement.

¹⁸ This rule is applicable since the index launch date.

In such a case, the smallest company by weight in the S&P BSE SENSEX Next 50 TMC is dropped so that the index maintains its target count of 50. Any addition of a new company into the S&P BSE 500 (which is not added to the S&P BSE 100) is added to either the S&P BSE 150 Midcap or S&P BSE 250 Smallcap based on its daily six-month average total market capitalization as of the last business day of the previous month.¹⁹

S&P BSE Sector Indices. If the sector classification of a company changes between rebalancings, the change is accounted for at the quarterly share update. Companies that change to an ineligible sector are dropped from the respective index on a quarterly basis. During the March and September quarterly share updates, deletions are made without replacements, even if the company count falls below 10. Replacements are only made to the indices during the June and December semi-annual rebalancings. Changes take effect at the open of the Monday following the third Friday of March, June, September, and December.

Deletions

Between rebalancings, a company can be deleted from an index due to corporate events such as mergers, takeovers, delistings, group changes, suspensions, spin-offs/demergers or bankruptcies.

- Whenever possible, changes in the index's components are announced at least one to five business days prior to their implementation date.
- Whenever practicable, Asia Index Private Limited uses the closing price for all deletions.

Corporate Actions

With the exception of the S&P BSE BANKEX and S&P BSE OIL & GAS, the indices follow the corporate action treatment for float-adjusted market capitalization weighted indices. The S&P BSE BANKEX and S&P BSE OIL & GAS follow the corporate action treatment for non-market capitalization weighted indices.²⁰

Float-Adjusted Market Capitalization Weighted Indices. The following table details the most common corporate actions and index treatment for the S&P BSE Indices employing a float-adjusted market capitalization weighting scheme.

Corporate Action	Adjustment to Index	Divisor Adjustment?
Spin Off	In general, the parent company is dropped from the index. However, if information regarding price adjustment is available, the parent company may remain in the index with an adjusted price, at the discretion of the Index Committee.	Yes
Rights Offering	Rights price is adjusted and index shares will be increased as per the Rights Ratio.	Yes
Stock Dividend (Bonus), Stock split, Reverse Stock Split	Index shares are multiplied by and price is divided by the split factor.	No
Change in Shares (new issue, repurchase, warrant conversion etc.)	Index shares and weights will change as per the corporate action.	Yes
Special Dividend	Price of stock making special dividend is reduced by the per share special dividend amount after the close of trading on the day before the dividend ex-date.	Yes
Constituent Change	No intraday rebalancing.	No
	Deletions due to delisting, acquisition or any other corporate event resulting in the deletion of the stock from the index causes the weights of the rest of the stocks in the index to change.	Yes
	Stocks that are reclassified into Z group between rebalancings are removed from the index as soon as practicable.	Yes

¹⁹ For history prior to May 29, 2017, full rebalancings were conducted at both the scheduled rebalancing and ad-hoc rebalancing, driven by additions/deletions due to corporate actions. The companies were selected based on total market capitalization as of the open of the rebalancing effective date. In addition, no buffers were applied during that period.

²⁰ The S&P BSE IPO is a capped market capitalization weighted index, but follows the corporate action treatment for float-adjusted market capitalization indices.

Non-Market Capitalization Weighted Indices. The following table details the most common corporate actions and index treatment for the S&P BSE Indices employing a non-market capitalization weighting scheme, except for the S&P BSE Bharat 22 Index whose specific corporate actions and index treatment are detailed in the next table.

Corporate Action	Adjustment to Index	Divisor Adjustment?
Spin Off	In general, the parent company is dropped from the index. However, if information regarding price adjustment is available, the parent company may remain in the index with an adjusted price, at the discretion of the Index Committee.	Yes
Rights Offering	The price is adjusted to the Price of the Parent Company minus the Price of the Rights Offering/Rights Ratio. Index shares change so that the company's weight remains the same as its weight before the rights offering.	No
Stock Dividend (Bonus), Stock split, Reverse Stock Split	Index shares are multiplied by and price is divided by the split factor.	No
Change in Shares (new issue, repurchase, warrant conversion etc.)	None.	No
Special Dividend	Price of stock making special dividend is reduced by the per share special dividend amount after the close of trading on the day before the dividend ex-date.	Yes
Constituent Change	No intraday rebalancing.	No
	Deletions due to delisting, acquisition or any other corporate event resulting in the deletion of the stock from the index causes the weights of the rest of the stocks in the index to change.	Yes
	Stocks that are reclassified into Z group between rebalancings are removed from the index as soon as practicable.	Yes
	Rebalancing changes including additions, deletions and weight changes	Yes

S&P BSE Bharat 22 Index. The following table details the most common corporate actions and index treatment for the index.

