

**THOMSON REUTERS/CORECOMMODITY  
CRB 3 MONTH FORWARD  
CALCULATION SUPPLEMENT**

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## **The Thomson Reuters/CoreCommodity CRB 3 Month Forward Index Calculation Supplement**

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Section 1 describes the computation of each individual commodity performance series including the Excess Return Index along with the rebalancing methodology. Section 2 describes the calculation of the Total Return Index. Section 3 describes the commodities and weights in the Thomson Reuters/CoreCommodity CRB 3 Month Forward Index and the included contract months for each commodity. Section 4 describes certain market disruption and emergency provisions applicable to the Thomson Reuters/CoreCommodity CRB 3 Month Forward Index. Section 5 addresses certain other issues related to ongoing index construction and calculation, including the role of the Thomson Reuters/CoreCommodity CRB Index Oversight Committee.

SEE “DISCLAIMERS” SET FORTH ON LAST PAGE OF THIS SUPPLEMENT FOR IMPORTANT RISKS AND DISCLAIMERS RELATING TO THE THOMSON REUTERS/CORECOMMODITY CRB 3 MONTH FORWARD INDEX AND THE INFORMATION CONTAINED IN THIS SUPPLEMENT.

## **Section 1. Computation of Individual Commodity Performance Series (“CPS”) and Percent Return Series (“PR”)**

For each commodity  $i$ , a performance series (“Commodity Performance Series”) is calculated. These performance series are then used to calculate the Thomson Reuters/CoreCommodity CRB Index.

The CPS at time  $t = 0$  is scaled to equal 100 while for any time  $t$  the CPS is given by:

$$CPS_{t,i} = CPS_{t-1,i} \times \left( \frac{W_{t-1,i}^F \times P_{t,i}^F + W_{t-1,i}^B \times P_{t,i}^B}{W_{t-1,i}^F \times P_{t-1,i}^F + W_{t-1,i}^B \times P_{t-1,i}^B} \right), \quad t > 0$$

for  $i = 1$  to 19

where:

$CPS_{t,i}$  = Commodity Performance Series for  $i^{\text{th}}$  commodity at time  $t$ .

$W_{t,i}^F$  = Weight in the Front Month for commodity  $i$  at time  $t$ .

$W_{t,i}^B$  = Weight in the Back Month for commodity  $i$  at time  $t$ .

$P_{t,i}^F$  = Price of the Front Month Futures Contract for Commodity  $i$  at time  $t$ .

and

$P_{t,i}^B$  = Price of the Back Month Futures Contract for Commodity  $i$  at time  $t$ .

### **N.B.:**

- 1) The performance series for each commodity reflects a constant dollar investment such that the rolling of the futures contracts requires neither the addition nor withdrawal of funds.
- 2) The Front Month, or the Active Contract, is the month closer to expiration; the Back Month becomes the Front Month when the Back Month weight reaches 100%.
- 3) All values throughout this document are rounded to six decimal places.
- 4) All commodity contracts roll over the first four Business Days of the month such that the weight in the Front Month at the end of the first rollover day is 75% and the weight in the Back Month is 25%. The weight shifts from the Front Month to the Back Month by 25% per rollover day until the Back Month reaches 100% at the end of the fourth Business Day. (See Section 4 for information regarding rollover disruption events.)

The CPS are then used to construct the Percent Return Series (“PR”) for each commodity.

Values of each PR are computed as follows:

$$PR_{t,i} = PR_{t-1,i} \times (CPS_{t,i} / CPS_{t-1,i})$$

The Index at time t is the sum of all the PR:

$$\text{Index}_t = \sum_{i=1}^N PR_{t,i}$$

At the end of the sixth Business Day<sup>1</sup> of each month, the Thomson Reuters/CoreCommodity CRB 3 Month Forward Index is rebalanced and the PR for each commodity is rescaled such that:

$$PR_i = W_i \times \text{Index}$$

for  $i = 1$  to 19

where:

$W_i \equiv$  Index weight of commodity  $i$ , such that  $0 \leq W_i \leq 1, \forall i$  and  $\sum_{i=1}^{19} W_i = 1$ .

and the value of each PR at the end of the seventh Business Day is equal to:

$$PR_{r,i} = \text{Index}_{r-1} \times W_i \times (CPS_{r,i} / CPS_{r-1,i})$$

where  $r$  is defined as the seventh Business Day of the month.

