

**S&P Dow Jones
Indices**

A Division of **S&P Global**

S&P Factor-Based Quintile Indices *Methodology*

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Introduction

Index Objectives

S&P Volatility – Highest Quintile Indices. The indices measure the volatility-weighted performance of the most volatile stocks in a given underlying universe index. Volatility is defined as the standard deviation of the security’s daily price returns in local currency over the past year.

S&P Enhanced Value – Lowest Quintile Indices. The indices measure the value-adjusted weighted performance of the lowest ranked stocks in a given underlying universe index based on their value score, which is calculated based on three fundamental measures: book value-to-price, earnings-to-price, and sales-to-price.

S&P Quality – Lowest Quintile Indices. The indices measure the quality-adjusted weighted performance of the lowest ranked stocks in a given underlying universe index based on their quality score, which is calculated based on three fundamental measures: return on equity, accruals ratio, and financial leverage ratio.

S&P Momentum – Lowest Quintile Indices. The indices measure the momentum-adjusted weighted performance of stocks in a given underlying universe index that exhibit the lowest relative risk-adjusted performance.

Please refer to *Eligibility Criteria and Index Construction* for further details on each index’s underlying universe index and targeted constituent set.

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’ Global Industry Classification Standard (GICS) Methodology	GICS Methodology

This methodology was 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

Index Universe and Targeted Constituent Set

Each S&P Factor-Based Quintile Index includes a targeted set of index constituents (*N*) that are drawn from an underlying universe index as detailed in the table below.

Index	Targeted Constituent Set (<i>N</i>)	Underlying Universe Index
S&P 500 Volatility – Highest Quintile Index	100 Stocks	S&P 500
S&P 500 Enhanced Value – Lowest Quintile Index		
S&P 500 Quality – Lowest Quintile Index		
S&P 500 Momentum – Lowest Quintile Index	Bottom 20% of Stocks	
S&P MidCap 400 Volatility – Highest Quintile Index	80 Stocks	S&P MidCap 400
S&P MidCap 400 Enhanced Value – Lowest Quintile Index		
S&P MidCap 400 Quality – Lowest Quintile Index		
S&P MidCap 400 Momentum – Lowest Quintile Index	Bottom 20% of Stocks	
S&P SmallCap 600 Volatility – Highest Quintile Index	120 Stocks	S&P SmallCap 600
S&P SmallCap 600 Enhanced Value – Lowest Quintile Index		
S&P SmallCap 600 Quality – Lowest Quintile Index		
S&P SmallCap 600 Momentum – Lowest Quintile Index	Bottom 20% of Stocks	
S&P Developed Ex-U.S. Volatility – Highest Quintile Index	Top 20% of Stocks	S&P Developed Ex-US LargeMidCap
S&P Developed Ex-U.S. Enhanced Value – Lowest Quintile Index	Bottom 20% of Stocks	S&P Developed Ex-US LargeMidCap
S&P Developed Ex-U.S. Quality – Lowest Quintile Index	Bottom 20% of Stocks	S&P Developed Ex-US LargeMidCap
S&P Developed Ex-U.S. Momentum – Lowest Quintile Index	Bottom 20% of Stocks	S&P Developed Ex-US LargeMidCap

For the S&P Momentum indices the number of companies selected is rounded up if the targeted constituent set results in a fractional company amount.

For information on stock eligibility criteria and index management rules of the S&P 500, S&P MidCap 400, S&P SmallCap 600, and S&P Developed Ex-US LargeMidCap, please refer to the S&P U.S. Indices Methodology and S&P Global BMI, S&P/IFCI Methodology, respectively, available at www.spdji.com.

Index Calculations

The indices are calculated by means of the divisor methodology used in all S&P Dow Jones Indices' equity indices.

For more information on index calculations, please refer to the Non-Market Capitalization Weighting section of S&P Dow Jones Indices' Index Mathematics Methodology.

S&P Volatility – Highest Quintile Indices

Index Eligibility. Index constituents are drawn from the respective underlying universe index as detailed in *Index Universe and Targeted Constituent Set*. In order to be eligible for index consideration, the security must be a member of the underlying universe index on the rebalancing reference date.

