

# **S&P GSCI Multiple Contract Index** *Methodology Supplement*

February 2019

## Index Objective and Highlights

The S&P GSCI Multiple Contract Index is a long-only version of the S&P GSCI that holds multiple contract months for each of the S&P GSCI commodities. The index contains the specific commodities of the S&P GSCI Index and is calculated on a basis similar to the S&P GSCI Index. The basic framework involves a 55% weight in the contract months included in the base S&P GSCI Index, 30% in the 1-Month S&P GSCI Forward Indices contracts and 15% in the 2-Month S&P GSCI Forward Indices contracts.

All the individual S&P GSCI commodity CPWs are the same as the standard S&P GSCI Index, but the CPWs are allocated by a fixed percentage weight along the futures curve beyond the front most liquid futures contract.

## The S&P GSCI Multiple Contract Index Methodology Supplement

This methodology supplement uses various terms from *the S&P GSCI Index Methodology*. Where not specifically noted otherwise in this document, the rules of the S&P GSCI Methodology will prevail. Where the terms in this document are also defined in the S&P GSCI Methodology, the definitions in this document prevail.

## Supporting Documents

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

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

This methodology supplement 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 supplement. Any changes to or deviations from this methodology supplement are made in the sole judgment and discretion of S&P Dow Jones Indices so that the index continues to achieve its objective.

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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:*

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- *Internal Reviews of Methodology*
- *Calculations and Pricing Disruptions*
- *Error Corrections*
- *Expert Judgment*
- *Data Hierarchy*
- *Unexpected Exchange Closures*

*Please refer to S&P Dow Jones Indices' Commodities Indices Policies & Practices document.*

## The S&P GSCI Multiple Contract Index Weighting Scheme

Instead of being represented by only one contract month, each of the S&P GSCI Commodities in the index is represented by up to three separate futures contract months. The CPWs of each of the S&P GSCI Commodities are updated annually in January, and distributed among the three contract months as follows: 55% assigned to the standard S&P GSCI Index contract month, 30% assigned to the contract month represented by the S&P GSCI 1-Month Forward Index, and 15% assigned to the contract month represented by the S&P GSCI 2-Month Forward Index. The 55/30/15 percentage weight split between the assigned commodity contract months are reset daily.

### Value of the Index

On any given day, the value of the index is equal to the total dollar weight of the index divided by a normalizing constant, which assures the continuity of the index over time. The total dollar weight of the index is the total dollar weight of the underlying commodities. The dollar weight of the underlying commodities on any given day is equal to the product of:

- the daily contract reference price,
- the appropriate contract production weight (CPW) and,
- the appropriate “roll weights” needed during a roll period (discussed below).

On any given day, the daily contract reference price used in calculating the dollar weight of the commodity futures contract is the most recent daily contract reference price made available by the relevant trading facility. The daily contract reference price for the most recent prior day will be used if the trading facility is closed or otherwise fails to publish a daily contract reference price on that day. In addition, if the trading facility fails to make a daily contract reference price available or publishes a daily contract reference price that, in the reasonable judgment of S&P Dow Jones Indices reflects manifest error, the relevant calculation will be delayed until the price is made available or corrected. However, if the price is not made available or corrected by 4:00 PM ET, S&P Dow Jones Indices may determine the appropriate daily contract reference price for the applicable futures contract for purposes of the relevant calculation of the value of the index, if it deems such action to be appropriate under the circumstances.

### Calculation of the Index

The value of the index on any S&P GSCI business day is equal to the product of (i) the value of the index on the immediately preceding S&P GSCI business day, (ii) one plus the sum of the contract daily return and the Treasury bill return on the hypothetical investment in the index on the S&P GSCI business day on which the calculation is made, and (iii) one plus the Treasury bill return on the hypothetical investment in the index for each non S&P GSCI business day since the immediately preceding S&P GSCI business day. We use the term S&P GSCI business day to mean each day on which S&P Dow Jones Indices offices in New York City are open for business. The value of the index has been normalized such that its hypothetical level on January 19, 1995 was 100.

In formulaic terms:

$$Index TR_d = IndexTR_{d-1} * (1 + CDR_d + TBR_d) * (1 + TBR_d)^{days}$$

where *days* is the number of non S&P GSCI Business Days since the immediately preceding S&P GSCI Business Day.

## Contract Daily Return

On any given day, the contract daily return is equal to the applicable daily contract reference price on the specific commodity contract multiplied by the CPW and the appropriate “roll weight,” (Total Dollar Weight Obtained) divided by the total dollar weight of the contract on the preceding day (Total Dollar Weight Invested), minus one.

