

Bloomberg SL Commodity Indices

Index Methodology

Publication Date: 09/18/2020

Last Updated: 06/7/2024

Bloomberg

Table of Contents

Section 1. Index Overview	4
Section 2. Index Limitations.....	5
Section 3. Index Calculation.....	6
Section 4. Market Disruption Events	11
Section 5. Benchmark Governance and Review	12
Section 6. Index Terms.....	13
Section 7. Disclaimer.....	14

Version Tracker

Date	Update
3/22/2024	Updated to include the calculation of the 4 Week Total Return Indices.
10/16/2020	Updated Index Launch Date
9/15/2020	Bloomberg SL Commodity Index methodology written. The indices will launch at a later date. Please note, the index methodology may be subject to change prior to the launch date.
6/7/2024	Publication in new format

Section 1: Index Overview

The Bloomberg SL Commodity Index (“the Index” or “the Indices”) aims to track the performance of holding a long position of single commodity futures contract, using a monthly roll schedule. There are two Total Return versions calculated, one using the returns of the underlying excess return index and the return of cash collateral invested in the 3-Month T-Bill, and the second using the U.S. Treasury 4-Week Bill Low Discount Rate.

Table 1: SL Commodity Indices

Index Names (USD)	Ticker	Currency	Index Commencement Date
Bloomberg Brent Crude SL Excess Return Index	BCOSLER	USD	10/16/2020
Bloomberg Brent Crude Oil SL Total Return Index	BCOSLTR	USD	10/16/2020
Bloomberg Brent Crude Oil SL 4 Week Total Return Index	BCOSL4T	USD	03/22/2024
Bloomberg Natural Gas SL Excess Return Index	BNGSLER	USD	10/16/2020
Bloomberg Natural Gas SL Total Return Index	BNGSLTR	USD	10/16/2020
Bloomberg Natural Gas SL 4 Week Total Return Index	BNGSL4T	USD	03/22/2024
Bloomberg WTI Crude Oil SL Excess Return Index	BCLSLER	USD	10/16/2020
Bloomberg WTI Crude Oil SL Total Return Index	BCLSLTR	USD	10/16/2020
Bloomberg WTI Crude Oil SL 4 Week Total Return Index	BCLSL4T	USD	03/22/2024

To maintain the long position of the basket, contracts are ‘rolled’ from the expiring futures contract to a new contract farther down the futures curve with a longer expiry date. All commodities will roll on the sixth through the tenth Business Day of each calendar month. An **Index Level** or Business Day is determined on a day in which NYMEX is open for trading.

The Bloomberg SL Commodity Indices are denominated in U.S. dollars. The Indices have a **Base Date** of January 4th, 2010 with a **Base Index Level** of 100.

The Bloomberg SL Commodity Index is the intellectual property of Bloomberg Index Services Limited (**BISL** and, collectively with its affiliates, Bloomberg), in such capacity as the **“Index Owner”**.

Section 2: Index Limitations

Though the Indices are designed to be representative of the markets they measure or otherwise align with their stated objective, they may not be representative in every case or achieve their stated objective in all instances. They are designed and calculated strictly to follow the rules of this Methodology, and any Index Level or other output is limited in its usefulness to such design and calculation.

Markets can be volatile, including those commodity market interests which the Indices intend to measure or upon which the Indices are dependent in order to achieve their stated objective. For example, trading in futures contracts on physical commodities, including trading in the Index components, is speculative and can be extremely volatile. Market prices of the Index components and the underlying physical commodities may fluctuate rapidly based on numerous factors, including changes in supply and demand relationships (whether actual, perceived, anticipated, unanticipated or unrealized); weather; agriculture; trade; fiscal, monetary and exchange control programs; domestic and foreign political and economic events and policies; disease; pestilence; technological developments; changes in interest rates, whether through government action or market movements; and monetary and other government policies, action and inaction.

