

# **S&P GSCI Dynamic Roll** *Methodology*

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# Table of Contents

Introduction	2
<b>Index Objective</b>	<b>2</b>
<b>Highlights</b>	<b>2</b>
<b>The S&amp;P GSCI Dynamic Roll Methodology</b>	<b>2</b>
<b>Supporting Documents</b>	<b>3</b>
Dynamic Roll Selection Process	4
<b>Process</b>	<b>4</b>
<b>Dynamic Roll Selection for a Given Commodity, C</b>	<b>4</b>
<b>Monthly Dynamic Roll Schedule</b>	<b>6</b>
Index Maintenance	16
<b>Monthly Roll Determination</b>	<b>16</b>
<b>Annual Contract Eligibility Review</b>	<b>16</b>
<b>Currency of Calculation and Additional Index Return Series</b>	<b>17</b>
Index Governance	18
<b>Index Committee</b>	<b>18</b>
Index Policy	19
<b>Announcements</b>	<b>19</b>
<b>Contact Information</b>	<b>19</b>
Index Dissemination	20
<b>Tickers</b>	<b>20</b>
<b>Index Data</b>	<b>21</b>
<b>Web site</b>	<b>21</b>
Appendix A – Calculation of the S&P GSCI Dynamic Roll Select	22
Appendix B – Calculation of the S&P GSCI Dynamic Roll Alpha Light Energy	23
Appendix C – Calculation of the S&P GSCI Dynamic Roll 12-Month Petroleum Index	25
Appendix D – Glossary	27
Appendix E – Methodology Changes	28
Appendix F – EU Required ESG Disclosures	29
<b>EU Required ESG Disclosures</b>	<b>29</b>
Disclaimer	30

# Introduction

## Index Objective

The S&P GSCI® Dynamic Roll (S&P GSCI DR) is a commodity index that measures the performance of the same underlying commodities as the S&P GSCI. The index utilizes a more flexible monthly futures contract rolling strategy, to determine the new futures contract months for the underlying commodities, than the liquidity focused S&P GSCI.

At each Roll Determination Date, the Dynamic Roll Algorithm (DRA) measures the current shape of the forward curves of the S&P GSCI DR designated eligible futures contract prices, for each commodity listed in the respective Dynamic Roll Matrices. The contract rolling strategy is based on the implied roll yields with specific Rank Orders assigned to each of the S&P GSCI Commodities. See Dynamic Roll Selection Process section for further details.

*For information on the S&P GSCI, please refer to the S&P GSCI Methodology, available at [www.spdji.com](http://www.spdji.com).*

*For a list of defined terms used throughout this document, please refer to Appendix D.*

## Highlights

The S&P GSCI roll schedule is limited to the most liquid nearby contract months, whereas the S&P GSCI Dynamic Roll Matrix use a systematic methodology to search for the contract months with the largest roll yield for each commodity along the curve to roll into, subject to buffers and to using only the most liquid of all available contracts of a given commodity.

When the futures curve for a given commodity is in a general state of contango, the S&P GSCI Dynamic Roll methodology will generally use futures contracts months that are further out on the futures curve, with the intention of minimizing the effects of negative roll yields. When the futures curve for a given commodity is in a general state of backwardation, the nature of the S&P GSCI Dynamic Roll methodology, the Index is to generally use nearby futures contracts.

## The S&P GSCI Dynamic Roll Methodology

This methodology uses various terms and definitions from the S&P GSCI Methodology, henceforth referred to as the S&P GSCI 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:

<b>Supporting Document</b>	<b>URL</b>
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 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.

# Dynamic Roll Selection Process

## Process

Based on the closing values on the Roll Determination Date, the  $DRA(k)$  algorithms are run for each of the commodities included in the S&P GSCI, based on the respective Rank Orders of the commodities. The Dynamic Roll selections of all the S&P GSCI commodities are assembled into the Monthly Dynamic Roll Schedule (see below). The Monthly Dynamic Roll Schedule is applied to the S&P GSCI Dynamic Roll calculations at the beginning of the S&P GSCI Roll Period.

For a given S&P GSCI Commodity, the roll schedule follows the S&P GSCI roll schedule; i.e., there is no need to perform the monthly Dynamic Roll Selection Process for those commodities on the months in which the S&P GSCI roll schedule uses the same contracts as in the prior month.

## Dynamic Roll Selection for a Given Commodity, C

**Create a selected forward curve based on the Dynamic Roll Matrix.** For any given commodity, C, each component of its Dynamic Roll Matrix is:

$C(i,j)$  = The  $j^{\text{th}}$  futures contract month for month  $i$

Define:

$M[C(i,j-1)]$  = The calendar month of the  $(j-1)^{\text{th}}$  contract for month  $i$ ,

$M[C(i,j)]$  = The calendar month of the  $j^{\text{th}}$  contract for month  $i$ , and

Interval  $d$  =  $M[C(i,j)] - M[C(i,j-1)]$

Thus, the selected forward curve, for month  $i$ , can be viewed as a series of eligible futures contract prices:

$C(i,1), C(i,2), C(i,3), \dots$  up to  $C(i,j)$ , where  $j$  is the number of eligible contracts in month  $i$ .

**Calculate the implied roll yield of each consecutive pair of contracts on the selected forward curve.** The implied roll yield of the consecutive contracts  $C(i,j-1)$  and  $C(i,j)$  is computed as follows:

$$\text{Implied roll yield}_{C(i,j)} = \left[ \frac{C(i, j-1) - C(i, j)}{C(i, j) * d} \right]$$

**Rank the Contract Months from best to worst, based on their implied roll yields.** The Contract Months are ranked based on their implied roll yields, with the best candidate for the new Rolled-in Contract Month being that having the largest implied roll yield, and the next best candidate being that having the second largest implied roll yield, and so on:

$$Best(1) = C(i,f),$$

where:

$$Implied\ roll\ yield\_C(i,f) = \text{Largest}\{Implied\ roll\ yield\_C(i,j), j=1, \dots, \text{number of eligible contracts in month } i\},$$

$$Best(2) = C(i,g),$$

where:

$$Implied\ roll\ yield\_C(i,g) = \text{Second largest } (Implied\ roll\ yield\_C(i,j), j=1, \dots, \text{number of eligible contracts in month } i)$$

and so on.

