

THE **RICI**[®] Handbook

The Guide to the
Rogers International Commodity Index[®]

January 22, 2021

This document is provided to you for information purposes only. It is not an offer for purchase or sale of any type of financial instrument. Past performance is not indicative of future returns.

The information presented in this RICI® Handbook demonstrates the methodology that is used for determining the composition and calculation of the Rogers International Commodity Index® ("RICI®") and sub-indexes.

All data and information is provided for information purposes only. All information has been carefully compiled to ensure maximum accuracy. However, we cannot guarantee and do not guarantee the accuracy of the information/calculation, or the complete absence of errors and omissions concerning information included or cited in this Handbook.

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AMENDMENTS TO THE PREVIOUS HANDBOOK INCLUDE:

- After deliberation by the Committee governing the Rogers International Commodity Index®, the Committee Chairman decided to make no adjustments to the Index composition, which has been in effect since the January 2019 roll period, which roll period began at the end of January 2019, and which composition was specified in the immediately preceding RICI® Handbook, dated January 29, 2020.
 - Effective with the January 2021 roll period, which roll period begins at the end of January 2021, the Index uses WM/Refinitiv Closing Spot Rates fixed at 4 p.m. London as the FX source for settlement levels. The MCW calculated for the January 2021 roll period also uses WM/Refinitiv Closing Spot Rates fixed at 4 p.m. London on the MCW calculation day. TPI will continue to be the FX source used for Index intraday levels. See RICI Handbook Sections 4.3 and 4.4.4.1.
 - New Section 4.4.4.3 Adjustments for Very Small or Negative Contract Pricing provides an additional example of how extraordinary circumstances might affect calculation of the Index.
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I. OVERVIEW

1.1 THE RICI®

The Rogers International Commodity Index® (“RICI®”) is a composite, USD based, total return index, designed by James B. Rogers, Jr. in the late 1990s.

The index was designed to meet the need for consistent investing in a broad-based international vehicle; it represents the value of a basket of commodities consumed in the global economy, ranging from agricultural to energy to metals products. The value of this basket is tracked via futures contracts on exchange-traded physical commodities, comprised of 38 commodities futures contracts, quoted in four different currencies, listed on ten exchanges in four countries.

RICI® aims to be an effective measure of the price action of raw materials not just in the United States but also around the world. Indeed, the index’s weights attempt to balance consumption patterns worldwide (*in developed and developing economies*) and specific contract liquidity.

The index is designed to offer stability, partly because it is broadly based and consistent in composition, and to meet a need in the financial spectrum currently not effectively covered.

Rogers International Commodity Index® Methodology

The Rogers International Commodity Indexes are maintained by their owner, Beeland Interests, Inc., who is advised by members of the Rogers International Commodity Index® Committee: a group of “wise people” just as are the people who determine the Dow Jones Averages and other major indexes.

For the sake of transparency, consistency, and stability, composition changes are infrequent. The Committee members generally monitor the Indexes daily for circumstances that warrant consideration of changes. The Committee meets formally in November or December of each year to assess the Indexes and discuss changes. Mr. James B. Rogers, Jr., as the founder of the RICI® and sole owner of Beeland Interests, chairs the RICI® Committee and is the final arbiter of its decisions.

The Committee of wise people bases its discussion on world consumption patterns and liquidity. Other indexes may show regular dramatic changes in weights and compositions meaning investors never know in what they are investing. This is not the case with the Rogers International Commodity Index®, which is stable, consistent and transparent. An investor in the Rogers Indexes always knows what he or she is getting.

The RICI® and its sub-indexes are calculated and published in real time.

Indexes, calculated with 9 decimals accuracy, will be rounded to 2 decimal places and can be accessed via the following sources:

FOR CQG SUBSCRIBERS

RICI®—Agriculture Index Excess Return:	RICIAER
RICI®—Agriculture Index Total Return:	RICIATR
RICI®—Energy Index Excess Return:	RICIEER
RICI®—Energy Index Total Return:	RICIETR
RICI®—Metals Index Excess Return:	RICIMER
RICI®—Metals Index Total Return:	RICIMTR
RICI®—Industrial Metals Index Excess Return:	RICIBMER
RICI®—Industrial Metals Index Total Return:	RICIBMTR
RICI®—Precious Metals Index Excess Return:	RICIPMER
RICI®—Precious Metals Index Total Return:	RICIPMTR
RICI®—Index Excess Return:	RICIER
RICI®—Index Total Return:	RICITR