Corporate Action	Adjustment to Index	Divisor Adjustment?
Rights Offering	The price is adjusted to the Price of the Parent Company minus the Price of the Rights Offering/Rights Ratio. Index shares change so that the company's weight remains the same as its weight before the rights offering.	No
Stock Dividend (Bonus), Stock split, Reverse Stock Split	Index shares are multiplied by and price is divided by the split factor.	No
Change in Shares (new issue, repurchase, warrant conversion etc.)	None.	No
Special Dividend	Price of stock making special dividend is reduced by the per share special dividend amount after the close of trading on the day before the dividend ex-date.	Yes
Constituent Change	Addition and deletion, as notified by Government of India, will result in ad-hoc rebalancing. Stocks will be reweighted based on the weighing scheme.	Yes
Spin Off	Spin-offs are generally added to the index per the treatment described in <i>S&P Dow Jones Indices' Equity Indices Policies & Practices</i> document. Any such addition will be announced to clients in advance. <i>For information on spin-off treatment, please refer to S&P Dow Jones Indices' Equity Indices Policies & Practices document.</i>	

For more information, please refer to S&P Dow Jones Indices' Equity Indices Policies & Practices document.

Currency, Currency Hedged, and Risk Control Indices

All S&P BSE Indices are calculated in Indian rupees and U.S. dollars, with the exception of the S&P BSE DOLLEX series, and the S&P BSE 200. The S&P BSE DOLLEX series is calculated only in U.S. dollars while the S&P BSE 200 is calculated in both Indian rupees and Australian dollars.

Spot foreign exchange rates provided by Thomson Reuters are taken daily at 3:00 PM India Time and used in the end-of-day calculation to calculate the indices in U.S. dollars and Australian dollars.

The S&P BSE SENSEX is also calculated in U.S. dollars using WM/ Reuters foreign exchange rates taken daily at 4:00 PM London Time. These mid-market fixings are calculated by The WM Company based on Reuters data and appear on Reuters pages WMRA.

Additional currency, currency hedged, and risk control versions of the indices may be available. For a list of available currency, currency hedged, and risk control indices, please contact Client Services at index_services@spglobal.com.

For more information on currency, currency hedged, and risk control indices, please refer to S&P Dow Jones Indices' Index Mathematics Methodology.

Base Dates and History Availability

Index history availability, base dates and base values are shown in the table below.

Index	Launch Date	First Value Date	Base Date	Base Value
S&P BSE SENSEX	01-Jan-86	03-Apr-79	1978-79	100
S&P BSE SENSEX Futures Index	29-Sep-14	31-Jan-12	31-Jan-12	1000
S&P BSE Arbitrage Rate Index (INR)	20-Mar-18	31-Jan-12	31-Jan-12	1000
S&P BSE SENSEX 2X Leverage Daily Index	24-Mar-15	15-Jun-98	01-Jan-13	1000
S&P BSE SENSEX 1X Inverse Daily Index	24-Mar-15	15-Jun-98	01-Jan-13	1000
S&P BSE SENSEX 2X Inverse Daily Index	24-Mar-15	15-Jun-98	01-Jan-13	1000
S&P BSE 100	03-Jan-89	03-Apr-84	1983-84	58
S&P BSE SENSEX 50	06-Dec-16	16-Sep-05	16-Dec -05	2900
S&P BSE SENSEX Next 50	27-Feb-17	16-Dec-05	16-Dec-05	7000
S&P BSE 100 LargeCap TMC	09-Jul-18	16-Dec-05	16-Dec-05	1000
S&P BSE SENSEX 50 TMC	18-Apr-18	16-Dec-05	16-Dec-05	1000
S&P BSE SENSEX Next 50 TMC	18-Apr-18	16-Dec-05	16-Dec-05	1000
S&P BSE 200	27-May-94	02-Jan-91	1989-90	100
S&P BSE 500	09-Aug-99	01-Feb-99	01-Feb-99	1000
S&P BSE 150 Midcap	30-Nov-17	16-Sep-05	16-Sep-05	1000
S&P BSE 250 Smallcap	30-Nov-17	16-Sep-05	16-Sep-05	1000
S&P BSE 250 LargeMidcap	30-Nov-17	16-Sep-05	16-Sep-05	1000
S&P BSE 400 MidSmallcap	30-Nov-17	16-Sep-05	16-Sep-05	1000
S&P BSE 250 LargeMidcap, 65:35	30-Nov-17	16-Sep-05	16-Sep-05	1000
S&P BSE CAPITAL GOODS	09-Aug-99	01-Feb-99	01-Feb-99	1000
S&P BSE CONSUMER DURABLES	09-Aug-99	01-Feb-99	01-Feb-99	1000
S&P BSE PSU	04-Jun-01	01-Feb-99	01-Feb-99	1000
S&P BSE CPSE	29-Sep-14	08-July-08	08-July-08	1000
S&P BSE Bharat 22 Index ²¹	10-Aug-17	17-Mar-06	17-Mar-06	1000
S&P BSE TECK	11-Jul-01	31-Jan-00	02-Apr-01	1000
S&P BSE BANKEX	23-Jun-03	01-Jan-02	01-Jan-02	1000