**Create the Optimum Set of Contract Months based on the Rank Order of the Commodity.** Select the first k Contract Months based on their rankings, where k is the Rank Order of the given commodity, and create the Optimum Set of Contracts for that commodity.

$$\{Best(1), Best(2), \dots, Best(k)\}$$

**Apply the Dynamic Roll Parity Principle.** For a given commodity, if the Rolled-out Contract is included in the Optimum Set of Contract Months, continue to use the same contract month as the Rolled-in Contract for the current month; otherwise, choose the first ranked contract month in the Optimum Set of Contract Months to be the new Rolled-in Contract for the current month.

## Monthly Dynamic Roll Schedule

**Assemble the New Rolled-in Contract Months.** S&P Dow Jones Indices creates a Monthly Dynamic Roll Schedule of the S&P GSCI DR by assembling all the new Rolled-in Contract Months for all the S&P GSCI Commodities. This set of Contract Months is effective for the upcoming monthly Roll Period, from the fifth (5<sup>th</sup>) business day to the ninth (9<sup>th</sup>) business day.

**The Rank Orders of the S&P GSCI Commodities.** As applied in the calculation of the S&P GSCI Dynamic Roll, the Rank Orders of the S&P GSCI Commodities are given as follows:

Commodity	Code	Rank Order
Chicago Wheat	W	2
Kansas Wheat	KW	2
Corn	C	1
Soybeans	S	1
Coffee	KC	1
Sugar	SB	1
Cocoa	CC	1
Cotton	CT	1
Lean Hogs	LH	1
Live Cattle	LC	1
Feeder Cattle	FC	1
WTI Crude Oil	CL	3
Heating Oil	HO	2
RBOB Gasoline	RB	2
Brent Crude Oil	LCO	2
Gas Oil	LGO	3
Natural Gas	NG	1
Aluminum	MAL	2
Copper	MCU	3
Nickel	MNI	2
Lead	MPB	1
Zinc	MZN	2
Gold	GC	1
Silver	SI	2

Rank order descriptions are as follows:

- Rank Order of 1 – Use the DRA(1) Algorithm, with the Optimum Set of Contracts consisting of only the top one contract
- Rank Order of 2 – Use the DRA(2) Algorithm, with the Optimum Set of Contracts consisting of the top two ranked contracts
- Rank Order of 3 – Use the DRA(3) Algorithm, with the Optimum Set of Contracts consisting of the top three ranked contracts
- Rank Order of 4 – Use the DRA(4) Algorithm, with the Optimum Set of Contracts consisting of the top four ranked contracts

For example, Corn has a Rank Order of 1. If the Rolled-out Contract for corn is not the same as the top ranked contract, use the top-ranked contract in the Optimum Set of Contracts as the new Rolled-In Contract Month. Otherwise, if the Rolled-Out Contract Month is the same as the top ranked contract, then the same Rolled-out Contract Month will continue to be used as the new Rolled-in Contract Month.

In the case of Crude Oil, which has a Rank Order of 3, this means if the Rolled-out Contract is not one of the top three Contract Months in the Optimum Set of Contracts for Crude Oil, the top ranked Contract

Month is selected as the new Rolled-in Contract Month. Otherwise, if the Rolled-out Contract is among the top three Contract Months in the Optimum Set of Contracts, then the same Rolled-Out Contract Month will continue to be used as the new Rolled-In Contract Month.

**The Dynamic Roll Matrices of the S&P GSCI Commodities.** The Dynamic Roll Matrix of a given commodity is a listing of all eligible contract months for that commodity, on a month by month basis. The eligible contract months are determined based on the liquidity profile measured by open interest and volume, which are verified annually.

The following tables represent the Dynamic Roll Matrices for the current year, with column headers as follows: The column “0” is the “front futures” contract. The eligible contracts for each month are listed from column “1” onward. Contract months listed under “1” are the same as the S&P GSCI Roll Schedule for that commodity. Rows excluding contract months indicate non-roll months.

CL	Month	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Jan	1	G0	H0	J0	K0	M0	N0	Q0	U0	V0	X0	Z0	F1	G1	H1	M1	Z1	M2	Z2				
Feb	2	H0	J0	K0	M0	N0	Q0	U0	V0	X0	Z0	F1	G1	H1	M1	U1	Z1	M2	Z2				
Mar	3	J0	K0	M0	N0	Q0	U0	V0	X0	Z0	F1	G1	H1	J1	M1	U1	Z1	M2	Z2				
Apr	4	K0	M0	N0	Q0	U0	V0	X0	Z0	F1	G1	H1	J1	K1	M1	N1	U1	Z1	M2	Z2			
May	5	M0	N0	Q0	U0	V0	X0	Z0	F1	G1	H1	J1	K1	M1	N1	Q1	U1	Z1	M2	Z2	Z3		
Jun	6	N0	Q0	U0	V0	X0	Z0	F1	G1	H1	J1	K1	M1	N1	Q1	U1	V1	X1	Z1	M2	Z2	Z3	
Jul	7	Q0	U0	V0	X0	Z0	F1	G1	H1	J1	K1	M1	N1	Q1	U1	V1	X1	Z1	M2	Z2	Z3		
Aug	8	U0	V0	X0	Z0	F1	G1	H1	J1	K1	M1	N1	Q1	U1	V1	X1	Z1	M2	Z2	Z3			
Sep	9	V0	X0	Z0	F1	G1	H1	J1	K1	M1	N1	Q1	U1	V1	X1	Z1	F2	H2	M2	Z2	Z3		
Oct	10	X0	Z0	F1	G1	H1	J1	K1	M1	N1	Q1	U1	V1	X1	Z1	F2	H2	M2	Z2	Z3			
Nov	11	Z0	F1	G1	H1	J1	K1	M1	N1	Q1	U1	V1	X1	Z1	F2	H2	M2	Z2	Z3				
Dec	12	F1	G1	H1	J1	K1	M1	N1	Q1	U1	V1	X1	Z1	F2	G2	H2	M2	Z2	M3	Z3			