BLOOMBERG

RICI®—Agriculture Index Excess Return:
 RICI®—Agriculture Index Total Return:
 RICI®—Energy Index Excess Return:
 RICI®—Energy Index Total Return:
 RICI®—Metals Index Excess Return:
 RICI®—Metals Index Total Return:
 RICI®—Industrial Metals Index Excess Return:
 RICI®—Industrial Metals Index Total Return:
 RICI®—Precious Metals Index Excess Return:
 RICI®—Precious Metals Index Total Return:
 RICI®—Index Excess Return:
 RICI®—Index Total Return:

CQG

ROGRAGER
ROGRAGTR
ROGRENER
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ROGRIMTR
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ROGRPMTR
ROGRER
ROGRTR

DIAPASON

RICIAGER Index
RICIAGTR Index
RICIENER Index
RICIENTR Index
RICIMEER Index
RICIMETR Index
RICIIMER Index
RICIIMTR Index
RICIBMER Index
RICIBMTR Index
RICIGLER Index
RICIGLTR Index

REUTERS

RICI®—Agriculture Index Excess Return:
 RICI®—Agriculture Index Total Return:
 RICI®—Energy Index Excess Return:
 RICI®—Energy Index Total Return:
 RICI®—Metals Index Excess Return:
 RICI®—Metals Index Total Return:
 RICI®—Industrial Metals Index Excess Return:
 RICI®—Industrial Metals Index Total Return:
 RICI®—Precious Metals Index Excess Return:
 RICI®—Precious Metals Index Total Return:
 RICI®—Index Excess Return:
 RICI®—Index Total Return:

CQG

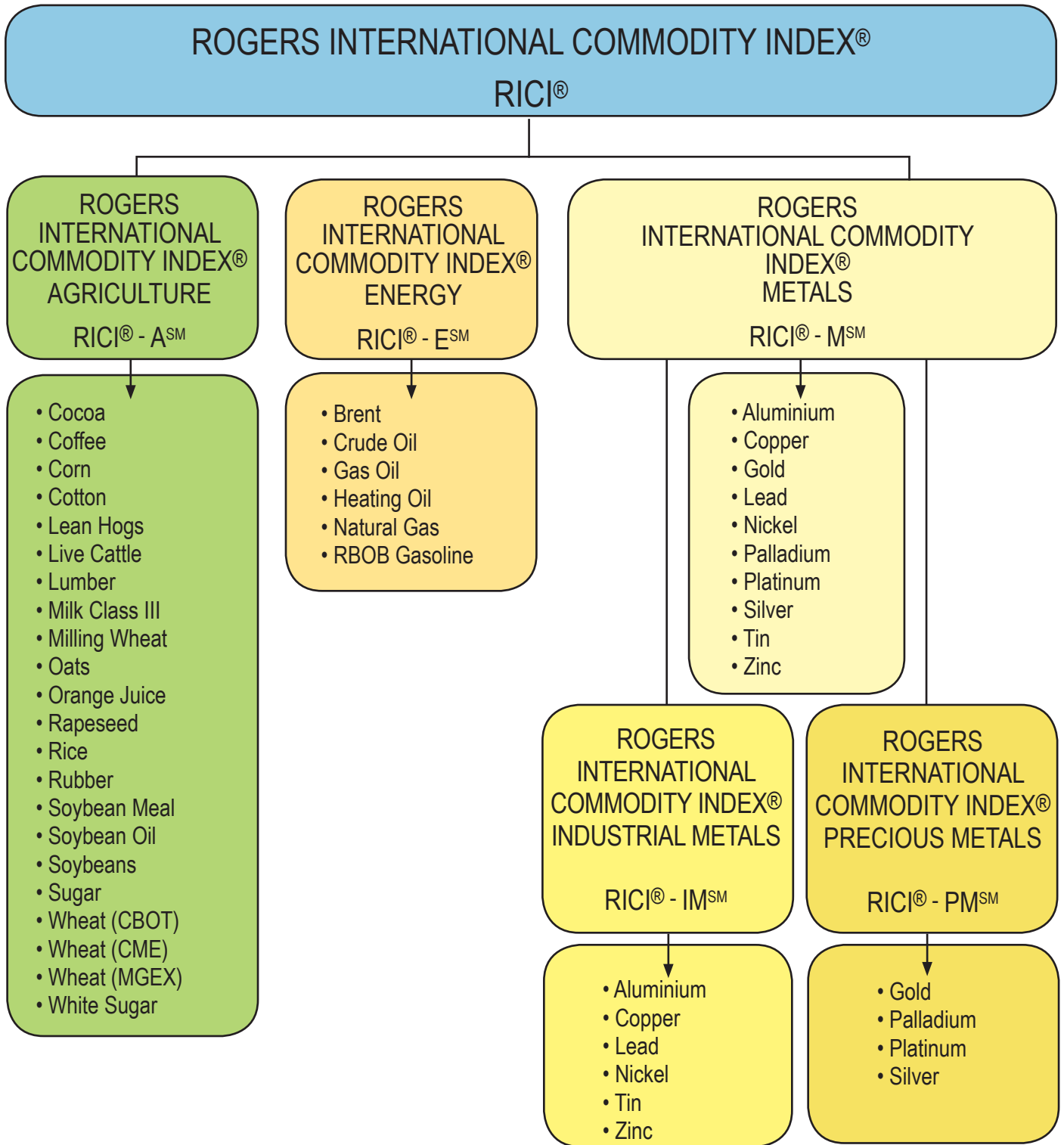
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DIAPASON