²¹ The index's historical composition is the same as the composition at launch. Stocks were added to the index at each subsequent rebalancing in March following their IPO.

Index	Launch Date	First Value Date	Base Date	Base Value
S&P BSE AUTO	23-Aug-04	01-Feb-99	01-Feb-99	1000
S&P BSE METAL	23-Aug-04	01-Feb-99	01-Feb-99	1000
S&P BSE OIL & GAS	23-Aug-04	01-Feb-99	01-Feb-99	1000
S&P BSE DOLLEX 30	25-Jul-01	03-Apr-79	1978-79	125.22
S&P BSE DOLLEX 100	22-May-06	02-Jan-91	1983-84	167.62
S&P BSE DOLLEX 200	27-May-94	02-Jan-91	1989-90	120.32
S&P BSE REALTY	09-Jul-07	02-Jan-06	2005	1000
S&P BSE POWER	09-Nov-07	03-Jan-05	03-Jan-05	1000
S&P BSE IPO	24-Aug-09	03-May-04	03-May-04	1000
S&P BSE SME IPO	14-Dec-12	16-Aug-12	16-Aug-12	100
S&P BSE REALVOL-1MTH	12-Nov-10	12-Nov-10	-	-
S&P BSE REALVOL-2MTH	12-Nov-10	12-Nov-10	-	-
S&P BSE REALVOL-3MTH	12-Nov-10	12-Nov-10	-	-

Index Data

Calculation Return Types – Equity Indices

S&P Dow Jones Indices calculates multiple return types which vary based on the treatment of regular cash dividends. The classification of regular cash dividends is determined by S&P Dow Jones Indices.

- Price Return (PR) versions are calculated without adjustments for regular cash dividends.
- Gross Total Return (TR) versions reinvest regular cash dividends at the close on the ex-date without consideration for withholding taxes.
- Net Total Return (NTR) versions, if available, reinvest regular cash dividends at the close on the ex-date after the deduction of applicable withholding taxes.

In the event there are no regular cash dividends on the ex-date, the daily performance of all three indices will be identical.

For a complete list of indices available, please refer to the daily index levels file (“SDL”).

For more information on the classification of regular versus special cash dividends as well as the tax rates used in the calculation of net return, please refer to S&P Dow Jones Indices’ Equity Indices Policies & Practices Methodology document.

For more information on the calculation of return types, please refer to S&P Dow Jones Indices’ Index Mathematics Methodology document.

Index Governance

Index Committee

The S&P BSE Indices Index Committee oversees the S&P BSE Indices. The Index Committee is composed of full time employees of S&P Dow Jones Indices and the BSE. The Index Committee meets quarterly. At each meeting, the Index Committee reviews pending corporate actions that may affect index constituents, statistics comparing the composition of the indices to the market, companies that are being considered as candidates for addition to an index, and any significant market events. In addition, the Index Committee may revise index policy covering rules for selecting companies, treatment of dividends, share counts or other matters.

Asia Index Private Limited considers information about changes to its indices and related matters to be potentially market moving and material. Therefore, all Index Committee discussions are confidential.