The current or "spot" prices of the underlying physical commodities may also affect, in a volatile and inconsistent manner, the prices of futures contracts in respect to the relevant commodity. These factors may affect the value of the Indices in varying ways, and different factors may cause the prices of the Index components, and the volatilities of their prices, to move in inconsistent directions at inconsistent rates.

In addition, market trends and changes to market structure may render the objective of the Index unachievable or to become impractical to replicate by investors.

Historical Index Levels published prior to the Index launch date are considered hypothetical. Historical Index Levels should not be considered as an indication of future performance.

The Bloomberg SL Commodity Indices are comprised of liquid commodity future contracts. If any commodity future contract is terminated or replaced in accordance with the rules of the Index methodology, a comparable commodity futures contract may be selected by BISL. The replacement of a commodity future contract may cause the level of the Index to change or be adjusted.

In the event the Bloomberg SL Commodity Indices level falls at or below zero due to an at any point intraday and/or end-of-day negative futures settlement price(s), the Index level will be closed at zero and terminated same day, in which case the Index may cease to accurately measure its underlying market interest (see Handling of Negative and or Zero Pricing). Index users should therefore consider such possibility in connection with any financial instrument or financial contract based on the index to the extent the index level diverges from exposure to the underlying market.

BISL may discontinue or suspend calculation or publication of the Indices defined in this methodology. If this happens, BISL shall use reasonable efforts to provide advance notice through an Index announcement made available via bloombergindices.com and on the Bloomberg Terminal via INP <GO>.

Section 3: Index Calculation

The Bloomberg SL Commodity Index (“the Index” or “the Indices”) aims to track the performance of holding a long position of single commodity futures contract, using a monthly roll schedule. The index family consist of single commodity indices of Brent Crude Oil (ticker: CO), Natural Gas (ticker: NG), and WTI Crude Oil (ticker: CL).

Index Rolling

The Indices hold a long position in commodity futures. To maintain a long position, contracts are ‘rolled’ from the expiring futures contract to a new contract farther down the futures curve with a longer expiry date. The calculation of the Bloomberg SL Indices follows the roll schedule based on the commodity contract calendar listed in Table 3. The mapping for the contract letters and months are defined in Table 2.

Table 2: Contract Month Codes

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

The Contract Calendar Table (Table 3) represents the **Lead Contract** on the first Business Day of each month.

Table 3: SL Commodity Contract Calendar

Commodity	Exchange	Bloomberg Code	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Brent Crude Oil	ICE-EU	CO	J	K	M	N	Q	U	V	X	Z	F	G	H
Crude Oil (WTI)	CME	CL	H	J	K	M	N	Q	U	V	X	Z	F	G
Natural Gas	CME	NG	H	J	K	M	N	Q	U	V	X	Z	F	G

The Indices will roll from the Lead Contract to the Next Contract over the sixth to tenth Business Day of each month, at 20% (1/5) each Business Day. If a Market Disruption Event (“MDE”) occurs during the roll period (Business Days 6 through 10), the roll weight will be “held”. The roll weight will catch up on the next Business Day when a MDE is not present. Table 3 is an example of the rolling process for Crude Oil (CL) during the February Roll Period of 2014.

Table 4: Rolling Example for Crude Oil (CL)

Date	Ticker	Day Count	Lead Contract	Next Contract	Yesterday Roll Weight		Today Roll Weight	
					% Lead	% Next	% Lead	% Next
2/5/2010	CL	5	CLJ10	CLJK0	100.00%	0.00%	80.00%	20.00%
2/8/2010	CL	6	CLJ10	CLJK0	80.00%	20.00%	60.00%	40.00%
2/9/2010	CL	7	CLJ10	CLJK0	60.00%	40.00%	40.00%	60.00%
2/10/2010	CL	8	CLJ10	CLJK0	40.00%	60.00%	20.00%	80.00%
2/11/2010	CL	9	CLJ10	CLJK0	20.00%	80.00%	0.00%	100.00%
2/12/2010	CL	10	CLJ10	CLJK0	0.00%	100.00%	0.00%	100.00%

Index Calculation

Index Levels are determined on a day on which NYMEX is open for business. If a commodity futures contract **Settlement Price** is unavailable on a Business Day when NYMEX is open, the last available official Settlement Price will be used for the calculation of the Index. The official Index Level precision is eight decimal places.