RICIAGER=DIAP
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RICIBMER=DIAP
RICIBMTR=DIAP
RICIGLER=DIAP
RICIGLTR=DIAP

<http://www.cqg.com>

1.2 THE RICI® AND ITS SUB-INDEXES



1.3 THE RICI® COMMITTEE

The RICI® Committee formulates and enacts all business assessments and decisions regarding the calculation, composition and management of the index.

Mr. James B. Rogers, Jr., as the founder of the RICI® and sole owner of Beeland Interests, chairs the RICI® Committee and is the final arbiter of its decisions. In addition to Mr. Rogers, the representatives of the following parties take part to advise the Chairman:

- 1. CQG**
- 2. DAIWA ASSET MANAGEMENT**
- 3. DIAPASON COMMODITIES MANAGEMENT S.A.**
- 4. MERRILL LYNCH**
- 5. PRICE ASSET MANAGEMENT**
- 6. UBS AG**
- 7. MOORGATE BENCHMARKS LIMITED**

The eight members of the RICI® Committee usually meet once per year, towards the end of the year, either during the month of November or December. However, the Committee may assemble on any other day of the year – for example, to deal with Exceptional Circumstances (see 2.1).

Exclusively Mr. Rogers, as Chairman of the Committee, is authorized to designate new members of the committee – if necessary.

II. RICI® INCLUSION PROCESS

2.1 THE PROCESS

The contracts chosen for the basket of commodities that constitute the RICI® are required to fulfill various conditions (see below).

Generally, the selection and weights of the items in the index are reviewed annually (see 1.3 The RICI® Committee), and weights for the next year are assigned every November or December. As a stable and investable index, the RICI®'s composition is modified infrequently.

For example, the composition of the RICI® may require changes when exceptional circumstances occur. "Exceptional Circumstances" include (but are not restricted to):

- **Continuous adverse trading conditions for a single contract** (e.g., trading volume collapses).
 - **Critical changes in the global consumption pattern** (e.g., a scientific breakthrough fundamentally alters the consumption of a commodity).
-

2.2 EXCHANGES AND NON-TRADED ITEMS

All commodities included in the RICI® must be publicly traded on recognized exchanges to ensure ease of tracking and verification.

Additionally, the RICI® does not and will not include non-traded items such as hides or tallow, which are included in other popular commodity indexes.

The 10 international exchanges recognized by the RICI® Committee are:

1. Chicago Board of Trade (USA)
2. Chicago Mercantile Exchange (USA)
3. COMEX (USA)
4. ICE Futures Europe (UK)
5. ICE Futures US (USA)
6. London Metal Exchange (UK)
7. NYMEX (USA)
8. Euronext (EU-Paris)
9. The Tokyo Commodity Exchange (Japan)
10. Minneapolis Grain Exchange (USA)

2.3 GENERAL COMMODITY ELIGIBILITY

A commodity will be considered fit to be included in the index if it plays a significant role in world-wide (*developed and developing economies*) consumption. “Worldwide consumption” is measured by tracking international import/export patterns, and domestic consumption environments of the world’s prime commodity consumers.

Only raw materials that reflect the current state of international trade and commerce are eligible to become RICI® commodities. Commodities that are merely linked to national consumption patterns will not be considered.

The RICI® is not related to commodities production data of any sort.

2.4 COMMODITY SCREENING PROCESS

Data of private and governmental providers concerning the world’s top consumed commodities is monitored and considered by members of the RICI® Committee throughout the year.

To obtain a fair representation of international commodities consumption, a wide range of sources on commodities demand and supply is consulted.

The findings of this undertaking are then condensed into the different commodities contracts and weights of the RICI®.

Sources on the world's commodity consumption data include:

- Industrial Commodity Statistics Yearbook, United Nations (New York)
- Commodity Trade Statistics Database, United Nations Statistics Division (New York)
- Copper Bulletin Yearbook, International Copper Study Group (Lisbon)
- Foreign Agricultural Service's Production, Supply and Distribution Database, U.S. Department of Agriculture (Washington, DC)
- Manufactured Fiber Review, Fiber Economics Bureau, Inc. (Arlington, VA)
- Monthly Bulletin, International Lead and Zinc Study Group (London)
- