

**S&P GSCI Capped & Alternatively  
Weighted Indices  
*Methodology***

May 2024

# Table of Contents

Introduction	3
<b>Index Objective</b>	<b>3</b>
<b>Capping Determination &amp; Implementation Dates</b>	<b>3</b>
<b>Different Varieties of Capped Indices</b>	<b>3</b>
<b>Supporting Documents</b>	<b>3</b>
<b>List of Commodity Components</b>	<b>4</b>
Capped Component Indices	5
<b>Implementation</b>	<b>5</b>
Capped Commodity Indices	6
<b>Implementation</b>	<b>6</b>
Equal Weighted Indices	7
<b>S&amp;P GSCI Equal Weight Select</b>	<b>7</b>
<b>S&amp;P GSCI Equal Weight Capped Component</b>	<b>8</b>
<b>S&amp;P GSCI Precious Metals, Palladium &amp; Platinum Equal Weight</b>	<b>8</b>
<b>S&amp;P GSCI Industrial Metals &amp; Iron Ore Equal Weight</b>	<b>8</b>
<b>S&amp;P GSCI 3 Month Forward Capped Sector Equal Weight Composite</b>	<b>9</b>
<b>S&amp;P GSCI Equal Weight Commodity Sector Index</b>	<b>11</b>
<b>S&amp;P GSCI 3 Month Forward Equal Weight Commodity Sector Index</b>	<b>11</b>
Specialized Capping Indices	12
<b>S&amp;P GSCI Agriculture &amp; Livestock Enhanced Capped 40/75</b>	<b>12</b>
<b>S&amp;P GSCI Electric Vehicle Metals</b>	<b>15</b>
<b>S&amp;P GSCI Global Voluntary Carbon Liquidity Weighted Index</b>	<b>17</b>
Single Commodity Capped Component Indices	19
<b>Index Objectives and Highlights</b>	<b>19</b>
<b>Index Family</b>	<b>19</b>
<b>S&amp;P GSCI Single &amp; Ex-Single Commodity Capped Component</b>	<b>20</b>
<b>S&amp;P GSCI Single Commodity ex Agriculture and Livestock Capped Component</b>	<b>21</b>
<b>S&amp;P GSCI Energy &amp; Extended Metals, Platinum &amp; Palladium Capped Component</b>	<b>21</b>
S&P GSCI Risk Weight Index	24
S&P GSCI Roll Weight Select Index	26
Index Calculation	29
<b>Currency of Calculation and Additional Index Return Series</b>	<b>29</b>
Index Governance	30
S&P Dow Jones Indices: S&P GSCI Capped & Alternatively Weighted Indices Methodology	1

	<b>Index Committee</b>	<b>30</b>
Index Dissemination		31
	<b>Tickers</b>	<b>31</b>
	<b>Index Data</b>	<b>32</b>
	<b>Web site</b>	<b>32</b>
Index Policy		33
	<b>Announcements</b>	<b>33</b>
	<b>Contact Information</b>	<b>33</b>
Appendix I		34
	<b>Methodology Changes</b>	<b>34</b>
Appendix II		35
	<b>ESG Disclosures</b>	<b>35</b>
Disclaimer		36
	<b>Performance Disclosure/Back-Tested Data</b>	<b>36</b>
	<b>Intellectual Property Notices/Disclaimer</b>	<b>37</b>
	<b>ESG Indices Disclaimer</b>	<b>39</b>

# Introduction

## Index Objective

The S&P GSCI Capped & Alternatively Weighted Indices measure commodity market performance through futures but utilize a different weighting scheme than the S&P GSCI. The series includes indices that use equal weighted or specialized capping methods at the component or commodity level. Each method (or, rule) is outlined in the applicable sections below.

## Capping Determination & Implementation Dates

For the S&P GSCI and capped indices family, the monthly determination date is the fourth business day of each month. The implementation will take place during the five-day roll period (5<sup>th</sup> to 9<sup>th</sup> business days) each month. For the S&P GSCI Enhanced Index family, the determination date is the last business day of each month. The implementation will take place during the five-day roll period at the beginning (1<sup>st</sup> to 5<sup>th</sup> business days) of the month.

## Different Varieties of Capped Indices

S&P Dow Jones Indices offers a variety of capped versions of their indices, where the indices are calculated according to various methodologies within the S&P GSCI family. The actual index calculations of the specific indices will not be covered in this document, and it will instead refer to the corresponding index methodology for reference. Capping variations include:

- Capped Component (headline & sector)
- Capped Commodity (headline & sector)
- Equal Weighted (headline & sector)
- Specialized Capping

*Inverse and leveraged versions of the indices may be available. For more information on the calculation of such indices, please refer to the **Futures-Based Leveraged & Inverse Indices** section of the S&P Dow Jones Indices' Commodity Index Mathematics Methodology.*

## 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 hyperlink to those documents is as follows:

Supporting Document	URL
S&P Dow Jones Indices' Commodities Indices Policies & Practices Methodology	<a href="#">Commodities Indices Policies &amp; Practices</a>
S&P Dow Jones Indices' Commodity Index Mathematics Methodology	<a href="#">Commodity 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.

## List of Commodity Components

The following table lists the commodities and components:

Sector	Sub Sector	Commodity	Component
Energy		WTI Crude Oil	Petroleum
		Brent Crude Oil	
		Gas Oil	
		Heating Oil	
		Unleaded Gasoline	
		Natural Gas	
Agriculture	Grains & Oilseeds	Chicago Wheat	Wheat
		Kansas Wheat	
		Corn	
		Soybeans	
	Softs	Coffee	
		Sugar	
		Cocoa	
		Cotton	
Livestock		Live Cattle	Cattle
		Feeder Cattle	
		Lean Hogs	
Industrial Metals		Aluminum	
		Copper	
		Lead	
		Nickel	
		Zinc	
Precious Metals		Gold	
		Silver	

# Capped Component Indices

The methodology uses various terms and definitions from the *S&P GSCI Methodology*. Where not specifically noted otherwise in this document, the rules of the S&P GSCI will prevail.

The capping procedure follows two rules, in succession:

**Rule 1: Only one component can reach a maximum weight of 32%.** Any excess weight is distributed proportionately among the remaining components.

*Once Rule 1 is implemented,*

**Rule 2: No remaining component's weight can exceed 17%.** Any excess weight is distributed proportionately among the remaining components.

**Capping Excess Distribution.** Distributed proportionately among the remaining components

## Implementation

Any excess weight from a rule #1 violation is distributed proportionally among the remaining index components.

After rule #1 is implemented, if there are rule #2 violations, then the violating components are adjusted and the balance is distributed proportionately among the remaining index components.

The adjustment process takes place monthly as per the following procedures:

1. On the S&P GSCI business day before each monthly first roll date, the latest S&P GSCI commodity CPWs are multiplied by the commodity prices to determine the S&P GSCI commodity weights.
2. The commodities are separated into components and the components are sorted in descending order by their sector weights.
3. The largest component is capped at 32% if it exceeds 32% (historically the case for Petroleum). The excess weight is distributed among the remaining index components.
4. Additional components are capped at 17% if any component exceeds 17%. The excess weight is distributed among the remaining index components. This process is repeated iteratively until all the capping rules are met.
5. The percentage weights of all commodities are converted to CPW-equivalents, based on the prices from the business day one day prior to the first roll date, using the initial S&P GSCI weights implied by those prices and the latest S&P GSCI CPWs. For example, the S&P GSCI CPWs are multiplied by the commodity prices from the last business day before the roll.
6. This capping adjustment process takes place every month and utilizes any CPW component changes to the base index, additions, subtractions, substitutions, etc., in order to maintain continuity and proportion with the base S&P GSCI.

*For information on capped component target weight and CPW calculations, please refer to the **Capped Indices** section of the *S&P Dow Jones Indices Commodity Index Mathematics Methodology*.*

# Capped Commodity Indices

The capping procedure follows two rules, in succession:

**Rule 1: Largest commodity can reach a maximum weight of 32%.** Any excess weight is distributed proportionately within the sector.

*Once Rule 1 is implemented,*

**Rule 2: Weights of additional commodities cannot exceed 17%.** Any excess weight is distributed proportionately within the sector.

**Determination Date.** One S&P GSCI Business Day before the first roll date.

## Implementation

Any excess weight from a rule #1 violation is distributed proportionally among the remaining commodities within that specific sector, thus keeping sector weights intact.

After rule #1 is implemented, if there are any rule #2 violations, the commodity that violates the 17% rule is adjusted and the balance is distributed proportionally among the remaining commodities within that specific sector.

The adjustment process takes place at the beginning of each month.

1. On the S&P GSCI Business Day before each monthly first roll date, the latest S&P GSCI commodity CPWs are multiplied by the commodity prices to determine the S&P GSCI commodity weights.
2. The commodities are separated into sectors and the sectors are sorted in descending order by their sector weights. If there is any commodity above 32% (historically the case for crude oil), it is capped at 32% and the excess weight is distributed proportionally among the remaining commodities **within that sector**, thus keeping the sector weights the same.
3. If any additional commodity is above 17%, it is capped at 17% and the excess weight is distributed among the remaining commodities within that sector, thus keeping the sector weights the same. This process is repeated iteratively. If the final commodity within a sector exceeds 17%, the weight is distributed proportionally among the remaining commodities outside that sector in the index.
4. The percentage weights of all commodities are converted to CPW-equivalents, based on the prices from the business day one day prior to the first roll date, using the initial S&P GSCI weights implied by those prices and the newly updated S&P GSCI CPWs. For example, the January S&P GSCI CPWs are multiplied by the commodity prices from the 4<sup>th</sup> business day in January, the last business day before the roll.
5. The capping adjustment process takes place every month and utilizes any CPW component changes to the base index (additions, subtractions, substitutions, etc.) in order to maintain continuity and proportion with the base S&P GSCI.

*For information on capped commodity target weight and CPW calculations, please refer to the **Capped Indices** section of the S&P Dow Jones Indices Commodity Index Mathematics Methodology.*

# Equal Weighted Indices

## S&P GSCI Equal Weight Select

The S&P GSCI Equal Weight Select index sorts the S&P GSCI commodity space into six commodity groups and selectively includes only the largest and most liquid commodities in each commodity group. At the beginning of each month, the 14 individual commodities are equally weighted in the Index.

**Highlights.** The S&P GSCI Equal Weight Select Index is comprised of 14 commodities, categorized into six commodity groups, where:

- No single group accounts for more than 30% of the total.
- Rules-based annual reconstitution.
- Turnover minimized through an annual rebalancing.
- Fewer commodities than the S&P GSCI which results in fewer monthly rolls.

**Index Eligibility.** Only those commodities that are included in the S&P GSCI are eligible for the S&P GSCI Equal Weight Select Index. As such, the S&P GSCI Equal Weight Select Index Methodology maintains many of the rules of S&P GSCI Methodology.