LCO	Month	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Jan	1	H0	J0	K0	M0	N0	Q0	U0	V0	X0	Z0	F1	G1	H1	M1	Z1	M2	Z2	Z3				
Feb	2	J0	K0	M0	N0	Q0	U0	V0	X0	Z0	F1	G1	H1	J1	M1	Z1	M2	Z2	Z3				
Mar	3	K0	M0	N0	Q0	U0	V0	X0	Z0	F1	G1	H1	J1	M1	U1	Z1	M2	Z2	Z3				
Apr	4	M0	N0	Q0	U0	V0	X0	Z0	F1	G1	H1	J1	K1	M1	N1	Q1	U1	X1	Z1	M2	Z2	Z3	
May	5	N0	Q0	U0	V0	X0	Z0	F1	G1	H1	J1	K1	M1	N1	Q1	U1	V1	X1	Z1	M2	Z2	Z3	
Jun	6	Q0	U0	V0	X0	Z0	F1	G1	H1	J1	K1	M1	N1	Q1	U1	V1	X1	Z1	M2	Z2	Z3		
Jul	7	U0	V0	X0	Z0	F1	G1	H1	J1	K1	M1	N1	Q1	U1	V1	X1	Z1	M2	Z2	Z3			
Aug	8	V0	X0	Z0	F1	G1	H1	J1	K1	M1	N1	Q1	U1	V1	X1	Z1	F2	M2	Z2	Z3			
Sep	9	X0	Z0	F1	G1	H1	J1	K1	M1	N1	Q1	U1	V1	X1	Z1	F2	G2	M2	Z2	Z3			
Oct	10	Z0	F1	G1	H1	J1	K1	M1	N1	Q1	U1	V1	X1	Z1	F2	G2	H2	M2	Z2	Z3			
Nov	11	F1	G1	H1	J1	K1	M1	N1	Q1	U1	V1	X1	Z1	F2	G2	H2	M2	Z2	Z3				
Dec	12	G1	H1	J1	K1	M1	N1	Q1	U1	V1	X1	Z1	F2	G2	H2	M2	Z2	Z3					

NG	Month	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Jan	1	G0	H0	J0	K0	M0	N0	Q0	U0	V0	X0	Z0	F1	H1	J1								
Feb	2	H0	J0	K0	M0	N0	Q0	U0	V0	X0	Z0	F1	H1	J1									
Mar	3	J0	K0	M0	N0	Q0	U0	V0	X0	Z0	F1	H1	J1										
Apr	4	K0	M0	N0	Q0	U0	V0	X0	Z0	F1	G1	H1	J1										
May	5	M0	N0	Q0	U0	V0	X0	Z0	F1	G1	H1	J1											
Jun	6	N0	Q0	U0	V0	X0	Z0	F1	G1	H1	J1	K1											
Jul	7	Q0	U0	V0	X0	Z0	F1	G1	H1	J1	K1	V1											
Aug	8	U0	V0	X0	Z0	F1	G1	H1	J1	K1	V1												
Sep	9	V0	X0	Z0	F1	G1	H1	J1	K1	M1	V1												
Oct	10	X0	Z0	F1	G1	H1	J1	K1	M1	N1	V1	Z1											
Nov	11	Z0	F1	G1	H1	J1	K1	M1	N1	V1	Z1												
Dec	12	F1	G1	H1	J1	K1	M1	N1	Q1	V1	Z1	F2											

LGO	Month	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Jan	1	G0	H0	J0	K0	M0	N0	Q0	U0	V0	Z0	M1	Z1										
Feb	2	H0	J0	K0	M0	N0	Q0	U0	V0	X0	Z0	F1	M1	Z1									
Mar	3	J0	K0	M0	N0	Q0	U0	V0	X0	Z0	F1	G1	M1	Z1									
Apr	4	K0	M0	N0	Q0	U0	V0	X0	Z0	F1	G1	H1	M1	Z1									
May	5	M0	N0	Q0	U0	V0	X0	Z0	F1	G1	H1	M1	Z1	Z2									
Jun	6	N0	Q0	U0	V0	X0	Z0	F1	G1	H1	M1	Z1	Z2										
Jul	7	Q0	U0	V0	X0	Z0	F1	G1	H1	K1	M1	Z1	Z2										
Aug	8	U0	V0	X0	Z0	F1	G1	H1	J1	K1	M1	Z1	Z2										
Sep	9	V0	X0	Z0	F1	G1	H1	J1	K1	M1	Z1	Z2											
Oct	10	X0	Z0	F1	G1	H1	J1	K1	M1	N1	U1	Z1	Z2										
Nov	11	Z0	F1	G1	H1	J1	K1	M1	N1	U1	V1	Z1	F2	Z2									
Dec	12	F1	G1	H1	J1	K1	M1	N1	Q1	U1	V1	Z1	F2	M2	Z2								

HO	Month	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Jan	1	G0	H0	J0	K0	M0	N0	U0	Z0														
Feb	2	H0	J0	K0	M0	N0	Q0	U0	Z0														
Mar	3	J0	K0	M0	N0	Q0	U0	V0	Z0														
Apr	4	K0	M0	N0	Q0	U0	V0	X0	Z0														
May	5	M0	N0	Q0	U0	V0	X0	Z0	F1	M1													
Jun	6	N0	Q0	U0	V0	X0	Z0	F1	M1														
Jul	7	Q0	U0	V0	X0	Z0	F1	G1	H1	M1	Z1												
Aug	8	U0	V0	X0	Z0	F1	G1	H1	M1	Z1													
Sep	9	V0	X0	Z0	F1	G1	H1	J1	M1	Z1													
Oct	10	X0	Z0	F1	G1	H1	J1	K1	M1	Z1													
Nov	11	Z0	F1	G1	H1	J1	K1	M1	Z1														
Dec	12	F1	G1	H1	J1	K1	M1	Z1															

RB	Month	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Jan	1	G0	H0	J0	K0	M0	N0	U0	Z0														
Feb	2	H0	J0	K0	M0	N0	Q0	U0	Z0														
Mar	3	J0	K0	M0	N0	Q0	U0	Z0															
Apr	4	K0	M0	N0	Q0	U0	V0	X0	Z0														
May	5	M0	N0	Q0	U0	V0	X0	Z0															
Jun	6	N0	Q0	U0	V0	X0	Z0	F1															
Jul	7	Q0	U0	V0	X0	Z0	F1	H1															
Aug	8	U0	V0	X0	Z0	F1	H1	M1															
Sep	9	V0	X0	Z0	F1	G1	H1	J1	M1														
Oct	10	X0	Z0	F1	G1	H1	J1	K1	M1														
Nov	11	Z0	F1	G1	H1	J1	K1	M1															
Dec	12	F1	G1	H1	J1	K1	M1	U1	Z1														

