

S&P GSCI Sector Equities *Methodology*

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Introduction

Index Objective and Highlights

The S&P GSCI Sector Equities is designed to measure the performance of companies exposed to a spectrum of commodities in various industries.

The index is the combination of three float market cap weighted sector sub-indices – the S&P Equity Commodity Agricultural & Livestock Index, S&P Equity Commodity Energy Index and S&P Equity Commodity All Metals Index.

Each of these sector sub-indices is comprised of some of the largest publicly traded companies in the respective commodity sectors that meet specific market capitalization and investability requirements and that have a specific GICS Sub-industry code.

Index constituents must have a U.S.-market listing and meet minimum market capitalization and liquidity requirements. The sector sub-indices have constituent weights driven by float-adjusted market capitalization to reflect available shares to investors.

The weights of each of the sector sub-indices within the S&P GSCI Sector Equities are also reset periodically to match the weights of each sector in the S&P GSCI Reduced Energy.

Index Family

Members of the S&P GSCI Sector Equities include:

- **S&P Equity Commodity Agriculture & Livestock Index.** The index includes the largest publicly-traded companies involved in agricultural and livestock.
- **S&P Equity Commodity All Metals Index.** The index includes the largest publicly-traded companies involved in the exploration and production of industrial and precious metals and related products.
- **S&P Equity Commodity Energy Index.** The index includes the largest publicly-traded companies involved in the exploration and production of coal, gas, and oil.

Supporting Documents

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

Supporting Document	URL
S&P Dow Jones Indices' Equity Indices Policies & Practices Methodology	Equity Indices Policies & Practices
S&P Dow Jones Indices' Index Mathematics Methodology	Index Mathematics Methodology
S&P Dow Jones Indices' Float Adjustment Methodology	Float Adjustment Methodology
S&P Dow Jones Indices' Global Industry Classification Standard (GICS) Methodology	GICS Methodology
S&P Dow Jones Indices' Commodities Indices Policies & Practices Methodology	Commodities Indices Policies & Practices
S&P Dow Jones Indices' GSCI Reference Guide	GSCI Reference Guide

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

Each sub-index of the S&P GSCI Sector Equities is constructed from the constituents of the S&P Global BMI Index and the S&P ADR Index.

For a stock to be eligible for inclusion in the S&P GSCI Sector Equities sub-indices, it must, on the rebalancing reference date:

- Be an existing member of the relevant index universe
- Have a minimum float-adjusted market capitalization of US\$ 1 billion with a buffer of US\$ 900 million buffer for current constituents
- Have a minimum three-month average daily value traded (ADVT) of US\$ 5 million with a buffer of US\$ 4.5 million for current constituents
- Be listed on a U.S. exchange

For more information on the S&P Global BMI and S&P ADR Index please refer to the S&P Global BMI/S&P IFCI Index Methodology and S&P ADR Index Methodology documents located on our Web site, www.spdji.com.

Index Construction

Constituent Selection

The constituents of each S&P GSCI Sector Equities sub-index are then selected based on the following GICS sub-industry codes:

S&P Equity Commodity Agriculture and Livestock Index	
GICS Sub-industry	GICS Sub-industry code
Fertilizers & Agricultural Chemicals	15101030
Specialty Chemicals	15101050
Agricultural & Farm Machinery	20106015
Agricultural Products	30202010
S&P Equity Commodity Energy Index	
GICS Sub-industry	GICS Sub-industry code
Oil & Gas Drilling	10101010
Oil & Gas Equipment & Services	10101020
Integrated Oil & Gas	10102010
Oil & Gas Exploration & Production	10102020
Oil & Gas Refining & Marketing	10102030
Oil & Gas Storage & Transportation	10102040
Coal & Consumable Fuels	10102050
S&P Equity Commodity All Metals Index	
GICS Sub-industry	GICS Sub-industry code
Aluminum	15104010
Diversified Metals & Mining	15104020
Copper	15104025
Steel	15104050
Gold	15104030
Precious Metals & Minerals	15104040
Silver	15104045

All securities in the eligible universe that are assigned to any of the above eligible GICS Sub-industry codes form each sub-index. The S&P GSCI Sector Equities is comprised of a combination of all constituents in the above sub-indices.

