

# Bloomberg Commodity 4-Week Total Return Indices

Index Methodology

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## Section 1: Index Overview

The Bloomberg Commodity 4-Week Total Return Indices aims to track the performance of Bloomberg Commodity (BCOM) underlying excess return indices and the return of cash collateral invested in the U.S. Treasury 4-Week Bill Low Discount Rate. The Indices are denominated in USD. Index names, tickers, and **Commencement Date** are defined in Table 1.

**Table 1: BCOM 4-Week Total Return Indices**

Index Name	Tickers	Commencement Date
Bloomberg Commodity Agriculture Subindex 3 Month Forward 4W Total Return	BCOMA3T4	3/28/2024
Bloomberg Commodity Agriculture Subindex 4W Total Return	BCOMAG4T	3/28/2024
Bloomberg Commodity Aluminum Subindex 4W Total Return	BCOMAL4T	3/28/2024
Bloomberg Commodity Brent Crude Subindex 3 Month Forward 4W Total Return	BCMCO3T4	3/28/2024
Bloomberg Commodity Brent Crude Subindex 4W Total Return	BCOMCO4T	3/28/2024
Bloomberg Commodity Cocoa Subindex 4W Total Return	BCOMCC4T	3/28/2024
Bloomberg Commodity Coffee Subindex 4W Total Return	BCOMKC4T	3/28/2024
Bloomberg Commodity Commodities 4W Total Return	BCOM4T	3/28/2024
Bloomberg Commodity 3 Month Forward 4W Total Return	BCOMF3T4	3/28/2024
Bloomberg Commodity ex-Agriculture and Livestock Subindex 4W Total Return	BBUXAL4T	3/28/2024
Bloomberg Commodity Copper Subindex 4W Total Return	BCOMHG4T	3/28/2024
Bloomberg Commodity Corn Subindex 4W Total Return	BCOMCN4T	3/28/2024
Bloomberg Commodity Cotton Subindex 4W Total Return	BCOMCT4T	3/28/2024
Bloomberg Commodity Energy 4W Total Return	BCOMEN4T	3/28/2024
Bloomberg Commodity Energy Subindex 3 Month Forward 4W Total Return	BCOME3T4	3/28/2024
Bloomberg Commodity Gold Subindex 4W Total Return	BCOMGC4T	3/28/2024
Bloomberg Commodity Grains Subindex 4W Total Return	BCOMGR4T	3/28/2024
Bloomberg Commodity Heating Oil Subindex 4W Total Return	BCOMHO4T	3/28/2024
Bloomberg Commodity Industrial Metals Subindex 3 Month Forward 4W Total Return	BCOMI3T4	3/28/2024
Bloomberg Commodity Industrial Metals Subindex 4W Total Return	BCOMIN4T	3/28/2024
Bloomberg Commodity Lead Subindex 4W Total Return	BCOMLL4T	3/28/2024
Bloomberg Commodity Lean Hogs Subindex 4W Total Return	BCOMLH4T	3/28/2024
Bloomberg Commodity Live Cattle Subindex 4W Total Return	BCOMLC4T	3/28/2024
Bloomberg Commodity Livestock Subindex 4W Total Return	BCOMLI4T	3/28/2024
Bloomberg Commodity Natural Gas Subindex 4W Total Return	BCOMNG4T	3/28/2024
Bloomberg Commodity Nickel Subindex 4W Total Return	BCOMNI4T	3/28/2024
Bloomberg Commodity Petroleum Subindex 4W Total Return	BCOMPE4T	3/28/2024
Bloomberg Commodity Platinum Subindex 4W Total Return	BCOMPL4T	3/28/2024
Bloomberg Commodity Precious Metals Subindex 4W Total Return	BCOMPR4T	3/28/2024
Bloomberg Commodity Silver Subindex 4W Total Return	BCOMSI4T	3/28/2024
Bloomberg Commodity Softs Subindex 4W Total Return	BCOMSO4T	3/28/2024
Bloomberg Commodity Soybean Oil Subindex 4W Total Return	BCOMBO4T	3/28/2024
Bloomberg Commodity Soybeans Subindex 4W Total Return	BCOMSY4T	3/28/2024
Bloomberg Commodity Sugar Subindex 4W Total Return	BCOMSB4T	3/28/2024
Bloomberg Commodity Tin Subindex 4W Total Return	BCOMSN4T	3/28/2024
Bloomberg Commodity Unleaded Gasoline Subindex 4W Total Return	BCOMRB4T	3/28/2024
Bloomberg Commodity Wheat Subindex 4W Total Return	BCOMWH4T	3/28/2024
Bloomberg Commodity WTI Crude Oil Subindex 3 Month Forward 4W Total Return	BCMCL3T4	3/28/2024
Bloomberg Commodity Zinc Subindex 4W Total Return	BCOMZS4T	3/28/2024

The **Index Base Date** for Bloomberg Commodity 4-Week Total Return Indices (Table 1) is July 31, 2001, except for the Bloomberg Commodity ex-Agriculture and Livestock 4W Total Return Index (ticker: BBUXAL4T) which is December 31<sup>st</sup>, 2001. The Bloomberg Commodity 4-Week Total Return Indices have a **Base Index Level** of 100.

## 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.

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](http://bloombergindices.com) and on the Bloomberg Terminal via INP <GO>.

### Section 3: Index Calculation

The Bloomberg Commodity 4-Week Total Return Indices aims to track the performance of BCOM underlying excess return indices and the return of cash collateral invested in the U.S. Treasury 4-Week Bill Low Discount Rate.

These returns are calculated by using the most recent weekly auction for Treasury 4-Week Bill Low Discount Rate, as reported on the website <http://www.treasurydirect.gov/> published by the Bureau of the Public Debt of the U.S. Treasury. The auction results are also available on the Bloomberg Terminal using the ticker: USB4WLYL Index.

Treasury 4-Week Bill Low Discount Rate is used each day until the next rate is released; provided, however, that if a new rate is scheduled to be released on a given day, the prior rate is used for purposes of calculations in respect of such release date. The new rate is generally obtained on Tuesday and is first used in Wednesday's index calculations. In the event of a holiday or other disruption in the Treasury auction schedule, the last available rate is used until the next rate becomes available.

Index Levels are determined on a day on which BCOM is open for business.

4 Week Total Return Index Level is calculated as follows:

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

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.
- $IndexER$  is the underlying BCOM ER Index Level on Business Day t.
- $IndexER_{t-1}$  is the underlying BCOM 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)

## 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 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

### Cessation

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](#).

### 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 Commodity 4-Week Total Return 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 Commodity 4-Week Total Return 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.

### 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.

### Real-time Distribution

Real-time index levels are considered indicative only. 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.



## 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 BCOM is open for business.

**“Commencement Date”** means the date each of the Indices is first made available on the relevant Bloomberg Page, i.e., March 28<sup>th</sup>, 2024.

**“Index Administrator”** means BISL.

**“Index Base Date”** means the first date of the Index history as described in Section 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.

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

**“Treasury Bill Daily Return”** means the return of cash collateral invested in the U.S. Treasury 4-Week Bill Low Discount Rate.

## Version Tracker

<b>Date</b>	<b>Update</b>	<b>Updated By</b>
3/28/2024	Bloomberg Commodity 4-Week Total Return Index methodology written.	Ken Hoefling

## Environmental, Social and Governance (ESG) Disclosures

This Index does not take into account any ESG factors or pursue any ESG objectives. Please refer to the [Bloomberg Commodities Methodology](#) for ESG disclosures.

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