**Eligibility Factors.** During the S&P GSCI index roll period, the S&P GSCI Equal Weight Select Index allocates the same weight to all its constituents. To promote diversification and reduce concentration risk, six commodity groups are identified:

- Agriculture – Grains and Oilseeds
- Agriculture – Softs
- Energy
- Industrial Metals
- Livestock
- Precious Metals

**Distribution of Commodities into Commodity Groups.** As of the current S&P GSCI rebalancing the groups are as follows:

- Four commodities in the Agriculture - Grains and Oilseeds group (Chicago Wheat, Corn, Kansas Wheat, and Soybeans),
- Four commodities in the Agriculture - Softs group (Cocoa, Coffee, Cotton, and Sugar),
- Six commodities in the Energy group (Brent Crude, Gasoil, Heating Oil, Natural Gas, RBOB Unleaded Gasoline and WTI Crude),
- Five commodities in the Industrial Metals group (Aluminum, Copper, Lead, Nickel, and Zinc),
- Three commodities in the Livestock group (Feeder Cattle, Lean Hogs, and Live Cattle), and
- Two in the Precious Metals group (Gold and Silver).

**Allocation Scheme.** For the index to be representative of the size and trading in the commodities markets, three (3) commodities are selected from the Agriculture - Grains and Oilseeds group, one (1) from the Agriculture - Softs group, four (4) from the Energy group, four (4) from the Industrial Metals group, one (1) from the Livestock group, and one (1) from the Precious Metals group, for a total of fourteen (14) commodities.

**Constituent Selection.** Within each commodity group, the average daily dollar weights for the 12-months ending in August of each year are computed for each of the commodities. Commodities within the group are, then, ranked in descending order based these weights. The number of commodities chosen for the index is based on the Allocation Scheme designated for each commodity group.

**Timing of Changes.** The Index is reconstituted annually, at the end of December. The Index weights are rebalanced monthly, during the S&P GSCI roll period.

- **Additions.** No commodities are added to the Index until the following annual reconstitution period.
- **Deletions.** In the event that a commodity is removed from the Index, the weight of the deleted commodity is distributed to the remaining members of the Index proportionately.

**Rebalancing Frequency.** Monthly.

#### **S&P GSCI Equal Weight Capped Component**

The S&P GSCI Equal Weight Capped Component Index is a version of the S&P GSCI, where 100% of the index weight is equally distributed among the total number of constituents in the S&P GSCI – currently 24 commodities. Once the weights have been equally distributed, the capped component methodology is then applied to the index.

**Capping Frequency.** Monthly.

*For information on the capping methodology, please refer to the **Capped Component** section of this methodology.*

#### **S&P GSCI Precious Metals, Palladium & Platinum Equal Weight**

The S&P GSCI Precious Metals, Palladium & Platinum Equal Weight index membership considers the Precious Metals sector of the S&P GSCI (Gold & Silver), along with Platinum & Palladium, which are not currently members of the S&P GSCI. Only these 4 commodities are eligible for index inclusion. The index weights are reset to equal weights during the designated rebalancing periods.

**Rebalancing Frequency.** Monthly.

*For further details on index composition and contract calendar, please refer to **Table 1 in Appendix A** of the S&P GSCI methodology.*

#### **S&P GSCI Industrial Metals & Iron Ore Equal Weight**

The S&P GSCI Industrial Metals & Iron Ore Equal Weight index membership consists of the Industrial Metals sector of the S&P GSCI (Aluminum, LME Copper, Lead, Nickel & Zinc) and Iron Ore, which is not currently a member of the S&P GSCI. The index weights are reset to equal weights during the designated rebalancing periods.

**Rebalancing Frequency.** Monthly. The GSCI Industrial Metals components follow the parent methodology for the contract calendar. See the table below for the Iron Ore contract calendar.

*For further details on index composition and contract calendar, please refer to **Table 1 in Appendix A** of the S&P GSCI methodology.*

## Contract Calendar (Iron Ore):

Trading Facility	Commodity	Ticker <sup>(1)</sup>	Designated Contract Expirations at Month Begin											
			1	2	3	4	5	6	7	8	9	10	11	12
SGX	SGX TSI Iron Ore CFR China (62% Fe Fines) Index Futures	SZZF	G	H	J	K	M	N	Q	U	V	X	Z	F

(1) Tickers are RIC Codes.

## S&P GSCI 3 Month Forward Capped Sector Equal Weight Composite

The S&P GSCI 3 Month Forward Capped Sector Equal Weight Composite reflects the total return available through an unleveraged investment in the specific commodities of the S&P GSCI 3 Month Forward, employing the S&P GSCI Capped methodology. The index contains the specific commodities of, and is calculated on a basis similar to, the S&P GSCI 3 Month Forward, but it is modified to apply the S&P GSCI Capped Commodity and Component capping rules. Furthermore, the universe of the commodities of the S&P GSCI 3 Month Forward is grouped into three distinct sectors, with equal weights assigned to each sector. The three sectors are the Agriculture and Livestock, Energy, and All Metals.

The capping procedure follows two rules, in succession:

**Rule 1: Only one commodity can reach a maximum weight of 32% within its sector.** If there is any commodity above 32%, it is capped at 32%, and any excess weight is distributed proportionally among the remaining commodities in that sector.

*Once Rule 1 is implemented,*

**Rule 2: No remaining commodity's weight can exceed 17%.** If any remaining commodity within the same sector is above 17% it is capped at 17%, and the excess weight is distributed proportionally among the remaining commodities in that sector.

**Capping Frequency.** Monthly.

**Capping Excess Distribution.** Distributed proportionally among the remaining Commodities within the same sector.

**Commodities.** Commodities included in each sector are as follows:

- **Agriculture and Livestock sector.** Chicago Wheat, Kansas City Wheat, Corn, Soybeans, Coffee, Sugar, Cocoa, Cotton, Lean Hogs, Live Cattle, and Feeder Cattle. Within the Agriculture and Livestock sector, the two Wheat commodities (Chicago Wheat and Kansas City Wheat) and the two Cattle commodities (Live Cattle and Feeder Cattle) are grouped together as components, on a par with the other commodities within the sector for the purpose of applying their capping procedure.
- **Energy sector.** WTI Crude, Brent Crude, Heating Oil, Gasoil, Gasoline and Natural Gas.
- **All Metals sector.** Aluminum, Copper, Lead, Nickel, Zinc, Gold, and Silver.

**Implementation.** The excess weight from a rule #1 violation is distributed proportionally among the remaining sector commodities.

After rule #1 is implemented, if there are rule #2 violations, then the violating commodities are adjusted, and the balance is distributed proportionally among the remaining sector commodities.

In order to properly implement, Contract Production Weights (CPWs) are adjusted to arrive at the assigned weights for each commodity. This adjustment process takes place at the beginning of each month and every time the S&P GSCI 3-Month Forward Index is rebalanced, adjusted, and/or new commodities are added to or deleted from the Index.

The adjustment processes for the Energy and All Metals sectors take place as follows:

1. On the S&P GSCI Business Day before each monthly first roll date, the latest S&P GSCI 3-Month Forward Index commodity CPWs are multiplied by their respective 3-month forward commodity prices to determine the commodity weights. For January, the CPWs will be the new ones that were determined with that year's annual rebalancing.
2. Within each sector, the commodities are sorted in descending order by their respective index weights.
3. If there is any commodity above 32%, it is capped at 32%, and the excess weight is distributed proportionally among the remaining commodities within that sector.
4. If any additional commodity is above 17%, it is capped at 17%, and the excess weight is distributed among the remaining commodities within that sector. This process is repeated iteratively until all the capping rules are met.
5. The percentage weights of all commodities are converted to CPW-equivalents, based on the prices from the S&P GSCI Business Day, one day prior to the first roll date, using the initial S&P GSCI 3-Month Forward Index weights implied by those prices and the latest S&P GSCI CPWs. For January, the CPWs are the new ones that were determined with that year's annual rebalancing. For example, the S&P GSCI CPWs are multiplied by the 3-Month Forward commodity prices from the last business day before the roll.
6. The capping adjustment process takes place every month and utilizes any CPW commodity changes to the base index, additions to, subtractions from, commodity substitutions, etc. in order to maintain continuity with the base S&P GSCI Index.

**Sector Equal Weight Explanation & Procedures.** At the end of the capping procedure, all the individual Target Weights within a given sector are re-scaled to obtain a total of 33.33% for each given sector.

1. For the energy and all metals sectors, determine the largest commodity weight from the "sector specific weight" column. If that weight is greater than 32%, then set it to 32%; otherwise leave it as is.
2. For the energy and all metals sectors, determine the difference between the largest commodity weight from the "sector specific weight" column and 32% (or the same value if it is under 32%). Redistribute that weight proportionally to the other commodities within its sector. In this example, the 17.8% is redistributed to all energy commodities other than crude oil, but nothing is redistributed in metals because copper is under 32%.
3. For the energy and all metals sectors, add the redistributed extra weight of each commodity to the "sector specific weight" of each commodity to get new weights for all but the largest "sector specific weight" from each sector.
4. For the energy and all metals sectors, determine the largest commodity weight from the new weights in step 3. If that weight is greater than 17%, then set it to 17%; otherwise leave it as is.
5. For the energy and all metals sectors, determine the difference between the largest commodities weight from step 3 and 17% (or the same value if it is under 17%). Redistribute that weight proportionally to the other commodities within its sector. In this example the 12.5% is redistributed to all energy commodities other than Brent crude and crude oil. In metals, 7.2% is redistributed from gold to all metals commodities other than gold and copper.
6. For the energy and all metals sectors, add the redistributed extra weight of each commodity to the weights in step 3 for all but the two that have been "redistributed" from each sector.

7. For the energy and all metals sectors, find the largest commodity weight from the new weights in step 6. If that weight is greater than 17%, then set it to 17%; otherwise leave it as is.
8. For the energy and all metals sectors, add the redistributed extra weight of each commodity to the weights in step 6 for all but the three that have been "redistributed" from each sector.
9. Since there are no more commodity weights greater than 17%, these are the weights for each sector to total 100% for each sector.

### S&P GSCI Equal Weight Commodity Sector Index

**Index Objective.** The index is a weighted return index consisting of four equal weighted component sub-indices, as defined below.

**Underlying Indices.** Please see the table below. *For more information on the component sub-indices, please refer to the S&P GSCI Methodology.*

Component Sub-Indices	Index Code	Weight
S&P GSCI Agriculture & Livestock Index	SPGSAL	25%
S&P GSCI Energy Index	SPGSEN	25%
S&P GSCI Industrial Metals Index	SPGSIN	25%
S&P GSCI Precious Metals Index	SPGSPM	25%

**Index Weighting.** At each rebalancing, the component sub-indices are equal weighted.

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

**Rebalancing.** The index is reweighted on a quarterly basis, effective at the open of the first business day of January, April, July, and October.

**Currency of Calculation.** The index is calculated in USD, AUD, EUR, GBP, JPY, NZD, and SGD.

**Exchange Rate.** 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.

### S&P GSCI 3 Month Forward Equal Weight Commodity Sector Index

The index is a three-month forward version of the S&P GSCI Equal Weight Commodity Sector Index. The only exception from the S&P GSCI Equal Weight Commodity Sector Index is the component make up. The index uses three-month forward versions of the Component Sub-Indices detailed in the above table.