In formulaic terms, the Contract Daily Return is calculated as follows:

$$CDR_d = \frac{TDWO_d}{TDWI_{d-1}} - 1$$

$$TDW_d = \sum_c CPW^c * (CRW1_d^c * DCRP1_d^c + CRW2_d^c * DCRP2_d^c)$$

where:

$c$  = each Designated Contract

$d$  = the S&P GSCI Business Day on which the calculation is made

$CRW1$  = the Contract Roll Weight of the First Nearby Contract Expiration

$CRW2$  = the Contract Roll Weight of the Roll Contract Expiration

$DCRP$  = the Daily Contract Reference Price of each respective Contract Expiration

Exhibit 1, below, identifies the Contracts included in the S&P GSCI Multiple Contract Total Return Index and their respective designated contract roll schedules.

### EXHIBIT 1: CONTRACTS INCLUDED

Contracts Included in the S&P GSCI Multiple Contract Index														
Designated Contract														
Trading Facility	Commodity (Contract)	Ticker <sup>(1)</sup> Clones	Expirations at Month Begin <sup>(2)</sup>											
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
CBT	Chicago Wheat	W-A	H	H	K	K	N	N	U	U	Z	Z	Z	H
	Chicago Wheat	W-B	H	K	K	N	N	U	U	Z	Z	Z	H	H
	Chicago Wheat	W-C	K	K	N	N	U	U	Z	Z	Z	H	H	H
KBT	Kansas Wheat	KW-A	H	H	K	K	N	N	U	U	Z	Z	Z	H
	Kansas Wheat	KW-B	H	K	K	N	N	U	U	Z	Z	Z	H	H
	Kansas Wheat	KW-C	K	K	N	N	U	U	Z	Z	Z	H	H	H
CBT	Corn	C-A	H	H	K	K	N	N	U	U	Z	Z	Z	H
	Corn	C-B	H	K	K	N	N	U	U	Z	Z	Z	H	H
	Corn	C-C	K	K	N	N	U	U	Z	Z	Z	H	H	H
CBT	Soybeans	S-A	H	H	K	K	N	N	X	X	X	X	F	F
	Soybeans	S-B	H	K	K	N	N	X	X	X	X	F	F	H
	Soybeans	S-C	K	K	N	N	X	X	X	X	F	F	H	H
ICE – US	Coffee	KC-A	H	H	K	K	N	N	U	U	Z	Z	Z	H
	Coffee	KC-B	H	K	K	N	N	U	U	Z	Z	Z	H	H
	Coffee	KC-C	K	K	N	N	U	U	Z	Z	Z	H	H	H
ICE – US	Sugar	SB-A	H	H	K	K	N	N	V	V	V	H	H	H
	Sugar	SB-B	H	K	K	N	N	V	V	V	H	H	H	H
	Sugar	SB-C	K	K	N	N	V	V	V	H	H	H	H	H
ICE - US	Cocoa	CC-A	H	H	K	K	N	N	U	U	Z	Z	Z	H
	Cocoa	CC-B	H	K	K	N	N	U	U	Z	Z	Z	H	H
	Cocoa	CC-C	K	K	N	N	U	U	Z	Z	Z	H	H	H

(1) Tickers are Reuters RIC Codes.

(2) Future months included in the index at the beginning of each calendar month.

