S&P Dow Jones Indices

A Division of S&P Global

S&P U.S. Style Indices Methodology

September 2024

S&P Dow Jones Indices: Index Methodology

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Introduction

Index Objective and Highlights

The S&P U.S. Style Indices measure the performance of U.S. equities fully or partially categorized as either growth or value stocks, as determined by Style Scores for each security. The Style indices are either float-adjusted market capitalization (FMC) weighted or capped market capitalization weighted while the Pure Style indices are Style Score weighted, subject to the rules described in *Index Construction*.

The S&P U.S. Style Indices address two distinct needs. The first is for exhaustive style indices that provide broad exposure to a certain style segment. The second need is for narrow, style-pure indices.

Index Family

Style Index Series. The indices divide the complete FMC of each underlying index approximately equally into growth and value indices. This series covers all stocks in the underlying index universe and is capped market capitalization weighted.

- **Uncapped Style series**. The indices cover all stocks in the underlying index universe. The indices are FMC weighted, adjusted by the applicable Style factor.
- **Daily Capped Style series**. The indices cover all stocks in the underlying index universe. The indices employ a daily capped market capitalization weighting scheme, and specific capping methodology, as defined in *Index Construction*.

Pure Style Index Series. The indices identify a portion of the underlying index's FMC as Pure Growth and a portion as Pure Value. There are no overlapping stocks, and stocks are weighted in proportion to their relative style propensity.

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 &	Equity Indices Policies & Practices
Practices Methodology	
S&P Dow Jones Indices' Index Mathematics	Index Mathematics Mathedalagy
Methodology	Index Mathematics Methodology
S&P Dow Jones Indices' Float Adjustment	Fleet Adjustment Methodology
Methodology	Float Adjustment Methodology
S&P Dow Jones Indices' Global Industry	CICS Mathedalamy
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

Index Universe

The indices derive constituents from an underlying index universe. The underlying indices are:

- S&P 500
- S&P MidCap 400
- S&P SmallCap 600

- S&P Composite 1500
- S&P 900
- S&P 1000

For information on the underlying indices, please refer to the S&P U.S. Indices Methodology, available at <u>www.spglobal.com/spdji</u>.

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 in the Multiple Share Classes section of the S&P Dow Jones Indices' Equity Indices Policies & Practices Methodology. In the S&P Pure Style Indices the weight determined at the rebalancing is distributed proportionally to the market capitalization ratio of the share class lines.

Index Construction

Evaluating Growth and Value at the Company Level

Style Factors. The Style indices measure growth and value along two separate dimensions, with three factors each used to measure growth and value. The list of factors used is outlined in the table below.

Growth Factors	Value Factors
Three-Year Net Change in Earnings per Share (Excluding Extra Items) over Current Price	Book Value to Price Ratio
Three-Year Sales per Share Growth Rate	Earnings to Price Ratio
Momentum (12-Month % Price Change)	Sales to Price Ratio

When earnings from three years prior are not available, then Two-Year Change in Earnings per Share (Excluding Extra Items) over Price per Share is used. When earnings from two years prior are not available, then One-Year Change in Earnings per Share (Excluding Extra Items) over Price per Share is used. If earnings from one year prior are not available, set the factor to zero.

When sales from three years prior are not available, then Two-Year Sales per Share Growth Rate is used. When sales from two years prior are not available, then One-Year Sales per Share Growth Rate is used. When sales from one year prior are not available, set the factor to zero. If the starting value is less than zero, the style factor is multiplied by a factor of negative 1.

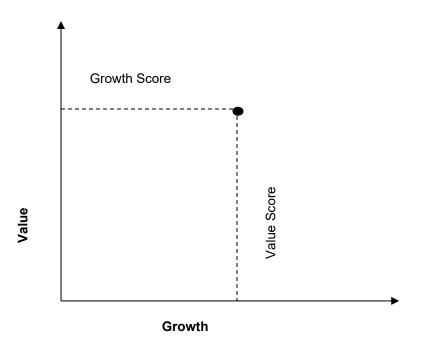
When there is not enough trading history to calculate 12-month Momentum, then Momentum is calculated from the stock's listing date.

When Book Value to Price Ratio, Earnings to Price Ratio, or Sales to Price Ratio is not available, the factor is set equal to zero.

Style Scores. Raw values for each of the above factors are calculated for each company in the S&P Total Market Index (TMI) universe. These raw values are first winsorized to the 90th percentile and then standardized by dividing the difference between each company's raw score and the mean of the entire set by the standard deviation of the entire set. A Growth Score for each company is computed as the average of the standardized values of the three growth factors. Similarly, a Value Score for each company is computed as the average of the standardized values of the standardized values of the three yrange of the three values for the three value factors.

At the end of this step each company has a Growth Score and a Value Score, as shown below, with growth and value being measured along separate dimensions.

Exhibit 1: Measuring Growth and Value Along Separate Dimensions



For Stock X,

 $G_{i, X}$ = Standardized value of Growth Factor *I* for stock *X*, *I*=1 to 3.

 $V_{j, X}$ = Standardized value of Value Factor *J* for stock *X*, *J*=1 to 3.

 SG_X = Growth Score of X = 1/3 ($G_{1, X}$ + $G_{2, X}$ + $G_{3, X}$).

 SV_X = Value Score of X = 1/3 ($V_{1, X}$ + $V_{2, X}$ + $V_{3, X}$).