# Specialized Capping Indices

## S&P GSCI Agriculture & Livestock Enhanced Capped 40/75

The S&P GSCI Agriculture & Livestock Enhanced Capped 40/75 reflects the total return available through an unleveraged investment in the specific commodities of the S&P GSCI Agriculture & Livestock Enhanced employing the S&P GSCI Capped 40/75 methodology. The Index contains the specific commodities of the S&P GSCI Agriculture & Livestock Enhanced and is calculated on a basis similar to the S&P GSCI Agriculture & Livestock Enhanced but modified to apply the following 40/75 capping rules employing a 5% buffer.

**Objective.** On the fourth business date of each month, 1) the highest weight constituent is capped at 35%, 2) the top 5 constituents are capped at 70%, AND 3) none of the succeeding positions (n+1-th position) can be larger than its preceding position (n-th position) after capping. (For example, the capped weight of the sixth commodity cannot exceed the capped weight of the fifth commodity, etc.) Capping calculation is based on the closing price as of the last business day of the previous month.

**Capping Methodology.** The capping methodology is as follows:

1. Cap each constituent at 35%. If the weight of a constituent is larger than 35%, it is capped at 35% and the excess weight is reallocated among the remaining constituents on a pro-rata basis. Repeat the step if any additional constituent is larger than 35%, until all constituents are less than 35%.
2. Cap Top 5 constituents if their total weight is greater than 70%. If the total weight of the top 5 constituents is over 70%, cap the top 5 constituents at 70% on a pro-rata basis and re-allocate their excess weighting to the remaining constituents on a pro-rata basis.
3. Cap any succeeding position if larger than preceding position. After re-allocation, if the 6<sup>th</sup> position becomes larger than the 5<sup>th</sup> position, cap the 6<sup>th</sup> position at the weighting of the 5<sup>th</sup> position and re-allocate the excess weight to the remaining constituents (succeeding the 6<sup>th</sup> position) on a pro-rata basis.
4. Repeat: Cap any succeeding position if larger than preceding position. Repeat the step 3 process for the remaining constituents if any position is larger than its preceding position after re-allocation until none of the succeeding positions is larger than a preceding position.
5. A Special Case: No Solution. If there is no solution after the iteration in step 4 (i.e., there is still a succeeding position which has a larger weighting than a preceding position), perform the following steps:
  - a. Redo from Step 2, but ONLY apply capping to top 4 constituents in a way such that total weighting of top 5 constituents is capped at 70%.
  - b. If any succeeding position is larger than a preceding position after Step 5a, repeat Step 3 and start from the 4th position (i.e., cap 5th position at 4th position if larger than the 4th position, and repeat this process for the remaining constituents if any succeeding position is larger than the preceding position).
  - c. If there is still no solution after the iteration in Step 5b, redo from Step 5a but ONLY apply capping to top 3 constituents (one fewer constituent) in a way such that total weighting of top 5 constituents is capped at 70% and proceed to Step 5b starting from the 3rd position (one further preceding position).
  - d. Repeat Step 5c until no succeeding position is greater than a preceding position.

**Capping Frequency.** Monthly.

**Capping Excess Distribution.** Distributed proportionately among the remaining constituents.

**Implementation.** In order to properly implement, Contract Production Weights (CPWs) are adjusted to arrive at the assigned weights for each commodity. This adjustment process takes place at the beginning of each month and every time the S&P GSCI Agriculture & Livestock Enhanced is rebalanced, adjusted, and/or new constituents are added to or deleted from the index, in order to be initially proportional to and inclusive of the S&P GSCI Agriculture & Livestock Enhanced constituents.

The adjustment process takes place as follows:

1. On the S&P GSCI Business Day before each monthly first roll date, the latest S&P GSCI Agriculture & Livestock Enhanced commodity CPWs are multiplied by the commodity prices to determine the S&P GSCI Agriculture & Livestock Enhanced commodity weights. For January, the CPWs will be the new ones that were determined with that year's annual rebalancing.
2. The commodities are sorted in descending order by weights.
3. If there is any commodity above 35%, it is capped at 35% and the excess weight distributed among the remaining commodities. The process is iterative.
4. If the total weight of the top 5 commodities is above 70%, it is capped at 70% and the excess weight is distributed among the remaining uncapped commodities. Any commodity that meets the capping mentioned in step 3 will not be subject to further capping.
5. If the weight of any uncapped commodity is greater than the capped weight of the smallest commodity in the Top 5, it is capped at the capped weight of the smallest commodity in the Top 5 and the excess weight is distributed among the remaining uncapped commodities. This process is repeated iteratively until all the capping rules are met.
6. The percentage weights of all commodities are converted to CPW-equivalents, all based on prices from the S&P GSCI Business Day one day prior to the first roll date, using the initial S&P GSCI Agriculture & Livestock Enhanced weights implied by those prices and the latest S&P GSCI Agriculture & Livestock Enhanced CPWs. For January, the CPWs are the new ones that were determined with that year's annual rebalancing. For example, the January S&P GSCI Agriculture & Livestock Enhanced CPWs are multiplied by the commodity prices from the last business day in December, the last business day before the roll.
7. This capping adjustment process takes place every month and utilizes any CPW commodity changes to the base index, additions to, subtractions from, commodity substitutions, etc. in order to maintain continuity and be proportional with the S&P GSCI Agriculture & Livestock Enhanced.

**Capping Formulas.** At each rebalancing, CPWs are calculated as follows:

$$CPW_{capped\ i} = CPW_{index\ i} * \frac{TargetWeight\ j}{IndexWeight\ j}$$

where:

$CPW_{capped\ i}$  = CPW for commodity  $i$  in the S&P GSCI Enhanced Agriculture & Livestock Capped 40/75 as of the rebalancing reference date.

$CPW_{index\ i}$  = CPW for commodity  $i$  in the S&P GSCI Agriculture & Livestock Enhanced as of the rebalancing reference date.

$IndexWeight\ j$  = Weight of commodity  $j$ , of which commodity  $i$  is a part, in the S&P GSCI Agriculture & Livestock Enhanced as of the rebalancing reference date.

$TargetWeight\ j$  = Weight of commodity  $j$ , of which commodity  $i$  is a part, in the S&P GSCI Enhanced Agriculture & Livestock Capped 40/75 as of the rebalancing reference date.

At each rebalancing target weights are calculated as follows:

If  $IndexWeight_j > 35\%$ , then  $TargetWeight_j = 35\%$

For the Top 5 commodities:

$$TargetWeight_j = \frac{70\% * IndexWeight_j}{Total\ Top\ 5\ Weights}$$

For all remaining commodities:

$$TargetWeight_j = \frac{30\% * IndexWeight_j}{(1 - IndexWeight_c)}$$

where:

$IndexWeight_c$  = Total S&P GSCI Agriculture & Livestock Enhanced weight of all capped commodities as of the rebalancing reference date.

For the commodities not in Top 5:

If  $TargetWeight_j > TargetWeight_s$ , then  $TargetWeight_j = TargetWeight_s$

where:

$TargetWeight_s$  = Weight of the smallest commodity in the initial Top 5

For all remaining commodities:

$$TargetWeight_j = \frac{(100\% - Total\ Capped\ Weights) * IndexWeight_j}{(100\% - IndexWeight_c)}$$

where:

$Total\ Capped\ Weights$  = Total S&P GSCI Agriculture & Livestock Capped Commodity weight of all capped Commodities as of the rebalancing reference date.

This process is repeated iteratively until there is no commodity with weight greater than the smallest commodity in the Top 5.

## S&P GSCI Electric Vehicle Metals

**Index Objective and Highlights.** The index reflects the performance of the tradeable metals used in the production of an electric vehicle (EV). The expertise of S&P Global Commodity Insights (S&P GCI) is utilized to determine the index constituents and production weights to ensure the index broadly reflects the relative metal usage in a representative EV. An important characteristic of the index is the flexibility to reweight and add or remove constituents on a semi-annual basis. Weights are determined by S&P GCI in accordance with industry standards and assumptions and will be based solely on S&P GCI's industry expertise. S&P GCI will draw on market survey, industry trade bodies, research reports and other internal resources such as S&P Market Intelligence to determine both the constituents and production weights.

**S&P GCI Insights Usage Data Overview.** S&P GCI Electric Vehicle Metals Usage Data reflects metals used in the production of a typical electric vehicle (EV). S&P GCI defines Electric Vehicle Metals Usage Data as the metal's components used in a typical EV and the corresponding production weights of those components in kilos. S&P GCI Electric Vehicle Metals Usage Data is published as a semi-annual data sheet comprising EV metals components and production weights. S&P GCI engages with a range of market participants and industry bodies ahead of publication. S&P GCI may also reference research reports and other relevant resources.

The latest Electric Vehicle Metals Usage Data is available here: <https://www.spglobal.com/commodity-insights/en/our-methodology/price-assessments/metals/battery-metals>.

S&P GCI will update its Electric Vehicle Metals Usage Data on a semi-annual basis, in June and December. S&P GCI will monitor key components of a typical EV, including changing and evolving battery chemistries, and will add new components and production weights accordingly.

S&P GCI battery metals service is dedicated to producing world class pricing, insight and analysis on battery metals and electric vehicle markets. For further details please click here for support information: <https://www.spglobal.com/commodity-insights/en>.

**Constituents Universe.** All metal futures contracts deemed important components of an EV by S&P GCI. New constituents are added to the index in one of two ways:

1. S&P GCI's semi-annual update on the metal usage in a representative EV may include new commodities thereby ensuring that as EV technology changes the index has the flexibility for new constituents to reflect those changes. S&P GCI will monitor key metals of an EV, including changing and evolving battery chemistries, for inclusion in the constituent universe.
2. A minimum contract trading and liquidity rules for index inclusion will include a minimum total dollar value trading requirement (TDVT) as well as a minimum reference percentage dollar weight (RPDW).

### Eligibility Criteria

- **Availability of Daily Contract Reference Prices.** Daily Contract Reference Prices for such Contract generally must have been available on a continuous basis for at least three months prior to the proposed date of inclusion. In appropriate circumstances, S&P Dow Jones Indices may determine that a shorter time period is sufficient or that historical Daily Contract Reference Prices for such Contract may be derived from Daily Contract Reference Prices for a similar or related Contract.
- **Availability of Volume Data.** Volume data with respect to such Contract must be available, from sources satisfying the criteria specified in Contract Volume and Liquidity Requirements, for at least the three months immediately preceding the date on which the determination is made. S&P Dow Jones Indices may determine that a shorter time period is sufficient.
- **Total Dollar Value Trading Requirement.** A Contract that is not included in the headline S&P GSCI at the time of determination (which may be either a Monthly Observation Date or the time of the annual determination of the composition of the S&P GSCI), and is based on a commodity that

is not represented in the S&P GSCI at such time, must have an annualized Total Dollar Value Traded (TDVT), over the relevant semi-annual observation period or Interim Calculation Period, of at least US\$ 100 million.