GC	Month	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Jan	1	G0	J0	M0	Q0	Z0																	
Feb	2																						
Mar	3	J0	M0	Q0	V0	Z0	G1																
Apr	4																						
May	5	M0	Q0	V0	Z0	G1																	
Jun	6																						
Jul	7	Q0	Z0	G1	J1	M1																	
Aug	8																						
Sep	9																						
Oct	10																						
Nov	11	Z0	G1	J1	M1	Q1	Z1																
Dec	12																						

SI	Month	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Jan	1																						
Feb	2	H0	K0	N0	Z0																		
Mar	3																						
Apr	4	K0	N0	U0	Z0																		
May	5																						
Jun	6	N0	U0	Z0																			
Jul	7																						
Aug	8	U0	Z0	H1																			
Sep	9																						
Oct	10																						
Nov	11	Z0	H1	K1																			
Dec	12																						

MAL	Month	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Jan	1	G0	H0	J0	K0	M0	N0	U0	Z0	Z1													
Feb	2	H0	J0	K0	M0	N0	Q0	U0	Z0	Z1													
Mar	3	J0	K0	M0	N0	Q0	U0	V0	Z0	Z1													
Apr	4	K0	M0	N0	Q0	U0	V0	X0	Z0	F1	Z1												
May	5	M0	N0	Q0	U0	V0	X0	Z0	F1	M1	Z1												
Jun	6	N0	Q0	U0	V0	X0	Z0	F1	H1	M1	Z1												
Jul	7	Q0	U0	V0	X0	Z0	F1	H1	M1	Z1													
Aug	8	U0	V0	X0	Z0	F1	H1	M1	Z1														
Sep	9	V0	X0	Z0	F1	G1	H1	J1	K1	M1	Z1	Z2											
Oct	10	X0	Z0	F1	G1	H1	J1	K1	M1	Z1	Z2												
Nov	11	Z0	F1	G1	H1	J1	K1	M1	Z1	Z2													
Dec	12	F1	G1	H1	J1	K1	M1	N1	Z1	Z2													

MPB	Month	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Jan	1	G0	H0																				
Feb	2	H0	J0																				
Mar	3	J0	K0																				
Apr	4	K0	M0																				
May	5	M0	N0																				
Jun	6	N0	Q0																				
Jul	7	Q0	U0																				
Aug	8	U0	V0																				
Sep	9	V0	X0																				
Oct	10	X0	Z0																				
Nov	11	Z0	F1																				
Dec	12	F1	G1	H1																			

MNI	Month	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Jan	1	G0	H0	J0	K0	M0	Z0																
Feb	2	H0	J0	K0	M0	N0	Z0																
Mar	3	J0	K0	M0	N0	U0	Z0																
Apr	4	K0	M0	N0	Q0	U0	Z0																
May	5	M0	N0	Q0	U0	Z0																	
Jun	6	N0	Q0	U0	X0	Z0																	
Jul	7	Q0	U0	V0	X0	Z0	F1																
Aug	8	U0	V0	X0	Z0	F1																	
Sep	9	V0	X0	Z0	F1	Z1																	
Oct	10	X0	Z0	F1	H1	Z1																	
Nov	11	Z0	F1	G1	H1	Z1																	
Dec	12	F1	G1	H1	J1	K1	Z1																

MCU	Month	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Jan	1	G0	H0	J0	K0	M0	N0	U0	Z0	Z1													
Feb	2	H0	J0	K0	M0	N0	Q0	U0	Z0	Z1													
Mar	3	J0	K0	M0	N0	Q0	U0	V0	Z0	Z1													
Apr	4	K0	M0	N0	Q0	U0	V0	Z0	H1	Z1													
May	5	M0	N0	Q0	U0	V0	X0	Z0	H1	Z1													
Jun	6	N0	Q0	U0	V0	X0	Z0	F1	H1	Z1													
Jul	7	Q0	U0	V0	X0	Z0	F1	H1	Z1														
Aug	8	U0	V0	X0	Z0	F1	G1	H1	M1	Z1	Z2												
Sep	9	V0	X0	Z0	F1	G1	H1	M1	Z1	Z2													
Oct	10	X0	Z0	F1	G1	H1	J1	K1	M1	Z1	Z2												
Nov	11	Z0	F1	G1	H1	J1	K1	M1	Z1	Z2													
Dec	12	F1	G1	H1	J1	K1	M1	N1	U1	Z1	Z2												

MZN	Month	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Jan	1	G0	H0	J0	K0	M0	Z0																
Feb	2	H0	J0	K0	M0	N0	Z0																
Mar	3	J0	K0	M0	N0	U0	Z0																
Apr	4	K0	M0	N0	Q0	U0	Z0																
May	5	M0	N0	Q0	U0	Z0																	
Jun	6	N0	Q0	U0	X0	Z0																	
Jul	7	Q0	U0	V0	X0	Z0	F1																
Aug	8	U0	V0	X0	Z0	F1																	
Sep	9	V0	X0	Z0	F1	H1																	
Oct	10	X0	Z0	F1	G1	H1																	
Nov	11	Z0	F1	G1	H1																		
Dec	12	F1	G1	H1																			

CC	Month	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Jan	1																						
Feb	2	H0	K0	N0	U0	Z0																	
Mar	3																						
Apr	4	K0	N0	U0	Z0																		
May	5																						
Jun	6	N0	U0	Z0																			
Jul	7																						
Aug	8	U0	Z0	H1																			
Sep	9																						
Oct	10																						
Nov	11	Z0	H1	K1																			
Dec	12																						

CT	Month	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Jan	1																						
Feb	2	H0	K0	N0	Z0																		
Mar	3																						
Apr	4	K0	N0	Z0																			
May	5																						
Jun	6	N0	Z0	H1																			
Jul	7																						
Aug	8																						
Sep	9																						
Oct	10																						
Nov	11	Z0	H1	K1																			
Dec	12																						

KC	Month	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Jan	1																						
Feb	2	H0	K0	N0	U0	Z0																	
Mar	3																						
Apr	4	K0	N0	U0	Z0	H1																	
May	5																						
Jun	6	N0	U0	Z0	H1																		
Jul	7																						
Aug	8	U0	Z0	H1	K1																		
Sep	9																						
Oct	10																						
Nov	11	Z0	H1	K1	N1																		
Dec	12																						