**EXHIBIT 1: CONTRACTS INCLUDED (Continued)**

Contracts Included in the S&P GSCI Multiple Contract Index														
Designated Contract														
Trading Facility	Commodity (Contract)	Ticker <sup>(1)</sup>	Expirations at Month Begin <sup>(2)</sup>											
			Clones	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
ICE – US	Cotton	CT-A	H	H	K	K	N	N	Z	Z	Z	Z	Z	H
	Cotton	CT-B	H	K	K	N	N	Z	Z	Z	Z	Z	H	H
	Cotton	CT-C	K	K	N	N	Z	Z	Z	Z	Z	H	H	H
CME	Lean Hogs	LH-A	G	J	J	M	M	N	Q	V	V	Z	Z	G
	Lean Hogs	LH-B	J	J	M	M	N	Q	V	V	Z	Z	G	G
	Lean Hogs	LH-C	J	M	M	N	Q	V	V	Z	Z	G	G	J
CME	Live Cattle	LC-A	G	J	J	M	M	N	Q	V	V	Z	Z	G
	Live Cattle	LC-B	J	J	M	M	N	Q	V	V	Z	Z	G	G
	Live Cattle	LC-C	J	M	M	N	Q	V	V	Z	Z	G	G	J
CME	Feeder Cattle	FC-A	H	H	J	K	Q	Q	Q	U	V	X	F	F
	Feeder Cattle	FC-B	H	J	K	Q	Q	Q	U	V	X	F	F	H
	Feeder Cattle	FC-C	J	K	Q	Q	Q	U	V	X	F	F	H	H
NYM / ICE	Crude Oil	CL-A	G	H	J	K	M	N	Q	U	V	X	Z	F
	Crude Oil	CL-B	H	J	K	M	N	Q	U	V	X	Z	F	G
	Crude Oil	CL-C	J	K	M	N	Q	U	V	X	Z	F	G	H
NYM	Heating Oil	HO-A	G	H	J	K	M	N	Q	U	V	X	Z	F
	Heating Oil	HO-B	H	J	K	M	N	Q	U	V	X	Z	F	G
	Heating Oil	HO-C	J	K	M	N	Q	U	V	X	Z	F	G	H
NYM	Gasoline	RB-A	G	H	J	K	M	N	Q	U	V	X	Z	F
	Gasoline	RB-B	H	J	K	M	N	Q	U	V	X	Z	F	G
	Gasoline	RB-C	J	K	M	N	Q	U	V	X	Z	F	G	H
ICE – UK	Brent Crude	LCO-A	H	J	K	M	N	Q	U	V	X	Z	F	G
	Brent Crude	LCO-B	J	K	M	N	Q	U	V	X	Z	F	G	H
	Brent Crude	LCO-C	K	M	N	Q	U	V	X	Z	F	G	H	J
ICE – UK	Gasoil	LGO-A	G	H	J	K	M	N	Q	U	V	X	Z	F
	Gasoil	LGO-B	H	J	K	M	N	Q	U	V	X	Z	F	G
	Gasoil	LGO-C	J	K	M	N	Q	U	V	X	Z	F	G	H
NYM / ICE	Natural Gas	NG-A	G	H	J	K	M	N	Q	U	V	X	Z	F
	Natural Gas	NG-B	H	J	K	M	N	Q	U	V	X	Z	F	G
	Natural Gas	NG-C	J	K	M	N	Q	U	V	X	Z	F	G	H
LME	Aluminum	MAL-A	G	H	J	K	M	N	Q	U	V	X	Z	F
	Aluminum	MAL-B	H	J	K	M	N	Q	U	V	X	Z	F	G
	Aluminum	MAL-C	J	K	M	N	Q	U	V	X	Z	F	G	H
LME	Copper	MCU-A	G	H	J	K	M	N	Q	U	V	X	Z	F
	Copper	MCU-B	H	J	K	M	N	Q	U	V	X	Z	F	G
	Copper	MCU-C	J	K	M	N	Q	U	V	X	Z	F	G	H
LME	Lead	MPB-A	G	H	J	K	M	N	Q	U	V	X	Z	F
	Lead	MPB-B	H	J	K	M	N	Q	U	V	X	Z	F	G
	Lead	MPB-C	J	K	M	N	Q	U	V	X	Z	F	G	H
LME	Nickel	MNI-A	G	H	J	K	M	N	Q	U	V	X	Z	F
	Nickel	MNO-B	H	J	K	M	N	Q	U	V	X	Z	F	G
	Nickel	MNI-C	J	K	M	N	Q	U	V	X	Z	F	G	H

(1) Tickers are Reuters RIC Codes.

(2) Future months included in the index at the beginning of each calendar month.

## EXHIBIT 1: CONTRACTS INCLUDED (Continued)

Contracts Included in the S&P GSCI Multiple Contract Index Designated Contract														
Trading Facility	Commodity (Contract)	Ticker <sup>(1)</sup> Clones	Expirations at Month Begin <sup>(2)</sup>											
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
LME	Zinc	MZN-A	G	H	J	K	M	N	Q	U	V	X	Z	F
	Zinc	MZN-B	H	J	K	M	N	Q	U	V	X	Z	F	G
	Zinc	MZN-C	J	K	M	N	Q	U	V	X	Z	F	G	H
CMX	Gold	GC-A	G	J	J	M	M	Q	Q	Z	Z	Z	Z	G
	Gold	GC-B	J	J	M	M	Q	Q	Z	Z	Z	Z	G	G
	Gold	GC-C	J	M	M	Q	Q	Z	Z	Z	Z	G	G	J
CMX	Silver	SI-A	H	H	K	K	N	N	U	U	Z	Z	Z	H
	Silver	SI-B	H	K	K	N	N	U	U	Z	Z	Z	H	H
	Silver	SI-C	K	K	N	N	U	U	Z	Z	Z	H	H	H

(1) Tickers are Reuters RIC Codes.

(2) Future months included in the index at the beginning of each calendar month.

## EXHIBIT 2: MONTH LETTER CODES

Month Letter Codes			
Month	Letter Code	Month	Letter Code
January	F	July	N
February	G	August	Q
March	H	September	U
April	J	October	V
May	K	November	X
June	M	December	Z

## Currency, Currency Hedged, Inverse, Leveraged, and Risk Control Indices

Additional currency, currency hedged, inverse, leveraged, and risk control versions of the indices may be available. For a list of available indices, please contact Client Services at [index\\_services@spglobal.com](mailto:index_services@spglobal.com).

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

## Tickers

The table below lists headline indices covered by this document. All currency, currency hedged, risk control, and return type versions of the below indices that may exist are also covered by this document. Please contact [index\\_services@spglobal.com](mailto:index_services@spglobal.com) for a complete list of indices covered by this document.

Index	Bloomberg
S&P GSCI Multiple Contract Index	SPMCCI
S&P GSCI Multiple Contract Index ER	SPMCCIP
S&P GSCI Multiple Contract Index TR	SPMCCIT

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