Establishing Style Baskets

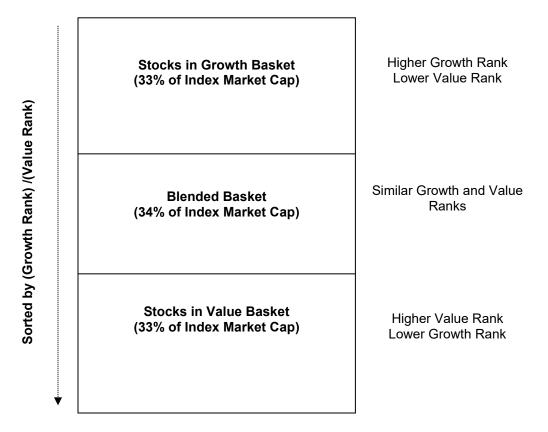
Companies within each underlying index are ranked based on growth and value scores. A company with a high Growth Score would have a higher Growth Rank, while a company with a low Value Score would have a lower Value Rank. For example, the S&P MidCap 400 constituent with the highest Value Score would have a Value Rank of 1, while the constituent with the lowest would have a Value Rank of 400.

The index constituents are then sorted in ascending order of the ratio Growth Rank/Value Rank. The companies at the top of the list have a higher Growth Rank (or high Growth Score) and a lower Value Rank (or low Value Score) and, therefore, exhibit pure growth characteristics. The companies at the top of the list, comprising 33% of the total index market capitalization, are designated as the Growth basket.

The companies at the bottom of the list have a higher Value Rank (and Value Score) and a lower Growth Rank (and Growth Score) and, therefore, exhibit pure value characteristics. The companies at the bottom of the list, comprising 33% of the total index market capitalization, are designated as the Value basket.

The companies in the middle of the list have neither pure growth nor pure value characteristics. The distribution of the index universe into style baskets is illustrated below.

Exhibit 2: Style Baskets



Capped Growth and Value Indices

As described earlier, one of the design goals is to construct a Style index series that divides the complete FMC of each underlying index approximately equally into growth and value indices while limiting the number of stocks that overlap across both.

The Style baskets described above are natural starting points for the Style indices' construction. 100% of a company's FMC in the Value basket is assigned to the Value index, and 100% of a company's FMC in the Growth basket is assigned to the Growth index.

The middle 34% of FMC consists of companies with similar growth and value ranks. Their FMC is distributed among the Style indices based on their distances from the midpoint of the Growth basket and the midpoint of the Value basket, as detailed below. The midpoint of each Style region calculates as the average of Value Scores and Growth Scores of companies in the Style basket.

For company X,

 $W_{V,X}$ = Percent of FMC of company X in the Value Index.

 $W_{G,X}$ = Percent of FMC of company X in the Growth Index.

 $W_{V,X} = D_{G,X}/(D_{G,X} + D_{V,X}).$

 $W_{G,X} = D_{V,X}/(D_{G,X} + D_{V,X}).$

 $W_{V,X}+W_{G,X}=1.$

where:

 $D_{G,X}$ and $D_{V,X}$ represent the distances of company X from the midpoint of each Style basket.

The algorithm for computation of $D_{G, X}$ and $D_{V, X}$ is shown in Appendix A.

Further, from the practical point of view of constructing easily replicable baskets, it is essential to avoid very small fractions of a stock's market capitalization being in a particular Style index. Therefore, the weights are rounded as follows:

If $W_{V,X} \ge 0.8$, $W_{V,X} = 1.0$ and $W_{G,X} = 0$.

If $W_{G,X} \ge 0.8$, $W_{G,X} = 1.0$ and $W_{V,X} = 0$.

Based on back-test results, the total market capitalization is approximately equally divided among the growth and value indices. No mathematical procedure is employed to force equal market capitalization for the growth and value indices since price movements of constituent stocks would result in inequality immediately following any reconstitution.

It is also worth noting that the assignment of the market capitalization of stocks not in Style baskets to growth and value indices allows graduated moves and prevents stocks from churning throughout the indices at each reconstitution. Further, this procedure results in only 34% of the market capitalization of the parent index distributed across both indices: thus, limiting the overlap area and narrowing the Style indices.

The index calculates following S&P Dow Jones Indices' divisor-based index methodology. In addition, the index market capitalization for these indices incorporates the Growth and Value Factors.

For information on the Investable Weight Factors (IWF), please refer to S&P Dow Jones Indices' Float Adjustment Methodology.

For more information on index calculations, please refer to S&P Dow Jones Indices' Index Mathematics Methodology.

Constituent Weighting. At each rebalancing, each index is capped market capitalization weighted using the following process:

- 1. With prices reflected on the rebalancing reference date, adjusted for any applicable corporate actions, and membership, shares outstanding, IWFs, and Growth/Value Factor as of the rebalancing effective date, weight each company by style adjusted FMC.
- 2. If any company weighs more than 24% cap the company's weight at 23%, which allows for a 2% buffer.¹
- 3. Proportionally redistribute any excess weight to all uncapped companies within the relevant index. The process continues iteratively until no company breaches the 23% weight cap.
- 4. The aggregate weight of companies with weights greater than 4.8% cannot exceed 50% of the total index weight.²
- 5. If the rule in step 4 is breached, rank all companies in descending order by weight and reduce the weight of the smallest company whose weight is greater than 4.8% that causes the step 4 breach to 4.5%. Continue the process iteratively until step 4 is satisfied.
- 6. Assign index share amounts to each constituent to arrive at the weights calculated above.
- 7. If, on the third to last business day of March, June, September, or December, a company has an index weight greater than 24%, or the sum of the companies with weights greater than 4.8% exceeds 50%, a secondary reweighting is triggered with the rebalancing effective date after the close of the last business day of the month with any applicable reweighting changes appearing in daily proforma and corporate action files starting on the second to last business day of the month. The secondary reweighting uses the closing prices as of the third to last business day of March,

¹ The buffer attempts to mitigate the potential for any company to exceed 25% as of the quarter-end diversification requirement date. ² The cap is set to allow for a buffer below the 5% limit.

