ASIA INDEX Pvt. Ltd.
A BSE and S&P DJI Venture

S&P BSE Sustainability Indices
Methodology

S&P Dow Jones Indices
A Division of S&P Global

BSE
EXPERIENCE THE NEW

August 2018

Table of Contents

Introduction 3

Index Objectives **3**

Partnership and Collaboration **3**

Index Family **3**

Supporting Documents **3**

Eligibility Criteria and Index Construction 4

S&P BSE CARBONEX **4**

S&P BSE GREENEX **6**

Index Maintenance 7

Rebalancing **7**

Ongoing Maintenance **7**

Additions **7**

Deletions **8**

Graded Surveillance Measure (GSM) **8**

Corporate Actions **8**

Currency, Currency Hedged, and Risk Control Indices **9**

Base Dates and History Availability **9**

Index Data 10

Calculation Return Types – Equity Indices **10**

Index Governance 11

Index Committee **11**

Index Policy 12

Announcements **12**

Pro-forma Files **12**

Holiday Schedule **12**

Rebalancing **12**

Unexpected Exchange Closures **12**

Recalculation Policy **13**

Real-Time Calculation **13**

End-of-Day Calculation **13**

Contact Information **13**

Index Dissemination 14
Tickers **14**
Index Data **14**
Web site **14**
Appendix I 15
RobecoSAM Industries **15**
Appendix II 17
Carbon Re-Weighting Factors **17**
Carbon Adjusted Float Weight **17**
Appendix III 19
S&P Trucost Methodology **19**
Appendix IV 20
Methodology Changes **20**
Disclaimer 21

Introduction

Index Objectives

S&P BSE CARBONEX. The index measures the performance of the companies in the S&P BSE 100 with constituent weights modified in accordance with the companies' relative carbon performance.

S&P BSE GREENEX. The index measures the performance of 25 companies from the S&P BSE 100 selected based on size, liquidity and low greenhouse gas emissions.

Partnership and Collaboration

S&P Dow Jones Indices and the BSE Ltd. have established a partnership, Asia Index Private Limited, to calculate, disseminate, and license the S&P BSE suite of indices.

S&P BSE CARBONEX. Asia Index Private Limited has partnered with RobecoSAM, a specialist in sustainability investing to provide the Carbon Performance Scores.

S&P BSE GREENEX. Greenhouse gas (GHG) emission numbers are provided by S&P Trucost Limited, a subsidiary of S&P Dow Jones Indices LLC.

Index Family

The S&P BSE Sustainability Indices are part of the suite of S&P BSE indices.

For information on the other S&P BSE indices, please refer to www.spdji.com and www.asiaindex.co.in.

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
S&P Dow Jones Indices' Global Industry Classification Standard (GICS) Methodology	GICS Methodology

This methodology was created by Asia Index Private Limited 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 Asia Index Private Limited so that the index continues to achieve its objective.

Eligibility Criteria and Index Construction

S&P BSE CARBONEX

Index Eligibility and Construction. The S&P BSE CARBONEX is composed of the constituents of the S&P BSE 100. Only common stocks are eligible for index inclusion.

For more information on index construction and eligibility factors of the S&P BSE 100, please refer to the S&P BSE Indices Methodology document available at www.spdji.com and www.asiaindex.co.in.

Constituent Weights. Each stock in the index is weighted based on its carbon adjusted float market capitalization, which is calculated based on the Carbon Performance Scores provided by RobecoSAM.

Stock weight calculations consist of two steps as follows:

1. **Carbon Re-Weighting Factors.** Carbon Re-Weighting Factors are calculated for all stocks in the S&P BSE 100 using the current year's Industry Tilt Factors and Carbon Performance Scores provided by RobecoSAM. New Carbon Performance Scores are calculated annually in March and are based on the annual CSA figures released in the previous year.

   Carbon Performance Scores calculated by RobecoSAM encompass the following themes:

Theme	Weight in the Carbon Performance Score
Strategy & Governance	40%
Reporting & Disclosures	30%
Performance & Achievement	20%
Ecosystem Action	10%

   Each of the themes includes three to ten specific carbon-related indicators.

   If a company does not have a Carbon Performance Score, the Carbon Re-Weighting Factor applied to its stock is 1.