S&P Dow Jones Indices' Index Committees reserve the right to make exceptions when applying the methodology if the need arises. In any scenario where the treatment differs from the general rules stated in this document or supplemental documents, clients will receive sufficient notice, whenever possible.

In addition to the daily governance of indices and maintenance of index methodologies, at least once within any 12-month period, the Index Committee reviews the methodology to ensure the indices continue to achieve the stated objectives, and that the data and methodology remain effective. In certain instances, S&P Dow Jones Indices may publish a consultation inviting comments from external parties.

For information on Quality Assurance and Internal Reviews of Methodology, please refer to S&P Dow Jones Indices' Equity Indices Policies & Practices document.

Index Policy

Announcements

All index constituents are evaluated daily for data needed to calculate index levels and returns. All events affecting the daily index calculation are typically announced in advance via the Index Corporate Events report (.SDE), delivered daily via ftp to all clients. Any unusual treatment of a corporate action or short notice of an event may be communicated via email to clients.

In addition, index composition changes due to scheduled rebalancings are announced four weeks in advance of the rebalancing effective date for the following indices:

- S&P BSE SENSEX
- S&P BSE 100
- S&P BSE SENSEX 50
- S&P BSE SENSEX Next 50
- S&P BSE 200
- S&P BSE 250 Smallcap
- S&P BSE 400 MidSmallcap
- S&P BSE 500
- S&P BSE TECK
- S&P BSE BANKEX
- S&P BSE OIL & GAS
- S&P BSE 150 Midcap
- S&P BSE 250 LargeMidcap
- S&P BSE SENSEX 50 TMC
- S&P BSE SENSEX Next 50 TMC
- S&P BSE 100 LargeCap TMC

Index methodology is constantly under review for best practices, and any changes are announced well ahead of time via the Web site and email to all clients.

Pro-forma Files

In addition to the corporate events file (.SDE), Asia Index Private Limited provides constituent pro-forma files each time the indices rebalance. The pro-forma file is typically provided daily in advance of the rebalancing date and contains all constituents and their corresponding weights and index shares effective for the upcoming rebalancing.

Please visit www.spdji.com for a complete schedule of rebalancing timelines and pro-forma delivery times.

Holiday Schedule

The S&P BSE Indices are calculated on all business days when the BSE is open.

A complete holiday schedule for the year is available on the BSE Ltd. Web site at www.bseindia.com.

Special Trading Sessions. The S&P BSE Indices will be calculated on special trading sessions as declared by the Bombay Stock Exchange. Some examples include, but are not limited to, special trading sessions on Saturday and Mahurat trading. Asia Index Private Limited will issue a notice to inform market participants regarding such special trading sessions.

If the special trading session falls on the Saturday following the third Friday of any rebalancing month, the new portfolio will be effective at the discretion of the Index Committee. Asia Index Private Limited will issue a notice to inform market participants detailing when the new portfolio will become effective.

Rebalancing

The Index Committee may change the date of a given rebalancing for reasons including market holidays occurring on or around the scheduled rebalancing date. Any such change will be announced with proper advance notice where possible.

Unexpected Exchange Closures

For information on Unexpected Exchange Closures, please refer to S&P Dow Jones Indices' Equity Indices Policies & Practices document.

Recalculation Policy

For information on the recalculation policy, please refer to S&P Dow Jones Indices' Equity Indices Policies & Practices document.

Real-Time Calculation

Real-time, intra-day index calculations are executed for certain S&P BSE Indices on the BSE real-time platform, "EPIC". Real-time indices are not restated.

For information on Calculations and Pricing Disruptions, Expert Judgment and Data Hierarchy, please refer to S&P Dow Jones Indices' Equity Indices Policies & Practices document.

End-of-Day Calculation

End of day index calculations are executed on an S&P proprietary platform.

Contact Information

For questions regarding an index, please contact: index_services@spglobal.com.

Index Dissemination

Index levels are available through S&P Dow Jones Indices' Web site at www.spdji.com, Asia Index Private Limited's Web site at www.asiaindex.co.in, major quote vendors (see codes below), numerous investment-oriented Web sites, and various print and electronic media.

Tickers

The table below lists headline indices covered by this document. All currency, currency hedged, risk control, and return type versions of the below indices that may exist are also covered by this document. Please contact index_services@spglobal.com for a complete list of indices covered by this document.