- **Average Contract Reference Price (ACRP).** For the six-month observation period and with respect to a particular Contract, the average of the daily contract reference prices for the first nearby contract expiration on the last day of each month during the semi-annual observation period on which such price is available.
- **Reference Percentage Dollar Weight Requirement.** The following criteria must be satisfied:
  - New constituents must have an RPDW of at least 1.00% (current constituents 0.50%). The RPDW is calculated based on the composition of the index determined according to the procedures set forth above. Any Contract that does not satisfy the applicable RPDW requirement is excluded from such composition, and the CPWs of the remaining Contracts are recalculated according to the procedure set forth in the S&P GSCI Methodology, until the index contains only Contracts that satisfy the applicable RPDW requirements.

**Constituent Weightings.** The RPDW for each constituent is calculated based on S&P GCI's expected metal usage in a representative EV multiplied by the ACRP for that constituent.

$$TDW_j = CPWPlatts_j * ACRP_j$$

where:

$TDW_j$  = Total Dollar Weight of commodity  $j$  in the index as of the rebalancing reference date.

$CPWPlatts_j$  = CPW for commodity  $j$  provided by S&P GCI as of the rebalancing reference date.

$ACRP_j$  = Average Contract Reference Price of commodity  $j$  as of rebalancing reference date.

At each rebalancing, uncapped weights are calculated as follows:

$$GSCIWeight_j = \frac{TDW_j}{\sum TDW_j}$$

**Capped CPW Calculation.** CPWs are provided by S&P GCI on the rebalancing reference date. The index applies a cap on the CPWs for those constituents defined as battery metals by S&P GCI. The adjustment process takes place at the time of January and July semi-annual rebalancing.

Cap is dynamically determined by the TDVT of Cobalt as follows.

- Cap battery metal at 10% when TDVT is  $\geq$  US\$ 100 million and  $<$  US\$ 500 million
- Cap battery metal at 15% when TDVT is  $\geq$  US\$ 500 million and  $<$  US\$ 1 billion
- Cap battery metal at 20% when TDVT is  $\geq$  US\$ 1 billion

where:

Target weights of the constituents in the S&P GSCI Electric Vehicles Metals are determined by applying weight caps as follows:

If  $GSCIWeight_j > WeightCap_j$  for  $j$ -th battery metal,

$$TargetWeight_j = WeightCap_j$$

Remaining weights are assigned to all constituents that do not exceed the cap.

$$TargetWeight_j = \frac{(100\% - Total\ Capped\ Weights) * GSCIWeight_j}{(100\% - Total\ Remaining\ GSCI\ Weights)}$$

where:

*Total Capped Weights* = Total capped weights of S&P GSCI Electric Vehicle Metals (USD) Commodity constituents as of the rebalancing reference date.

*Total Remaining GSCI Weights* = Total GSCI weights of all constituents that do not exceed the weight cap, as of the rebalancing reference date.

Capped CPW are then derived from the target weights where:

$$CPW_{capped_j} = \frac{TargetWeight_j * \sum (CPW_{Platts_j} * ACRP_j)}{ACRP_j}$$

**Rebalancing.** The index rebalances during the January and July S&P GSCI roll period. The rebalancing reference date is 20 business days (as determined by the CME holiday calendar) prior to the rebalancing date. All data, including data provided by S&P GSCI, required to rebalance the index is obtained as of the rebalancing reference date. If any data on the rebalancing reference date is not available, the latest data available prior to the rebalancing reference date is used. All days reflect after the close.

Rebalancing Schedule	
Rebalance Frequency	Semi-Annually
Announcement Date	T-5
Rebalancing Reference Date	T-20

**Capping Frequency.** Between rebalancing dates individual constituent weights are allowed to move freely. The ACRP and TDVT semi-annual observation periods used to determine constituent inclusion and capping lag the rebalancing reference date by one-month.

### Contract Schedule

Trading Facility	Commodity <sup>2</sup>	Ticker	Prior Rebal CPW	Current Rebal CPW	Units	1	2	3	4	5	6	7	8	9	10	11	12
LME	Aluminum	MAL	5.641776	5.399263	MT	G	H	J	K	M	N	Q	U	V	X	Z	F
LME	Copper	MCU	2.226106	1.268454	MT	G	H	J	K	M	N	Q	U	V	X	Z	F
LME	Nickel	MNI	1.102395	1.235512	MT	G	H	J	K	M	N	Q	U	V	X	Z	F
SGX	Iron Ore	SZZF	35.00052	28.92473	MT	G	H	J	K	M	N	Q	U	V	X	Z	F
CME	Cobalt	OCB	647.7906	438.4975	lbs	G	H	J	K	M	N	Q	U	V	X	Z	F
CME	Lithium	LTH	0	200.5753	Kgs	G	H	J	K	M	N	Q	U	V	X	Z	F

(1) Futures Months included in the index at the beginning of each calendar month.

(2) Index constituents at the July 2023 rebalancing.

### S&P GSCI Global Voluntary Carbon Liquidity Weighted Index

**Index Objective and Highlights.** The index is designed to reflect the performance of the global voluntary carbon credit market represented by S&P GSCI Single Commodity Indices. Index constituents are liquidity-weighted tradeable voluntary carbon credit futures contracts.

**Index Universe.** All voluntary carbon futures contracts represented by S&P GSCI single commodity indices.<sup>1</sup>

**Eligibility Criteria.** At each semi-annual rebalancing, in addition to being a voluntary carbon futures contracts represented by a S&P GSCI single commodity index, each contract must satisfy the following:

- **Availability of Daily Contract Reference Prices and Volume Data.** Have Daily Contract Reference Prices and Volume Data available on a continuous basis for at least six months prior to

<sup>1</sup> At launch all constituents were CME GEO and NCEO contracts.

the rebalancing reference date. S&P Dow Jones Indices may determine that a shorter time period is sufficient.

- **Average Contract Reference Price (ACRP).** Have six-months of data over the observation period and with respect to a particular Contract, the average of the daily contract reference prices for the first nearby contract expiration on the last day of each month during the semi-annual observation period on which such price is available.
- **Reference Percentage Dollar Weight (RPDW) Requirement.** New constituents must have an RPDW of at least 1.00% (current constituents 0.50%). The RPDW is calculated based on the proposed composition of the index determined according to the procedures set forth below. Any Contract that does not satisfy the applicable RPDW requirement is excluded from such proposed composition, and the weights are reallocated until the proposed index contains only Contracts that satisfy the applicable RPDW requirements.

**Constituent Weightings.** Each constituent’s RPDW is calculated based on the relative TDVT of the constituent over the reference period (one of either of the prior six months from December to May or June to November).<sup>2</sup>

**Rebalancing.** The index rebalances semiannually, during the January and July S&P GSCI roll periods. The rebalancing reference date is five (5) business days (as determined by the CME holiday calendar) prior to the rebalancing date. All data required to rebalance the index is obtained as of the rebalancing reference date. If any data on the rebalancing reference date is not available, the latest data available prior to the rebalancing reference date is used. All days reflect after the close.

Rebalancing Schedule	
Frequency	Semi -annually
Announcement Date	T-3
Reference Date	T-5

### Additions and Deletions

**Additions.** At each rebalancing, all eligible voluntary carbon futures contracts are selected and form the index.

**Deletions.** Between rebalancings, a constituent can be deleted from the index due to delisting, otherwise, any voluntary carbon future that doesn’t meet the eligibility criteria is removed from the index at the subsequent semi-annual rebalancing.

### Contract Schedule

Trading Facility	Commodity	Ticker <sup>1</sup>	Designated Contract Expirations at Month Begin												
			1	2	3	4	5	6	7	8	9	10	11	12	
CME	CBL Global Emissions Offset Futures	GEO	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z1
CME	CBL Nature-Based Global Emissions Offset Futures	NGO	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z1

(1) Futures months included in the index at the beginning of each calendar month.

(2) Index constituents at the current rebalance year.

<sup>2</sup> For the final rebalancing prior to launch in January 2022, a reference period of July – November was used for NGEOS as NCEO prices only became available starting from July 30, 2021.

# Single Commodity Capped Component Indices

## Index Objectives and Highlights

The S&P GSCI Single Commodity Capped Component Indices measure the performance of a single capped commodity component of the S&P GSCI while maintaining the diversification of the S&P GSCI component weights.

*For information on the S&P GSCI, please refer to the S&P GSCI Index Methodology.*

The namesake commodity is the commodity bearing the name of the S&P GSCI Single Commodity Capped Component. For example, Gold is the namesake commodity for the S&P GSCI Gold Capped Component. In general, any S&P GSCI Single Commodity Capped Component consists of the namesake commodity as well as most of the rest of the S&P GSCI Commodities, subject to the Rule of Exclusion regarding commodities that belong to a given component.

The Rule of Exclusion states that when any commodity that belongs to a component is the namesake commodity of the index, all other commodities of that same component are excluded in that particular single commodity index. For instance, for the S&P GSCI Heating Oil Capped Component, the four remaining commodities (WTI Crude Oil, Brent Crude Oil, Unleaded Gasoline and Gasoil) of the Petroleum Component are not included in the index.

*For more information on index calculations, please refer to the **Weighted Return Indices** section of S&P Dow Jones Indices' Commodity Index Mathematics Methodology.*

## Index Family

**S&P GSCI Single Commodity Capped Component.** The weighting scheme of the S&P GSCI Single Commodity Capped Component is as follows: in every S&P GSCI Single Commodity Capped Component, each namesake commodity is allocated 32%, with the remaining 68% equally distributed among the eligible S&P GSCI Commodities, subject to the Rule of Exclusion.

The weights are rebalanced on a monthly basis. In essence, each single commodity index consists of a basket of individual S&P GSCI Single Commodities, not just one single individual commodity. However, if a market disruption event takes place on the day of the rebalance, the rebalance is held off one business day, or until there is no further market disruption event.

**S&P GSCI Ex-Single Commodity Capped Component.** The weighting scheme of the S&P GSCI Ex-Single Commodity Capped Component is as follows: in every S&P GSCI Ex-Single Commodity Capped Component, each namesake commodity is allocated 0%, with the remaining 100% equally distributed among the eligible S&P GSCI Commodities. These indices are not subject to the Rule of Exclusion.

The weights are rebalanced on a monthly basis. In essence, each ex-single commodity index consists of a basket of the S&P GSCI Single Commodities, excluding one single individual commodity.

**S&P GSCI Single Commodity ex Agriculture and Livestock Capped Component.** Every S&P GSCI Single Commodity ex Agriculture and Livestock Capped Component index follows a weighting scheme whereby each namesake commodity is allocated 32%, with the remaining 68% equally distributed among the eligible S&P GSCI ex Agriculture and Livestock commodities, subject to the Rule of Exclusion.