Multiple Share Classes

All publicly listed multiple share class lines are eligible for index inclusion, subject to meeting the eligibility criteria. For more information regarding the treatment of multiple share classes, please refer to Approach A within the Multiple Share Classes section of the S&P Dow Jones Indices' Equity Indices Policies & Practices document.

Weights Computation

All securities eligible for inclusion in the S&P GSCI Sector Equities sub-indices are weighted by their float adjusted market capitalization.

The S&P GSCI Sector Equities is comprised of each of the three sub-indices listed above. The weights of each sub-index are reset periodically at the quarterly rebalancing, and are based on the sector weights within the S&P GSCI Reduced Energy Index as of the quarterly reference date as defined in the following table:

Index	Weight based on
S&P Equity Commodity Agriculture and Livestock Index	The sum of the weights of the following commodities in the S&P GSCI Reduced Energy: Chicago wheat, Kansas wheat, corn, soybeans, coffee, sugar, cocoa, cotton, lean hogs, live cattle and feeder cattle.
S&P Equity Commodity Energy Index	The sum of the weights of the following commodities in the S&P GSCI Reduced Energy: WTI crude oil, heating oil, RBOB gasoline, Brent crude oil, gasoil and natural gas.
S&P Equity Commodity All Metals Index	The sum of the weights of the following commodities in the S&P GSCI Reduced Energy: aluminum, copper, nickel, lead, zinc, gold and silver.

For more information on the indices used to assign weights for the allocation strategy please refer to the respective methodology documents.

Index Returns and Calculations

Each sector sub-index is calculated using the divisor methodology used in all S&P Dow Jones Indices' equity indices.

Let each sector sub-index level be defined as follows:

- S&P Equity Commodity Agriculture and Livestock Total Return Index = $Subindex_t^1$
- S&P Equity Commodity Energy Total Return Index = $Subindex_t^2$
- S&P Equity Commodity All Metals Total Return Index = $Subindex_t^3$

The overall S&P GSCI Sector Equities is calculated as follows:

$$IndexDailyReturn_t = \sum_{i=1}^3 W_{rebalancing}^i \left(\frac{Subindex_t^i}{Subindex_{rebalancing}^i} - 1 \right)$$

where:

- $W_{last\ rebalancing}^i$ = The weight of Sub-index i at the most recent rebalancing
- $Subindex_t^i$ = The index level of Sub-index i at time t
- $Subindex_{rebalancing}^i$ = The index level of Sub-index i at the most recent rebalancing

$$IndexValue_t = IndexValue_{t-1} * (1 + IndexDailyReturns_t)$$

Index Maintenance

Rebalancing

The indices are rebalanced quarterly after the close of the last business day of January, April, July and October. The rebalancing reference date is ten business days prior to the first day of February, May, August, and November.¹

Additions. The majority of additions occur as part of the quarterly index rebalancings. Stocks that have intra-quarter GICS sub-industry changes to one that is eligible for inclusion in the sector sub-indices will not be added at that time and will be evaluated at the next quarterly rebalancing.

Deletions. The majority of deletions occur as part of the quarterly index rebalancings. Constituents removed from an underlying headline universe index are also removed from the respective S&P GSCI Sector Equity sub-index simultaneously. Constituents that have intra-quarter GICS sub-industry changes to one that is ineligible will be removed simultaneously with that change.

Spin-offs. The spun-off company is added to the index at a zero price and will be dropped from the index after the first day of regular way trading provided the drop event has been announced at least two days prior to the drop date, unless the GICS sub-industry code of the spun-off stock will remain eligible for inclusion in the sector sub-indices. In that case, the stock will remain in the index until the next rebalancing when it will be re-evaluated for continued inclusion.