S&P Dow Jones Indices: S&P U.S. Style Indices Methodology

June, September, or December, and membership, shares outstanding, IWFs and Growth/Value Factor as of the rebalancing effective date.

For more information on the index calculation, please refer to the Capped Market Capitalization Weighted Indices section of S&P Dow Jones Indices' Index Mathematics Methodology.

At times, companies may be represented in the S&P U.S. Style Indices by multiple share class lines. Maximum weight capping is based on style adjusted company FMC, with the weight of multiple class companies allocated proportionally to each share class line based on its FMC as of the rebalancing reference date. If no capping is required, both share classes remain in the index at their natural style adjusted FMC.

For more information on the capping thresholds, please refer to the Regulatory Capping Requirements section of S&P Dow Jones Indices' Equity Indices Policies & Practices Methodology.

Uncapped Growth and Value Indices

Constituent Weighting. At each rebalancing, each index is FMC weighted, adjusted by the applicable Style factor.

Pure Growth and Pure Value Indices

There are no overlapping stocks between these indices. The Style baskets are the only regions used to construct the Pure Style indices.

The constituents of the Pure Value index are all stocks for which $W_V = 1$ and SV > (the mean of all underlying index value scores + 0.25). Similarly, the constituents of the Pure Growth index are all stocks for which $W_G = 1$ and SG > (the mean of all parent index growth scores + 0.25). In other words, all constituents of the Value basket except those with the lowest value scores are members of the Pure Value index. Similarly, all constituents of the Growth basket except those with the lowest growth scores are members of the Pure Value index.

Further, to avoid stocks with outlying high Style Scores having a very large weight in the index, all Style Scores are capped at 2.0 in the Pure Style indices. In other words, for the Pure Style indices, SV = 2.0 if SV > 2.0, and SG = 2.0 if SG > 2.0.

The index calculates using the divisor-based methodology of S&P Dow Jones Indices. For example, for the S&P SmallCap 600 Pure Value index,

Index Value _t	Index Market Value, ////////////////////////////////////		
Index Market Value _t	$= \sum_{X \to i}^{n} IWF_{X,i} * Modified Index Shares_{X,i} * Price_{X,i}$		
where:			
<i>IWF_{X,t}</i>	= Investable Weight Factor of stock X on date t.		
Price _{X, t}	 Price used for stock X in the S&P SmallCap 600 computation on date t. 		
n	= Number of stocks in S&P SmallCap 600 Pure Value Index on date t (note that $n \le N$, the count from the previous page).		
<i>Modified Index Shares</i> $x_{t,t}$ = Shares used for Stock X on date t.			
This term calcul	This term calculates in the following manner:		
Modified Index Shares _{x,t} = Index Shares _{x,t} * PWF _{x,t}			

The Pure Weight Factor (*PWF*) term ensures the index weights each stock with its Style Score. This is accomplished by setting the *PWF* at the rebalancing date, *d*, as follows:

$$PWF_{X,d} = k * SV_X / (IWF_{X,d} * Index Shares_{X,d} * Price_{X,d})$$

The constant k is used as a multiplier since $SV_x/(IWF_{x,d} * Index Shares_{x,d} * Price_{x,d})$ results in a very small value.

The PWF is set only once a year at the index rebalancing. Therefore, only at the rebalancing will the stocks be weighted in exact proportion to their Style Scores. The weights of stocks in a Pure Style index between rebalancings will depend on their relative price performances.

Daily Capped Growth and Daily Capped Value Indices

Constituent changes are incorporated in the indices as and when made in the relevant style index. Please note any addition not coinciding with a reweighting effective date is added to the relevant Style Daily Capped 25/20 Index with an Additional Weight Factor (AWF) of its respective growth or value weight.

Indices are also reviewed daily based on each company's capped market capitalization weight. Daily capping is only performed when the sum of companies with weight greater than 5% exceeds 25%. When daily capping is necessary, the changes are announced after the close of the business day on which the daily weight caps are exceeded, with the reference date after the close of that same business day, and changes are effective after the close of the next trading day. While capping is reviewed daily, the index may be capped on a less frequent basis. Both the annual and daily capping process are performed according to the following procedures:

- 1. With prices reflected on the rebalancing reference date, and membership, shares outstanding, and IWFs as of the rebalancing effective date, each company is weighted by FMC multiplied by its respective growth or value weight.
- 2. If any company's weight exceeds 10%, that company's weight is capped at 10% and all excess weight is proportionally redistributed to all uncapped companies within the index. If, after this redistribution, any company breaches the weight cap the process is repeated iteratively until no company breaches the company capping rule.
- 3. Then, the aggregate weight of the companies with weights greater than 4.5% cannot exceed 22.5% of the total weight. These caps are set to allow for a buffer below 5% and 25% limits, respectively.
- 4. If the rule in step 3 is breached, rank all companies in descending order by weight and identify the company with the smallest weight above 4.5%. Reduce the weight of this company to 4.5%.
- 5. Proportionally redistribute the excess weight to all companies with weights below 4.5%. Any company receiving weight cannot breach the 4.5% cap. This process repeats iteratively until step 4 is satisfied.
- 6. Index share amounts are assigned to each constituent to arrive at the weights calculated above.