Securities must also satisfy the following to be considered for index inclusion:

- **Trading History.** Stocks must have been issued and trading for at least one calendar year leading up to the rebalancing reference date. Generally, a stock must have traded on all trading days in the 12 months leading up to the rebalancing reference date; however, Index Committee discretion may be used in situations where a stock was subject to a temporary trading halt during that period.
- **Multiple Share Classes.** Each company is represented once by the Designated Listing. For more information regarding the treatment of multiple share classes, please refer to Approach B within the Multiple Share Classes section of the S&P Dow Jones Indices' Equity Indices Policies & Practices document.
- **Liquidity.** For the S&P Developed Ex-U.S. Volatility – Highest Quintile Index new constituents must have a six-month median daily value traded (MDVT) of at least US \$3 million (current constituents US \$2.5 million).¹

Constituent Selection. The selection of index constituents is done as follows:

1. Using available price return data for the trailing one year of trading days leading up to each index rebalancing reference date, the volatilities of the constituents within the underlying universe index are calculated.
2. Constituents meeting the eligibility requirements as described in *Index Eligibility* are, then, ranked in descending order based on their realized volatilities. The N stocks with the greatest volatility are selected and form the index.

For the S&P Developed Ex-U.S. Volatility – Highest Quintile Index, a 20% buffer is applied to stocks already in the index in order to reduce turnover and is implemented as follows:

- Stocks are ranked in descending order of volatility and those ranked within the top 80% of the targeted constituent set are automatically chosen for index inclusion.
- All stocks which are current constituents that fall within the top 120% of the targeted constituent set are then chosen for index inclusion in order of their volatility.
- If at this point the targeted constituent set has still not been met, the remaining stocks are chosen based on the highest volatility.

Constituent Weightings. The methodology employs a volatility-weighting scheme. At each rebalancing, the weight, w , for each index constituent, i , is set proportional to its volatility.

$$w_i = \frac{Volatility_i}{\sum_{i=1}^N Volatility}$$

where:

N = The number of index constituents, as specified in *Index Universe and Targeted Constituent Set*

Volatility is defined as the standard deviation of the security's daily price returns over the prior one year of trading days. It can be mathematically expressed as:

¹ For history prior to 2001, the threshold was US \$2 million (current constituents US \$1.5 million).

$$\sqrt{\frac{\sum_{i=1}^N (X_i - \bar{X})^2}{N-1}}$$

where:

$$X_i = \text{Price change} = \frac{P_t}{P_{t-1}} - 1$$

P_t = Closing price of the stock on day t

P_{t-1} = Closing price of the stock on day $t-1$

t = 1 to N

\bar{X} = Average price change

N = Number of trading days in a year based on local calendar

S&P Developed Ex-US Volatility – Highest Quintile Index. After the above weighting process is complete, constituents' weights are then subject to security, sector, and country constraints. This is done by using an optimization procedure such that the maximum weight of each security is the lower of 5% and 20 times its market capitalization weight in the eligible universe. The maximum weight of any given GICS sector is 40%, and the maximum weight of any country is 40%. Each stock's weight is floored at 0.05%.

Where the optimization procedure fails for a given period, the constraints are then relaxed in the following order: the maximum weight of the security, then the maximum weight of the sector, then the maximum weight of the country (if applicable), and finally 20 times its market capitalization weight.

For more information, please refer to the Non-Market Capitalization Weighting section of S&P Dow Jones Indices' Index Mathematics Methodology.

S&P Enhanced Value – Lowest Quintile Indices

Index Eligibility. Index constituents are drawn from the respective underlying universe index as detailed in *Index Universe and Targeted Constituent Set*. In order to be eligible for index consideration, the security must be a member of the underlying universe index on the rebalancing reference date.

Securities must also satisfy the following to be considered for index inclusion:

Multiple Share Classes. Each company is represented once by the Designated Listing. For more information regarding the treatment of multiple share classes, please refer to Approach B within the Multiple Share Classes section of the S&P Dow Jones Indices' Equity Indices Policies & Practices Methodology.

Liquidity. For the S&P Developed Ex-US Enhanced Value – Lowest Quintile index new constituents must have a six-month MDVT of at least US \$3 million (current constituents US \$2.5 million).

