

**S&P Dow Jones
Indices**

A Division of **S&P Global**

S&P Global Core Battery Metals Index *Methodology*

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Introduction

Index Objective

The S&P Global Core Battery Metals Index measures the performance of stocks in the S&P Global BMI (the “Underlying Index”) engaged in the mining of cobalt, lithium, and nickel. Index constituents are weighted based on the relative ranking of the percentage of revenue derived from production of these metals and capped to reflect market liquidity.

For information on the S&P Global BMI, please refer to the S&P Global BMI, S&P/IFCI Methodology, available at www.spglobal.com/spdji.

Data Source

Production value and revenue data are sourced from S&P Global Commodity Insights.

For information on S&P Global Commodity Insights, please refer [here](#).

Supporting Documents

This methodology is meant to be read in conjunction with supporting documents providing greater detail with respect to the policies, procedures and calculations described herein. References throughout the methodology direct the reader to the relevant supporting document for further information on a specific topic. The list of the main supplemental documents for this methodology and the hyperlinks to those documents is as follows:

Supporting Document	URL
S&P Dow Jones Indices’ Equity Indices Policies & Practices Methodology	Equity Indices Policies & Practices
S&P Dow Jones Indices’ Index Mathematics Methodology	Index Mathematics Methodology

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 index universe consists of all constituents of the S&P Global BMI, adjusted for any composition changes due to the current rebalancing.

Eligibility Factors

As of the rebalancing reference date, a stock must satisfy the following to be eligible for index inclusion:

- Be a member of the index universe.
- Have positive revenue and a positive production value sum of cobalt, lithium, and nickel for the previous year.
- Have a minimum float-adjusted market capitalization (FMC) of US \$100 million.
- Have a minimum three-month average daily value traded (ADVT) of US \$1 million.

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

Index Construction

Constituent Selection

At each reconstitution, all eligible stocks are selected and form the index.

Constituent Weighting

At each reconstitution, the initial weight is set for each constituent to reflect its relative ranking of percentage of revenue derived from the production of battery metals. Weights are then capped to enhance basket liquidity.

1. For each eligible constituent, calculate the sum of production value in lithium, cobalt, and nickel for the previous year.
2. For each eligible constituent, calculate the ratio of the production value divided by revenue¹ for the previous year.
3. Rank the eligible constituents by the production-value-to-revenue ratio, in ascending order, and sum the ranks.
4. The weight of each constituent is set to the production-value-to-revenue ratio rank divided by the sum of all ranks.
5. A basket liquidity maximum weight (BL) for each company is then determined by dividing the USD three-month ADVT by the basket liquidity amount (USD \$100 million). This weight is the maximum weight allowed for each constituent in the index.
6. If any constituent has a weight greater than its BL maximum weight, that constituent will have its weight reduced to its BL maximum weight.
7. All excess weight is proportionally redistributed to all uncapped constituents within the index.
8. If, after this redistribution, the weight of any other constituent(s) in the index exceeds its BL maximum weight, the process is iterated until no constituent breaches its BL maximum weight.

The final constituent weights determined after Step 8 are also the target constituent weights used in each quarterly reweighting process.

The basket liquidity constraint is subject to change based on market conditions.

If the basket liquidity rule cannot be satisfied for all index constituents after all possible iterations are completed (all constituents are capped), a final iteration will be performed to proportionally redistribute the remaining weight among all constituents.

Index Calculations

The index is calculated by means of the divisor methodology used in most S&P Dow Jones Indices equity indices.

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

¹ USD is the currency used to calculate the production value to revenue ratio.

Index Maintenance

Reconstitution and Reweighting

Reconstitution. The index reconstitutes annually, effective at the close of the third Friday of July. The reconstitution reference date is after the close of the third Friday of June.

Reweighting. During the reconstitution, constituents' target weights are determined, and the index reweights quarterly to reset the constituent weights back to those target weights, effective after the close of the third Friday of January, April, and October, respectively. The reference date for the rebalancings is the third Friday of December, March, and September, respectively.

Additions. Except for spin-offs, no additions are made to the index between rebalancings.

Spin-offs. A spin-off company is added to all the indices of which the parent is a constituent, at a zero price at the market close of the day before the ex-date (with no divisor adjustment). The spin-off remains in the index until the subsequent reconstitution and is evaluated for continued index inclusion.

Deletions. Constituents removed from the underlying index due to corporate actions are removed from the index simultaneously.

Corporate Actions

For more information on Corporate Actions, please refer to Non-Market Capitalization Weighted Indices section of S&P Dow Jones Indices' Equity Indices Policies & Practices Methodology.

Currency of Calculation and Additional Index Return Series

The index calculates in U.S. dollars.

WM/Refinitiv 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 the WM Company based on Refinitiv data and appear on Refinitiv pages WMRA.

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 index calculation, 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.

Base Date and History Availability

The 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 Global Core Battery Metals Index	06/27/2022	07/21/2017	07/21/2017	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. All committee members are full-time professional members of S&P Dow Jones Indices' staff. The Index Committee meets regularly. At each meeting, the 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 the indices, and any significant market events. In addition, the Index Committee may revise index policy covering rules for selecting companies, treatment of dividends, share counts or other matters.

S&P Dow Jones Indices considers information about changes to its indices and related matters to be potentially market moving and material. Therefore, all Index Committee discussions are confidential.

S&P Dow Jones Indices' Index Committees reserve the right to make exceptions when applying the methodology if the need arises. In any scenario where the treatment differs from the general rules stated in this document or supplemental documents, clients will receive sufficient notice, whenever possible.

In addition to the daily governance of indices and maintenance of index methodologies, at least once within any 12-month period, the Index Committee reviews the methodology to ensure the indices continue to achieve the stated objectives, and that the data and methodology remain effective. In certain instances, S&P Dow Jones Indices may publish a consultation inviting comments from external parties.

For information on Quality Assurance and Internal Reviews of Methodology, please refer to S&P Dow Jones Indices' Equity Indices Policies & Practices Methodology.

Index Policy

Announcements

All index constituents are evaluated daily for data needed to calculate index levels and returns. All events affecting the daily index calculation are typically announced in advance via the Index Corporate Events report (.SDE), delivered daily to all clients. Any unusual treatment of a corporate action or short notice of an event may be communicated via email to clients.

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

Pro-forma Files

In addition to the corporate events file (.SDE), S&P Dow Jones Indices provides constituent pro-forma files each time the index rebalances. 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. 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.

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

Holiday Schedule

The index is calculated daily, throughout the calendar year, when the U.S. equity markets are open.

A complete holiday schedule for the year is available on S&P Dow Jones Indices' 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.

Real-Time Calculation

Real-time, intra-day, index calculations are executed for some versions of the index, whenever the index's primary exchanges are open. Real-time indices are not restated.

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

Contact Information

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

Index Dissemination

Index levels are available through S&P Dow Jones Indices' Web site at www.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 [S&P DJI Methodology & Regulatory Status Database](#) for a complete list of indices covered by this document.

Index	Return Type	Bloomberg	RIC
S&P Global Core Battery Metals Index (USD)	Price Return	SPGBMUP	.SPGBMUP
	Total Return	SPGBMUT	.SPGBMUT
	Net Total Return	SPGBMUN	.SPGBMUN

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.

S&P Commodity Insights Data

Company-level data on revenue and production value of metals are available via subscription.

For product information, please contact S&P Commodity Insights, www.spglobal.com/commodityinsights/en/contact.

Web Site

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

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.

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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