Index	Bloomberg	Reuters
S&P BSE 500	BSE500	.BSE500
S&P BSE 100	BSE100	.BSE100
S&P BSE SENSEX 50	SPBSS5IP	--
S&P BSE SENSEX 50 TR	SPBSS5IT	--
S&P BSE SENSEX 50 (USD)	SPBSS5UP	--
S&P BSE SENSEX 50 TR (USD)	SPBSS5UT	--
S&P BSE SENSEX Next 50	SPBSN5IP	--
S&P BSE SENSEX Next 50 TR	SPBSN5IT	--
S&P BSE SENSEX Next 50 (USD)	SPBSN5UP	--
S&P BSE SENSEX Next 50 TR (USD)	SPBSN5UT	--
S&P BSE 100 LargeCap TMC	SPB1LTIP	--
S&P BSE 100 LargeCap TMC (TR)	SPB1LTIT	--
S&P BSE SENSEX Next 50 TMC	SPBN5TIP	--
S&P BSE SENSEX Next 50 TMC TR	SPBN5TIT	--
S&P BSE 200	BSE200	.BSE200
S&P BSE SENSEX	SENSEX	.BSESN
S&P BSE SENSEX (TR)	BXTRSENX	--
S&P BSE SENSEX Futures Index (ER)	SPBSSFIE	--
S&P BSE SENSEX Futures Index (TR)	SPBSSFIT	--
S&P BSE SENSEX Futures Index ER (USD)	SPBSSFUE	--
S&P BSE SENSEX Futures Index TR (USD)	SPBSSFUT	--
S&P BSE Arbitrage Rate Index (INR)	SPBSARB	--
S&P BSE SENSEX 2X Leverage Daily Index	SENSEX2L	--
S&P BSE SENSEX 1X Inverse Daily Index	SENSEX1I	--
S&P BSE SENSEX 2X Inverse Daily Index	SENSEX2I	--
S&P BSE CAPITAL GOODS	BSETCG	.BSECG
S&P BSE CONSUMER DURABLES	BSETCD	.BSECD
S&P BSE METAL	BSEMETL	.BSEMET
S&P BSE OIL & GAS	BSEOIL	.BSEOIL
S&P BSE AUTO	BSEAUTO	.BSEAUTO
S&P BSE BANKEX	BANKEX	.BSEBANK
S&P BSE PSU	BSETPSU	.BSEPSU
S&P BSE CPSE	SPBSECP	--
S&P BSE CPSE (TR)	SPBSECPT	--
S&P BSE TECK	BSETECK	.BSETECK
S&P BSE Bharat 22 Index	SPBSB2IP	--
S&P BSE Bharat 22 Index TR	SPBSB2IT	--
S&P BSE Bharat 22 Index (USD)	SPBSB2UP	--
S&P BSE Bharat 22 Index (USD) TR	SPBSB2UT	--
S&P BSE 150 Midcap Index	BSEMC150	--
S&P BSE 250 Smallcap Index	BSESC250	--
S&P BSE 250 LargeMidcap Index	BSELM250	--

Index	Bloomberg	Reuters
S&P BSE 400 MidSmallcap Index	BSEMS400	--
S&P BSE POWER	BSEPOWER	.BSEPOWER
S&P BSE REALTY	BSERREAL	.BSERREAL
S&P BSE DOLLEX 200	DOLLEX	.BSEDX200
S&P BSE DOLLEX 100	DOLL100	.BSEDX100
S&P BSE DOLLEX 30	DOLL30	.BSEDX30
S&P BSE DOLLEX 30 (TR)	DOLL30T	--
S&P BSE IPO	BSEIPO	.BSEIPO
S&P BSE SME IPO	BSESMIPO	.BSESMEIPO

FTP

Daily constituent and index level data are available via FTP subscription.

For product information, please contact S&P Dow Jones Indices, www.spdji.com/contact-us.

Web site

For further information, please refer to S&P Dow Jones Indices' Web site at www.spdji.com.