Constituent Selection. The selection of index constituents is done as follows:

1. Value scores are computed for each of the stocks that satisfy the criteria as detailed in *Index Eligibility*.

For more information on the calculation of the value scores, please refer to the S&P Enhanced Value Indices Methodology available at www.spdji.com.

2. The stocks are then ranked based on their value scores. The N stocks with the lowest value scores are selected and form the index.

where:

N = number of index constituents, as specified in *Index Universe and Targeted Constituent Set*

3. A 20% buffer is applied to stocks already in the index in order to reduce turnover and is implemented as follows:
 - a. Stocks are ranked based on value score and those ranked within the bottom 80% of the targeted constituent set are automatically chosen for index inclusion.
 - b. All stocks which are current constituents that fall within the bottom 120% of the targeted constituent set are then chosen for index inclusion in order of their value score.
 - c. If at this point the targeted constituent set has still not been met, the remaining stocks are chosen based on the lowest value score.

Constituent Weightings. The methodology employs a non-market-capitalization weighting scheme. Adjusted value scores are calculated for all securities selected for index inclusion.

First, each stock's average Z-score is multiplied by -1. Then, adjusted value scores are calculated as detailed in the *S&P Enhanced Value Indices Methodology*. For a given rebalancing, all the securities eligible for inclusion in the index are weighted by the product of their market capitalization in the underlying universe index and their adjusted value score, subject to security, sector, and country (if applicable) constraints. This is done by using an optimization procedure such that the maximum weight of each security is the lower of 5% and 20 times its market capitalization weight in the underlying universe index and the maximum weight of any given GICS sector and country (if applicable) is 40%. Each stock's weight is floored at 0.05%. Note that the capping algorithm redistributes the excess weight to the other stocks in proportion to their value weights.

Where the optimization procedure fails for a given period, the constraints are then relaxed in the following order: the maximum weight of the security and then the maximum weight of the sector, and then the maximum weight of the country (if applicable), and finally 20 times its market capitalization weight.

For more information, please refer to the Non-Market Capitalization Weighting section of S&P Dow Jones Indices' Index Mathematics Methodology.

S&P Quality – Lowest Quintile Indices

Index Eligibility. Index constituents are drawn from the respective underlying universe index as detailed in *Index Universe and Targeted Constituent Set*. In order to be eligible for index consideration, the security must be a member of the underlying universe index on the rebalancing reference date.

Securities must also satisfy the following to be considered for index inclusion:

Multiple Share Classes and Dual-Listed Companies. Each company is represented once by the Designated Listing. For more information regarding the treatment of multiple share classes, please refer to Approach B within the Multiple Share Classes section of the S&P Dow Jones Indices' Equity Indices Policies & Practices document.

Liquidity. For the S&P Developed Ex-US Quality – Lowest Quintile Index new constituents must have a six-month MDVT of at least US \$3 million (current constituents US \$2.5 million).

Constituent Selection. The selection of index constituents is done as follows:

1. Quality scores are computed for each of the stocks that satisfy the criteria as detailed in *Index Eligibility*.

For more information on the calculation of the quality scores, please refer to the S&P Quality Indices Methodology available at www.spdji.com.

2. The stocks are then ranked based on their quality scores. The N stocks with the lowest quality scores are selected and form the index.

where:

N = number of index constituents, as specified in *Index Universe and Targeted Constituent Set*

3. A 20% buffer is applied to stocks already in the index in order to reduce turnover and is implemented as follows:
 - a. Stocks are ranked based on quality score and those ranked within the bottom 80% of the targeted constituent set are automatically chosen for index inclusion.
 - b. All stocks which are current constituents that fall within the bottom 120% of the targeted constituent set are then chosen for index inclusion in order of their quality score.
 - c. If at this point the targeted constituent set has still not been met, the remaining stocks are chosen based on the lowest quality score.

Constituent Weightings. The methodology employs a non-market-capitalization weighting scheme. Adjusted quality scores are calculated for all securities selected for index inclusion.

First, each stock's average Z-score is multiplied by -1. Then, adjusted quality scores are calculated as detailed in the *S&P Quality Indices Methodology*. For a given rebalancing, all the securities eligible for inclusion in the index are weighted by the product of their market capitalization in the underlying universe index and their adjusted quality score subject to security, sector, and country (if applicable) constraints. This is done by using an optimization procedure such that the maximum weight of each security is the lower of 5% and 20 times its market capitalization weight in the underlying universe index and the maximum weight of any given GICS sector and country (if applicable) is 40%. Each stock's weight is floored at 0.05%. Note that the capping algorithm redistributes the excess weight to the other stocks in proportion to their quality weights.

Where the optimization procedure fails for a given period, the constraints are then relaxed in the following order: the maximum weight of the security and then the maximum weight of the sector, and then the maximum weight of the country (if applicable), and finally 20 times its market capitalization weight.

For more information, please refer to the Non-Market Capitalization Weighting section of S&P Dow Jones Indices' Index Mathematics Methodology.

S&P Momentum – Lowest Quintile Indices

Index Eligibility. Index constituents are drawn from the respective underlying universe index as detailed in *Index Universe and Targeted Constituent Set*. In order to be eligible for index consideration, the security must be a member of the underlying universe index on the rebalancing effective date.

Securities must also satisfy the following to be considered for index inclusion:

- **Trading History.** Stocks must have traded at least 150 trading days during the 12-month measurement period.
- **Multiple Share Classes.** All publicly listed multiple share class lines are eligible for index inclusion, subject to meeting the eligibility criteria. For more information regarding the treatment of multiple share classes, please refer to Approach A within the Multiple Share Classes section of the S&P Dow Jones Indices' Equity Indices Policies & Practices document.
- **Liquidity.** For the S&P Developed Ex-US Momentum – Lowest Quintile Index new constituents must have a six-month MDVT of at least US \$3 million (current constituents US \$2.5 million).

Constituent Selection. The selection of index constituents is done as follows:

1. Momentum scores are computed for each of the stocks that satisfy the criteria as detailed in *Index Eligibility*.

For more information on the calculation of the momentum scores, please refer to the S&P Momentum Indices Methodology available at www.spdji.com.

2. The stocks are then ranked based on their momentum scores. The N stocks with the lowest momentum scores are selected and form the index.

where:

N = number of index constituents, as specified in *Index Universe and Targeted Constituent Set*

3. A 20% buffer is applied to stocks already in the index in order to reduce turnover and is implemented as follows:
 - a. Stocks are ranked based on momentum score and are automatically chosen for index inclusion if they meet the following:
 - i. Are ranked within the bottom 16% of the targeted constituent set.
 - b. All stocks which are current constituents are then chosen for index inclusion in order of their momentum score if they meet the following:
 - i. Are ranked within the bottom 24% of the targeted constituent set.
 - c. If at this point the targeted constituent set has still not been met, the remaining stocks are chosen based on the lowest momentum score.

Constituent Weightings. The methodology employs a non-market-capitalization weighting scheme. Adjusted momentum scores are calculated for all securities selected for index inclusion.

First, each stock's average Z-score is multiplied by -1. Then, adjusted momentum scores are calculated as detailed in the *S&P Momentum Indices Methodology*. For a given rebalancing, all the securities eligible for inclusion in the index are weighted by the product of their market capitalization in the underlying universe index and their adjusted momentum score subject to security constraints. This is done by using an optimization procedure such that the maximum weight of each security is the lower of 9% and three times its market capitalization weight in the index.

For more information, please refer to the Non-Market Capitalization Weighting section of S&P Dow Jones Indices' Index Mathematics Methodology.

Index Maintenance

Rebalancing

S&P Volatility – Highest Quintile Indices. Except for the S&P Developed Ex-US Volatility – Highest Quintile Index, the indices rebalance quarterly, effective after the close of the third Friday of February, May, August, and November. The reference date for each rebalancing is the last trading date of January, April, July, and October, respectively. 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 shares are calculated and assigned to each stock to arrive at the weights determined on the reference date. Since index shares are assigned in advance, the actual weight of each stock at the rebalancing differs from these weights due to market movements.

Rebalancing Schedule	
Rebalancing Frequency	Quarterly
Rebalancing Date	After the close of the third Friday of February, May, August, and November
Reference Date	Last trading date of January, April, July, and October
Weights Reference Date	Closing prices on the Wednesday prior to the second Friday of the rebalancing month

S&P Developed Ex-US Volatility – Highest Quintile Index. The index rebalances quarterly, effective after the close of the third Friday of March, June, September, and December. The reference date for each rebalancing is the last trading date of February, May, August and November respectively.

S&P Enhanced Value – Lowest Quintile Indices and S&P Quality – Lowest Quintile Indices. The indices rebalance semi-annually after the close on the third Friday of June and December. The fundamental data reference date for each rebalancing is five weeks prior to the rebalancing effective date. As part of the rebalancing process, constituent stock weights are updated. The rebalancing reference dates are the last business day of May and November, respectively. 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 shares are calculated and assigned to each stock to arrive at the weights determined on the reference date. Since index shares are assigned in advance, the actual weight of each stock at the rebalancing differs from these weights due to market movements.

Rebalancing Schedule	
Rebalancing Frequency	Semi-annually
Rebalancing Date	After the close on the third Friday of June and December
Fundamental Data Reference Date	Five weeks prior to the rebalancing date
Reference Date	The last business day of May and November
Weights Reference Date	Closing prices as of the Wednesday prior to the second Friday of June and December

S&P Momentum – Lowest Quintile Indices. The indices rebalance semi-annually after the close on the third Friday of March and September. As part of the rebalancing process, constituent stock weights are updated. The reference date for each rebalancing is the last business day of February and August, respectively. Weights calculated as a result of the reference date data are implemented in the index using closing prices as of the last business day of February and August.

Rebalancing Schedule	
Rebalancing Frequency	Semi-annually
Rebalancing Date	After the close on the third Friday of March and September
Reference Date	The last business day of February and August
Weights Reference Date	Closing prices as of the last business day of February and August

Additions and Deletions

Additions. Except for spin-offs, companies can only be added to an index at the time of the rebalancing. A spin-off company is added to all the indices of which the parent is a constituent, at a zero price at the market close of the day before the ex-date (with no divisor adjustment). The spin-off is removed after at least one day of regular way trading (with a divisor adjustment).

Deletions. Constituents removed from an underlying universe index are also removed from the respective S&P Factor-Based Quintile Indices simultaneously. Constituents can also be removed due to delisting, acquisition or any other corporate action resulting in the deletion of the stock from the underlying universe index. A stock dropped due to one of these events causes the weights of the rest of the stocks in the index to change proportionately.

Corporate Actions

For information on Corporate Actions, please refer to S&P Dow Jones Indices' Equity Indices Policies & Practices Methodology.

Other Adjustments

In cases where there is no achievable market price for a stock being deleted, it may be removed at a zero or minimal price at the Index Committee's discretion, in recognition of the constraints faced by investors in trading bankrupt or suspended stocks.

Currency of Calculation and Additional Index Return Series

The indices are calculated in U.S. dollars.

In addition to the indices detailed in this methodology, additional return series versions of the indices may be available, including, but not limited to: currency, currency hedged, decrement, fair value, inverse, leveraged, and risk control versions. For a list of available indices, please refer to [S&P DJI Methodology & Regulatory Status Database](#).

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

For the inputs necessary to calculate certain types of indices, including decrement, dynamic hedged, fair value, and risk control indices, please refer to the Parameters documents available at www.spdji.com.

