

# **S&P 500 Factor Rotator Index** *Methodology*

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# Table of Contents

Introduction	3
<b>Index Objective</b>	<b>3</b>
<b>Supporting Documents</b>	<b>3</b>
Eligibility Criteria	4
<b>Index Universe</b>	<b>4</b>
Index Construction	5
<b>Constituent Selection</b>	<b>5</b>
<b>Constituent Weightings</b>	<b>5</b>
<b>Index Calculations</b>	<b>5</b>
Index Maintenance	6
<b>Rebalancing</b>	<b>6</b>
<b>Additions and Deletions</b>	<b>6</b>
<b>Currency of Calculation and Additional Index Return Series</b>	<b>6</b>
<b>Base Date and History Availability</b>	<b>6</b>
Index Data	7
<b>Calculation Return Types</b>	<b>7</b>
Index Governance	8
<b>Index Committee</b>	<b>8</b>
Index Policy	9
<b>Holiday Schedule</b>	<b>9</b>
<b>Rebalancing</b>	<b>9</b>
<b>Unexpected Exchange Closures</b>	<b>9</b>
<b>Recalculation Policy</b>	<b>9</b>
<b>Contact Information</b>	<b>9</b>
Index Dissemination	10
<b>Tickers</b>	<b>10</b>
<b>Index Data</b>	<b>10</b>
<b>Web site</b>	<b>10</b>
Appendix A	11
<b>Risk-Adjusted Momentum Score Calculation</b>	<b>11</b>
Disclaimer	12
<b>Performance Disclosure/Back-Tested Data</b>	<b>12</b>



# Introduction

## Index Objective

The S&P 500 Factor Rotator Index is a weighted return index that selects the two highest ranked S&P 500 factor indices out of the five indices listed in *Eligibility Criteria*, based on past risk-adjusted momentum.

*For more information on the S&P 500 factor indices, please refer to the S&P Quality Indices, Enhanced Value Indices, Momentum Indices, Low Volatility Indices, and High Dividend Index Methodologies, respectively, available at [www.spglobal.com/spdji](http://www.spglobal.com/spdji).*

## 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	<a href="#">Equity Indices Policies &amp; Practices</a>
S&P Dow Jones Indices' Index Mathematics Methodology	<a href="#">Index Mathematics Methodology</a>

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 following indices form the index universe:

Index	Return Type	Ticker
S&P 500 Quality	Total Return	SPXQUT
S&P 500 Enhanced Value	Total Return	SPXEVUT
S&P 500 Momentum	Total Return	SP500MUT
S&P 500 Low Volatility	Total Return	SP5LVIT
S&P 500 High Dividend	Total Return	SPXHDUT

*For more information on the above factor indices, please refer to their respective methodology documents available at [www.spglobal.com/spdji](http://www.spglobal.com/spdji).*

# Index Construction

## Constituent Selection

The two highest ranked factor indices, by past risk-adjusted momentum, are selected and form the index according to the following process:

1. Risk-adjusted momentum ratios for the preceding 20, 120, and 240 days are computed for each factor index based on total return data.
2. The average of the three risk-adjusted momentum ratios is computed for each factor index.
3. The factor indices are ranked in descending order using the average ratios from step 2, and the top two indices are selected.

*For more information on risk-adjusted momentum calculations, please refer to Appendix A.*

## Constituent Weightings

At each rebalancing the component indices are weighted as follows:

- 75% for the highest ranked index
- 25% for the second highest ranked index

## 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 the index calculation methodology, please refer to the Weighted Return Indices section of S&P Dow Jones Indices' Index Mathematics Methodology.*

# Index Maintenance

## Rebalancing

The index rebalances after the close of the 15<sup>th</sup> day of every month. If the 15<sup>th</sup> day of the month is a holiday or a non-business day, the rebalancing date is the preceding business day. The reference date for measuring risk-adjusted momentum is two days prior to the rebalancing date.

## Corporate Actions

Corporate actions are handled at the component index level.

*For more information on corporate action treatment, please refer to the S&P Quality Indices, Enhanced Value Indices, Momentum Indices, Low Volatility Indices, and High Dividend Index Methodologies, respectively, available at [www.spglobal.com/spdji](http://www.spglobal.com/spdji).*

## Additions and Deletions

Additions and deletions of factor indices occur as part of the monthly rebalancing. Additions and deletions at the stock level are handled at the component index level.

## Currency of Calculation and Additional Index Return Series

The index calculates 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 the following: currency, currency hedged, decrement, fair value, inverse, leveraged, and risk control versions. For a list of available indices, please refer to the [S&P DJI Methodology & Regulatory Status Database](#).

*For information on various index calculations, 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.spglobal.com/spdji](http://www.spglobal.com/spdji).*

## Base Date and History Availability

Index history availability, base date, and base value are shown in the table below.

Index	Launch Date	First Value Date	Base Date	Base Value
S&P 500 Factor Rotator Index	03/25/2020	12/15/1995	12/15/1995	100

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

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

## **Holiday Schedule**

The index calculates when the U.S. equity markets are open.

*A complete holiday schedule for the year is available on the S&P Dow Jones Indices' Web site at [www.spglobal.com/spdji](http://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 any questions regarding an index, please contact: [index\\_services@spglobal.com](mailto:index_services@spglobal.com).

# Index Dissemination

## 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 [S&P DJI Methodology & Regulatory Status Database](#) for a complete list of indices covered by this document.

Index (Currency)	Return Type	Bloomberg
S&P 500 Factor Rotator Index (USD)	Total Return	SPXFRUT

## Index Data

Daily constituent and index level data are available via subscription.

For product information, please contact S&P Dow Jones Indices, [www.spglobal.com/spdji/en/contact-us](http://www.spglobal.com/spdji/en/contact-us).

## Web site

For further information, please refer to S&P Dow Jones Indices' Web site at [www.spglobal.com/spdji](http://www.spglobal.com/spdji).

# Appendix A

## Risk-Adjusted Momentum Score Calculation

The first step to determine the top performing factors is to calculate three risk-adjusted momentum ratios for 20, 120, and 240 days. The ratio is defined as follows:

$$\text{Risk – adjusted momentum ratio}_A^n = \frac{\frac{\text{Index}_T^A}{\text{Index}_{T-n}^A} - 1}{\text{Realized Vol}_{T-n,T}^A}$$

where:

T = Reference date

n = {19, 119, 239}

A = Factor

and:

$$\text{Realized Vol}_{T-n,T}^A = \sqrt{\frac{252 * \sum_{i=0}^n \left( \ln \left( \frac{P_{T-i}^A}{P_{T-i-1}^A} \right) \right)^2}{n + 1}}$$

where:

$P_T^A$  = Total Return index value for factor A on date T

The average is computed as follows:

$$\text{Risk – adjusted momentumScore}_A = \frac{\text{Ratio}_A^{19} + \text{Ratio}_A^{119} + \text{Ratio}_A^{239}}{3}$$

# Disclaimer

## Performance Disclosure/Back-Tested Data

Where applicable, S&P Dow Jones Indices and its index-related affiliates (“S&P DJI”) defines various dates to assist our clients in 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. 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 involved in a specific business activity were 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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