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<sup>1</sup> Business Day is defined as any day on which the New York Mercantile Exchange is open for business.

## Section 2. Computation of the Thomson Reuters/CoreCommodity CRB 3 Month Forward Total Return Index (“Index TR”)

The Total Return Index includes a risk-free rate of return that is reinvested into the Index and is calculated as follows:

$$\text{Index TR}_t = \text{Index TR}_{t-1} \times \left[ TB_t + \frac{\text{Index}_t}{\text{Index}_{t-1}} \right] \times (TB_t + 1)^{\text{Days}-1}$$

where:

Days = The number of calendar days between time t and time t - 1.

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

and

$TBR_{t-1}$  = 91 day Treasury Bill rate at time t - 1.

### Section 3. Thomson Reuters/CoreCommodity CRB 3 Month Forward Index Composition

This Section presents the commodities included in the Thomson Reuters/CoreCommodity CRB 3 Month Forward Index and their respective weightings in the Index.

#### Commodities Included in the Thomson Reuters/CoreCommodity CRB 3 Month Forward Index

	Commodity	Index Weight	Contract Months	Exchange
1.	WTI Crude Oil	23%	Jan - Dec	NYMEX
2.	Heating Oil	5%	Jan - Dec	NYMEX
3.	RBOB Gasoline	5%	Jan - Dec	NYMEX
	<b>Total</b>	<b>33%</b>		
4.	Natural Gas	6%	Jan - Dec	NYMEX
5.	Corn	6%	Mar, May, Jul, Sep, Dec	CBOT
6.	Soybeans	6%	Jan, Mar, May, Jul, Nov	CBOT
7.	Live Cattle	6%	Feb, Apr, Jun, Aug, Oct, Dec	CME
8.	Gold	6%	Feb, Apr, Jun, Aug, Dec	COMEX
9.	Aluminum	6%	Mar, Jun, Sep, Dec	LME
10.	Copper	6%	Mar, May, Jul, Sep, Dec	COMEX
	<b>Total</b>	<b>42%</b>		
11.	Sugar	5%	Mar, May, Jul, Oct	NYBOT
12.	Cotton	5%	Mar, May, Jul, Dec	NYBOT
13.	Coffee	5%	Mar, May, Jul, Sep, Dec	NYBOT
14.	Cocoa	5%	Mar, May, Jul, Sep, Dec	NYBOT
	<b>Total</b>	<b>20%</b>		
15.	Nickel	1%	Mar, Jun, Sep, Dec	LME
16.	Wheat	1%	Mar, May, Jul, Sep, Dec	CBOT
17.	Lean Hogs	1%	Feb, Apr, Jun, Jul, Aug, Oct, Dec	CME
18.	Orange Juice	1%	Jan, Mar, May, Jul, Sep, Dec	NYBOT
19.	Silver	1%	Mar, May, Jul, Sep, Dec	COMEX
	<b>Total</b>	<b>5%</b>		