Additionally, all components are capped at 17%. This means that for any given S&P GSCI Single Commodity ex Agriculture and Livestock Capped Component index, if the sum of the weights of all the

commodities belonging in the same component exceeds 17%, then the individual weights of all the commodities in said component are curtailed to the extent that the sum of the weights of all the commodities in said component equal 17%, and the excess weight is redistributed on a pro-rata basis to all the remaining commodities, except for the namesake commodity, which remains at 32%.

**S&P GSCI Energy & Extended Metals, Platinum & Palladium Capped Component.** Every GSCI Energy & Extended Metals, Platinum & Palladium Capped Component index follows a weighting scheme whereby each namesake commodity is allocated 32%, with the remaining 68% equally distributed among the eligible S&P GSCI Energy & Extended Metals, Platinum & Palladium commodities, subject to the Rule of Exclusion.

The membership of the S&P GSCI Energy & Extended Metals, Platinum & Palladium Capped Component indices considers the energy and metals sectors of the S&P GSCI, along with Platinum & Palladium, which are not currently members of the S&P GSCI. Four commodities, Gold, Silver, Platinum, and Palladium use the standard GSCI calendar, while the remaining commodities uses the GSCI Two-Month Forward calendar.

### Index Construction & Maintenance

#### S&P GSCI Single & Ex-Single Commodity Capped Component

**Rebalancing Frequency:** Monthly.

**Determination date:** One S&P GSCI business day before each monthly roll date.

**Sector, component, and commodity name information:**

GSCI Sector	GSCI Component	Commodity Name	
Agriculture	Wheat	Chicago Wheat	
		Kansas Wheat	
			Corn
			Soybeans
			Coffee
			Sugar
			Coca
			Cotton
Livestock	Cattle	Live Cattle	
		Feeder Cattle	
			Lean Hogs
Energy	Petroleum	WTI Crude Oil	
		Brent Crude Oil	
		Gas Oil	
		Heating Oil	
		Unleaded Gasoline	
		Natural Gas	
Metals	Industrial Metals	Aluminum	
		Copper	
		Lead	
		Nickel	
	Precious Metals	Zinc	
		Gold	
		Silver	

**S&P GSCI Single Commodity ex Agriculture and Livestock Capped Component**

**Rebalancing Frequency:** Monthly.

**Determination Date:** One S&P GSCI business day before each monthly roll date.

**Sector, component, and commodity name information:**

GSCI Sector	GSCI Component	Commodity Name
Energy	Petroleum	WTI Crude Oil
		Brent Crude Oil
		Gas Oil
		Heating Oil
		Unleaded Gasoline
		Natural Gas
Metals	Industrial Metals	Aluminum
		Copper
		Lead
		Nickel
		Zinc
	Precious Metals	Gold
		Silver

**S&P GSCI Energy & Extended Metals, Platinum & Palladium Capped Component**

**Rebalancing Frequency:** Monthly.

**Determination Date:** One S&P GSCI business day before each monthly roll date.

**Sector, component, commodity name and contract calendar information:**

GSCI Sector	GSCI Component	Commodity Name	Contract Calendar
Energy	Petroleum	WTI Crude Oil	2-Month Forward
		Brent Crude Oil	
		Gas Oil	
		Heating Oil	
		Unleaded Gasoline	
		Natural Gas	
Metals	Industrial Metals	Aluminum	
		Copper	
		Lead	
		Nickel	
		Zinc	
	Precious Metals	Gold	
		Silver	
		N/A	Non GSCI
Palladium			



**Table 3: S&P GSCI Ex-Agriculture & Livestock Single Commodity Capped Component Index Weights**

Index	CL	GC	HO	LCO	LGO	MAL	MCU	MNI	MPB	MZN	NG	RB	SI
S&P GSCI Ex-Agriculture & Livestock Crude Oil Capped Component	32%	8.50%				8.50%	8.50%	8.50%	8.50%	8.50%	8.50%		8.50%
S&P GSCI Ex-Agriculture & Livestock Brent Crude Capped Component		8.50%		32%		8.50%	8.50%	8.50%	8.50%	8.50%	8.50%		8.50%
S&P GSCI Ex-Agriculture & Livestock Gasoil Capped Component		8.50%			32%	8.50%	8.50%	8.50%	8.50%	8.50%	8.50%		8.50%
S&P GSCI Ex-Agriculture & Livestock Heating Oil Capped Component		8.50%	32%			8.50%	8.50%	8.50%	8.50%	8.50%	8.50%		8.50%
S&P GSCI Ex-Agriculture & Livestock Unleaded Gasoline Capped Component		8.50%				8.50%	8.50%	8.50%	8.50%	8.50%	8.50%	32%	8.50%
S&P GSCI Ex-Agriculture & Livestock Natural Gas Capped Component	3.40%	7.29%	3.40%	3.40%	3.40%	7.29%	7.29%	7.29%	7.29%	7.29%	32%	3.40%	7.29%
S&P GSCI Ex-Agriculture & Livestock Aluminum Capped Component	3.40%	7.29%	3.40%	3.40%	3.40%	32%	7.29%	7.29%	7.29%	7.29%	7.29%	3.40%	7.29%
S&P GSCI Ex-Agriculture & Livestock Copper Capped Component	3.40%	7.29%	3.40%	3.40%	3.40%	7.29%	32%	7.29%	7.29%	7.29%	7.29%	3.40%	7.29%
S&P GSCI Ex-Agriculture & Livestock Nickel Capped Component	3.40%	7.29%	3.40%	3.40%	3.40%	7.29%	7.29%	32%	7.29%	7.29%	7.29%	3.40%	7.29%
S&P GSCI Ex-Agriculture & Livestock Lead Capped Component	3.40%	7.29%	3.40%	3.40%	3.40%	7.29%	7.29%	7.29%	32%	7.29%	7.29%	3.40%	7.29%
S&P GSCI Ex-Agriculture & Livestock Zinc Capped Component	3.40%	7.29%	3.40%	3.40%	3.40%	7.29%	7.29%	7.29%	7.29%	32%	7.29%	3.40%	7.29%
S&P GSCI Ex-Agriculture & Livestock Gold Capped Component	3.40%	32%	3.40%	3.40%	3.40%	7.29%	7.29%	7.29%	7.29%	7.29%	7.29%	3.40%	7.29%
S&P GSCI Ex-Agriculture & Livestock Silver Capped Component	3.40%	7.29%	3.40%	3.40%	3.40%	7.29%	7.29%	7.29%	7.29%	7.29%	7.29%	3.40%	32%

**Table 4: S&P GSCI Energy & Extended Metals, Platinum & Palladium Capped Component Index Weights**

Index	Component Maturity Index Calendar	CL	LCO	HO	LGO	RB	NG	MAL	MCU	MPB	MNI	MZN	GC	SI	PL	PA
S&P GSCI Energy & Extended Metals Crude Oil Capped Component	S&P GSCI Crude Oil 2 Month Forward	32%					6.80%	6.80%	6.80%	6.80%	6.80%	6.80%	6.80%	6.80%	6.80%	6.80%
S&P GSCI Energy & Extended Metals Brent Crude Capped Component	S&P GSCI Brent Crude 2 Month Forward		32%				6.80%	6.80%	6.80%	6.80%	6.80%	6.80%	6.80%	6.80%	6.80%	6.80%
S&P GSCI Energy & Extended Metals Heating Oil Capped Component	S&P GSCI Heating Oil 2 Month Forward			32%			6.80%	6.80%	6.80%	6.80%	6.80%	6.80%	6.80%	6.80%	6.80%	6.80%
S&P GSCI Energy & Extended Metals Gasoil Capped Component	S&P GSCI Gasoil 2 Month Forward				32%		6.80%	6.80%	6.80%	6.80%	6.80%	6.80%	6.80%	6.80%	6.80%	6.80%
S&P GSCI Energy & Extended Metals Unleaded Gasoline Capped Component	S&P GSCI Unleaded Gasoline 2 Month Forward					32%	6.80%	6.80%	6.80%	6.80%	6.80%	6.80%	6.80%	6.80%	6.80%	6.80%
S&P GSCI Energy & Extended Metals Natural Gas Capped Component	S&P GSCI Natural Gas 2 Month Forward	3.40%	3.40%	3.40%	3.40%	3.40%	32%	5.67%	5.67%	5.67%	5.67%	5.67%	5.67%	5.67%	5.67%	5.67%
S&P GSCI Energy & Extended Metals Aluminum Capped Component	S&P GSCI Aluminum 2 Month Forward	3.40%	3.40%	3.40%	3.40%	3.40%	5.67%	32%	5.67%	5.67%	5.67%	5.67%	5.67%	5.67%	5.67%	5.67%
S&P GSCI Energy & Extended Metals Copper Capped Component	S&P GSCI Copper 2 Month Forward	3.40%	3.40%	3.40%	3.40%	3.40%	5.67%	5.67%	32%	5.67%	5.67%	5.67%	5.67%	5.67%	5.67%	5.67%
S&P GSCI Energy & Extended Metals Lead Capped Component	S&P GSCI Lead 2 Month Forward	3.40%	3.40%	3.40%	3.40%	3.40%	5.67%	5.67%	5.67%	32%	5.67%	5.67%	5.67%	5.67%	5.67%	5.67%
S&P GSCI Energy & Extended Metals Nickel Capped Component	S&P GSCI Nickel 2 Month Forward	3.40%	3.40%	3.40%	3.40%	3.40%	5.67%	5.67%	5.67%	5.67%	32%	5.67%	5.67%	5.67%	5.67%	5.67%
S&P GSCI Energy & Extended Metals Zinc Capped Component	S&P GSCI Zinc 2 Month Forward	3.40%	3.40%	3.40%	3.40%	3.40%	5.67%	5.67%	5.67%	5.67%	5.67%	32%	5.67%	5.67%	5.67%	5.67%
S&P GSCI Energy & Extended Metals Gold Capped Component	S&P GSCI Gold	3.40%	3.40%	3.40%	3.40%	3.40%	5.67%	5.67%	5.67%	5.67%	5.67%	5.67%	32%	5.67%	5.67%	5.67%
S&P GSCI Energy & Extended Metals Silver Capped Component	S&P GSCI Silver	3.40%	3.40%	3.40%	3.40%	3.40%	5.67%	5.67%	5.67%	5.67%	5.67%	5.67%	5.67%	32%	5.67%	5.67%
S&P GSCI Energy & Extended Metals Platinum Capped Component	S&P GSCI Platinum	3.40%	3.40%	3.40%	3.40%	3.40%	5.67%	5.67%	5.67%	5.67%	5.67%	5.67%	5.67%	5.67%	32%	5.67%
S&P GSCI Energy & Extended Metals Palladium Capped Component	S&P GSCI Palladium	3.40%	3.40%	3.40%	3.40%	3.40%	5.67%	5.67%	5.67%	5.67%	5.67%	5.67%	5.67%	5.67%	5.67%	32%

# S&P GSCI Risk Weight Index

The S&P GSCI Risk Weight is designed to measure the broad commodities market while assigning weights based on the risk contribution of each commodity sector to minimize overall sector index risk. The index considers the contribution of each commodity sector to the overall index risk in order to avoid risk concentration in any one sector.