For more information on the capping thresholds, please refer to the Regulatory Capping Requirements section of S&P Dow Jones Indices' Equity Indices Policies & Practices Methodology.

Style Indices Versus Pure Style Indices

Style indices and Pure Style indices have different characteristics addressing distinct needs. These differences are summarized below.

Characteristic	Style Index Series	Pure Style Index Series
Universe coverage	Exhaustive, all parent index stocks are covered	Only Pure Style stocks are covered
Overlapping stocks	Stocks that do not have Pure Growth or Pure Value characteristics have their market capitalization divided between Growth and Value indices in proportion to their distance from the pure regions.	None
Weighting scheme	Capped market capitalization- weighted	Style Score weighted
Breadth	Broader	Narrower
Usage	Exposure to the broad style market (For example, relative value exposure)	Pure style exposure (For example, deep value exposure) or "style spread" strategies, quantitative analysis

Exhibit 3: Differences Between the Style Index Series and the Pure Style Index Series

Index Maintenance

Rebalancing

The indices rebalance annually, effective after the close on the third Friday of December.¹ The reference date for growth and value expressions is after the close of the last trading date of the previous month. Closing prices as of the second Friday of December are used for setting index weights for the Pure Style indices. Style Scores, growth and value midpoint averages, and the Pure Weight Factors (PWFs) reset only at the December rebalancing.

For index selection purposes, all S&P U.S. Style Indices use the index universe, shares outstanding, and IWF figures as of the rebalancing effective date.

Growth and Value Indices Quarterly Reweighting. For capping purposes, the indices reweight quarterly, effective after the close of business on the third Friday of March, June, September, and December using a rebalancing reference date as of after the close of the Wednesday prior to the first Friday of March, June, September, and December.

Daily Capped Style Indices. For annual capping purposes, the rebalancing reference date for capping is after the close of the Wednesday prior to the second Friday of December, with changes effective after the close of the following Friday.

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

Other changes to the U.S. Style Indices are made on an as-needed basis, following the guidelines of the underlying index. Changes in response to corporate actions and market developments can be made at any time.

Underlying Index Action	Adjustment Made to the Style Index	Divisor Adjustment Required?
Constituent Change	 If the constituent being dropped is a member of the Style index, it is removed from the index. S&P Dow Jones Indices will announce the <i>W_V</i> and <i>W_G</i> for the replacement stock via the Index Corporate Events report (.SDE). If <i>W_V</i> is non-zero, the stock is added to the Value index. If <i>W_G</i> is non-zero, the stock is added to the Growth index. The replacement stock can therefore be added to both Growth and Value indices, or to only one of them. <i>W_V</i> and <i>W_G</i> for the new stock are calculated using GICS industry-level averages for stocks outside the S&P Total Market Index (TMI), as of the prior rebalance, other than spin-offs, and 	Yes
Share Changes Between Quarterly Share	retain their old values for inter-index moves. Share count follows parent index share count.	Yes

Corporate Actions - Style and Daily Capped Style Indices

¹ For purposes of index history, the rebalancings from 1995 to 2004 were in July, and the 2005 rebalancing was in September.

Underlying Index Action Adjustments	Adjustment Made to the Style Index	Divisor Adjustment Required?
Quarterly Share Changes	Share count follows parent index share count. In addition, new W_V and W_G for all constituent stocks change at the December rebalancing. These will be pre-announced in a manner similar to quarterly share changes.	Yes
Spin-Off	Index Membership follows the parent index. The child stock is assigned the same W_V and W_G as the parent stock.	No

For information on the treatment of corporate actions in the Style Indices, please refer to the Market Capitalization Indices section of S&P Dow Jones Indices' Equity Indices Policies & Practices Methodology.

Corporate Actions - Pure Style Indices

Underlying Index Action	Adjustment made to Pure Style Index	Divisor Adjustment Required?
Constituent Change	If the constituent being dropped is a member of the Pure Style index, it is removed from the Pure Style index. The replacement stock can be added to either the Pure Growth or the Pure Value index, or to neither. S&P Dow Jones Indices will include the index shares at which the stock will enter a Pure Style index. The index shares are determined using the weight and the closing constituent prices on the announcement date of the addition. The weight is simply the ratio of the capped Style Score of the added stock divided by the sum of Style Scores of all index constituents. For index computation purposes PWF _G or PWF _V for the new stock are calculated accordingly using the formula in <i>Appendix B</i> .	Yes
Share Changes Between Quarterly Share Adjustments	The weight of stocks is unchanged.	No
Quarterly Share Changes	The weight of stocks is unchanged during March, June, and September quarterly share changes. For the annual rebalancing, new constituents and their weights are announced two-to-five days before the December quarterly date. At the rebalancing, the weight of each stock is simply proportional to its capped Style Score.	Only on the December quarterly adjustment date—since it coincides with the annual rebalancing of the Pure Style indices
Spin-Off	Index Membership follows the parent index. The child stock is assigned the same <i>PWF</i> and Style score as the parent stock on the effective date of the spin-off. If the parent index migrates the child stock to a new index (i.e., S&P 500 to S&P 400), the PWF for the spin-off is calculated according to the details in <i>Appendix B</i> .	No
Rights Offering	The weight of stocks is unchanged. Price follows parent index price change. To keep weights of stocks unchanged following price change, Modified Index Shares are adjusted for the stock whose shares are being changed.	No

For information on the treatment of corporate actions in the Pure Style Indices, please refer to the Non-Market Capitalization Indices section of S&P Dow Jones Indices' Equity Indices Policies & Practices Methodology.