Appendix

Methodology Changes

Methodology changes since January 1, 2015 are as follows:

Change	Effective Date (After Close)	Previous	Methodology Updated
S&P BSE 500: Index Construction:	06/15/2018	<ul style="list-style-type: none"> Companies meeting the eligibility factors are ranked based on their average six month total market capitalization, average six month float-adjusted market capitalization, and average six month value traded. Rank Full is determined by assigning a 75% weight to the average six month total market capitalization rank and a 25% weight to the average six month value traded rank. Rank Free is determined by assigning a 75% weight to the average six month float-adjusted market capitalization rank and a 25% weight to the average six month value traded rank. For all companies, Rank Full and Rank Free are added and a Combined Final Rank is determined based on this number. If an existing constituent has Rank Full and Rank Free greater than 550, it is excluded from the index. Non-constituents with a Rank Full and Rank Free less than 500 are identified and sorted based on Combined Final Rank. These are included in the index based on the best Combined Final Rank. In order to then achieve the target constituent count, stocks are assessed based on their ranks and selected accordingly. 	<ul style="list-style-type: none"> At each semi-annual rebalancing, eligible companies must have an annualized traded value greater than or equal to INR 1 billion. Current index constituents with an annualized traded value of at least INR 800 million remain eligible for index inclusion provided they meet the other eligibility criteria. Companies satisfying the above criteria are then ranked by their average six month total market capitalization. The top 400 companies are added to the index. Current constituents ranked 401-600 are added to the index in order of highest rank until the constituent count reaches 500 companies. If the target constituent count of 500 companies is still not met, non-constituents are added to the index in order of highest rank until the target constituent count is met.
S&P BSE Sector Indices: Index Construction:	06/15/2018	<ul style="list-style-type: none"> Eligible stocks are selected based on their Rank Free order, as determined according to the S&P BSE 500 methodology, until a minimum market coverage of 90% of the average float-adjusted market capitalization per sector is achieved. To maintain a minimum count of 10 in the index, constituents are retained and non-constituents are included based on their Rank Free order with a 2% buffer, as determined according to the S&P BSE 500 methodology. 	<ul style="list-style-type: none"> Eligible stocks are selected based on their average float-adjusted market capitalization rank, until a minimum market coverage of 90% of the average float-adjusted market capitalization per sector is achieved. To maintain a minimum count of 10 in the index, constituents are retained and non-constituents are included based on their average float-adjusted market capitalization rank with a 2% buffer.
S&P BSE 100: Listing History	06/15/2018	Stocks must have a listing history of six months at BSE in order to be eligible for the index.	--

Change	Effective Date (After Close)	Previous	Methodology Updated
S&P BSE 200: Index Construction:	06/15/2018	<ul style="list-style-type: none"> Companies meeting the eligibility factors are ranked based on their average six month total market capitalization, average six month float-adjusted market capitalization, and average six month value traded. Rank Full is determined by assigning a 75% weight to the average six month total market capitalization rank and a 25% weight to the average six month value traded rank. Rank Free is determined by assigning a 75% weight to the average six month float-adjusted market capitalization rank and a 25% weight to the average six month value traded rank. For all companies, Rank Full and Rank Free are added and a Combined Final Rank is determined based on this number. If an existing constituent has Rank Full and Rank Free greater than 220, it is excluded from the index. Non-constituents with Rank Full and Rank Free less than 200 are identified and sorted on Combined Final Rank. These are included in the index based on the best Combined Final Rank. In order to achieve the target constituent count, stocks are assessed based on their ranks and selected accordingly. 	<ul style="list-style-type: none"> At each semi-annual rebalancing, eligible companies must have an annualized traded value of at least INR 5 billion. Current index constituents with an annualized traded value of at least INR 4 billion remain eligible for index inclusion provided they meet the other eligibility criteria. Companies satisfying the above criteria are then ranked by their average six month total market capitalization. The top 160 companies are added to the index. Current constituents ranked 161-240 are added to the index in order of highest rank until the constituent count reaches 200 companies. If the target constituent count of 200 companies is still not met, non-constituents are added to the index in order of highest rank until the target constituent count is met.
S&P BSE 500 and S&P BSE 200: Multiple Share Classes	06/15/2018	Differential Voting Rights Shares (DVRs) are eligible for inclusion in the index provided that the ordinary share class is part of the index and the DVR shares outstanding are greater than 10% of the ordinary shares outstanding. In addition, the DVRs must individually satisfy all other index eligibility criteria. DVRs satisfying the index eligibility criteria are aggregated with the company's common stock and index construction is done based on the aggregated company data.	Differential Voting Rights Shares (DVRs) are eligible for inclusion in the index provided that the ordinary share class is part of the index and the DVR shares outstanding are greater than 10% of the ordinary shares outstanding. In addition, the DVRs must individually pass the liquidity criteria to be eligible for the index.
S&P BSE 500: Eligible Universe	12/15/2017	All common equities listed at BSE Ltd., (excluding companies classified in Z group, suspended companies, companies objected by the Surveillance Department of BSE Ltd., and those that are traded under a permitted category and on the SME platform) are considered eligible	The constituents of the S&P BSE AllCap.
S&P BSE SENSEX, S&P BSE 200, and S&P BSE 500: Differential Voting Right Shares (DVRs) inclusion	06/16/2017	DVRs are eligible for index inclusion provided that the ordinary share class is part of the index and the DVR shares outstanding are greater than 10% of the ordinary shares outstanding. In addition, the DVRs must individually satisfy all other index eligibility and construction criteria.	<p>DVRs are eligible for index inclusion provided that the ordinary share class is part of the index and the DVR shares outstanding are greater than 10% of the ordinary shares outstanding. In addition, the DVRs must individually satisfy all other index eligibility criteria.</p> <p>DVRs satisfying the index eligibility criteria are aggregated with the company's common stock and index construction is done based on the aggregated company data.</p>