   Industry Tilt Factors are provided by RobecoSAM and calculated to represent each industry's relative exposure to carbon-related risks and opportunities. They are calculated based on the weights of the carbon-related questions in each overall industry-specific RobecoSAM CSA questionnaire. In the course of the CSA process, companies are assigned to one of the 59 industries defined by RobecoSAM (the "RobecoSAM Industries"). RobecoSAM uses the Global Industry Classification System (GICS®) as its starting point for determining industry classification.[1] At the industry group and sector levels, the RobecoSAM Industries match the standard GICS® classifications. However, some non-standard aggregations are made at the industry level. Please see *Appendix I* for a list of RobecoSAM Industries.

   RobecoSAM reviews the mapping of CSA questions to the Carbonex framework on an annual basis, to reflect any changes made to the CSA methodology, such as the deletion or addition of questions. This is done on an industry-specific level as well as at the general and cross-industry

[1] For more information about GICS®, please refer to the Global Industry Classification Standard (GICS®) Methodology.

level, looking at common carbon-related themes that apply to all industries or a majority of industries – in order to preserve the relative importance of topics within the questionnaires and the importance of carbon-related risks and opportunities to companies within each industry.

The stocks of companies in industries with greater exposure to carbon-related risks and opportunities receive a higher Industry Tilt Factor and therefore, a higher weight restatement compared to the stocks of companies in other industries belonging to the same sector.

2. **Carbon Adjusted Float Weights.** Once the Carbon Re-Weighting Factors are determined, the float weights of the stocks are tilted based on their Carbon Re-Weighting Factors.

   After the float weight tilting, the overall sector exposure is again realigned with that of S&P BSE 100 to arrive at the Carbon Adjusted Float Weight of each constituent stock in the index.

For details on formulas used in steps 1 and 2 above, please refer to Appendix II.

Stock weights are adjusted at each semi-annual rebalancing to reflect each constituent's Carbon Adjusted Float Weight.

For more information on the constituent weighting scheme, please refer to the Non-Market Capitalization Weighted Indices section in S&P Dow Jones Indices' Index Mathematics Methodology.

S&P BSE GREENEX

Index Eligibility and Construction. The S&P BSE GREENEX is formed from companies in the S&P BSE 100. Only common stocks are eligible for index inclusion.

For more information on index construction and eligibility factors of the S&P BSE 100, please refer to the S&P BSE Indices Methodology document available at www.spdji.com and www.asiaindex.co.in.

Greenhouse gas (GHG) emission numbers are provided by S&P Trucost Limited, a subsidiary of S&P Dow Jones Indices LLC, for the eligible universe. Stocks of companies for which Asia Index Private Limited is not able to obtain GHG emission numbers are excluded from the eligible universe.

The GHG emission numbers (C), average six-month float market capitalization (M), and six-month median annualized traded value (T) are scaled from 0 to 100 within the sector.

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

Points are assigned to the above mentioned parameters from 1-50 within the sector.

- For C: For 0-2, 1 point is assigned; for 2-4, 2 are assigned, etc. For scale of 48-50, 25 points are assigned. For scale beyond 50, 1000 are assigned.
- For M & T: For 0-2, 50 points are assigned; for 2-4, 49 are assigned, etc.

For sectors where there is only one stock, 25 points are assigned for GHG emission numbers (C), average six-month float market capitalization (M) and six-month median annualized traded value (T).

The composite point for a stock is arrived by taking the summation of the points multiplied by their respective weights, where C is weighted 50%, M is weighted 40%, and T is weighted 10%. Stocks are ranked on the basis of composite points. The top 25 stocks are selected for the base composition.

During semi-annual rebalancings, the following inclusion/exclusion rules are applied:

- If a non-constituent ranks within the top 15 stocks, it is automatically selected for index inclusion.
- If an existing constituent ranks beyond the top 35 stocks, it is removed from the index.

In cases where two or more stocks have the same composite rank, the stock selection is performed based on the following order:

1. GHG emission numbers (C).
2. Average six-month float market capitalization (M).
3. Six-month median annualized traded value (T).

Constituent Weightings. Each stock in the index is weighted based on its float-adjusted market capitalization, subject to a stock capping limit. The stock capping limit is 6% and is applied in conjunction with the quarterly share updates (see *Index Maintenance*). Stocks that exceed the 6% cap between share updates are brought back to 6% at the subsequent quarterly share update.

For more information on the constituent weighting scheme, please refer to the Capped Market Capitalization Indices section in S&P Dow Jones Indices' Index Mathematics Methodology.

Index Maintenance

Rebalancing

Frequency. Index rebalancing follows that of the S&P BSE 100 and is detailed in the table below.

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

Index	Frequency	Effective Date	Reference Date
S&P BSE CARBONEX	Semi-annual	Monday following the third Friday of June and December	Last trading day of April and October
S&P BSE GREENEX			

The reference date for the prices used in the weighting process is after the close on the Wednesday prior to the second Friday of each rebalancing.

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.

Please refer to S&P Dow Jones Indices' Float Adjustment Methodology for a detailed description of float adjustment and Investable Weight Factors.

Ongoing Maintenance

The indices are also reviewed on an ongoing basis to account for events such as mergers, takeovers, delistings, group changes, suspensions, surveillance objections, graded surveillance measure objections, 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

S&P BSE CARBONEX. No stocks are added to the index between semi-annual rebalancings. As such, the number of stocks in the index may fall below the targeted constituent count of 100 due to any deletions made between rebalancings.

S&P BSE GREENEX. Between rebalancings, stocks may be added to the index as replacements for those removed from the index between rebalancings in order to maintain a fixed constituent count of 25.

Deletions

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

- Index constituents removed from an index's underlying universe are also deleted from the index on the same effective date. Whenever possible, changes in an index's components are announced at least one to five business days prior to implementation.
- Whenever practicable, Asia Index Private Limited uses the closing price for all deletions.

Graded Surveillance Measure (GSM)

On a monthly basis, companies added to the GSM list are dropped. The effective date of the drop is at the open of the Tuesday following the first Monday of each month. The reference date for the GSM list data is the third Friday of the previous month.

Any company dropped due to inclusion on the GSM list must remain off the list for six consecutive months prior to the rebalancing reference date to be reconsidered for index inclusion

Corporate Actions

S&P BSE CARBONEX

Corporate Action	Adjustment made 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 will cause the weights of the rest of the stocks in the index to change. Relative weights will stay the same.	Yes
	A change to a constituent's industry classification, as defined in *Appendix I*, is reflected in the index at the subsequent semi-annual rebalancing.	No
	Rebalancing changes including additions, deletions and weight changes.	Yes
	Stocks that are reclassified into Z group between rebalancings are removed from the index as soon as practicable.	Yes

S&P BSE GREENEX

Corporate Action	Adjustment made 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

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

Currency, Currency Hedged, and Risk Control Indices

The indices are calculated in Indian rupees and U.S. 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 these indices in U.S. dollars.

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 CARBONEX	30-Nov-12	30-Sep-10	30-Sep-10	1000
S&P BSE GREENEX	22-Feb-12	01-Oct-08	01-Oct-08	1000

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 document.

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

Index Governance

Index Committee

The S&P BSE Index Committee oversees the indices. The Index Committee is composed of full time employees of S&P Dow Jones Indices and the BSE. The Index Committee meets regularly. At each meeting, the Index Committee may review 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.

Asia Index Private Limited's 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 its daily governance of indices and maintenance of index methodologies, at least once within any 12-month period, the Index Committee reviews this methodology to ensure the indices continue to achieve the stated objectives, and that the data and methodology remain effective. In certain instances, Asia Index Private Limited 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.

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. Since index shares are assigned based on prices prior to the rebalancing, the actual weight of each stock at the rebalancing differs from these weights due to market movements.

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

Holiday Schedule

The 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 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 CARBONEX	BSECRBN	.BSECRBX
S&P BSE CARBONEX (TR)	BSECRBNR	--
S&P BSE CARBONEX (USD)	BSECRBUP	--
S&P BSE CARBONEX (USD) TR	BSECRBUT	--
S&P BSE GREENEX	BSEGREEN	.BSEGRNX
S&P BSE GREENEX (TR)	SPBSEGIT	--
S&P BSE GREENEX (USD)	SPBSEGUP	--
S&P BSE GREENEX (USD) TR	SPBSEGUT	--

Index Data

Daily constituent and index level data are available via 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 I

RobecoSAM Industries

Industry Tilt Factors are calculated and specific Corporate Sustainability Assessment Questionnaires are created for the following RobecoSAM Industries:

