S&P Dow Jones Indices

A Division of S&P Global

S&P Balanced Global Bond and Equity-Futures Index *Methodology*

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Introduction

Index Objective

The S&P Balanced Global Bond and Equity-Futures Index is a futures-based weighted return index that measures the performance of a multi-asset-class strategy with regional representation and a risk control overlay. Index weight is allocated to the component indices below on a monthly basis, with static proportions as defined in *Index Construction*, and a target volatility of 4%:

- S&P 500 Futures Dynamic Rebalancing Risk Control 4% Index (USD) ER
- S&P 10-Year U.S. Treasury Note Futures Excess Return Index
- S&P Euro-Bund Futures USD Hedged Index ER
- S&P 10-Year JGB Futures USD Hedged Index ER
- USD-Hedged NIKKEI 225 Futures Excess Return Index with 4% Risk Control
- USD-Hedged EURO STOXX 50 Futures Excess Return Index with 4% Risk Control

For information on the below sub-indices, please refer to their respective methodology documents, available at www.spglobal.com/spdji/:

- S&P 500 Futures Dynamic Rebalancing Risk Control 4% Index (USD) ER please refer to the S&P Factor Indices Methodology.
- S&P 10-Year U.S. Treasury Note Futures Excess Return Index please refer to the S&P Global Bond Futures Index Series Methodology.
- S&P Euro-Bund Futures USD Hedged Index ER and S&P 10-Year JGB Futures USD Hedged Index ER please refer to the S&P Global Bond Futures Index Series Methodology.

For information on the USD-Hedged NIKKEI 225 Futures Excess Return Index with 4% Risk Control and the USD-Hedged EURO STOXX 50 Futures Excess Return Index with 4% Risk Control please refer to *Appendix I*.

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' Commodities Indices	Commodities Indices Policies & Practices		
Policies & Practices Methodology	Commodities indices Policies & Practices		
S&P Dow Jones Indices' Commodity Index	Commodity Index Mathematics Methodology		
Mathematics Methodology	Commodity index Mathematics Methodology		
S&P Dow Jones Indices' Index Mathematics	Index Mathematics Methodology		
Methodology	index Mathematics 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.

Index Construction

The index measures the performance of a monthly allocation of futures contracts between the "Equity Component" and "Bond Component" with static proportions, defined in the table below, and a target volatility of 4%.

Calculation of the Risk Control Index

The index is comprised of futures contracts between both an "Equity Component" and a "Bond Component", with a 4% dynamic rebalancing risk control.

For the risk control parameters of the index, please refer to **Appendix A** for more details.

For information on the calculation of a risk control index, please see the **Dynamic Rebalancing Risk Control** section of S&P Dow Jones Indices' Index Mathematics Methodology.

Target Allocation Scheme & Rebalancing for the Index & the Sub-Indices

The index allocates futures contracts to the "Equity Component" and "Bond Component" with predetermined proportions on a monthly basis. The index rebalances monthly, effective after the market close of the first business day of each month. The sub-indices rebalance in accordance with S&P Dow Jones Indices' Dynamic Rebalancing Risk Control Indices Methodology.

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

The weights reset after the close of the first business day of each calendar month. Each sub-index's target proportions are as follows:

Index	Component	Target Component Weight	Risk Control Sub-Index	Ticker	Target Weight within Component
			S&P 500 Futures Dynamic Rebalancing Risk Control 4% Index (USD) ER	SPXFPDRC	33.3%
S&P Balanced	Equity	100%	USD-Hedged NIKKEI 225 Futures Excess Return Index with 4% Risk Control		33.3%
Global Bond and Equity Futures Excess			USD-Hedged EURO STOXX 50 Futures Excess Return Index with 4% Risk Control		33.3%
Return Index (Before 4% Risk Control)			S&P 10-Year U.S. Treasury Note Futures Excess Return Index	SPUSTTP	33.3%
Then dontroly	Bond	nd 100%	S&P Euro-Bund Futures USD Hedged Index ER	SPEUBDUH	33.3%
			S&P 10-Year JGB Futures USD Hedged Index ER	SPJGBPUH	33.3%