Change	Effective Date (After Close)	Previous	Methodology Updated
S&P BSE BANKEX and S&P BSE OIL & GAS: Constituent weightings	06/16/2017	At each semi-annual rebalancing, index constituents are weighted based on float-adjusted market capitalization, subject to a 22% and 20% weight cap, respectively. Any excess weight is distributed proportionally across the remaining stocks in the index.	At each quarterly share update, index constituents are weighted based on float-adjusted market capitalization, subject to a 22% and 20% weight cap, respectively. Any excess weight is distributed proportionally across the remaining stocks in the index.
S&P BSE SENSEX 50: Derivative Market Linkage	06/16/2017	As part of the constituent selection process, the following constraints are taken into account: 1. The individual float-adjusted weight of any share class of a company not linked to derivatives trading cannot exceed 5% of the index. 2. The aggregate float-adjusted weight of the index constituents not linked to derivatives trading cannot exceed 10%.	All constituents must have a derivative contract to be eligible for index inclusion.
S&P BSE 100: Eligible Universe	06/16/2017	All common equities listed at BSE Ltd. (excluding companies classified in Z group, listed mutual funds, companies suspended on the last day of the month prior to review date, companies objected by the Surveillance department of BSE Ltd. and those that are traded under a permitted category and SME category) are considered eligible.	The constituents of the S&P BSE LargeMidCap.
S&P BSE 100: Index Construction/ Constituent Selection	06/16/2017	1. All eligible stocks must have traded for at least 95% of the trading days at BSE during the six month reference period. 2. All stocks meeting the eligibility factors are ranked based on their average six month float-adjusted market capitalization, average six month value traded and average six month impact cost. 3. The liquidity rank is computed by assigning a 75% weight to the average value traded rank and a 25% weight to the average impact cost rank. 4. The final rank is determined by assigning a 75% weight to the average float-adjusted market capitalization rank and a 25% weight to the liquidity rank. 5. These stocks are then sorted based on the final rank. Any existing constituent ranking beyond 200, based on final rank, is excluded.	1. At each semi-annual rebalancing, eligible stocks must satisfy all of the following in order to be considered for index inclusion: a. Have an annualized traded value greater than or equal to INR 10 billion. Current index constituents with an annualized traded value of at least INR 8 billion remain eligible for index inclusion provided they meet the other eligibility criteria. b. Have no more than five non-trading days in the past six months as of the rebalancing reference date. 2. The remaining companies after Step 1 are then ranked based on average daily float-adjusted market capitalization. The Top 80 companies are selected for index inclusion. Existing constituents ranked 81-120 are selected in order of highest rank until the target constituent of 100 is reached. If after this step the target constituent count is not achieved, non-constituents are selected in order of highest rank until the target constituent count is reached.
S&P BSE 100: Listing History	06/16/2017	Stocks must have a listing history of at least three months at BSE, with the following exceptions: • Large sized initial public offerings (IPOs) are only required to have a listing history of one month. • Listings due to mergers, demergers or amalgamations do not have a minimum listing history requirement.	Companies must have a listing history of at least six months at BSE. Large sized IPOs are an exception and only require a listing history of one month.