The Excess Return Index Level is calculated as follows:

$$IndexER_t = IndexER_{t-1} * (1 + DER)$$

Where:

$IndexER_t$ is the Excess Return Index Level on Business Day t, rounded to 8 decimal places.

$IndexER_{t-1}$ is the Excess Return Index Level on the Business Day immediately preceding Business Day t.

DER is the Daily Excess Return of the commodity futures contracts.

The Daily Excess Return is calculated as:

$$DER = \left(\frac{WAV}{PWAV} - 1 \right)$$

3 Month Total Return Index Level is calculated as follows:

$$IndexTR_t = IndexTR_{t-1} \times \left(\frac{IndexER_t}{IndexER_{t-1}} + IR_t \right)$$

Where:

$IndexTR_t$ is the Total Return Index Level on Business Day t, rounded to 8 decimal places.

$IndexTR_{t-1}$ is the Total Return Index Level on the Business Day immediately preceding Business Day t.

- $IndexER_t$ is the Excess Return Index Level on Business Day t.
 $IndexER_{t-1}$ is the Excess Return Index Level on the Business Day immediately preceding Business Day t.
 IR_t is the Treasury Bill Daily Return, calculated as

$$IR_t = \left[\frac{1}{1 - \frac{91}{360} \times TBR_{t-1}} \right]^{\frac{D}{91}} - 1$$

Where:

- TBR_{t-1} is the 13-week (3 -month) US Treasury Bill ("T-Bill") Rate, the rate used is the most recent weekly auctioned high discount rate (ticker: USB3MTA Index).
 D is the number of calendar days between Business Day t, and the previous Business Day (i.e. 3 for weekend)

4 Week Total Return Index Level is calculated as follows:

$$4WTR_t = 4WTR_{t-1} \times \left(\frac{IndexER_t}{IndexER_{t-1}} + IR4_t \right)$$

Where:

- $4WTR_t$ is the current Business Day Bloomberg 4 Week TR Index Level, rounded to 8 decimal places.
 $4WTR_{t-1}$ is the Business Day immediately preceding Business Day Bloomberg 4 Week TR Index Level.
 $IndexER_t$ is the ER Index Level on Business Day t.
 $IndexER_{t-1}$ is the ER Index Level for Business Day immediately preceding Business Day t.

Interest Return ($IR4_t$) is calculated as follows:

$$IR4_t = \left[\frac{1}{1 - \frac{28}{360} \times TBR_{t-1}} \right]^{\frac{D}{28}} - 1$$

Where:

- TBR_{t-1} is the 4-week (1 -month) US Treasury Bill ("T-Bill") Rate, the rate used is the most recent weekly auctioned low discount rate (ticker: USB4WLYL Index).
 D is the number of calendar days between Business Day (t), and the previous Business Day) (i.e., weekend=3)

Commodity Index Multiplier ("CIM")

The Commodity Index Multiplier will be set to one as these indices are not rebalance annually.

Weighted Average Value ("WAV") on Business Day t is calculated as:

$$WAV = \sum CIM1 * YLRW * \frac{LCSP_t}{L} + CIM2 * YNRW * \frac{NCSP_t}{L}$$

Where:

<i>CIM1</i>	is the Commodity Index Multiplier for Lead Contract, which is equal to 1.
<i>YLRW</i>	is the Yesterday Lead Roll Weight, i.e., the roll weight of commodity futures contract i on the Business Day immediately preceding Business Day t.
<i>LCSP_t</i>	is the Lead Contract settlement price on Business Day t.
<i>CIM2</i>	is the Commodity Index Multiplier for Next Contract, which is equal to 1.
<i>YNRW</i>	is the Yesterday Next Roll Weight, i.e., the roll weight of commodity futures contract i on the Business Day immediately preceding Business Day t.
<i>NCSP_t</i>	is the Next Contract settlement price on Business Day t.
<i>L</i>	is the lot size of the futures contract.

Previous Weighted Average Value ("PWAV") on Business Day t is calculated as:

$$PWAV = \sum CIM1_{t-1} * YLRW * \frac{LCSP_{t-1}}{L} + CIM2_{t-1} * YNRW * \frac{NCSP_{t-1}}{L}$$

Where:

<i>CIM1_{t-1}</i>	is the Commodity Index Multiplier for Lead Contract, which is equal to 1 on the Business Day immediately preceding Business Day t.
<i>YLRW</i>	is the Yesterday Lead Roll Weight, i.e., the roll weight of commodity futures contract i on the Business Day immediately preceding Business Day t.
<i>LCSP_{t-1}</i>	is the Lead Contract settlement price on the Business Day immediately preceding Business Day t.
<i>CIM2_{t-1}</i>	is the Commodity Index Multiplier for Lead Contract, which is equal to 1, on the Business Day immediately preceding Business Day t.
<i>YNRW</i>	is the Yesterday Next Roll Weight, i.e., the roll weight of commodity futures contract i on the Business Day immediately preceding Business Day t.
<i>NCSP_{t-1}</i>	is the Next Contract settlement price on the Business Day immediately preceding Business Day t.
<i>L</i>	is the lot size.

Handling of Negative and or Zero Pricing

In the event the Index level falls at or below zero due to a non-positive real-time futures price(s) during real-time index market hours, the Index level will close at zero and the index will be terminated on the same day.

In the event the Index level falls at or below zero due to a non-positive futures settlement price(s), the Index level will close at zero and the index will be terminated on the same day.

If the negative official Index level is calculated using an incorrect exchange price or as a result of a technical issue, the Index will be recalculated. If the recalculated Index level is positive, the Index will not be terminated and will continue to calculate going forward.

Section 4: Market Disruption Events

Market Disruption Events (MDE) can occur to commodity futures for several reasons:

- a) The termination or suspension of, or material limitation or disruption in, the trading of any future contract used in the calculation of the Index on that day;
- b) The settlement price of any such contract reflect the maximum permitted price change from the previous day's settlement price, based on limits set by commodity exchanges
- c) The failure of an exchange to publish settlement prices.

If a MDE occurs with respect to the Bloomberg SL Commodity Index during the "Roll Period" for either the lead or next contract, the daily roll of the relevant futures contract will be held for that Business Day. On the following Business Day on which a Market Disruption Event does not occur, the roll weight will account for the current days roll weight and the previous Business Day (MDE's) roll weight.

If a MDE persists for four consecutive Index Business Days immediately following the original Index Business Day on which a MDE occurs, then the Index Administrator shall determine what further actions it may reasonably take.

If, on any Index Business Day, a MDE occurs or is occurring that the Index Administrator determines, in its sole discretion, materially affects the Index, the Index Administrator may defer or suspend the calculation and publication of the Index Value and any other information relating to the Index until the next Index Business Day on which such disruption event is not continuing.

Section 5: Benchmark Governance and Review

Data Providers and Data Extrapolation

Please refer to the BISL Benchmark Procedures Handbook available [here](#).

Benchmark Governance, Audit and Review Structure

Please refer to the BISL Benchmark Procedures Handbook available [here](#).

Internal and External Reviews

Please refer to the BISL Benchmark Procedures Handbook available [here](#).

Index and Data Reviews

Please refer to the BISL Benchmark Procedures Handbook available [here](#).

Exchange Settlement Price Delays

In the event an exchange delays the pricing of future settlements pertaining to the Bloomberg Representative Agriculture Index Indices, BISL will delay the publication of Index Levels to vendors and delivery of index data files.

Error Corrections/Restatement Policy

Please refer to the BISL Benchmark Procedures Handbook available [here](#).

Exchange Settlement Price Amendments

On the occasion when an exchange amends the Settlement Price of a contract used in the Bloomberg Representative Agriculture Index Indices prior to 7 PM EST, BISL will send an index announcement following the discovery to inform all clients of the correction. BISL will then recalculate, republish, and redistribute end-of day files.

Real-time Distribution

BISL strives to provide accurate real-time calculation of its indices, however the following circumstances may occur during real-time dissemination hours.

- Incorrect index levels can be disseminated.
- Indices may stop disseminating.
- Indices may disseminate stale prices.

Expert Judgment

Please refer to the BISL Benchmark Procedures Handbook available [here](#).

Reinvestment of Dividends and Coupons

Dividends and coupon payments play no direct role in this Index Methodology Handbook, and are therefore not accounted for by the Index.

Section 6: Index Terms

"Base Index Level" means the starting Index Level of 100 for each of the Indices.

"BISL" means Bloomberg Index Services Limited.

"BOC" means the Benchmark Oversight Committee.

"Business Day" means any day on which NYMEX is open for business.

"Commodity Index Multiplier (CIM)" means the value of one as described in Section 3.

"Index Administrator" means BISL.

"Index Base Date" means the first date of the Index history as described in Section 1.

"Index Commencement Date" means the date each of the Indices is first made available on the relevant Bloomberg Page, as defined in Table 1.

"Index Level" means, in respect of the Index and a Business Day, the value of the Index on such Business Day, calculated in accordance with the methodology described in Section 3.

"Index Owner" means BISL.

"PROC" means the Product, Risk and Oversight Committee.

"Lead Contract" means the rolling out commodity futures contract as defined in Table 5.

"Market Disruption Event (MDE)" has the meaning given to such term in Section 4.

"Next Contract" means the rolling in commodity futures contract as defined in Table 5.

"Next Contract Settlement Price" means the official settlement prices provided by the exchange of the rolling in commodity futures contract defined in Table 5.

"Rolling" means the commodity futures contracts are 'rolled' during the Roll Period from the expiring futures contract (Lead Contract) to a new contract farther down the futures curve with a longer expiry date (Next Contract). After the Roll Period, the former Next Contract becomes the new Lead Contract.

"Roll Period" means the sixth to tenth Business Day of each month, at 20% (1/5) each Business Day

"Settlement Price" means the official settlement prices provided by an exchange.

"Treasury Bill Daily Return" means the return of cash collateral invested in the 3-Month T-Bill or the U.S. Treasury 4-Week Bill Low Discount Rate.

Accessing Index Data

Bloomberg Terminal®	Bloomberg indices are the benchmarks of choice for capital markets investors. The Bloomberg Index Browser IN <GO> displays the latest performance results and statistics for the indices as well as history. IN presents the indices that make up Bloomberg's global, cross-asset Index families into a hierarchical view, facilitating navigation and comparisons. The "My Indices" tab allows a user to focus on a set of favorite indices. Bloomberg's Portfolio & Risk Analytics solution (PORT <GO>) includes tools to analyze the risk, return, and current structure of indices. PORT includes tools to analyze performance of a portfolio versus a benchmark as well as models for performance attribution, tracking error analysis, value-at-risk, scenario analysis, and optimization.												
Bloomberg Website	The index website makes available limited Index information including: <ul style="list-style-type: none">• Index methodology and factsheets• Current performance numbers for select indices												
Index Licensing	Bloomberg requires a license for use of indices in conjunction with: <ul style="list-style-type: none">• Exchange-traded index products• OTC products• Index or constituent-level redistribution• Custom index solutions• Use of any index data outside of the Bloomberg Terminal®												
Index Tickers	<table><tr><td>BCOSLER:</td><td>Bloomberg Brent Crude SL Excess Return Index</td></tr><tr><td>BCOSLTR:</td><td>Bloomberg Brent Crude Oil SL Total Return Index</td></tr><tr><td>BNGSLER:</td><td>Bloomberg Natural Gas SL Excess Return Index</td></tr><tr><td>BNGSLTR:</td><td>Bloomberg Natural Gas SL Total Return Index</td></tr><tr><td>BCLSLER:</td><td>Bloomberg WTI Crude Oil SL Excess Return Index</td></tr><tr><td>BCLSLTR:</td><td>Bloomberg WTI Crude Oil SL Total Return Index</td></tr></table>	BCOSLER:	Bloomberg Brent Crude SL Excess Return Index	BCOSLTR:	Bloomberg Brent Crude Oil SL Total Return Index	BNGSLER:	Bloomberg Natural Gas SL Excess Return Index	BNGSLTR:	Bloomberg Natural Gas SL Total Return Index	BCLSLER:	Bloomberg WTI Crude Oil SL Excess Return Index	BCLSLTR:	Bloomberg WTI Crude Oil SL Total Return Index
BCOSLER:	Bloomberg Brent Crude SL Excess Return Index												
BCOSLTR:	Bloomberg Brent Crude Oil SL Total Return Index												
BNGSLER:	Bloomberg Natural Gas SL Excess Return Index												
BNGSLTR:	Bloomberg Natural Gas SL Total Return Index												
BCLSLER:	Bloomberg WTI Crude Oil SL Excess Return Index												
BCLSLTR:	Bloomberg WTI Crude Oil SL Total Return Index												