On any business day t when the index is calculated, the index returns, and index values are calculated using the following formulas:

$$IndexReturn_t = \sum_{i=1}^{2} ComponentWeight_{i,t-1} \times ComponentReturn_{i,t}$$

 $IndexLevel_t = IndexLevel_{t-1} \times (1 + IndexReturn_t)$

where:

 $ComponentWeight_{i,t-1}$ = the weight of respective (Equity or Bond) component (i) as of time t-1.

ComponentReturn; = the daily return of the respective (Equity or Bond) component (i) as of time t.

ComponentReturn and ComponentWeight are determined by the following formulas:

$$= \begin{cases} SubIndexWeight_{j,t-1} \times \frac{ComponentLevel_{t-1}}{ComponentLevel_t} \times \frac{SubIndexLevel_{j,t}}{SubIndexLevel_{j,t-1}} & \textit{if t is not a rebalance date} \\ TargetWeightWithinComponent_j \times \frac{ComponentLevel_{t-1}}{ComponentLevel_t} \times \frac{SubIndexLevel_{j,t}}{SubIndexLevel_{j,t-1}} & \textit{otherwise} \end{cases}$$

$$ComponentReturn_{i,t} = \sum_{j=1}^{3} SubIndexWeight_{j,t-1} \times SubIndexReturn_{j,t}$$

 $ComponentLevel_{i,t} = ComponentLevel_{i,t-1} \times (1 + ComponentReturn_{i,t})$

$$= \begin{cases} ComponentWeight_{i,t} \times \frac{IndexLevel_{t-1}}{IndexLevel_t} \times \frac{ComponentLevel_{i,t}}{ComponentLevel_{i,t-1}} & \textit{if t is not a rebalance date} \\ TargetComponentWeight_i \times \frac{IndexLevel_{t-1}}{IndexLevel_t} \times \frac{ComponentLevel_{i,t-1}}{ComponentLevel_{i,t-1}} & \textit{otherwise} \end{cases}$$

where:

= The weight of respective sub-index(j) as of time t. SubIndexWeight_{i.t}

SubIndexReturn_{i t} = The daily return of respective sub-index(j) as of time t.

 $SubIndexLevel_{i.t}$ = The daily level of the respective sub-index(j) as of time t.

= The weight of respective component(i) as of time t. $ComponentWeight_{i,t}$

= The daily return of respective component(i) as of time t. $ComponentReturn_{i,t}$

= The daily level of the respective component(i) as of time t. ComponentLevel_{it}

Calculation of Risk Control Sub-Indices

The three dynamic rebalanced risk-control sub-indices of the "Equity Component" are constructed by respective underlying indices in table below:

Risk Control Sub-Index	Underlying Index	Underlying Index Ticker
S&P 500 Futures Dynamic Rebalancing Risk Control 4% Index (USD) ER	S&P 500 Futures Excess Return Index	SPXFP

Risk Control Sub-Index	Underlying Index	Underlying Index Ticker
USD-Hedged NIKKEI 225 Futures Excess Return Index with 4% Risk Control	USD-Hedged NIKKEI 225 Futures Excess Return Index	NK225P
USD-Hedged EURO STOXX 50 Futures Excess Return Index with 4% Risk Control	USD-Hedged EURO STOXX 50 Futures Excess Return Index	ESX50P

For the risk control parameters of the S&P 500 Futures Dynamic Rebalancing Risk Control 4% Index (USD) ER, please see the S&P Dow Jones Risk Control Indices Parameters document.

For the risk control parameters of the USD-Hedged NIKKEI 225 Futures Excess Return Index with 4% Risk Control and USD-Hedged EURO STOXX 50 Futures Excess Return Index with 4% Risk Control, please refer to *Appendix A* for more details.