SB	Month	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Jan	1																						
Feb	2	H0	K0	N0	V0	H1																	
Mar	3																						
Apr	4	K0	N0	V0	H1																		
May	5																						
Jun	6	N0	V0	H1	K1	N1	V1																
Jul	7																						
Aug	8																						
Sep	9	V0	H1	K1	N1	V1																	
Oct	10																						
Nov	11																						
Dec	12																						

W	Month	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Jan	1																						
Feb	2	H0	K0	N0	U0	Z0																	
Mar	3																						
Apr	4	K0	N0	U0	Z0																		
May	5																						
Jun	6	N0	U0	Z0																			
Jul	7																						
Aug	8	U0	Z0	H1	N1																		
Sep	9																						
Oct	10																						
Nov	11	Z0	H1	K1	N1																		
Dec	12																						

KW	Month	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Jan	1																						
Feb	2	H0	K0	N0	Z0																		
Mar	3																						
Apr	4	K0	N0	U0	Z0																		
May	5																						
Jun	6	N0	U0	Z0																			
Jul	7																						
Aug	8	U0	Z0	H1																			
Sep	9																						
Oct	10																						
Nov	11	Z0	H1	N1																			
Dec	12																						

C	Month	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Jan	1																						
Feb	2	H0	K0	N0	U0	Z0																	
Mar	3																						
Apr	4	K0	N0	U0	Z0	H1																	
May	5																						
Jun	6	N0	U0	Z0	H1	N1	Z1																
Jul	7																						
Aug	8	U0	Z0	H1	K1	N1	Z1																
Sep	9																						
Oct	10																						
Nov	11	Z0	H1	K1	N1	U1	Z1																
Dec	12																						

S	Month	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Jan	1																						
Feb	2	H0	K0	N0	X0	H1																	
Mar	3																						
Apr	4	K0	N0	Q0	X0	F1	H1	K1															
May	5																						
Jun	6	N0	X0	F1	H1	K1	N1																
Jul	7																						
Aug	8																						
Sep	9																						
Oct	10	X0	F1	H1	K1	N1	X1																
Nov	11																						
Dec	12	F1	H1	K1	N1	X1																	

LC	Month	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Jan	1	G0	J0	M0	Q0																		
Feb	2																						
Mar	3	J0	M0	Q0	V0																		
Apr	4																						
May	5	M0	Q0	V0	Z0																		
Jun	6																						
Jul	7	Q0	V0	Z0	G1																		
Aug	8																						
Sep	9	V0	Z0	G1	J1	M1																	
Oct	10																						
Nov	11	Z0	G1	J1	M1																		
Dec	12																						

FC	Month	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Jan	1																						
Feb	2	H0	J0	K0	Q0																		
Mar	3	J0	K0	Q0																			
Apr	4	K0	Q0																				
May	5																						
Jun	6																						
Jul	7	Q0	U0	V0																			
Aug	8	U0	V0	X0																			
Sep	9	V0	X0																				
Oct	10	X0	F1																				
Nov	11																						
Dec	12	F1	H1																				

LH	Month	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Jan	1	G0	J0	M0																			
Feb	2																						
Mar	3	J0	M0	N0	Q0	V0																	
Apr	4																						
May	5	M0	N0	Q0	V0	Z0																	
Jun	6	N0	Q0	V0	Z0																		
Jul	7	Q0	V0	Z0																			
Aug	8																						
Sep	9	V0	Z0	G1																			
Oct	10																						
Nov	11	Z0	G1	J1	M1																		
Dec	12																						

# Index Maintenance

## Monthly Roll Determination

The S&P GSCI Dynamic Roll performs the Dynamic Roll Selection Process on a monthly basis.

## Annual Contract Eligibility Review

The eligible contract months are reviewed annually based on liquidity rules following the S&P GSCI. For the S&P GSCI Dynamic Roll, a contract must have a Monthly Dollar Value Traded (MDVT) of at least U.S. \$1.2 billion (U.S. \$15 billion over 12 months) to be included as an eligible contract for the calendar month, and a Monthly Dollar Value Traded (MDVT) of at least U.S. \$0.4 billion (U.S. \$5 billion over 12 months) to remain eligible for the calendar month.

In addition to the MDVT requirement, a contract must meet the same requirement on Monthly Dollar Open Interest (MDOI). The Annual Calculation Period is defined as the 12-month period ending on August 31st of the calendar year immediately prior to the year for which the eligible contracts are being determined. If a contract is eligible for inclusion in a particular calendar month, it stays eligible for the subsequent calendar months until its expiry. There is no restriction on the number of eligible contracts included in each calendar month.

Calculation of Monthly Dollar Value Traded and Monthly Dollar Open Interest:

$$MDVT_i = \sum_{t=1}^n (V_t * DCRP_t) * CS$$

where:

- $MDVT_i$  = Monthly Dollar Value Traded of contract  $i$
- $V_t$  = Volume on day  $t$
- $DCRP_t$  = Daily Contract Reference Price on day  $t$
- $n$  = Number of business days in the calendar month
- $CS$  = Contract Size

$$MDOI_i = \frac{1}{n} \sum_{t=1}^n (OI_t * DCRP_t) * CS$$

where:

- $MDOI_i$  = Monthly Dollar Open Interest of contract  $i$
- $OI_t$  = Open Interest on day  $t$
- $DCRP_t$  = Daily Contract Reference Price on day  $t$
- $n$  = Number of business days in the calendar month
- $CS$  = Contract Size

For inclusion as an eligible contract:

MDVT and MDOI >= U.S. \$1.2 Billion

To remain as an eligible contract:

MDVT and MDOI  $\geq$  U.S. \$0.4 Billion

### **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 DJJ Methodology & Regulatory Status Database](#).

*For information on index calculation, please refer to S&P Dow Jones Indices' Index Mathematics Methodology.*

*For the inputs necessary to calculate certain types of indices, including decrement, dynamic hedged, fair value, and risk control indices, please refer to the Parameters documents available at [www.spdji.com](http://www.spdji.com).*

# Index Governance

## **Index Committee**

An S&P Dow Jones Indices' Index Committee maintains the S&P GSCI Dynamic Roll. The Index Committee meets regularly. At each meeting, the Index Committee reviews any significant market events. In addition, the Index Committee may revise index policy for timing of rebalancings 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 & Practices document.*

# 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).

# Index Dissemination

Index levels are available through S&P Dow Jones Indices' Web site at [www.spdji.com](http://www.spdji.com), major quote vendors (see codes below), numerous investment-oriented Web sites, and various print and electronic media.