#### Active Contract Month by Calendar Month

Commodity	Exchange	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
WTI Crude Oil	NYMEX	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr
Heating Oil	NYMEX	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr
RBOB Gasoline	NYMEX	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr
Natural Gas	NYMEX	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr
Corn	CBOT	May	Jul	Jul	Sep	Sep	Dec	Dec	Dec	Mar	Mar	Mar	May
Soybeans	CBOT	May	Jul	Jul	Nov	Nov	Nov	Nov	Jan	Jan	Mar	Mar	May
Live Cattle	CME	Jun	Jun	Aug	Aug	Oct	Oct	Dec	Dec	Feb	Feb	Apr	Apr
Gold	COMEX	Jun	Jun	Aug	Aug	Dec	Dec	Dec	Dec	Feb	Feb	Apr	Apr
Aluminum	LME	Jun	Jun	Sep	Sep	Sep	Dec	Dec	Dec	Mar	Mar	Mar	Jun
Copper	COMEX	May	Jul	Jul	Sep	Sep	Dec	Dec	Dec	Mar	Mar	Mar	May
Sugar	NYBOT	May	Jul	Jul	Oct	Oct	Oct	Mar	Mar	Mar	Mar	Mar	May
Cotton	NYBOT	May	Jul	Jul	Dec	Dec	Dec	Dec	Dec	Mar	Mar	Mar	May
Cocoa	NYBOT	May	Jul	Jul	Sep	Sep	Dec	Dec	Dec	Mar	Mar	Mar	May
Coffee	NYBOT	May	Jul	Jul	Sep	Sep	Dec	Dec	Dec	Mar	Mar	Mar	May
Nickel	LME	Jun	Jun	Sep	Sep	Sep	Dec	Dec	Dec	Mar	Mar	Mar	Jun
Wheat	CBOT	May	Jul	Jul	Sep	Sep	Dec	Dec	Dec	Mar	Mar	Mar	May
Lean Hogs	CME	Jun	Jun	Jul	Aug	Oct	Oct	Dec	Dec	Feb	Feb	Apr	Apr
Orange Juice	NYBOT	May	Jul	Jul	Sep	Sep	Nov	Nov	Jan	Jan	Mar	Mar	May
Silver	COMEX	May	Jul	Jul	Sep	Sep	Dec	Dec	Dec	Mar	Mar	Mar	May

## **Section 4. Market Disruption Provisions**

### **Rollover Disruptions**

A Rollover Disruption Event (“RDE”) is defined as any day, on which a commodity is scheduled to roll, in which either: 1) the front month or back month contracts for the commodity settle at the daily maximum or minimum price as determined by the rules for the relevant exchange, or 2) the exchange fails to publish an official settlement price for the commodity, or 3) the exchange on which the commodity trades is not scheduled to be open.

If a RDE occurs for any commodity, that portion of the rollover *for that commodity only* which was scheduled to occur on that day will be deferred until the next Business Day upon which no RDE occurs for that commodity.

### **Rebalancing Disruptions**

If, on any date the Index is scheduled to rebalance an official settlement price for any one or more of the commodities in the Index is unavailable, then the price used in rebalancing the Index for those commodities will be the price on the previous Business Day upon which a price is available. In the event any one or more individual commodities settle at the daily maximum price or the daily minimum price, that price will be used for the purpose of rebalancing the Index.

### **Market Emergencies**

A “Market Emergency” is herein defined as any unscheduled and extraordinary condition in which market liquidity is interrupted (such as an event resulting in the unscheduled closing of one or more futures exchanges). Should a Market Emergency occur, the Thomson Reuters/CoreCommodity CRB Index Oversight Committee reserves the right to take such action with respect to the Thomson Reuters/CoreCommodity CRB 3 Month Forward Index, as it deems appropriate given the circumstances. The Thomson Reuters/CoreCommodity CRB Index Oversight Committee will attempt to notify interested parties of any such actions as well in advance as is practicable. There is no assurance, however, that a Market Emergency, the actions taken in response to such Market Emergency, or any other force majeure event, will not have an adverse effect on the value of the Thomson Reuters/CoreCommodity CRB 3 Month Forward Index or the manner in which it is calculated.

**Section 5. Ongoing Index Calculation and the Thomson Reuters/CoreCommodity CRB Index Oversight Committee**

The role of the Thomson Reuters/CoreCommodity CRB Index Oversight Committee (the “Committee”) is to meet on an annual basis (and from time to time if necessary) in order to review and/or modify the operation and calculation of the Thomson Reuters/CoreCommodity CRB 3 Month Forward Index and related indexes, and procedures relating thereto, and to review proposals by CoreCommodity or Thomson Reuters to modify the Thomson Reuters/CoreCommodity CRB 3 Month Forward Index. The Committee will be comprised of 4 persons, appointed by CoreCommodity and Thomson Reuters. Committee members will be chosen in order to bring expertise from a wide variety of backgrounds. Modifications to the Thomson Reuters/CoreCommodity CRB 3 Month Forward Index shall be subject to approval by the Committee. The Committee will have a significant degree of discretion with regard to the operation and calculation of the Thomson Reuters/CoreCommodity CRB 3 Month Forward Index and may exercise its discretion, as it deems appropriate.



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