For information on the calculation of the risk control index, please see the **Dynamic Rebalancing Risk Control** section of S&P Dow Jones Indices' S&P Index Mathematics Methodology.

Calculation of Currency Hedged Sub-indices

To hedge currency risk, the USD versions of the following sub-indices are constructed:

Currency Hedged Sub-Index	Underlying Index	Underlying Index Ticker
USD-Hedged NIKKEI 225 Futures Excess Return Index	NIKKEI 225 Futures Excess Return Index	NK225P
USD-Hedged EURO STOXX 50 Futures Excess Return Index	EURO STOXX 50 Futures Excess Return Index	ESX50P
S&P Euro-Bund Futures USD Hedged Index ER	S&P Euro-Bund Futures Excess Return Index	SPEUBDP
S&P 10-Year JGB Futures USD Hedged Index ER	S&P 10-Year JGB Futures Excess Return Index	SPJGBER

The USD hedged indices calculate on a daily principle-hedged basis. The calculation is as follows:

$$IndexCurrReturn(USD)_t = \left(\frac{IndexValue(LOC)_t}{IndexValue(LOC)_{t-1}} - 1\right) \times \left(\frac{ExchangeRate(USD/LOC)_t}{ExchangeRate(USD/LOC)_{t-1}}\right)$$

 $IndexValue(USD)_t = IndexValue(USD)_{t-1} * (1 + IndexCurrReturns(USD)_t)$

where:

 $ExchangeRate(USD/LOC)_t = USD$ per local currency at time t

 $IndexValue(LOC)_t$ = The index level in local currency at time t

Construction of Futures Indices

The NIKKEI 225 Futures Index and EURO STOXX 50 Futures Index sub-indices¹ are constructed from the respective nearest quarterly month futures contract. These indices apply a one-day rolling period. The roll date is effective prior to open of the third business day prior to the expiration of the futures contract. The table below lists the contracts, corresponding exchanges, and index base dates.

For more information on the calculation of the equity futures excess return, please refer to **Price**Weighted Indices section of the S&P Dow Jones Indices' Commodity Index Mathematics Methodology.

¹ These sub-indices are internal indices, so are not publicly available, and are not disseminated.

Index	Underlying Futures Contract	Symbol	Exchange	Base Date	First Value Date
NIKKEI 225 Futures Excess Return Index	Nikkei 225 Futures	JNI	OSE	01/31/1995	01/31/1995
EURO STOXX 50 Futures Excess Return Index	EURO STOXX 50 Futures	STXE	EUREX	07/31/1998	07/31/1998

Currency of Calculation and Additional Index Return Series

The index is 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 the S&P DJI
Methodology & Regulatory Status Database.

For information on the calculation of different types of indices, please refer to the **Other Derived Indices** section of the S&P Dow Jones Indices' Commodity 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/.

Index Governance

Index Committee

An S&P Dow Jones Indices 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 Committees may revise index policy covering rules for including other assets or asset classes, changes to target weight allocations, currencies, the timing of rebalancing, 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 the **Index Governance** sections of the S&P Dow Jones Indices' Equity Indices Policies & Practices Methodology and S&P Dow Jones Indices' Commodities Indices Policies & Practices Methodology.

Index Policy

Holiday Schedule

The index calculates on all common business days of the underlying indices. The underlying indices' holiday schedules are as follows:

- USD-Hedged NIKKEI 225 Futures Excess Return Index with 4% Risk Control follows the JPX holiday schedule.
- USD-Hedged EURO STOXX 50 Futures Excess Return Index with 4% Risk Control follows EUREX Exchange holiday schedule.
- S&P 500 Futures Dynamic Rebalancing Risk Control 4% Index (USD) ER follows the holiday schedule of its underlying index.²
- Bond Component sub-indices follow the holiday schedule of the respective underlying indices.³

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

For information on Calculations and Pricing Disruptions, Expert Judgment and Data Hierarchy, please refer to the **Index Policy** section S&P Dow Jones Indices' Commodity Indices Policies & Practices Methodology.