Currency of Calculation and Additional Index Return Series

The indices are calculated in U.S. dollars (USD).

WMR foreign exchange rates are taken daily at 4:00 PM London Time and used in the calculation of the indices. These mid-market fixings are calculated by WMR based on LSEG data and appear on LSEG pages.

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

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 <u>www.spglobal.com/spdji</u>.

	Base Value		
Index	Base Date	Price Return	Total Return
S&P 500 Growth	06/30/1995	271.61	496.67
S&P 500 Pure Growth	06/30/1995	1004.08	1004.09
S&P 500 Pure Value	06/30/1995	1020.02	1020.10
S&P 500 Value	06/30/1995	291.12	799.70
S&P MidCap 400 Growth	06/30/1995	60.40	121.23
S&P MidCap 400 Pure Growth	06/30/1995	1016.60	1016.60
S&P MidCap 400 Pure Value	06/30/1995	997.45	997.51
S&P MidCap 400 Value	06/30/1995	100.73	223.02
S&P SmallCap 600 Growth	06/30/1995	76.27	96.28
S&P SmallCap 600 Pure Growth	06/30/1995	1005.01	1005.01
S&P SmallCap 600 Pure Value	06/30/1995	1004.47	1004.46
S&P SmallCap 600 Value	06/30/1995	76.22	115.10
S&P Composite 1500 Growth	06/30/1995	1000.04	1000.04
S&P Composite 1500 Pure Growth	06/30/1995	1007.25	1007.25
S&P Composite 1500 Pure Value	06/30/1995	1007.75	1007.80
S&P Composite 1500 Value	06/30/1995	1000.00	1000.00
S&P 900 Growth	06/30/1995	999.93	999.93
S&P 900 Pure Growth	06/30/1995	1008.41	1008.41
S&P 900 Pure Value	06/30/1995	1010.07	1010.14
S&P 900 Value	06/30/1995	999.96	999.96
S&P 1000 Growth	06/30/1995	1000.24	1000.24
S&P 1000 Pure Growth	06/30/1995	1009.50	1009.50
S&P 1000 Pure Value	06/30/1995	1001.57	1001.59
S&P 1000 Value	06/30/1995	999.88	999.88
S&P 500 Growth Capped Index	03/16/2018	2702.26	3311.22
S&P 500 Value Capped Index	03/16/2018	1696.10	2333.85

Index Data

Construction of Style and Pure Style indices across the size spectrum allows for a complete suite of benchmarking and style investing indices catering to distinct market needs. This is shown below.

	Value	Blend	Growth
Large-Cap	S&P 500 Value S&P 500 Pure Value S&P 500 Value Daily Capped Index	S&P 500	S&P 500 Growth S&P 500 Pure Growth S&P 500 Growth Daily Capped Index
Mid-Cap	S&P MidCap 400 Value S&P MidCap 400 Pure Value	S&P MidCap 400	S&P MidCap 400 Growth S&P MidCap 400 Pure Growth
Small-Cap	S&P SmallCap 600 Value S&P SmallCap 600 Pure Value	S&P SmallCap 600	S&P SmallCap 600 Growth S&P SmallCap 600 Pure Growth
All-Cap	S&P Composite 1500 Value S&P Composite 1500 Pure Value	S&P Composite 1500	S&P Composite 1500 Growth S&P Composite 1500 Pure Growth
Large-Mid	S&P 900 Value S&P 900 Pure Value	S&P 900	S&P 900 Growth S&P 900 Pure Growth
Mid-Small	S&P 1000 Value S&P 1000 Pure Value	S&P 1000	S&P 1000 Growth S&P 1000 Pure Growth

Suite of Indices Across the Asset Allocation Spectrum

Style and Pure Style indices derived for the S&P Composite 1500, the S&P 900, and the S&P 1000 are simply combinations of the Style and Pure Style indices of the subset indices.

For example, the S&P Composite 1500 Pure Value Index is comprised of the Pure Value index constituents of the S&P 500, the S&P MidCap 400, and the S&P SmallCap 600. Construction of Style baskets and assignment of style weight factors, as in Exhibit 2, are only done at the S&P 500, the S&P MidCap 400, and the S&P SmallCap 600 index levels. Scores are reviewed and indices rebalanced every December to coincide with the real-world portfolio review process, which typically relies on year-end evaluations.

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 Index Committee maintains the indices. All committee members are full-time professional members of S&P Dow Jones Indices' staff. The 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.

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.⁴ 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.⁵ The pro-forma file is typically provided daily in advance of the rebalancing date and contains all constituents as well as their corresponding weights and index shares effective for the upcoming rebalancing.

Please visit <u>www.spglobal.com/spdji</u> for a complete schedule of rebalancing timelines and pro-forma delivery times.

Holiday Schedule

The indices calculate when the U.S. equity markets are open.

A complete holiday schedule for the year is available on the Web site at www.spglobal.com/spdji.

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: <u>index_services@spglobal.com</u>.

⁴ For Style Indices, please refer to the underlying index's .SDE file for index corporate event information.

⁵ For Style Indices, please refer to the underlying index's pro-forma file (PRO.SDC) for rebalancing information.

Index Dissemination

Index levels are available through S&P Dow Jones Indices' Web site at <u>www.spglobal.com/spdji</u>, 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 versions of the below indices that may exist are also covered by this document. Please refer to the <u>S&P DJI Methodology & Regulatory</u> <u>Status Database</u> for a complete list of indices covered by this document.

Index	Return Type	BBG	RIC
S&P 500 Growth	Price Return	SGX	.SGX
S&P 500 Growin	Total Return	SPTRSGX	.SPXGTR
	Price Return	SVX	.SVX
S&P 500 Value	Total Return	SPTRSVX	.SPXVTR
CRD 500 Dura Crawth	Price Return	SPXPG	.SPXPG
S&P 500 Pure Growth	Total Return	SPTRXPG	.SPXPGTR
S&P 500 Pure Value	Price Return	SPXPV	.SPXPV
Sap 500 Pure value	Total Return	SPTRXPV	.SPXPVTR
S&P MidCap 400 Growth	Price Return	MIDG	.MGD
S&P MidCap 400 Glowin	Total Return	SPTRMG	.SPMGTR
S&P MidCap 400 Value	Price Return	MIDV	.MUV
S&F MildCap 400 Value	Total Return	SPTRMV	.SPMVTR
S&P MidCap 400 Pure Growth	Price Return	SPMPG	.SPMPG
S&F MidCap 400 Fulle Glowin	Total Return	SPTRMPG	.SPMPGTR
S&P MidCap 400 Pure Value	Price Return	SPMPV	.SPMPV
S&P MIdCap 400 Pule Value	Total Return	SPTRMPV	.SPMPVTR
S&D SmallCap 600 Crowth	Price Return	SMLG	.CKG
S&P SmallCap 600 Growth	Total Return	SPTRSG	.SPSGTR
S&P SmallCap 600 Value	Price Return	SMLV	.CVK
S&F Sinalicap 600 value	Total Return	SPTRSV	.SPSVTR
S&P SmallCap 600 Pure Growth	Price Return	SPSPG	.SPSPG
Sap Smallcap 600 Pule Glowin	Total Return	SPTRSPG	.SPSPGTR
S&D SmallCap 600 Dura Valua	Price Return	SPSPV	.SPSPV
S&P SmallCap 600 Pure Value	Total Return	SPTRSPV	.SPSPVTR
S&P Composite 1500 Growth	Price Return	SPUSCG	.SPCG
	Total Return	SPTRCG	.SPCGTR
S&P Composite 1500 Value	Price Return	SPUSCV	.SPCV
	Total Return	SPTRCV	.SPCVTR
S&P Composite 1500 Pure Growth	Price Return	SPUSCPG	.SPCPG
	Total Return	SPTRCPG	.SPCPGTR
S&P Composite 1500 Pure Value	Price Return	SPUSCPV	.SPCPV
	Total Return	SPTRCPV	.SPCPVTR
S&P 900 Growth	Price Return	SPUSNG	.SPNG
	Total Return	SPTRNG	.SPNGTR
S&P 900 Value	Price Return	SPUSNV	.SPNV
	Total Return	SPTRNV	.SPNVTR
S&P 900 Pure Growth	Price Return	SPUSNPG	.SPNPG
	Total Return	SPTRNPG	.SPNPGTR
S&P 900 Pure Value	Price Return	SPUSNPV	.SPNPV
	Total Return	SPTRNPV	.SPNPVTR
S&P 1000 Growth	Price Return	SPUSTG	.SPTG
	Total Return	SPTRTG	.SPTGTR

Index	Return Type	BBG	RIC
S&P 1000 Value	Price Return	SPUSTVA	.SPTVA
S&P 1000 Value	Total Return	SPTRTVA	.SPTVATR
S&P 1000 Pure Growth	Price Return	SPUSTPG	.SPTPG
Sar 1000 rule Glowin	Total Return	SPTRTPG	.SPTPGTR
S&P 1000 Pure Value	Price Return	SPUSTPV	.SPTPV
Sap 1000 Pule value	Total Return	SPTRTPV	.SPTPVTR
S&D 500 Crowth Daily Cannod Inday (USD)	Price Return	SPXGCUP	
S&P 500 Growth Daily Capped Index (USD)	Total Return	SPXGCUT	
S&R 500 Value Daily Conned Index (USD)	Price Return	SPXVCUP	
S&P 500 Value Daily Capped Index (USD)	Total Return	SPXVCUT	

Index Alert

Comprehensive index data is available through S&P Dow Jones Indices' fee-based service, SPICE (<u>www.spice-indices.com</u>).

Index Data

Daily constituent and index level data are available via subscription.

For product information, please contact S&P Dow Jones Indices, <u>www.spglobal.com/spdji/en/contact-us</u>.

Web site

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

Appendix A

Calculating Distances from Pure Growth Regions

First, the midpoints of the Growth and Value baskets are determined.