Change	Effective Date (After Close)	Methodology	
		Previous	Updated
S&P BSE 100: Differential Voting Rights (DVRs)	06/16/2017	DVRs are eligible provided that the ordinary share class is part of the index and the DVR shares outstanding are greater than 10% of the ordinary shares outstanding. Additionally the DVR must meet the index's eligibility and index construction rules.	DVRs are eligible provided that the ordinary share class is part of the index. In addition, the DVR must meet the index's liquidity criteria as detailed in the index construction process.
S&P BSE SENSEX, S&P BSE 100, S&P BSE 200, S&P BSE 500 and S&P BSE Sector Indices: Reference Period	12/19/2016	Data collected and used in the rebalancing is based on a three month reference period.	Data collected and used in the rebalancing is based on a six month reference period.
S&P BSE Sector Indices: Sector Changes	12/19/2016	If the sector classification of a company changes between rebalancings, the change is accounted for at the semi-annual rebalancing. Changes take effect at the open of the Monday following the third Friday of June and December.	If the sector classification of a company changes between rebalancings, the change is accounted for at the quarterly share update. Changes take effect at the open of the Monday following the third Friday of March, June, September, and December.
S&P BSE 200: Eligible Universe	12/19/2016	All common equities listed at BSE Ltd. (excluding companies classified in Z group, listed mutual funds, companies suspended on the last day of the month prior to review date, companies objected by the Surveillance Department of BSE Ltd. and those that are traded under a permitted category and SME category) are considered eligible.	The index is derived from the constituents of the S&P BSE 500.
S&P BSE 500: Listing History	12/19/2016	Companies must have a listing history of at least three months at BSE.	Companies must have a listing history of at least three months at BSE. IPOs are eligible if they have a listing history of at least one month.
S&P BSE 500: Trading Days	12/19/2016	The company must have traded for at least 75% of the trading days at BSE during the three month reference period.	The company must have traded for at least 80% of the trading days at BSE during the six month reference period.
S&P BSE PSU: Weighing Scheme	12/19/2016	Every company is weighted within the index based on its total market capitalization.	Every company is weighted within the index based on its float-adjusted market capitalization.
S&P BSE IPO: Index Construction:	12/19/2016	A company is excluded from the index at the open of the Monday following the third Friday of the month after the completion of two years of listing.	A company is excluded from the index at the open of the Monday following the third Friday of the month after the completion of one year of listing.
S&P BSE SME IPO: Index Construction:	12/19/2016	A company is excluded from the index at the open of the Monday following the third Friday of the month after completion of three years of listing on the BSE SME Platform.	A company is excluded from the index at the open of the Monday following the third Friday of the month after completion of one year of listing on the BSE SME Platform.
S&P BSE SENSEX: Eligible Universe	06/17/2016	All common equities listed at BSE Ltd. (excluding companies classified in Z group, listed mutual funds, companies suspended on the last day of the month prior to review date, companies objected by the Surveillance Department of BSE Ltd. and those that are traded under a permitted category and SME category) are considered eligible.	The index is derived from the constituents of the S&P BSE 100.
S&P BSE SENSEX, S&P BSE 100, S&P BSE 200 and S&P BSE 500: Eligibility of Differential Voting Right Shares (DVRs)	06/19/2015	Differential Voting Right Shares (DVRs) are not eligible for index inclusion.	Differential Voting Right Shares (DVRs) are eligible provided that the ordinary share class is part of the index and the DVR shares outstanding are greater than 10% of the ordinary shares outstanding.
S&P BSE SENSEX Futures Index: Day Count Convention	04/15/2015	The risk free rate calculation is based on a 360-day year convention.	The risk free rate calculation is based on a 365-day year convention.

Change	Effective Date (After Close)	Previous	Methodology Updated
S&P BSE OIL & GAS: Weighting Scheme	04/01/2015	The index employs a float-adjusted market capitalization weighting scheme.	The index employs a non-market capitalization weighting scheme.
S&P BSE BANKEX: Weighting Scheme	01/23/2015	The index employs a float-adjusted market capitalization weighting scheme.	The index employs a non-market capitalization weighting scheme.

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