For further information, please refer to the Treatment of Spin-offs in S&P Dow Jones Indices' Equity Indices Policies & Practices document located on our Web site, www.spdji.com.

Corporate Actions

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

Currency, Currency Hedged, and Risk Control Indices

The indices are calculated in U.S. dollars.

Additional currency, currency hedged, and risk control versions of the indices may be available. For a list of available currency, currency hedged, and risk control indices, please contact Client Services at index_services@spglobal.com.

For more information on currency, currency hedged, and risk control indices, please refer to S&P Dow Jones Indices' Index Mathematics Methodology.

¹ For the index history, the reference date was the third business day after the third Friday of the rebalancing month.

Other Adjustments

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

Base Dates and History Availability

Index history availability, base dates and base values for are shown in the table below.

Index	Launch Date	First Value Date	Base Date	Base Value
S&P GSCI Sector Equities	04/17/2017	10/31/2006	10/31/2006	100
S&P Equity Commodity Agriculture and Livestock Index	04/17/2017	10/31/2006	10/31/2006	100
S&P Equity Commodity Energy Index	04/17/2017	10/31/2006	10/31/2006	100
S&P Equity Commodity All Metals Index	04/17/2017	10/31/2006	10/31/2006	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 document.

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

Index Governance

Index Committee

The Indices are maintained by the S&P Global Benchmarks Index Committee. The 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 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 document.

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.

All methodology changes are posted to the S&P Dow Jones Indices' Web site and announced via email to all clients. The latest available version is always posted on the Web site at www.spdji.com.

Pro-forma Files

In addition to the corporate events file (.SDE), S&P Dow Jones Indices provides constituent pro-forma files each time the indices rebalance. The pro-forma file is typically provided daily in advance of the rebalancing date and contains all constituents and their corresponding weights and index shares effective for the upcoming rebalancing. Since index shares are assigned based on prices prior to the rebalancing, the actual weight of each stock at the rebalancing will differ from these weights due to market movements.

Please visit the S&P Dow Jones Indices' Web site for a complete schedule of rebalancing timelines and proforma delivery times at www.spdji.com.

Holiday Schedule

The S&P GSCI Sector Equities Series is calculated daily, throughout the calendar year. The only days an index is not calculated or files are not distributed are on days when all exchanges where an index's constituents are listed are officially closed.

A complete holiday schedule for the year is available on S&P Dow Jones Indices' Web site at www.spdji.com.

Rebalancing

The Index Committee may change the date of a given rebalancing for reasons including market holidays occurring on or around the scheduled rebalancing date. Any such change will be announced with proper advance notice where possible.

Unexpected Exchange Closures

For further information on Unexpected Exchange Closures, please refer to S&P Dow Jones Indices' Equity Indices Policies & Practices document.

Recalculation Policy

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

Real-Time Calculation

Real-time, intra-day, index calculations are executed for certain indices whenever any of their 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 document.

Contact Information

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

Index Dissemination

Index levels are available through S&P Dow Jones Indices' Web site at www.spdji.com, major quote vendors (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 currency, currency hedged, risk control, and return type versions of the below indices that may exist are also covered by this document. Please contact index_services@spglobal.com for a complete list of indices covered by this document.

Index	Return Type	Ticker
S&P GSCI Sector Equities	Total Return	SPGESEQT
S&P Equity Commodity Agriculture & Livestock Index	Total Return	SPGECALT
S&P Equity Commodity Energy Index	Total Return	SPGECENT
S&P Equity Commodity All Metals Index	Total Return	SPGECAMT

Index Data

Daily constituent and index level data are available via subscription.

For product information, please contact S&P Dow Jones Indices, www.spdji.com/contact-us.

Web site

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

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