Contact Information

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

² Please refer to the S&P Factor Indices Methodology at www.spglobal.com/spdji/.

³ Please refer to the S&P Global Bond Futures Index Series Methodology at www.spglobal.com/spdii/.

Index Dissemination

Index levels are available through S&P Dow Jones Indices' Web site at www.spglobal.com/spdji/, 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 Name	Launch Date	BBG - Real Time	BBG	RIC	Base Date	Base Value
S&P Balanced Global Bond and Equity Futures Index	01/23/2020		SPBGBEF		03/31/2000	100

Index Data

Daily index level data is available via subscription.

For product information, please contact S&P Dow Jones Indices, 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/.

Appendix A: S&P Dynamic Rebalancing Risk Control Indices Parameters

The S&P Dynamic Rebalancing Risk Control Indices utilize the underlying risk indices provided in the table below, plus an overlying mathematical algorithm designed to control the level of risk of the underlying index by establishing a specific volatility target and dynamically adjusting the exposure to the S&P index based on its historical volatility. Mandatory end of month rebalancing does not apply for the S&P Balanced Global Bond and Equity Futures Index and its sub-indices.

Index Name	Underlying Risk Index	Risk Control Level	Maximum Leverage	Interest Rate	Volatility Calculation	Return Frequency for Volatility	Lag to Rebalancing Date	Decay Factor Short- Term Volatility	Decay Factor Long- Term Volatility	Threshold for Rebalancing
S&P 500 Futures Dynamic Rebalancing Risk Control 4% Index (USD) ER	S&P 500 Futures Excess Return Index	4%	100%	0%	Average	Daily	1	20 days	40 days	5%
USD- Hedged NIKKEI 225 Futures Excess Return Index with 4% Risk Control	USD- Hedged NIKKEI 225 Futures Excess Return Index	4%	100%	0%	Average	Daily	1	20 days	40 days	5%
USD- Hedged EURO STOXX 50 Futures Excess Return Index with 4% Risk Control	USD- Hedged EURO STOXX 50 Futures Excess Return Index	4%	100%	0%	Average	Daily	1	20 days	40 days	5%

Appendix B: ESG Disclosures

Ξ	EXPLANATION OF HOW ENVIRONMENTAL, SOCIAL & GOVERNANCE (ESG) FACTORS ARE REFLECTED IN THE KEY ELEMENTS OF THE BENCHMARK METHODOLOGY ⁴					
1.	Name of the benchmark administrator.	S&P Dow Jones Indices LLC.				
2.	Underlying asset class of the ESG benchmark. ⁵	N/A				
3.	Name of the S&P Dow Jones Indices benchmark or family of benchmarks.	S&P DJI Futures Indices Benchmark Statement				
4.	Do any of the indices maintained by this methodology consider ESG factors?	No				
	pendix latest update:	January 2021				
Ap	pendix first publication:	January 2021				

⁴ 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

⁵ 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.

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 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 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.

Index returns do not reflect payment of any sales charges or fees an investor may pay to purchase the securities underlying the Index or investment funds that are intended to track the performance of the Index. The imposition of these fees and charges would cause actual and back-tested performance of the securities/fund to be lower than the Index performance shown. As a simple example, if an index returned 10% on a US \$100,000 investment for a 12-month period (or US \$10,000) and an actual asset-based fee of 1.5% was imposed at the end of the period on the investment plus accrued interest (or US \$1,650), the net return would be 8.35% (or US \$8,350) for the year. Over a three-year period, an annual 1.5% fee taken at year end with an assumed 10% return per year would result in a cumulative gross return of 33.10%, a total fee of US \$5,375, and a cumulative net return of 27.2% (or US \$27,200).

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