## Weighting Scheme

The aim is to determine an allocation such that the risk contribution from each constituent sector is optimized, subject to the weight of each constituent being positive and their cumulative weights totaling 100%. The five sectors in the S&P GSCI Risk Weight are the same as the sectors in the S&P GSCI. The representative indices are as follows:

- S&P GSCI Energy ER
- S&P GSCI Industrial Metals ER
- S&P GSCI Precious Metals ER
- S&P GSCI Agriculture ER
- S&P GSCI Livestock ER

The risk contribution from each sector is calculated using the covariance of its representative index, as defined by its volatility and correlation with the representative indices of other sectors. Volatility is defined as the standard deviation of the daily returns of the relevant sector representative index over a one-year calendar period from the third business day of each month, and correlation is computed using daily returns over the same period. The Sector Weights are determined monthly on the third business day, defined as two business days prior to the S&P GSCI Roll Period. The index is rebalanced during the monthly five-day S&P GSCI Roll Period.

**Determination of the Risk Contribution from each Commodity Sector.** The marginal risk contribution is defined as the change in volatility of the overall index induced by an infinitesimal increase in the weight of that sector. Mathematically, it can be summarized as follows:

$$MRC_i = \frac{\partial \sigma_{PORT}}{\partial \varpi_i} = \sum_{j=1}^N \varpi_j \cdot cov(r_i, r_j) = cov(r_i, r_{PORT})$$

where:

$\frac{\partial \sigma_{PORT}}{\partial \varpi_i}$  = Change in the volatility of the index with respect to a small change in the weight of sector  $i$

$cov(r_i, r_j)$  = Covariance between sector  $i$  and  $j$  representative indices

$cov(r_i, r_{PORT})$  = Covariance between sectors' representative index and the entire index

The risk contribution from each sector is equal to the product of its weight and its respective marginal risk contribution.

$$RC_i = \varpi_i \times MRC_i$$

**Determination of Weights of Individual Sectors.** The individual sector weights are solved using a

numerical optimization technique, with the aim of minimizing, as far as possible, the variance of the risk contributions from all of the commodity sectors. The maximum sector weight is capped at 33%. Any excess over 33% is redistributed to the remaining sectors based on their risk contribution.

**Determination of Weights of Individual Commodities.** Individual commodities within a sector are weighted according to their respective Contract Production Weights (CPWs) defined in the most recent S&P GSCI Methodology. The CPWs are updated annually and instituted during the January roll.

**Rolling Scheme.** The contract rolling schedule of the index follows the roll calendar of the S&P GSCI Methodology. For the S&P GSCI Dynamic Roll Risk Weight Index, the contract rolling schedule of the index follows the dynamic roll contract selection of the S&P GSCI Dynamic Roll Index.

*The capping procedures follow the rules provided in the **Capped Component Indices** section and the target weight and CPW calculations are located in the **Capped Indices** section of the S&P Dow Jones Indices' Commodity Index Mathematics Methodology.*

# S&P GSCI Roll Weight Select Index

The S&P GSCI Roll Weight Select is designed to measure the performance of commodities from an underlying index, where the commodities in the index are weighted by the relative change in the realized roll yield. The index underweights or overweights commodities depending on the roll yield at the current month than at the one-month forward expiration, as described under **Weighting Scheme**.

**Index Eligibility.** Only the 14 commodities that are included in the S&P GSCI Equal Weight Select (underlying index) are included in the S&P GSCI Roll Weight Select. Please refer to the S&P GSCI Equal Weight Select Methodology for details on the index eligibility process. The reconstitution occurs annually.

**Weighting Scheme.** On the determination date, each of the 14 commodities is weighted according to its rank of relative change in realized roll yield. The commodity with the highest (lowest) change in realized roll yield, indicating the roll yield is less (more) in the current month than the 1-month forward contract, is given the lowest rank of 1 (highest rank of 14).

The following table summarizes the rank order and final ranking weights:

Rank Order with Weighting Scheme	
Rank	Rank Weight
1 - 4	2.8%
5 - 12	8.3%
13 - 14	11.1%

**Commodity Gradient Signal Determination.** For each commodity “A”, at each monthly node  $i$  (for  $i=0$  and  $i=1$ ), for a given month  $m$ , the following notation is adopted:

$A_{PL(0,m)}$  = The index level of S&P GSCI ‘A’ for month  $m$  (as of the Determination Date specified)

$A_{PL(1,m)}$  = The index level of S&P GSCI ‘A’ 1 Month Forward, for month  $m$

$A_{EL(0,m)}$  = The index level of S&P GSCI ‘A’ ER for month  $m$

$A_{EL(1,m)}$  = The index level of S&P GSCI ‘A’ 1 Month Forward ER for month  $m$

These four inputs, define the following variables:

$$A_{PR(i,m)} = \frac{A_{PL(i,m)} - A_{PL(i,m-1)}}{A_{PL(i,m-1)}}$$

where:

$A_{PR(i,m)}$  = Price index return for commodity A, at node  $i$ , for month  $m$

$$A_{ER(i,m)} = \frac{A_{EL(i,m)} - A_{EL(i,m-1)}}{A_{EL(i,m-1)}}$$

where:

$A_{ER(i,m)}$  = Excess Return index return for commodity A, at node  $i$ , for month  $m$

The following relationship, for a given commodity A, at node  $i$ , for month  $m$  is defined as:

$$A_{RRY(i,m)} = A_{ER(i,m)} - A_{PR(i,m)}$$

where:

$$A_{RRY(i,m)} = \text{Realized Roll Yield for commodity A, at node } i, \text{ for month } m$$

The realized roll yield is a proxy of the monthly roll yield for commodity A, incorporating the effects of the daily changes in the prices, as well as the effects of the rolling of the relevant contracts during the month, as specified in the *S&P GSCI Methodology*.

**Interpolation of S&P GSCI Realized Roll Yields.** Any A commodity that does not roll monthly will require an interpolation of its realized roll yield. The Interpolated Realized Roll Yield for each commodity A, is defined as follows:

$$A_{IRRY(i,m)} = A_{ARRY(i,m)} - A_{IF(i,m)}$$

where:

$$A_{ARRY(i,m)} = \text{Adjusted realized roll yield for commodity A, at node } i, \text{ for month } m$$

$$A_{IF(i,m)} = \text{Interpolation factor for commodity A, at node } i, \text{ for month } m$$

The realized roll yield is adjusted if no rolling is involved by carrying over the previously calculated realized roll yield based on the commodities contract calendar. The interpolation factor is a count of consecutive months for an individual commodity. The interpolation is achieved by dividing the adjusted realized roll yield by its respective interpolation factor.

We now define the following relationship, for a given commodity A, at node  $i$ , for month  $m$ :

$$A_{GD(i+1,m)} = A_{IRRY(i+1,m)} - A_{IRRY(i,m)}$$

The gradient  $A_{GD(i+1,m)}$  is a measure of the change in the interpolated realized roll yields for commodity A, at node 1 and node 0, respectively, for a given month  $m$ . Additionally, if commodity A is in a state of contango, i.e., if  $A_{RRY(0,m)}$  and the gradient are both negative, then the sign of the gradient is reversed. The gradient is also reversed if commodity A is in a state of backwardation, i.e., if  $A_{RRY(0,m)}$  and the gradient are both positive. The sign reversal is implemented to so that commodities in backwardation are preferred to those in contango, other things being equal, in cases where the forward curve deviates from normal patterns.

**Example.** This section illustrates the interpolation process, using Sugar as an example, for the S&P GSCI Sugar 1 Month Forward. See Table 1 below.

For January, the realized roll yield for Sugar is shown in column 4 (RRY=0.0187). Based on Sugar's roll schedule, it was long the same contract in the following month (the May contract, K), its unadjusted realized roll yield for February is equal to 0, because of no rolling of contracts. The unadjusted realized roll yield for February is then superseded by January's realized roll yield. For January and February, the interpolated realized roll yield is obtained by dividing the adjusted realized roll yield by the interpolation factor for the given month. Thus, the interpolation factor of 2 for January and February is applied, spreading the unadjusted realized roll yield over the 2-month period. The interpolation factor is a function of how many months the same futures contracts are in force. Thus, for March and April, the interpolation factor is again 2 because the July contract (N) is in use. Likewise, the unadjusted realized roll yield for April is filled in with the realized roll yield for March. However, for May through July, the October contract (V) is in use for the three months. When the realized roll yield for sugar is calculated, it is spread over the three-month period. In the case of August until December, the upcoming March (H) Contract has an interpolation factor set at 5.

Table 1: Example of Sugar (SB) S&P GSCI Sugar 1 Month Forward					
Col.1 Month	Col.2 Interpolation Factor	Col.3 Contract Month	Col.4 RRY	Col.5 Adjusted	Col.6 Interpolated RRY
Jan	2	K	0.0187	0.0187	0.0093
Feb	2	K	0.0000	0.0187	0.0093
Mar	2	N	0.0375	0.0375	0.0187
Apr	2	N	0.0000	0.0375	0.0187
May	3	V	-0.0176	-0.0176	-0.0059
Jun	3	V	0.0000	-0.0176	-0.0059
Jul	3	V	0.0000	-0.0176	-0.0059
Aug	5	H	-0.0210	-0.0210	-0.0042
Sep	5	H	0.0000	-0.0210	-0.0042
Oct	5	H	0.0000	-0.0210	-0.0042
Nov	5	H	0.0000	-0.0210	-0.0042
Dec	5	H	0.0000	-0.0210	-0.0042

**Rebalancing Frequency.** Monthly.

*For information on the capping methodology, please refer to the **Capped Component** section of this methodology.*

# Index Calculation

## Overview of the Calculation Process

The calculation of the S&P GSCI capped index family considers price levels of the First Nearby Contract Expiration on each commodity and, during the Roll Periods, price levels of the Roll Contract Expirations as well. Once the Roll Period has been completed, the Roll Contract Expiration becomes the First Nearby Contract Expiration.

*For information on the calculation of the spot, ER & TR index levels, please refer to the **Production Weighted Indices** and **Other Derived Indices** sections of the S&P Dow Jones Indices' Commodity Index Mathematics Methodology.*

## Currency of Calculation and Additional Index Return Series

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 [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/](http://www.spglobal.com/spdji/).*

# Index Governance

## Index Committee

An S&P Dow Jones Indices Index Committee maintains the indices. All members of the Committee are full-time professionals at S&P Dow Jones Indices. The Committee meets regularly. The Committee may revise index policy covering rules for including 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. The Index Committee is separate from and independent of other analytical groups at S&P Global. In particular, the Index Committee has no access to or influence on decisions by S&P Global Ratings analysts.