## Tickers

The table below lists headline indices covered by this document. All 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.

## Bloomberg:

Index Name	Launch Date	Base Date	Index Code
S&P GSCI Dynamic Roll	1/26/2011	1/16/1995	SPDYCI
S&P GSCI Wheat Dynamic Roll	1/26/2011	1/16/1995	SPDYWH
S&P GSCI Kansas Wheat Dynamic Roll	1/26/2011	1/15/1999	SPDYKW
S&P GSCI Corn Dynamic Roll	1/26/2011	1/16/1995	SPDYCN
S&P GSCI Soybeans Dynamic Roll	1/26/2011	1/16/1995	SPDYSO
S&P GSCI Coffee Dynamic Roll	1/26/2011	1/16/1995	SPDYKC
S&P GSCI Sugar Dynamic Roll	1/26/2011	1/16/1995	SPDYSB
S&P GSCI Cocoa Dynamic Roll	1/26/2011	1/16/1995	SPDYCC
S&P GSCI Cotton Dynamic Roll	1/26/2011	1/16/1995	SPDYCT
S&P GSCI Lean Hogs Dynamic Roll	1/26/2011	5/14/2001	SPDYLH
S&P GSCI Live Cattle Dynamic Roll	1/26/2011	1/16/1995	SPDYLC
S&P GSCI Feeder Cattle Dynamic Roll	1/26/2011	1/14/2002	SPDYFC
S&P GSCI Heating Oil Dynamic Roll	1/26/2011	1/16/1995	SPDYHO
S&P GSCI Gas Oil Dynamic Roll	1/26/2011	1/15/1999	SPDYGO
S&P GSCI Crude Oil Dynamic Roll	1/26/2011	1/16/1995	SPDYCL
S&P GSCI Brent Crude Oil Dynamic Roll	1/26/2011	1/15/1999	SPDYBR
S&P GSCI Natural Gas Dynamic Roll	1/26/2011	1/16/1995	SPDYNG
S&P GSCI Aluminum Dynamic Roll	1/26/2011	8/14/1997	SPDYIA
S&P GSCI Copper Dynamic Roll	1/26/2011	8/14/1997	SPDYIC
S&P GSCI Lead Dynamic Roll	1/26/2011	11/14/1997	SPDYIL
S&P GSCI Nickel Dynamic Roll	1/26/2011	8/14/1997	SPDYIK
S&P GSCI Zinc Dynamic Roll	1/26/2011	8/14/1997	SPDYIZ
S&P GSCI Gold Dynamic Roll	1/26/2011	1/16/1995	SPDYGC
S&P GSCI Silver Dynamic Roll	1/26/2011	1/16/1995	SPDYSI
S&P GSCI Unleaded Gas Dynamic Roll	1/26/2011	1/16/1995	SPDYHU
S&P GSCI Agriculture Dynamic Roll	2/17/2011	1/16/1995	SPDYAG
S&P GSCI Energy Dynamic Roll	2/17/2011	1/16/1995	SPDYEN
S&P GSCI Industrial Metals Dynamic Roll	2/17/2011	1/16/1995	SPDYIN
S&P GSCI Livestock Dynamic Roll	2/17/2011	1/16/1995	SPDYLV
S&P GSCI Precious Metals Dynamic Roll	2/17/2011	1/16/1995	SPDYPM
S&P GSCI Light Energy Dynamic Roll	4/15/2011	1/16/1995	SPDYLE
S&P GSCI Dynamic Roll Capped Commodity	5/4/2011	10/6/2006	SPDYP
S&P GSCI Energy Dynamic Roll Capped Commodity	5/4/2011	1/8/1999	SPDYPE
S&P GSCI Industrial Metals Dynamic Roll Capped Commodity	5/4/2011	1/9/1995	SPDYPI
S&P GSCI Agriculture Dynamic Roll Capped Component	5/4/2011	1/9/1995	SPDYPA
S&P GSCI Dynamic Roll Equal Weight Select	3/6/2012	12/7/1994	SPDYEW
S&P GSCI Dynamic Roll Select	8/7/2012	1/16/1995	SPDYSE

**Index Data**

Daily index level data is available via subscription.

*For product information, please contact S&P Dow Jones Indices, [www.spdji.com/contact-us](http://www.spdji.com/contact-us).*

**Web site**

*For further information, please refer to S&P Dow Jones Indices' Web site at [www.spdji.com](http://www.spdji.com).*

# Appendix A – Calculation of the S&P GSCI Dynamic Roll Select

The S&P GSCI Dynamic Roll Select (the Index) reflects the total return available through an unleveraged investment in the S&P GSCI Dynamic Roll; however, rather than using the 24 commodities from the S&P GSCI, only the select 14 commodities of the S&P GSCI Equal Weight Select are included in the Index.

**Methodology Overview.** During the January roll period at the beginning of each calendar year, the S&P GSCI Dynamic Roll Select includes only the same select commodities as the S&P GSCI Equal Weight Select. The select commodities are weighted based on the same Contract Production Weights (CPWs) as the commodities in S&P GSCI Dynamic Roll. The CPWs are updated annually and instituted during the January roll period. The periodic rolling process of the individual commodities follows the methodology specified by the S&P GSCI Dynamic Roll. Announcements of the new futures contract months to be rolled into are made following the close of business on the second business day of each month.

**The S&P GSCI Equal Weight Select.** The S&P GSCI Equal Weight Select 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.

The S&P GSCI Equal Weight Select 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.

*For more information on the S&P GSCI Equal Weight Select please refer to the S&P GSCI Equal Weight Select Methodology available on our Web site, [www.spdji.com](http://www.spdji.com).*

## Appendix B – Calculation of the S&P GSCI Dynamic Roll Alpha Light Energy

The S&P GSCI Dynamic Roll Alpha Light Energy index measures a long position in the S&P GSCI Dynamic Roll Light Energy ER index and a short position in the S&P GSCI Light Energy ER index (the benchmark index), on a market neutral basis.

The Index aims to measure the effects of the different roll strategies between the S&P GSCI Dynamic Roll Light Energy index and the S&P GSCI Light Energy index while neutralizing the market directional bias.

**Long-Short Index.** The index value is determined by measuring the difference between a long position in the S&P GSCI Dynamic Roll Light Energy ER index and a short position in the S&P GSCI Light Energy ER index.

**Calculation.** On each Index Level Determination Date,  $t$ , a reference index level is determined by the following formula:

$$Ref_t = Ref_{t_r} * \left[ 1 + \frac{Enhanced_t}{Enhanced_{t_r}} - \frac{Bench_t}{Bench_{t_r}} \right]$$

where:

- $Ref_t$  = the Long-Short reference index level on date  $t$
- $Enhanced_t$  = the S&P GSCI Dynamic Roll Light Energy ER index on date  $t$
- $Bench_t$  = the S&P GSCI Light Energy ER index on date  $t$
- $t_r$  = the last Rebalancing Day preceding the date  $t$  (The rebalancing dates are the 9<sup>th</sup> S&P GSCI day of each month)

**Market Neutral Exposure.** The final index value is determined by measuring the daily return of the Long-Short Index adjusted by the return of a target exposure weighted benchmark index.

**Market Neutral Exposure Calculation.** On each Index Level Determination Date  $t$ , the index exposure to the benchmark index is determined by the following formulae:

$$Exposure_t = TargetExposure_{t-2}$$

$$TargetExposure_t = -\frac{RefVolatility_t}{BenchVolatility_t} * Correl_t$$

where:

- $TargetExposure_t$  = the exposure multiplier for the benchmark index
- $RefVolatility_t$  = the 120-day volatility of the reference index (of the daily natural log (ln) return)
- $BenchVolatility_t$  = the 120-day volatility of the benchmark index (of the daily ln-return)
- $Correl_t$  = the 120-day correlation of the reference and benchmark indices (of the daily ln-return)

**Index Calculation.** On each Index Level Determination Date  $t$ , the index level is determined by the following formula:

$$Index_t = Index_{t-1} * \left[ \frac{Ref_t}{Ref_{t-1}} + Exposure_{t-1} * \left( \frac{Bench_t}{Bench_{t-1}} - 1 \right) \right]$$

where:

$Index_t$  = the index level on Index Level Determination Date  $t$

The index start date is July 14, 1995, with a base level of 100.

# Appendix C – Calculation of the S&P GSCI Dynamic Roll 12-Month Petroleum Index

**Index Objective.** The index measures the performance of the constituents of the S&P GSCI Dynamic Roll Index within the petroleum sector and with eligible contracts expiring in 12 months or less.

**Index Eligibility.** The index is comprised of commodities in the petroleum sector, specifically WTI Crude Oil (CL), Brent Crude Oil (LCO), RBOB Gasoline (RB), Gas Oil (LGO) and Heating Oil (HO). It uses the same selection criteria as the S&P GSCI Dynamic Roll Index with the exception that no single contract can be more than 12 months out in the future chain during monthly selections.

**Index Maintenance.** All index adjustments follow the S&P GSCI Dynamic Roll Index.

**Rebalancing.** The index utilizes the same CPWs as the S&P GSCI Dynamic Roll Index. New constituent contract months are selected monthly on the third business day and implemented after the close of the fifth business day with the same roll schedule as the underlying index. The Dynamic Roll Matrices, provided below, are reviewed annually along with the underlying index.

**Dynamic Roll Matrices.** Futures contracts roll according to the schedules provided below:

CL	Month	0	1	2	3	4	5	6	7	8	9	10	11
Jan	1	G0	H0	J0	K0	M0	N0	Q0	U0	V0	X0	Z0	F1
Feb	2	H0	J0	K0	M0	N0	Q0	U0	V0	X0	Z0	F1	G1
Mar	3	J0	K0	M0	N0	Q0	U0	V0	X0	Z0	F1	G1	H1
Apr	4	K0	M0	N0	Q0	U0	V0	X0	Z0	F1	G1	H1	J1
May	5	M0	N0	Q0	U0	V0	X0	Z0	F1	G1	H1	J1	K1
Jun	6	N0	Q0	U0	V0	X0	Z0	F1	G1	H1	J1	K1	M1
Jul	7	Q0	U0	V0	X0	Z0	F1	G1	H1	J1	K1	M1	N1
Aug	8	U0	V0	X0	Z0	F1	G1	H1	J1	K1	M1	N1	Q1
Sep	9	V0	X0	Z0	F1	G1	H1	J1	K1	M1	N1	Q1	U1
Oct	10	X0	Z0	F1	G1	H1	J1	K1	M1	N1	Q1	U1	V1
Nov	11	Z0	F1	G1	H1	J1	K1	M1	N1	Q1	U1	V1	X1
Dec	12	F1	G1	H1	J1	K1	M1	N1	Q1	U1	V1	X1	Z1

LCO	Month	0	1	2	3	4	5	6	7	8	9	10	11
Jan	1	H0	J0	K0	M0	N0	Q0	U0	V0	X0	Z0	F1	
Feb	2	J0	K0	M0	N0	Q0	U0	V0	X0	Z0	F1	G1	
Mar	3	K0	M0	N0	Q0	U0	V0	X0	Z0	F1	G1	H1	
Apr	4	M0	N0	Q0	U0	V0	X0	Z0	F1	G1	H1	J1	
May	5	N0	Q0	U0	V0	X0	Z0	F1	G1	H1	J1	K1	
Jun	6	Q0	U0	V0	X0	Z0	F1	G1	H1	J1	K1	M1	
Jul	7	U0	V0	X0	Z0	F1	G1	H1	J1	K1	M1	N1	
Aug	8	V0	X0	Z0	F1	G1	H1	J1	K1	M1	N1	Q1	
Sep	9	X0	Z0	F1	G1	H1	J1	K1	M1	N1	Q1	U1	
Oct	10	Z0	F1	G1	H1	J1	K1	M1	N1	Q1	U1	V1	
Nov	11	F1	G1	H1	J1	K1	M1	N1	Q1	U1	V1	X1	
Dec	12	G1	H1	J1	K1	M1	N1	Q1	U1	V1	X1	Z1	