GICS Sector Code	GICS Sector	RobecoSAM Industry	RobecoSAM Industry Code
10	Energy	Coal & Consumable Fuels	COL
		Energy Equipment & Services	OIE
		Oil & Gas	OIX
		Oil & Gas Storage & Transportation	PIP
15	Materials	Aluminum	ALU
		Chemicals	CHM
		Construction Materials	COM
		Containers & Packaging	CTR
		Metals & Mining	MNX
		Paper & Forest Products	FRP
		Steel	STL
20	Industrials	Aerospace & Defense	ARO
		Airlines	AIR
		Building Products	BLD
		Commercial Services & Supplies	ICS
		Construction & Engineering	CON
		Electrical Components & Equipment	ELQ
		Industrial Conglomerates	IDD
		Machinery and Electrical Equipment	IEQ
		Professional Services	PRO
		Trading Companies & Distributors	TCD
		Transportation and Transportation Infrastructure	TRA
25	Consumer Discretionary	Auto Components	ATX
		Automobiles	AUT
		Casinos & Gaming	CNO
		Diversified Consumer Services	CSV
		Homebuilding	HOM
		Hotels, Resorts & Cruise Lines	TRT
		Household Durables	DHP
		Leisure Equipment & Products and Consumer Electronics	LEG
		Media	PUB
		Restaurants & Leisure Facilities	REX
		Retailing	RTS
		Textiles, Apparel & Luxury Goods	TEX
30	Consumer Staples	Beverages	BVG
		Food & Staples Retailing	FDR
		Food Products	FOA
		Household Products	HOU
		Personal Products	COS
		Tobacco	TOB

GICS Sector Code	GICS Sector	RobecoSAM Industry	RobecoSAM Industry Code
35	Health Care	Biotechnology	BTC
		Health Care Equipment & Supplies	MTC
		Health Care Providers & Services	HEA
		Life Sciences Tools & Services	LIF
		Pharmaceuticals	DRG
40	Financials	Banks	BNK
		Diversified Financial Services and Capital Markets	FBN
		Insurance	INS
45	Information Technology	Communications Equipment	CMT
		Computers & Peripherals and Office Electronics	THQ
		Electronic Equipment, Instruments & Components	ITC
		IT services & Internet Software and Services	TSV
		Semiconductors & Semiconductor Equipment	SEM
		Software	SOF
50	Telecommunication Services	Telecommunication Services	TLS
55	Utilities	Electric Utilities	ELC
		Gas Utilities	GAS
		Multi and Water Utilities	MUW
60	Real Estate	Real Estate	REA

Appendix II

Carbon Re-Weighting Factors

1. Sector specific Z scores are calculated for all index constituents as follows:

$$\boldsymbol{Z_c = \frac{S_c - \mu_c}{\sigma_c}}$$

where:

$\boldsymbol{Z_c}$ = Standardized Carbon Performance Score for the company

$\boldsymbol{S_c}$ = Carbon Performance Score for the company provided by RobecoSAM

$\boldsymbol{\mu_c}$ = Mean of the Carbon Performance Scores for the sector

$\boldsymbol{\sigma_c}$ = Standard deviation of the Carbon Performance Scores for the sector

Note: $\boldsymbol{Z_c}$ has a cap of -3 on the negative side and 3 on the positive side.

Therefore:

- when $\boldsymbol{Z_c < -3}$, $\boldsymbol{Z_c = -3}$
- when $\boldsymbol{Z_c > 3}$, $\boldsymbol{Z_c = 3}$

2. Carbon Re-Weighting Factors for all common stocks in the BSE 100 are calculated as follows:

$$\boldsymbol{C_f = 1 + \frac{(1 + I_i) \times Z_c}{6}}$$

where:

$\boldsymbol{C_f}$ = Carbon Re-Weighting Factor for the company

$\boldsymbol{I_i}$ = Industry Tilt Factor provided by RobecoSAM

$\boldsymbol{Z_c}$ = Standardized Carbon Performance Score for the company

Note: If a company does not have a score, the $\boldsymbol{C_f}$ applied to its stock is 1.

Carbon Adjusted Float Weight

1. Tilted weight with respect to the Carbon Re-Weighting Factor is calculated as follows:

$$\boldsymbol{T_w = F_w \times C_f}$$

where:

$\boldsymbol{T_w}$ = Tilted weight for the stock

$\boldsymbol{F_w}$ = Float Market Cap weight for the stock

$\boldsymbol{C_f}$ = Carbon Re-Weighting Factor applied to the company's stock

2. Realignment of the overall sector exposure to that of the S&P BSE 100 is calculated as follows:

$$\boldsymbol{C_w} = \frac{\boldsymbol{T_w}}{\boldsymbol{T_{ws}}} \times \boldsymbol{F_{ws}}$$

where:

$\boldsymbol{C_w}$ = Carbon Adjusted Float Weight for the stock

$\boldsymbol{T_w}$ = Tilted weight for the stock

$\boldsymbol{F_w}$ = Float Market Cap weight for the stock

$\boldsymbol{T_{ws}}$ = Sum of all $\boldsymbol{T_w}$ in the sector the stock belongs to