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** section of the S&P Dow Jones Indices' Commodities Indices Policies & Practices Methodology.*

# Index Dissemination

Index levels are available through S&P Dow Jones Indices' Web site at [www.spglobal.com/spdji/](http://www.spglobal.com/spdji/), major quote vendors, 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 Name	BBG – Real Time	BBG	RIC	Launch Date	Base Date	Base Value
S&P GSCI Capped Component	SPGSUC	SPGCUC	.SPGSUC	9/28/2009	1/16/1995	100
S&P GSCI 3 Month Forward Capped Component	--	SG3MCIC	.SG3MCIC	3/27/2014	1/16/1995	100
S&P GSCI 6 Month Forward Capped Component	--	SG6MCIC	.SG6MCIC	3/27/2014	1/20/2009	100
S&P GSCI 12 Month Forward Capped Component	--	SG12MCIC	.SG12MCIC	3/27/2014	1/19/2011	100
S&P GSCI & Livestock 1 Month Forward Capped Component	--	SG1MALC	.SG1MALC	2/7/2011	1/9/1995	100
S&P GSCI & Livestock 3 Month Forward Capped Component	--	SG3MALC	.SG3MALC	2/7/2011	1/9/1995	100
S&P GSCI Dynamic Roll Capped Component	--	SPDYUC	.SPDYUC	6/26/2013	1/16/1995	100
S&P GSCI Energy & Metals Capped Component	--	SPGCNC	.SPGCNC	5/19/2010	1/9/1995	100
S&P GSCI Energy & Metals 3 Month Forward Capped Component	--	SG3MNC	.SG3MNC	2/18/2015	1/9/1995	100
S&P GSCI Energy & Metals 6 Month Forward Capped Component	--	SG6MNC	.SG6MNC	2/18/2015	1/8/2009	100
S&P GSCI Energy & Metals 12 Month Forward Capped Component	--	SG12MNC	.SG12MNC	2/18/2015	1/7/2011	100
S&P GSCI Enhanced Capped Component	SGESCI	SGECCI	.SGESCI	8/23/2010	1/16/1995	100
S&P GSCI Agriculture Capped Component	SPGSGP	SPGCGP	.SPGSGP	11/23/2009	1/16/1995	100
S&P GSCI Agriculture Dynamic Roll Capped Component	--	SPDYPA	.SPDYPA	5/4/2011	1/9/1995	100
S&P GSCI Agriculture Enhanced Capped Component	--	SGECCAG	.SPGSCIAE C	8/13/2010	1/16/1995	100
S&P GSCI Capped Commodity	SPGSCP	SPGCCP	.SPGSCP	9/28/2009	1/16/1995	100
S&P GSCI Dynamic Roll Capped Commodity	--	SPDYPC	.SPDYPC	5/4/2011	10/6/2006	100
S&P GSCI Enhanced Capped Commodity	--	SGECCP	.SPGSCIES C	8/13/2010	1/16/1995	100
S&P GSCI All Metals Capped Commodity	SPGSAM	SPGCAM	.SPGSAM	11/23/2009	1/16/1995	100
S&P GSCI All Metals 3 Month Forward Capped Component	--	SG3MAMC	.SG3MAMC	8/8/2013	1/16/1995	100
S&P GSCI Energy Capped Commodity	--	SPGCEC	.SPGCEC	6/30/2011	1/8/1999	100
S&P GSCI Energy 1 Month Forward Capped Commodity	--	SG1MENC	.SG1MENC	2/7/2011	1/8/1999	100
S&P GSCI Energy 3 Month Forward Capped Commodity	--	SG3MENC	.SG3MENC	2/7/2011	1/8/1999	100
S&P GSCI Energy Dynamic Roll Capped Commodity	--	SPDYPE	.SPDYPE	5/4/2011	1/8/1999	100
S&P GSCI Energy Enhanced Capped Commodity	--	SGECCEN	.SGECCEN	8/13/2010	1/12/2000	100
S&P GSCI Industrial Metals Capped Commodity	--	SPGCMC	.SPGCMC	6/30/2011	1/9/1995	100
S&P GSCI Industrial Metals 1 Month Forward Capped Commodity	--	SG1MINC	.SG1MINC	2/7/2011	1/9/1995	100
S&P GSCI Industrial Metals 3 Month Forward Capped Commodity	--	SG3MINC	.SG3MINC	2/7/2011	1/9/1995	100
S&P GSCI Industrial Metals Dynamic Roll Capped Commodity	--	SPDYPI	.SPDYPI	5/4/2011	1/9/1995	100
S&P GSCI Industrial Metals Enhanced Capped Commodity	--	SGECCIN	.SPGSCIIMC	8/13/2010	1/16/1995	100
S&P GSCI Equal Weight Select	SPGSEW	--	.SPGSEW	9/9/2010	1/16/1995	100
S&P GSCI Dynamic Roll Equal Weight Select	--	SPDYEW	.SPDYEW	3/6/2012	12/7/1994	100
S&P GSCI Equal Weight Capped Component	--	SGEWUC	.SGEWUC	10/27/2014	1/16/1995	100
S&P GSCI Energy & Metals Equal Weight Capped Component	--	SGEMEW	--	10/9/2017	1/6/1995	100
S&P GSCI 3 Month Forward Capped Sector Equal Weight Composite	--	SG3MCE	.SG3MCE	6/28/2011	1/8/1999	100

Index Name	BBG – Real Time	BBG	RIC	Launch Date	Base Date	Base Value
S&P GSCI Precious Metals, Platinum & Palladium Equal Weight	--	SGPMPPE	.SGPMPPE	3/5/2018	1/6/1995	100
S&P GSCI Industrial Metals & Iron Ore Equal Weight	--	--	--	11/26/2018	7/31/2013	100
S&P GSCI Equal Weight Commodity Sector	--	EWCI	--	7/20/2020	9/30/2008	100
S&P GSCI Equal Weight Commodity Sector AUD	--	EWCIA	--	7/20/2020	9/30/2008	100
S&P GSCI Equal Weight Commodity Sector AUD Hedged	--	EWCIAH	--	7/20/2020	9/30/2008	100
S&P GSCI Equal Weight Commodity Sector CHF	--	EWCIK	--	7/20/2020	9/30/2008	100
S&P GSCI Equal Weight Commodity Sector CHF Hedged	--	EWCIKH	--	7/20/2020	9/30/2008	100
S&P GSCI Equal Weight Commodity Sector EUR	--	EWCIK	--	7/20/2020	9/30/2008	100
S&P GSCI Equal Weight Commodity Sector EUR Hedged	--	EWKIEH	--	7/20/2020	9/30/2008	100
S&P GSCI Equal Weight Commodity Sector GBP	--	EWCIK	--	7/20/2020	9/30/2008	100
S&P GSCI Equal Weight Commodity Sector GBP Hedged	--	EWKIGH	--	7/20/2020	9/30/2008	100
S&P GSCI Equal Weight Commodity Sector JPY	--	EWCIJ	--	7/20/2020	9/30/2008	100
S&P GSCI Equal Weight Commodity Sector JPY Hedged	--	EWKIJH	--	7/20/2020	9/30/2008	100
S&P GSCI Equal Weight Commodity Sector NZD	--	EWKINZ	--	7/20/2020	3/31/2011	100
S&P GSCI Equal Weight Commodity Sector NZD Hedged	--	EWKINZH	--	7/20/2020	3/31/2011	100
S&P GSCI Equal Weight Commodity Sector SGD	--	EWKIS	--	7/20/2020	9/30/2008	100
S&P GSCI Equal Weight Commodity Sector SGD Hedged	--	EWKISH	--	7/20/2020	9/30/2008	100
S&P GSCI 3 Month Forward Equal Weight Commodity Sector	SG3MEWC	--	.SG3MEWC	4/19/2021	3/31/1995	100
S&P GSCI 3 Month Forward Equal Weight Commodity Sector ER EUR Hedged	--	--	--	4/19/2021	12/31/1998	100
S&P GSCI Agriculture & Livestock Enhanced Capped 40/75	--	SGECCAL	.SGECCAL	12/6/2012	4/12/1995	100
S&P GSCI Electric Vehicle Metals (USD)	SPGEVMU	--	.SPGEVMU	3/21/2022	1/21/2021	100
S&P GSCI Global Voluntary Carbon Liquidity Weighted (USD)	SPGVCLW	--	.SPGVCLW	6/21/2022	1/18/2022	100
S&P GSCI Risk Weight	--	SPGSRW	.SPGSRW	4/44/2013	2/16/1995	100
S&P GSCI Dynamic Roll Risk Weight	--	SPGSDRW	.SPGSDRW	4/28/2015	2/16/1995	100
S&P GSCI Roll Weight Select	--	SPGSRWS	.SPGSRWS	6/20/2013	4/17/1995	100
S&P GSCI Energy & Metals Roll Weight Select Capped Component	--	SGEMRWC	--	10/9/2017	4/17/1995	100

## Index Data

Daily index level data is available via on 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/).

# Index Policy

## **Announcements**

Announcements of the daily index values are made after the futures market close each day.

Announcements of the new futures contract months to be rolled into are made following the close of business on the third business day of each month.

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

## **Contact Information**

For questions regarding an index, please contact: [index\\_services@spglobal.com](mailto:index_services@spglobal.com).

# Appendix I

## Methodology Changes

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

Change	Effective Date (After Close)	Methodology	
		Previous	Updated
Index name for the S&P GSCI Equal Weight Commodity Sector Index	07/17/2020	The index name was Equal Weighted Commodity Index.	The index is S&P GSCI Equal Weight Commodity Sector Index.
Capping rules for indices with buffers	01/07/2020	<p><b>Rule 1: The weight of the largest component or commodity cannot exceed 35% and will be capped down to 32%.</b> Any excess weight is distributed proportionately within the sector.</p> <p><i>Once Rule 1 is implemented,</i></p> <p><b>Rule 2: The weights of the other components or commodities cannot exceed 20% and will be capped down to 17%.</b> Any excess weight is distributed proportionately within the sector.</p>	<p><b>Rule 1: The weight of the largest component or commodity cannot exceed 32%.</b> Any excess weight is distributed proportionately within the sector.</p> <p><i>Once Rule 1 is implemented,</i></p> <p><b>Rule 2: The weights of the other components or commodities cannot exceed 17%.</b> Any excess weight is distributed proportionately within the sector.</p>
Capping rules for indices with no buffers	01/07/2020	<p><b>Rule 1: The weight of the largest component or commodity cannot exceed 35%.</b> Any excess weight is distributed proportionately within the sector.</p> <p><i>Once Rule 1 is implemented,</i></p> <p><b>Rule 2: The weights of the other components or commodities cannot exceed 20%.</b> Any excess weight is distributed proportionately within the sector.</p>	<p><b>Rule 1: The weight of the largest component or commodity cannot exceed 32%.</b> Any excess weight is distributed proportionately within the sector.</p> <p><i>Once Rule 1 is implemented,</i></p> <p><b>Rule 2: The weights of the other components or commodities cannot exceed 17%.</b> Any excess weight is distributed proportionately within the sector.</p>

# Appendix II

## ESG Disclosures

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

<sup>3</sup> 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].

<sup>4</sup> 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).

### **Intellectual Property Notices/Disclaimer**

© 2024 S&P Dow Jones Indices. All rights reserved. S&P, S&P 500, SPX, SPY, The 500, US500, US 30, S&P 100, S&P COMPOSITE 1500, S&P 400, S&P MIDCAP 400, S&P 600, S&P SMALLCAP 600, S&P GIVI, GLOBAL TITANS, DIVIDEND ARISTOCRATS, Select Sector, S&P MAESTRO, S&P PRISM, S&P STRIDE, GICS, SPIVA, SPDR, INDEXOLOGY, iTraxx, iBoxx, ABX, ADBI, CDX, CMBX, MBX, MCDX, PRIMEX, HHPI, and SOVX are registered trademarks of S&P Global, Inc. ("S&P Global") or its affiliates. DOW JONES, DJIA, THE DOW and DOW JONES INDUSTRIAL AVERAGE are trademarks of Dow Jones Trademark Holdings LLC ("Dow Jones"). These trademarks together with others have been licensed to S&P Dow Jones Indices LLC. Redistribution or reproduction in whole or in part are prohibited without written permission of S&P Dow Jones Indices LLC. This document does not constitute an offer of services in jurisdictions where S&P DJI does not have the necessary licenses. Except for certain custom index calculation services, all information provided by S&P DJI is impersonal and not tailored to the needs of any person, entity, or group of persons. S&P DJI receives compensation in connection with licensing its indices to third parties and providing custom calculation services. Past performance of an index is not an indication or guarantee of future results.

It is not possible to invest directly in an index. Exposure to an asset class represented by an index may be available through investable instruments based on that index. S&P DJI does not sponsor, endorse, sell, promote or manage any investment fund or other investment vehicle that is offered by third parties and that seeks to provide an investment return based on the performance of any index. S&P DJI makes no assurance that investment products based on the index will accurately track index performance or provide positive investment returns. S&P DJI is not an investment advisor, commodity trading advisor, fiduciary, "promoter" (as defined in the Investment Company Act of 1940, as amended) or "expert" as enumerated within 15 U.S.C. § 77k(a), and S&P DJI makes no representation regarding the advisability of investing in any such investment fund or other investment vehicle. A decision to invest in any such investment fund or other investment vehicle should not be made in reliance on any of the statements set forth in this document. S&P DJI is not a tax advisor. Inclusion of a security, commodity, crypto currency, or other asset within an index is not a recommendation by S&P DJI to buy, sell, or hold such security, commodity, crypto currency, or other asset, nor is it considered to be investment or trading advice.

These materials have been prepared solely for informational purposes based upon information generally available to the public and from sources believed to be reliable. No content contained in these materials (including index data, ratings, credit-related analyses and data, research, valuations, model, software or other application or output therefrom) or any part thereof ("Content") may be modified, reverse engineered, reproduced, or distributed in any form or by any means, or stored in a database or retrieval system, without the prior written permission of S&P DJI. The Content shall not be used for any unlawful or unauthorized purposes. S&P DJI and its third-party data providers and licensors (collectively "S&P Dow Jones Indices Parties") do not guarantee the accuracy, completeness, timeliness, or availability of the Content. S&P Dow Jones Indices Parties are not responsible for any errors or omissions, regardless of

the cause, for the results obtained from the use of the Content. THE CONTENT IS PROVIDED ON AN "AS IS" "WHERE IS" BASIS. S&P DOW JONES INDICES PARTIES DISCLAIMS ANY AND ALL EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE, FREEDOM FROM BUGS, SOFTWARE ERRORS OR DEFECTS, THAT THE CONTENT'S FUNCTIONING WILL BE UNINTERRUPTED OR THAT THE CONTENT WILL OPERATE WITH ANY SOFTWARE OR HARDWARE CONFIGURATION. In no event shall S&P Dow Jones Indices Parties be liable to any party for any direct, indirect, incidental, exemplary, compensatory, punitive, special, or consequential damages, costs, expenses, legal fees, or losses (including, without limitation, lost income or lost profits and opportunity costs) in connection with any use of the Content even if advised of the possibility of such damages.

Credit-related information and other analyses, including ratings, research and valuations are generally provided by licensors and/or affiliates of S&P Dow Jones Indices, including but not limited to S&P Global's other divisions such as S&P Global Market Intelligence. Any credit-related information and other related analyses and statements in the Content are statements of opinion as of the date they are expressed and not statements of fact. Any opinion, analyses and rating acknowledgement decisions are not recommendations to purchase, hold, or sell any securities or to make any investment decisions, and do not address the suitability of any security. S&P Dow Jones Indices does not assume any obligation to update the Content following publication in any form or format. The Content should not be relied on and is not a substitute for the skill, judgment and experience of the user, its management, employees, advisors and/or clients when making investment and other business decisions. S&P DJI does not act as a fiduciary or an investment advisor. While S&P DJI has obtained information from sources it believes to be reliable, S&P DJI does not perform an audit or undertake independent verification of any information it receives. S&P DJI reserves the right to vary or discontinue any index at any time for regulatory or other reasons. Various factors, including external factors beyond S&P DJI's control might necessitate material changes to indices.

To the extent that regulatory authorities allow a rating agency to acknowledge in one jurisdiction a rating issued in another jurisdiction for certain regulatory purposes, S&P Global Ratings reserves the right to assign, withdraw or suspend such acknowledgement at any time and in its sole discretion. S&P Dow Jones Indices, including S&P Global Ratings, disclaim any duty whatsoever arising out of the assignment, withdrawal, or suspension of an acknowledgement as well as any liability for any damage alleged to have been suffered on account thereof. Affiliates of S&P Dow Jones Indices LLC, including S&P Global Ratings, may receive compensation for its ratings and certain credit-related analyses, normally from issuers or underwriters of securities or from obligors. Such affiliates of S&P Dow Jones Indices LLC, including S&P Global Ratings, reserve the right to disseminate its opinions and analyses. Public ratings and analyses from S&P Global Ratings are made available on its Web sites, [www.standardandpoors.com](http://www.standardandpoors.com) (free of charge), and [www.ratingsdirect.com](http://www.ratingsdirect.com) and [www.globalcreditportal.com](http://www.globalcreditportal.com) (subscription), and may be distributed through other means, including via S&P Global Ratings publications and third-party redistributors. Additional information about our ratings fees is available at [www.standardandpoors.com/usratingsfees](http://www.standardandpoors.com/usratingsfees).

S&P Global keeps certain activities of its various divisions and business units separate from each other to preserve the independence and objectivity of their respective activities. As a result, certain divisions and business units of S&P Global may have information that is not available to other business units. S&P Global has established policies and procedures to maintain the confidentiality of certain nonpublic information received in connection with each analytical process.

In addition, S&P Dow Jones Indices provides a wide range of services to, or relating to, many organizations, including issuers of securities, investment advisers, broker-dealers, investment banks, other financial institutions, and financial intermediaries, and accordingly may receive fees or other economic benefits from those organizations, including organizations whose securities or services they may recommend, rate, include in model portfolios, evaluate, or otherwise address.

Some indices use the Global Industry Classification Standard (GICS®), which was developed by, and is the exclusive property and a trademark of, S&P Global and MSCI. Neither MSCI, S&P DJI nor any other party involved in making or compiling any GICS classifications makes any express or implied warranties or representations with respect to such standard or classification (or the results to be obtained by the use thereof), and all such parties hereby expressly disclaim all warranties of originality, accuracy, completeness, merchantability, or fitness for a particular purpose with respect to any of such standard or classification. Without limiting any of the foregoing, in no event shall MSCI, S&P DJI, any of their affiliates or any third party involved in making or compiling any GICS classifications have any liability for any direct, indirect, special, punitive, consequential or any other damages (including lost profits) even if notified of the possibility of such damages.

S&P Dow Jones Indices products are governed by the terms and conditions of the agreements under which they may be provided. A license is required from S&P Dow Jones Indices to display, create derivative works of and/or distribute any product or service that uses, is based upon and/or refers to any S&P Dow Jones Indices and/or index data.

### **ESG Indices Disclaimer**

S&P DJI provides indices that seek to select, exclude, and/or weight index constituents based on, but not limited to, certain environmental, social or governance (ESG) indicators, or a combination of those indicators, including the following: environmental indicators (including the efficient use of natural resources, the production of waste, greenhouse gas emissions, or impact on biodiversity); social indicators (such as, inequality and investment in human capital); governance indicators (such as sound management structures, employee relations, remuneration of staff, tax compliance, respect for human rights, anti-corruption and anti-bribery matters), specific sustainability or values-related company involvement indicators (for example, production/distribution of controversial weapons, tobacco products, or thermal coal), or controversies monitoring (including research of media outlets to identify companies involved in ESG-related incidents).

S&P DJI ESG indices use ESG metrics and scores in the selection and/or weighting of index constituents. ESG scores or ratings seek to measure or evaluate a company's, or an asset's, performance with respect to environmental, social and corporate governance issues.

The ESG scores, ratings, and other data used in S&P DJI ESG indices is supplied directly or indirectly by third parties (note these parties can be independent affiliates of S&P Global or unaffiliated entities) so an S&P DJI ESG index's ability to reflect ESG factors depends on these third parties' data accuracy and availability.

ESG scores, ratings, and other data may be reported (meaning that the data is provided as disclosed by companies, or an asset, or as made publicly available), modelled (meaning that the data is derived using a proprietary modelling process with only proxies used in the creation of the data), or reported and modelled (meaning that the data is either a mix of reported and modelled data or is derived from the vendor using reported data /information in a proprietary scoring or determination process).

ESG scores, ratings, and other data, whether from an external and/or internal source, is based on a qualitative and judgmental assessment, especially in the absence of well-defined market standards, and due to the existence of multiple approaches and methodologies to assess ESG factors and considerations. An element of subjectivity and discretion is therefore inherent in any ESG score, rating, or other data and different ESG scoring, rating, and/or data sources may use different ESG assessment or estimation methodologies. Different persons (including ESG data ratings, or scoring providers, index administrators or users) may arrive at different conclusions regarding the sustainability or impact of a particular company, asset, or index.

Where an index uses ESG scores, ratings or other data supplied directly or indirectly by third parties, S&P DJI does not accept responsibility for the accuracy or completeness of such ESG scores, ratings, or data. No single clear, definitive test or framework (legal, regulatory, or otherwise) exists to determine 'ESG',

'sustainable', 'good governance', 'no adverse environmental, social and/or other impacts', or other equivalently labelled objectives. In the absence of well-defined market standards and due to the existence of multitude approaches, the exercise of judgment is necessary. Accordingly, different persons may classify the same investment, product and/or strategy differently regarding 'ESG', 'sustainable', 'good governance', 'no adverse environmental, social and/or other impacts', or other equivalently labelled objectives. Furthermore, the legal and/or market position on what constitutes an 'ESG', 'sustainable', 'good governance', 'no adverse environmental, social and/or other impacts', or other equivalently labelled objectives may change over time, especially as further regulatory or industry rules and guidance are issued and the ESG sustainable finance framework becomes more sophisticated.

Prospective users of an S&P DJI ESG Index are encouraged to read the relevant index methodology and related disclosures carefully to determine whether the index is suitable for their potential use case or investment objective.