

S&P GSCI Covered Call Select Index *Methodology*

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Introduction

Index Objective and Highlights

The S&P GSCI Covered Call Select Index measures the performance of a covered call strategy on a select number of commodities from the S&P GSCI with the most active options markets. The index currently includes 10 equal-weighted commodities, with a separate covered call index created for each of the included commodities. Each index represents an investment in the rolling active futures contracts and the systematic writing (selling) of out-of-the-money (OTM) calls on the same contract.

For the list of included commodities, please see Appendix A.

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

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

This methodology was created by S&P Dow Jones Indices to achieve the aforementioned objective of measuring the underlying interest of each index governed by this methodology document. Any changes to or deviations from this methodology are made in the sole judgment and discretion of S&P Dow Jones Indices so that the index continues to achieve its objective.

GSCI is a registered trademark of The Goldman Sachs Group, Inc. (“Goldman”) and has been licensed for use by S&P Dow Jones Indices. The S&P GSCI index is not created, owned, endorsed, sponsored, sold or promoted by Goldman or its affiliates and Goldman bears no liability with respect to such index or data related thereto. Goldman provides no guarantee as to the accuracy and/or the completeness of the S&P GSCI index or any data related thereto.

Index Construction

Each of the individual covered call indices consists of a long futures position and a short OTM call position, both of which are rolled based on the S&P GSCI Covered Call Designated Contract Expiration calendar (Table 1 in Appendix A). The futures and options roll over a five-day period, starting on the first business day of each month.

Inclusion Criteria

The S&P GSCI Covered Call Select Index selects its constituents based on the current membership of the S&P GSCI. To be considered for inclusion in the index, annual options volume must be a minimum of 10% of the underlying commodity annual volume. The S&P GSCI annual volume measurement period is from September of the previous year to August of the current year.

Rebalancing

The S&P GSCI Covered Call Select Index and its representative constituents are reviewed on an annual basis along with the parent S&P GSCI during the January roll period. Weights used in the composite index are reset to equal once a year, on the S&P GSCI Business Day prior to the beginning of the January roll period.

Index Calculations

The index calculates based on the total return of a long futures position and a short OTM call. For trading days not occurring during a roll period, the return and the index value calculate as follows:

$$R_t = \frac{F_t - C_t}{F_{t-1} - C_{t-1}} - 1$$

$$I_t = I_{t-1} * (1 + R_t)$$

where:

R_t = Index return on day t

I_t = Index level on day t

F_t = Closing price of the futures contract on day t

F_{t-1} = Closing price of the futures contract on day t-1

C_t = Closing price of the call option on day t

C_{t-1} = Closing price of the call option on day t-1

Contract Roll Weights and Monthly Roll Period

Commodity futures and options are not held to maturity. Instead, the long futures and short options positions roll to the next Designated Contract Expiration Month over a five-day period, with 20% being replaced every business day. The roll period is the first five business days of each month. The option chosen to be rolled into is always based on the same contract month as the futures that are being rolled into. With the substitution of the roll during the 1st through the 5th business days for the S&P GSCI Covered Call Select index, the roll rules and procedures followed are those as specified in the S&P GSCI Methodology.

Determining the Strike of the Call Option

For each commodity included in the S&P GSCI Covered Call Select Index, the strike price of the call option to be rolled into the next Eligible Contract Month is based on the market price level implied by the realized volatility of the respective futures market.

After the close of the last trading day of each rebalancing month, calculate the annualized realized volatility of the past 21 trading days of the respective S&P GSCI Spot Index. Calibrate the 21-day realized (historical) volatility with the number of calendar days left to expiration in the option contract month to be rolled into. Denote this as *vol*. The formulas to calculate the option strikes are as follows:

$$r_i = \frac{S_i}{S_{i-1}} - 1$$

$$\bar{r}_i = \frac{1}{21} \sum_{j=1}^{21} r_{i-j}$$

$$stdev = \sqrt{\frac{1}{21} \sum_{j=1}^{21} (r_{i-j} - \bar{r}_i)^2}$$

$$vol = realized\ volatility * \sqrt{\frac{\#calendar\ days\ to\ expire}{365}}$$

$$realized\ volatility = stdev * \sqrt{252}$$

where:

S_i = Closing price of the S&P GSCI Spot Index on the *i*th trading day

r_i = Daily return of the S&P GSCI Spot Index on the *i*th trading day

\bar{r}_i = The 21-day average daily return of the S&P GSCI Spot Index on the *i*th trading day

The strike of the new call option, K , is 1 *vol* above the close of the futures contract to be rolled into on the last trading day of each month.

$$K = F_t^{new} * (1 + vol)$$

where:

F_t^{new} = Closing price of the futures contract to be rolled into on the last trading day of the month.