LGO	Month	0	1	2	3	4	5	6	7	8	9	10	11
Jan	1	G0	H0	J0	K0	M0	N0	Q0	U0	V0	Z0		
Feb	2	H0	J0	K0	M0	N0	Q0	U0	V0	X0	Z0	F1	
Mar	3	J0	K0	M0	N0	Q0	U0	V0	X0	Z0	F1	G1	
Apr	4	K0	M0	N0	Q0	U0	V0	X0	Z0	F1	G1	H1	
May	5	M0	N0	Q0	U0	V0	X0	Z0	F1	G1	H1		
Jun	6	N0	Q0	U0	V0	X0	Z0	F1	G1	H1	M1		
Jul	7	Q0	U0	V0	X0	Z0	F1	G1	H1	K1	M1		
Aug	8	U0	V0	X0	Z0	F1	G1	H1	J1	K1	M1		
Sep	9	V0	X0	Z0	F1	G1	H1	J1	K1	M1			
Oct	10	X0	Z0	F1	G1	H1	J1	K1	M1	N1	U1		
Nov	11	Z0	F1	G1	H1	J1	K1	M1	N1	U1	V1		
Dec	12	F1	G1	H1	J1	K1	M1	N1	Q1	U1	V1	Z1	

HO	Month	0	1	2	3	4	5	6	7	8	9	10	11
Jan	1	G0	H0	J0	K0	M0	N0	U0	Z0				
Feb	2	H0	J0	K0	M0	N0	Q0	U0	Z0				
Mar	3	J0	K0	M0	N0	Q0	U0	V0	Z0				
Apr	4	K0	M0	N0	Q0	U0	V0	X0	Z0				
May	5	M0	N0	Q0	U0	V0	X0	Z0	F1				
Jun	6	N0	Q0	U0	V0	X0	Z0	F1	M1				
Jul	7	Q0	U0	V0	X0	Z0	F1	G1	H1	M1			
Aug	8	U0	V0	X0	Z0	F1	G1	H1	M1				
Sep	9	V0	X0	Z0	F1	G1	H1	J1	M1				
Oct	10	X0	Z0	F1	G1	H1	J1	K1	M1				
Nov	11	Z0	F1	G1	H1	J1	K1	M1					
Dec	12	F1	G1	H1	J1	K1	M1	Z1					

RB	Month	0	1	2	3	4	5	6	7	8	9	10	11
Jan	1	G0	H0	J0	K0	M0	N0	U0	Z0				
Feb	2	H0	J0	K0	M0	N0	Q0	U0	Z0				
Mar	3	J0	K0	M0	N0	Q0	U0	Z0					
Apr	4	K0	M0	N0	Q0	U0	V0	X0	Z0				
May	5	M0	N0	Q0	U0	V0	X0	Z0					
Jun	6	N0	Q0	U0	V0	X0	Z0	F1					
Jul	7	Q0	U0	V0	X0	Z0	F1	H1					
Aug	8	U0	V0	X0	Z0	F1	H1	M1					
Sep	9	V0	X0	Z0	F1	G1	H1	J1	M1				
Oct	10	X0	Z0	F1	G1	H1	J1	K1	M1				
Nov	11	Z0	F1	G1	H1	J1	K1	M1					
Dec	12	F1	G1	H1	J1	K1	M1	U1	Z1				

## Appendix D – Glossary

**DRA(k) Algorithm.** The DRA(k) Algorithm is the  $k^{\text{th}}$  Dynamic Roll Algorithm, with  $k$  indicating the number of top-ranked futures contract months included in the Optimum Set of Contract Months for that algorithm. The values of  $k$  are from 1 through 4.

**Dynamic Roll Matrix.** The Dynamic Roll Matrix of a given commodity lists all the eligible futures contract months for that commodity, for each calendar month of the year. The eligible contract months are determined based on the liquidity profile measured by open interest and volume, which are verified annually.

**Dynamic Roll Parity Principle.** For a given commodity, if the Rolled-out Contract is included in the Optimum Set of Contract Months, continue to use the same contract month as the Rolled-in Contract for the current month; otherwise, choose the first ranked contract month in the Optimum Set of Contract Months to be the new Rolled-in Contract for the current month.

**Monthly Dynamic Roll Schedule.** Refer to the next chapter, *Dynamic Roll Selection Process*.

**Optimum Set of Contract Months.** For a given commodity, the Optimum Set of Contract Months is the set of top-ranked contract months determined by that commodity's Dynamic Roll Algorithm. The number of contract months included in the Optimum Set of Contract Months is governed by the Rank Order of the given commodity.

**Rank Order.** The Rank Order of a given commodity, denoted by  $k$ , refers to the choice of the DRA(k) algorithm for that commodity during the monthly Dynamic Roll Selection Process, detailed in the next chapter. The values of Rank Order are from 1 through 4.

**Rolled-in Contract Month.** For a given commodity's Roll Determination Date, the Rolled-in Contract Month is the contract month selected via the Dynamic Roll Selection Process for that commodity. At the end of the S&P GSCI Roll Period it, then, becomes the Rolled-out Contract Month for the upcoming Roll Determination Date.

**Rolled-out Contract Month.** For a given commodity, the Rolled-out Contract Month is the current active futures contract month in use for that commodity.

**Roll Determination Date.** The Roll Determination Date is the third S&P GSCI Business Day of each month, two days prior to the start of the S&P GSCI Roll Period.

## Appendix E – Methodology Changes

Methodology changes as of January 31, 2015 are as follows:

<b>Change</b>	<b>Effective Date (After Close)</b>	<b>Previous</b>	<b>Methodology Updated</b>
Annual Contract Eligibility Review	01/06/2017	Existing eligibility months are verified annually.	Liquidity rules added to make the eligibility rules-based. Reviewed in November for the annual January rebalance.

# Appendix F – EU Required ESG Disclosures

## EU Required ESG Disclosures

<b>EXPLANATION OF HOW ENVIRONMENTAL, SOCIAL &amp; GOVERNANCE (ESG) FACTORS ARE REFLECTED IN THE KEY ELEMENTS OF THE BENCHMARK METHODOLOGY<sup>1</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>2</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 take into account ESG factors?</b> No
<b>Appendix latest update:</b> January 2021	
<b>Appendix first publication:</b> January 2021	

<sup>1</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.

<sup>2</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.

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