AV _G	=	Average of Growth scores of Value basket members
AV_V	=	Average of Value scores of Value basket members
AG _G	=	Average of Growth scores of Growth basket members
AG _V	=	Average of Value scores of Growth basket members

These four variables are calculated once a year at the annual rebalancing.

For each Stock, X, that does not belong to either style basket, D_{G, X} and D_{V, X} are the distances from the Growth basket and the Value basket. As detailed in the chapter Index Construction, the stock's Growth and Value scores are SG_X and SV_X .

Calculation of D_{G, X}

If $(SG_X \ge AG_G)$, $D_{G,X} = |SV_X - AG_V|$

Else if $(SV_X \leq AG_V)$,

$$D_{G,X} = |AG_G - SG_X|$$

Else,

$$D_{G,X} = \sqrt{(SV_X - AG_V)^2 + (AG_G - SG_X)^2}$$

Calculation of Dv, x

If $(SV_X \ge AV_V)$, $Dv_{,X} = |SG_X - AV_G|$

Else if $(SG_X \leq AV_G)$,

$$DV_{,X} = |AV_V - SV_X|$$

Else,

$$D_{V,X} = \sqrt{(SV_X - AV_V)^2 + (AV_G - SG_X)^2}$$

Appendix B

Calculating Pure Weight Factors (PWFs) for Additions Between Rebalancings

To follow are the equations used to calculate the PWFs for additions between rebalancings. Index users need not calculate PWFs. S&P Dow Jones Indices announces the index shares at which stocks will be added to an index for all additions that are made between rebalancings. The PWFs are simply used in index computation to assign stocks their appropriate weights. The reference date used in the calculation of the PWFs is the announcement date of the addition.

Case 1: One stock is being added to a Pure Style index

The following are known variables:

- F = Float-adjusted market capitalization of the added stock = P * IWF * Index Shares
- s = Capped Style Score of Stock X being added
- S = Sum of the capped Style Scores of all constituents of the Pure Style index (including the stock that is being added)
- I = Index Market Value before the addition (but after deletions, if applicable)

$$= \sum_{X=l} IWF_{X,t} * Index Shares_{X,t} * PWF_X * Pr ice_{X,t}$$

The following is the unknown variable:

PWF = Weighting factor to ensure the stock goes in at a weight proportional to its Style Score

Because of score weighting, the weight of a stock should be equal to the ratio of its capped Style Score to that of the sum of the capped Style Scores of all constituents as determined on the reference date. The index weight for the addition will change based on price movements between the reference date and the effective date.

$$(F * PWF) / (I + F * PWF) = s/S$$

Solving for PWF:

N

$$PWF = (I * s) / [F * (S - s)]$$

Case 2: Two stocks are being added to a Pure Style index

Let the variable definitions be the same as above and be denoted by subscripts 1 and 2 for each of the added stocks.

Since stock weights are proportional to their capped Style Scores, it follows that:

 $(F_1 * PWF_1) / (F_2 * PWF_2) = s_1/s_2$

As before, the weight of an added stock is in proportion to its score. Therefore:

 $(F_1 * PWF_1)/(I + F_1 * PWF_1 + F_2 * PWF_2) = s_1/S$

Substituting $(F_2 * PWF_2)$ from the first equation into the second, and solving for PWF_1 :

$$PWF_1 = (I * s_1) / [F_1 * \{S - (s_1 + s_2)\}]$$

Similarly,

 $PWF_2 = (I * s_2) / [F_2 * {S - (s_1 + s_2)}]$

For cases with more than two stocks, the above equation can be extended.

Appendix C

Methodology Changes

Methodology changes since January 1, 2015, are as follows:

	Effective Date		Methodology
Change	(After Close)	Previous	Updated
Constituent Weightings and Secondary Reweighting Check	06/21/2024	At each rebalancing, the indices are market capitalization weighted.	Constituent Weighting. At each rebalancing each index is capped market capitalization weighted. For capping purposes, the indices rebalance quarterly after the close of business on the third Friday of March, June, September, and December using the following procedures:
			 With prices reflected on the rebalancing reference date, adjusted for any applicable corporate actions, and membership, shares outstanding, IWFs, and Growth/Value Factors as of the rebalancing effective date, weight each company by style adjusted FMC.
			 If any company weighs more than 24% cap the company's weight at 23%, which allows for a 2% buffer.
			 Proportionally redistribute any excess weight to all uncapped companies within the relevant index. The process continues iteratively until no company breaches the 23% weight cap.
			 The aggregate weight of companies with weights greater than 4.8% cannot exceed 50% of the total index weight.
			 5. If the rule in step 4 is breached, rank all companies in descending order by weight and reduce the weight of the smallest company whose weight is greater than 4.8% that causes the step 4 breach to 4.5%. Continue the process iteratively until step 4 is satisfied.
			 6. Assign index share amounts to each constituent to arrive at the weights calculated above. 7. If, on the third to last
			business day of March, June,

	Effective Date		dology
Change	Effective Date (After Close)	Metho Previous	Updated September, or December a company has an index weight greater than 24%, or the sum of the companies with weights greater than 4.8% exceeds 50%, a secondary reweighting is triggered with the rebalancing effective date after the close of the last business day of the month with any applicable reweighting changes appearing in daily proforma and corporate action files starting on the second to last business day of the month. The secondary reweighting uses the closing prices as of the third to last business day of March, June, September, or December, and membership, shares outstanding, IWFs and Growth/Value Factor as of the rebalancing effective date. For more information on the index calculation, please refer to the Capped Market Capitalization Weighted Indices
Corporate Action Treatment: Additions Between Rebalancings	12/09/18	S&P Dow Jones Indices will calculate the weight which the stock will enter a Pure Style index.	section of S&P Dow Jones Indices' Index Mathematics Methodology. S&P Dow Jones Indices will include the index shares at which the stock will enter a Pure Style index. The index shares are determined using the weight and the closing constituent prices on the announcement date of the addition.
Spin-Off Treatment	09/30/15	In Style indices, spun-off child stocks were assigned W_V and W_G using the GICS industry-level averages for stocks outside the S&P Composite 1500 index. In Pure Style indices, the weight of a parent stock remained unchanged by having an Index Shares increase to offset the price adjustment.	In Style indices, spun-off child stocks are assigned the same W_V and W_G as the parent stock. In Pure Style indices, spun- off child stocks are assigned the same PWF and Style score as the parent stock on the effective date of the spin-off. If the parent index migrates the child stock to a new index (i.e., S&P 500 to S&P 400), the PWF for the spin-off is calculated according to the details in Appendix II. The Index Shares of the parent stock will no longer be adjusted.

Appendix D

ESG Disclosures

=	EXPLANATION OF HOW ENVIRONMENTAL, SOCIAL & GOVERNANCE (ESG) FACTORS ARE REFLECTED IN THE KEY ELEMENTS OF THE BENCHMARK METHODOLOGY ⁶		
1.	Name of the benchmark administrator.	S&P Dow Jones Indices LLC.	
2.	Underlying asset class of the ESG benchmark. ⁷	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		January 2021	

⁶ 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 and the retained EU law in the UK [The Benchmarks (amendment and Transitional Provision) (EU Exit) Regulations 2019].

⁷ 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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Where applicable, S&P Dow Jones Indices and its index-related affiliates ("S&P DJI") defines various dates to assist our clients by providing transparency. The First Value Date is the first day for which there is a calculated value (either live or back-tested) for a given index. The Base Date is the date at which the index is set to a fixed value for calculation purposes. The Launch Date designates the date when the values of an index are first considered live: index values provided for any date or time period prior to the index's Launch Date are considered back-tested. S&P DJI defines the Launch Date as the date by which the values of an index are known to have been released to the public, for example via the company's public website or its data feed to external parties. For Dow Jones-branded indices introduced prior to May 31, 2013, the Launch Date (which prior to May 31, 2013, was termed "Date of introduction") is set at a date upon which no further changes were permitted to be made to the index methodology, but that may have been prior to the Index's public release date.

Please refer to the methodology for the Index for more details about the index, including the manner in which it is rebalanced, the timing of such rebalancing, criteria for additions and deletions, as well as all index calculations.

Information presented prior to an index's launch date is hypothetical back-tested performance, not actual performance, and is based on the index methodology in effect on the launch date. However, when creating back-tested history for periods of market anomalies or other periods that do not reflect the general current market environment, index methodology rules may be relaxed to capture a large enough universe of securities to simulate the target market the index is designed to measure or strategy the index is designed to capture. For example, market capitalization and liquidity thresholds may be reduced. In addition, forks have not been factored into the back-test data with respect to the S&P Cryptocurrency Indices. For the S&P Cryptocurrency Top 5 & 10 Equal Weight Indices, the custody element of the methodology was not considered; the back-test history is based on the index constituents that meet the custody element as of the Launch Date. Also, the treatment of corporate actions in back-tested performance may differ from treatment for live indices due to limitations in replicating index management decisions. Back-tested performance reflects application of an index methodology and selection of index constituents with the benefit of hindsight and knowledge of factors that may have positively affected its performance, cannot account for all financial risk that may affect results and may be considered to reflect survivor/look ahead bias. Actual returns may differ significantly from, and be lower than, back-tested returns. Past performance is not an indication or guarantee of future results.

Typically, when S&P DJI creates back-tested index data, S&P DJI uses actual historical constituent-level data (e.g., historical price, market capitalization, and corporate action data) in its calculations. As ESG investing is still in early stages of development, certain datapoints used to calculate certain ESG indices may not be available for the entire desired period of back-tested history. The same data availability issue could be true for other indices as well. In cases when actual data is not available for all relevant historical periods, S&P DJI may employ a process of using "Backward Data Assumption" (or pulling back) of ESG data for the calculation of back-tested historical performance. "Backward Data Assumption" is a process that applies the earliest actual live data point available for an index constituent company to all prior historical instances in the index performance. For example, Backward Data Assumption inherently assumes that companies currently not involved in a specific business activity (also known as "product involvement") were never involved historically and similarly also assumes that companies currently not involved historically too. The Backward Data Assumption allows the hypothetical back-test to be extended over more historical years than would be feasible using only actual data. For more information on "Backward Data Assumption" please refer to the FAQ. The methodology and factsheets of any index that employs backward assumption in the back-tested history

will explicitly state so. The methodology will include an Appendix with a table setting forth the specific data points and relevant time period for which backward projected data was used. Index returns shown do not represent the results of actual trading of investable assets/securities. S&P DJI maintains the index and calculates the index levels and performance shown or discussed but does not manage any assets.

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