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 500 Volatility – Highest Quintile Index	02/10/2017	11/16/1990	11/16/1990	100
S&P 500 Enhanced Value – Lowest Quintile Index	02/10/2017	12/16/1994	12/16/1994	100
S&P 500 Quality – Lowest Quintile Index	02/10/2017	12/16/1994	12/16/1994	100
S&P 500 Momentum – Lowest Quintile Index	02/10/2017	09/16/1994	09/16/1994	100
S&P MidCap 400 Volatility – Highest Quintile Index	11/13/2017	11/15/1991	11/15/1991	100
S&P MidCap 400 Enhanced Value – Lowest Quintile Index	11/13/2017	12/20/1991	12/20/1991	100
S&P MidCap 400 Quality – Lowest Quintile Index	11/13/2017	12/20/1991	12/20/1991	100
S&P MidCap 400 Momentum – Lowest Quintile Index	11/13/2017	09/20/1991	09/20/1991	100
S&P SmallCap 600 Volatility – Highest Quintile Index	12/15/2017	02/17/1995	02/17/1995	100
S&P SmallCap 600 Enhanced Value – Lowest Quintile Index	01/04/2018	12/30/1994	12/30/1994	100
S&P SmallCap 600 Quality – Lowest Quintile Index	01/04/2018	12/30/1994	12/30/1994	100
S&P SmallCap 600 Momentum – Lowest Quintile Index	01/04/2018	03/17/1995	03/17/1995	100
S&P Developed Ex-US Volatility – Highest Quintile Index	12/03/2021	03/19/1993	03/19/1993	1000
S&P Developed Ex-US Enhanced Value – Lowest Quintile Index	12/03/2021	12/17/1999	12/17/1999	1000
S&P Developed Ex-US Quality – Lowest Quintile Index	12/03/2021	12/17/1999	12/17/1999	1000
S&P Developed Ex-US Momentum – Lowest Quintile Index	12/03/2021	09/16/1994	09/16/1994	1000

Index Data

Calculation Return Types

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.

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

Index Governance

Index Committee

An S&P Dow Jones Indices' Index Committee maintains the indices. The Committee meets regularly. At each meeting, the 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.

S&P Dow Jones Indices 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 Methodology.

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 to all clients. Any unusual treatment of a corporate action or short notice of an event may be communicated via email to clients.

For more information, please refer to the Announcements section of S&P Dow Jones Indices' Equity Indices Policies & Practices Methodology.

Pro-forma Files

In addition to the corporate events file (.SDE), S&P Dow Jones Indices 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 indices are calculated daily, throughout the calendar year. The only days an index is not calculated are on days when all exchanges where the index's constituents are listed are officially closed.

A complete holiday schedule for the year is available at www.spdji.com.

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 Methodology.

Recalculation Policy

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

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

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, major quote vendors, numerous investment-oriented Web sites, and various print and electronic media.

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

Back-tested History

Certain index rules differ in the index history versus the rules at launch. The following historical deviations exist.

S&P Developed Ex-US Volatility – Highest Quintile Index. For history prior to 2001, the MDVT threshold was US \$2 million (current constituents US \$1.5 million).

Appendix II

Methodology Changes

Methodology changes since February 10, 2017 are as follows:

Change	Effective Date (After Close)	Methodology	
		Previous	Updated
S&P Volatility – Highest Quintile Indices :	04/29/2020	Constituents' index shares are calculated using closing prices on the second Friday of the rebalancing month as the reference price.	Constituents' index shares are calculated using the closing prices on the Wednesday prior to the second Friday of the rebalancing month as the reference price.
Rebalancing – Calculation of Index Shares			

Appendix III

EU Required ESG Disclosures

EXPLANATION OF HOW ENVIRONMENTAL, SOCIAL & GOVERNANCE (ESG) FACTORS ARE REFLECTED IN THE KEY ELEMENTS OF THE BENCHMARK METHODOLOGY²	
1.	Name of the benchmark administrator. S&P Dow Jones Indices LLC.
2.	Underlying asset class of the ESG benchmark.³ N/A
3.	Name of the S&P Dow Jones Indices benchmark or family of benchmarks. S&P DJI Equity Indices Benchmark Statement
4.	Do any of the indices maintained by this methodology take into account ESG factors? No
Appendix latest update: January 2021	
Appendix first publication: January 2021	

² The information contained in this Appendix is intended to meet the requirements of the European Union Commission Delegated Regulation (EU) 2020/1817 supplementing Regulation (EU) 2016/1011 of the European Parliament and of the Council as regards the minimum content of the explanation of how environmental, social and governance factors are reflected in the benchmark methodology.

³ The 'underlying assets' are defined in European Union Commission Delegated Regulation (EU) 2020/1816 supplementing Regulation (EU) 2016/1011 of the European Parliament and of the Council as regards the explanation in the benchmark statement of how environmental, social and governance factors are reflected in each benchmark provided and published.

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