$\boldsymbol{F_{ws}}$ = Sum of all $\boldsymbol{F_w}$ in the sector the stock belongs to

Appendix III

S&P Trucost Methodology

S&P Trucost Limited ("S&P Trucost"), a subsidiary of S&P Dow Jones Indices LLC, has analyzed the environmental performance of over 4,200 companies worldwide. S&P Trucost has the world's largest bank of standardized greenhouse gas ("GHG") emissions data, which provides a proxy for carbon performance. To calculate the carbon intensity of any company included in the indices, S&P Trucost reviews company annual reports and accounts, environmental/sustainability reports, public disclosures and corporate Web sites.

However many companies do not disclose their environmental or carbon impacts. Where there is no public disclosure, S&P Trucost employs its environmental profiling system. This proprietary Input-Output model maps the GHG impacts of business activities in 464 sectors. S&P Trucost's broad coverage seeks to ensure that all non-disclosing companies are considered for index eligibility, not just those that disclose environmental information.

Six greenhouse gases (GHGs) are included in the analysis; these are all the GHGs regulated under the Kyoto protocol. Each gas has a different capacity to cause global warming. Although carbon dioxide ("CO_2") is the least potent of the GHGs, it is one of the most prevalent in terms of man-made emissions. The GHGs are calculated for each company and converted into tons of carbon dioxide equivalents based on the appropriate Global Warming Potential factors. The Global Warming Potential ("GWP") index, published by the Intergovernmental Panel on Climate Change ("IPCC"), assesses the effect of the emissions of different gases over a 100-year time period, relative to the emission of an equal mass of CO_2. GWP enables all the GHGs to be expressed in terms of CO_2 equivalents, or CO_2e, and is used as the basis for the analysis and for index calculation.

Quantities of greenhouse gas emissions are, then, normalized by sales to calculate the company's carbon footprint, or "carbon intensity". The smaller the carbon footprint, the less investments contribute to climate change and the lower an index's exposure to the rising costs of emitting carbon dioxide.

Appendix IV

Methodology Changes

Methodology changes since January 1, 2015 are as follows:

Index	Change	Effective Date (After Close)	Methodology Previous	Methodology Updated
All Indices	Index Maintenance: Graded Surveillance Measure (GSM)	21-Sept-18	--	On a monthly basis, companies added to the GSM list are dropped. The effective date of the drop is at the open of the Tuesday following the first Monday of each month. The reference date for the GSM list data is the third Friday of the previous month. Any company previously dropped due to its inclusion on the GSM list must remain off the GSM list for six consecutive months prior to the rebalancing reference date in order to be reconsidered for index inclusion.
S&P BSE GREENEX	Reference Period	16-June-17	Float-adjusted market capitalization and value traded data used for the rebalancing is based on a three-month reference period.	Float-adjusted market capitalization and value traded data used in the rebalancing is based on a six-month reference period.
S&P BSE GREENEX	Liquidity	16-June-17	Average three-month value traded is used for the rebalancing.	Six-month median annualized value traded is used for the rebalancing. Annualized traded value is calculated by taking the median of the monthly medians of the daily traded values over the reference period. The annualization is calculated using 250 trading days in a year.
S&P BSE GREENEX	Vendor Change	18-Dec-15	Greenhouse gas (GHG) emission numbers were provided by gTrade Carbon Ex Rating Services Private Limited (“gTrade”) for the eligible universe, according to gTrade’s methodology.	Greenhouse gas (GHG) emission numbers are provided by S&P Trucost Limited (“S&P Trucost”) for the eligible universe, according to S&P Trucost’s methodology.

Disclaimer

Copyright © 2018 Asia Index Private Limited. All rights reserved.

The S&P BSE Indices (the “Indices”) are published by Asia Index Private Limited (“AIPL”), which is a joint venture among affiliates of S&P Dow Jones Indices LLC, a division of S&P Global (“S&P DJI”) and BSE Limited (“BSE”). Standard & Poor’s® and S&P® are registered trademarks of Standard & Poor’s Financial Services LLC, a division of S&P Global (“S&P”), and Dow Jones® is a registered trademark of Dow Jones Trademark Holdings LLC (“Dow Jones”). BSE® and SENSEX® are registered trademarks of BSE. These trademarks have been licensed to AIPL.

Redistribution, reproduction and/or photocopying in whole or in part are prohibited without written permission. This document does not constitute an offer of services in jurisdictions where AIPL, BSE, S&P DJI, S&P or their respective affiliates (collectively “AIPL Companies”) do not have the necessary licenses. All information provided by AIPL Companies is impersonal and not tailored to the needs of any person, entity or group of persons. AIPL Companies receive compensation in connection with licensing its indices to third parties. Past performance of an index is not an indication or guarantee of future results.

It is not possible to invest directly in an index. Exposure to an asset class represented by an index is available through investable instruments based on that index. AIPL Companies do not sponsor, endorse, sell, promote or manage any investment fund or other investment vehicle that is offered by third parties and that seeks to provide an investment return based on the performance of any index. AIPL Companies make no assurance that investment products based on the index will accurately track index performance or provide positive investment returns. AIPL and S&P DJI are not fiduciaries or investment advisors, and the AIPL Companies make no representation regarding the advisability of investing in any such investment fund or other investment vehicle. A decision to invest in any such investment fund or other investment vehicle should not be made in reliance on any of the statements set forth in this document. Prospective investors are advised to make an investment in any such fund or other vehicle only after carefully considering the risks associated with investing in such funds, as detailed in an offering memorandum or similar document that is prepared by or on behalf of the issuer of the investment fund or other vehicle. Inclusion of a security within an index is not a recommendation by the AIPL Companies to buy, sell, or hold such security, nor is it considered to be investment advice. Closing prices for S&P BSE Indices are calculated by AIPL or its agent based on the closing price of the individual constituents of the index as set by their primary exchange. Closing prices are received by AIPL from the BSE. Real-time intraday prices are calculated similarly without a second verification.

These materials have been prepared solely for informational purposes based upon information generally available to the public from sources believed to be reliable. No content contained in these materials (including index data, ratings, credit-related analyses and data, model, software or other application or output therefrom) or any part thereof (“Content”) may be modified, reverse-engineered, reproduced or distributed in any form by any means, or stored in a database or retrieval system, without the prior written permission of AIPL. The Content shall not be used for any unlawful or unauthorized purposes. AIPL and its third-party data providers and licensors and the other AIPL Companies (collectively “AIPL Parties”) do not guarantee the accuracy, completeness, timeliness or availability of the Content. The AIPL Parties are not responsible for any errors or omissions, regardless of the cause, for the results obtained from the use of the Content.

The Content is provided on an “as is” basis. THE AIPL PARTIES DISCLAIM ANY AND ALL EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE, FREEDOM FROM BUGS, SOFTWARE ERRORS OR DEFECTS, THAT THE CONTENT’S FUNCTIONING WILL BE UNINTERRUPTED OR THAT THE CONTENT WILL OPERATE WITH ANY SOFTWARE OR

HARDWARE CONFIGURATION. In no event shall the AIPL Parties be liable to any party for any direct, indirect, incidental, exemplary, compensatory, punitive, special or consequential damages, costs, expenses, legal fees, or losses (including, without limitation, lost income or lost profits and opportunity costs) in connection with any use of the Content even if advised of the possibility of such damages.

Credit-related and other analyses, including ratings and market analyses, are statements of opinion as of the date they are expressed and not statements of fact. Any opinion, analyses and rating acknowledgement decisions are not recommendations to purchase, hold, or sell any securities or to make any investment decisions, and do not address the suitability of any security. AIPL does not assume any obligation to update the Content following publication in any form or format. The Content should not be relied on and is not a substitute for the skill, judgment and experience of the user, its management, employees, advisors and/or clients when making investment and other business decisions. AIPL has obtained information from sources it believes to be reliable; AIPL does not perform an audit or undertake any duty of due diligence or independent verification of any information it receives.

The AIPL Companies keep certain activities of their business units separate from each other in order to preserve the independence and objectivity of their respective activities. As a result, certain business units of the AIPL Companies may have information that is not available to other business units. The AIPL Companies have established policies and procedures to maintain the confidentiality of certain non-public information received in connection with each analytical process.

The AIPL Companies provide a wide range of services to, or relating to, many organizations, including issuers of securities, investment advisers, broker-dealers, investment banks, other financial institutions and financial intermediaries, and accordingly may receive fees or other economic benefits from those organizations, including organizations whose securities or services they may recommend, rate, include in indices or model portfolios, evaluate or otherwise address.

Sustainability scores as well as industry tilt factors used in the calculation of the S&P BSE CARBONEX are provided by RobecoSAM AG (“RobecoSAM”).