If the calculated strike price, K , falls between two option strikes, choose the call option that is immediately above K .

The return of the portfolio and the index value calculate as follows:

$$R_t = \frac{W_{t-1}^{old} * (F_t^{old} - C_t^{old}) + W_{t-1}^{new} * (W_{t-1}^{new} - C_t^{new})}{W_{t-1}^{old} * (F_{t-1}^{old} - C_{t-1}^{old}) + W_{t-1}^{new} * (F_{t-1}^{new} - C_{t-1}^{new})} - 1$$

$$I_t = I_{t-1} * (1 + R_t)$$

where:

W_t^{new} = Weight of the new futures / options

F_t^{new} = Closing price of the new futures

C_t^{new} = Closing price of the new call option

W_t^{old} = Weight of the old futures / options

F_t^{old} = Closing price of the old futures

C_t^{old} = Closing price of the old call option

Total Return Index Calculation

Calculate the composite index using the total returns of the individual covered call indices, weighted by their respective daily weights. Initially the 10 commodities are allocated equal weights and are reset annually during the January roll period. The return and the index value of the covered call indices calculate as follows:

$$PR_t = \sum_c (R_t^c * DW_t^c)$$

$$PI_t = PI_{t-1}(1 + PR_t)$$

where:

PR_t = Total Return of the index on day t

PI_t = Index on day t

R_t^c = Return of Commodity c on day t

DW_t^c = Daily Weight of Commodity c on day t

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 the [S&P DJI Methodology & Regulatory Status Database](#).

For information on various index calculations, please refer to the Other Derived Indices section of the S&P Dow Jones Indices' Commodity Index Mathematics Methodology.

For the inputs necessary to calculate certain types of indices, including decrement, dynamic hedged, fair value, and risk control indices, please refer to the Parameters documents available at www.spglobal.com/spdji/.

Index Governance

Index Committee

An S&P Dow Jones Indices' Index Committee maintains the indices. The Committee meets regularly. At each meeting, the Committee reviews matters that may affect index constituents, statistics comparing the composition of the index to the market, and any significant market events. In addition, the Index Committee may revise index policy covering rules for selecting constituents, treatment of dividends, share counts or other matters.

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

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

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

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

Index Policy

Announcements

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

Announcements of the new call strike price to be rolled into are made following the close of business on the last business day of each month.

The index calculates daily when the various commodity exchanges are open for official trading and official settlement prices are provided, excluding holidays and weekends.

In situations where an exchange is forced to close early due to unforeseen events, such as computer or electric power failures, weather conditions or other events, S&P Dow Jones Indices calculates the value of the index based on most recent option price published. If an exchange fails to open due to unforeseen circumstances, S&P Dow Jones Indices may determine not to publish the index for that day.

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 document.