Take the next step.

For additional information, press the <HELP> key twice on the Bloomberg Terminal.

[bloomberg.com/professional](https://www.bloomberg.com/professional)

New York

+1-212-318-2000

London

+44-20-7330-7500

Singapore

+65-6212-1000

Hong Kong

+852-2977-6000

Tokyo

+81-3-3201-8900

Sydney

+61-2-9777-8600

Disclaimers

BLOOMBERG, BLOOMBERG INDICES and Bloomberg SL Commodity Index (the "Indices") are trademarks or service marks of Bloomberg Finance L.P. Bloomberg Finance L.P. and its affiliates, including Bloomberg Index Services Limited, the administrator of the Indices (collectively, "Bloomberg") or Bloomberg's licensors own all proprietary rights in the Indices. Bloomberg does not guarantee the timeliness, accuracy or completeness of any data or information relating to the Indices. Bloomberg makes no warranty, express or implied, as to the Indices or any data or values relating thereto or results to be obtained therefrom, and expressly disclaims all warranties of merchantability and fitness for a particular purpose with respect thereto. It is not possible to invest directly in an Index. Back-tested performance is not actual performance. Past performance is not an indication of future results. To the maximum extent allowed by law, Bloomberg, its licensors, and its and their respective employees, contractors, agents, suppliers and vendors shall have no liability or responsibility whatsoever for any injury or damages - whether direct, indirect, consequential, incidental, punitive or otherwise - arising in connection with the Indices or any data or values relating thereto - whether arising from their negligence or otherwise. This document constitutes the provision of factual information, rather than financial product advice. Nothing in the Indices shall constitute or be construed as an offering of financial instruments or as investment advice or investment recommendations (i.e., recommendations as to whether or not to "buy", "sell", "hold", or to enter or not to enter into any other transaction involving any specific interest or interests) by Bloomberg or a recommendation as to an investment or other strategy by Bloomberg. Data and other information available via the Indices should not be considered as information sufficient upon which to base an investment decision. All information provided by the Indices is impersonal and not tailored to the needs of any person, entity or group of persons. Bloomberg does not express an opinion on the future or expected value of any security or other interest and do not explicitly or implicitly recommend or suggest an investment strategy of any kind. Customers should consider obtaining independent advice before making any financial decisions. © 2024 Bloomberg. All rights reserved. This document and its contents may not be forwarded or redistributed without the prior consent of Bloomberg.

The BLOOMBERG TERMINAL service and Bloomberg data products (the "Services") are owned and distributed by Bloomberg Finance L.P. ("BFLP") except (i) in Argentina, Australia and certain jurisdictions in the Pacific islands, Bermuda, China, India, Japan, Korea and New Zealand, where Bloomberg L.P. and its subsidiaries distribute these products, and (ii) in Singapore and the jurisdictions serviced by Bloomberg's Singapore office, where a subsidiary of BFLP distributes these products.