Rebalancing

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

Contact Information

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

Index Dissemination

Index levels are available through S&P Dow Jones Indices' Web site at www.spglobal.com/spdji/, major quote vendors, 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 Code	Index Name	Launch Date	BBG - Real Time	BBG	RIC	Base Date	Base Value
SPCLCI	S&P GSCI Covered Call Select Index	10/08/2010	--	SPCLCI	--	02/04/2003	100
SPCLCIP	S&P GSCI Covered Call Select Index ER	10/08/2010	--	SPCLCIP	--	02/04/2003	100
SPCLCITR	S&P GSCI Covered Call Select Index TR	10/08/2010	--	SPCLCITR	--	02/04/2003	100
SPCLWH	S&P GSCI Covered Call Chicago Wheat Index	10/08/2010	--	SPCLWH	--	02/04/2003	100
SPCLWHP	S&P GSCI Covered Call Chicago Wheat Index ER	10/08/2010	--	SPCLWHP	--	02/04/2003	100
SPCLWHTR	S&P GSCI Covered Call Chicago Wheat Index TR	10/08/2010	--	SPCLWHTR	--	02/04/2003	100
SPCLCN	S&P GSCI Covered Call Corn Index	10/08/2010	--	SPCLCN	--	02/04/2003	100
SPCLCNP	S&P GSCI Covered Call Corn Index ER	10/08/2010	--	SPCLCNP	--	02/04/2003	100
SPCLCNTR	S&P GSCI Covered Call Corn Index TR	10/08/2010	--	SPCLCNTR	--	02/04/2003	100
SPCLSO	S&P GSCI Covered Call Soybeans Index	10/08/2010	--	SPCLSO	--	02/04/2003	100
SPCLSOP	S&P GSCI Covered Call Soybeans Index ER	10/08/2010	--	SPCLSOP	--	02/04/2003	100
SPCLSOTR	S&P GSCI Covered Call Soybeans Index TR	10/08/2010	--	SPCLSOTR	--	02/04/2003	100
SPCLSB	S&P GSCI Covered Call Sugar Index	10/08/2010	--	SPCLSB	--	02/04/2003	100
SPCLSBP	S&P GSCI Covered Call Sugar Index ER	10/08/2010	--	SPCLSBP	--	02/04/2003	100
SPCLSPTR	S&P GSCI Covered Call Sugar Index TR	10/08/2010	--	SPCLSPTR	--	02/04/2003	100
SPCLCL	S&P GSCI Covered Call Crude Oil Index	07/10/2009	--	SPCLCL	--	02/04/2003	100
SPCLCLP	S&P GSCI Covered Call Crude Oil Index ER	07/10/2009	--	SPCLCLP	--	02/04/2003	100
SPCLCLTR	S&P GSCI Covered Call Crude Oil Index TR	07/10/2009	--	SPCLCLTR	--	02/04/2003	100
SPCLNG	S&P GSCI Covered Call Natural Gas Index	10/08/2010	--	SPCLNG	--	02/04/2003	100
SPCLNGP	S&P GSCI Covered Call Natural Gas Index ER	10/08/2010	--	SPCLNGP	--	02/04/2003	100
SPCLNGTR	S&P GSCI Covered Call Natural Gas Index TR	10/08/2010	--	SPCLNGTR	--	02/04/2003	100
SPCLGC	S&P GSCI Covered Call Gold Index	10/08/2010	--	SPCLGC	--	02/04/2003	100
SPCLGCP	S&P GSCI Covered Call Gold Index ER	10/08/2010	--	SPCLGCP	--	02/04/2003	100
SPCLGCTR	S&P GSCI Covered Call Gold Index TR	10/08/2010	--	SPCLGCTR	--	02/04/2003	100
SPCLSI	S&P GSCI Covered Call Silver Index	10/08/2010	--	SPCLSI	--	02/04/2003	100
SPCLSIP	S&P GSCI Covered Call Silver Index ER	10/08/2010	--	SPCLSIP	--	02/04/2003	100
SPCLSITR	S&P GSCI Covered Call Silver Index TR	10/08/2010	--	SPCLSITR	--	02/04/2003	100
SPCLKC	S&P GSCI Covered Call Coffee Index	10/08/2010	--	SPCLKC	--	02/04/2003	100
SPCLKCP	S&P GSCI Covered Call Coffee Index ER	10/08/2010	--	SPCLKCP	--	02/04/2003	100
SPCLKCTR	S&P GSCI Covered Call Coffee Index TR	10/08/2010	--	SPCLKCTR	--	02/04/2003	100
SPCLCT	S&P GSCI Covered Call Cotton Index	10/08/2010	--	SPCLCT	--	02/04/2003	100
SPCLCTP	S&P GSCI Covered Call Cotton Index ER	10/08/2010	--	SPCLCTP	--	02/04/2003	100
SPCLCTTR	S&P GSCI Covered Call Cotton Index TR	10/08/2010	--	SPCLCTTR	--	02/04/2003	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.

Web site

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

Appendix A: Contracts Included in the S&P GSCI Covered Call

Table 1: Contracts Included in the S&P GSCI Covered Call Select Index

Trading Facility	Commodity	Ticker	Designated Contract											
			Expirations at Month Begin											
			1	2	3	4	5	6	7	8	9	10	11	12
CBOT	Chicago Wheat	W	H	H	K	K	N	N	U	U	Z	Z	Z	H
CBOT	Corn	C	H	H	K	K	N	N	U	U	Z	Z	Z	H
CBOT	Soybeans	S	H	H	K	K	N	N	X	X	X	X	F	F
ICE - US	Coffee	KC	H	H	K	K	N	N	U	U	Z	Z	Z	H
ICE - US	Sugar	SB	H	H	K	K	N	N	V	V	V	H	H	H
ICE - US	Cotton	CT	H	H	K	K	N	N	Z	Z	Z	Z	Z	H
NYMEX	WTI Crude Oil	CL	G	H	J	K	M	N	Q	U	V	X	Z	F
NYMEX	Natural Gas	NG	G	H	J	K	M	N	Q	U	V	X	Z	F
COMEX	Gold	GC	G	J	J	M	M	Q	Q	Z	Z	Z	Z	G
COMEX	Silver	SI	H	H	K	K	N	N	U	U	Z	Z	Z	H

Table 2: Month Letter Codes

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

Appendix B: ESG Disclosures

EXPLANATION OF HOW ENVIRONMENTAL, SOCIAL & GOVERNANCE (ESG) FACTORS ARE REFLECTED IN THE KEY ELEMENTS OF THE BENCHMARK METHODOLOGY¹		
1.	Name of the benchmark administrator.	S&P Dow Jones Indices LLC.
2.	Underlying asset class of the ESG benchmark.²	N/A
3.	Name of the S&P Dow Jones Indices benchmark or family of benchmarks.	S&P DJI Options Indices Benchmark Statement
4.	Do any of the indices maintained by this methodology take into account ESG factors?	No
Appendix latest update:		January 2021
Appendix first publication:		January 2021

¹ 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].

² The 'underlying assets' are defined in European Union Commission Delegated Regulation (EU) 2020/1816 supplementing Regulation (EU) 2016/1011 of the European Parliament and of the Council as regards the explanation in the benchmark statement of how environmental, social and governance factors are reflected in each benchmark provided and published.

Disclaimer

Performance Disclosure/Back-Tested Data

Where applicable, S&P Dow Jones Indices and its index-related affiliates (“S&P DJI”) defines various dates to assist our clients by providing transparency. The First Value Date is the first day for which there is a calculated value (either live or back-tested) for a given index. The Base Date is the date at which the index is set to a fixed value for calculation purposes. The Launch Date designates the date when the values of an index are first considered live: index values provided for any date or time period prior to the index’s Launch Date are considered back-tested. S&P DJI defines the Launch Date as the date by which the values of an index are known to have been released to the public, for example via the company’s public website or its data feed to external parties. For Dow Jones-branded indices introduced prior to May 31, 2013, the Launch Date (which prior to May 31, 2013, was termed “Date of introduction”) is set at a date upon which no further changes were permitted to be made to the index methodology, but that may have been prior to the Index’s public release date.

Please refer to the methodology for the Index for more details about the index, including the manner in which it is rebalanced, the timing of such rebalancing, criteria for additions and deletions, as well as all index calculations.

Information presented prior to an index’s launch date is hypothetical back-tested performance, not actual performance, and is based on the index methodology in effect on the launch date. However, when creating back-tested history for periods of market anomalies or other periods that do not reflect the general current market environment, index methodology rules may be relaxed to capture a large enough universe of securities to simulate the target market the index is designed to measure or strategy the index is designed to capture. For example, market capitalization and liquidity thresholds may be reduced. In addition, forks have not been factored into the back-test data with respect to the S&P Cryptocurrency Indices. For the S&P Cryptocurrency Top 5 & 10 Equal Weight Indices, the custody element of the methodology was not considered; the back-test history is based on the index constituents that meet the custody element as of the Launch Date. Also, the treatment of corporate actions in back-tested performance may differ from treatment for live indices due to limitations in replicating index management decisions. Back-tested performance reflects application of an index methodology and selection of index constituents with the benefit of hindsight and knowledge of factors that may have positively affected its performance, cannot account for all financial risk that may affect results and may be considered to reflect survivor/look ahead bias. Actual returns may differ significantly from, and be lower than, back-tested returns. Past performance is not an indication or guarantee of future results.

Typically, when S&P DJI creates back-tested index data, S&P DJI uses actual historical constituent-level data (e.g., historical price, market capitalization, and corporate action data) in its calculations. As ESG investing is still in early stages of development, certain datapoints used to calculate certain ESG indices may not be available for the entire desired period of back-tested history. The same data availability issue could be true for other indices as well. In cases when actual data is not available for all relevant historical periods, S&P DJI may employ a process of using “Backward Data Assumption” (or pulling back) of ESG data for the calculation of back-tested historical performance. “Backward Data Assumption” is a process that applies the earliest actual live data point available for an index constituent company to all prior historical instances in the index performance. For example, Backward Data Assumption inherently assumes that companies currently not involved in a specific business activity (also known as “product involvement”) were never involved historically and similarly also assumes that companies currently involved in a specific business activity were involved historically too. The Backward Data Assumption allows the hypothetical back-test to be extended over more historical years than would be feasible using only actual data. For more information on “Backward Data Assumption” please refer to the FAQ. The methodology and factsheets of any index that employs backward assumption in the back-tested history

will explicitly state so. The methodology will include an Appendix with a table setting forth the specific data points and relevant time period for which backward projected data was used. Index returns shown do not represent the results of actual trading of investable assets/securities. S&P DJI maintains the index and calculates the index levels and performance shown or discussed but does not manage any assets.

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

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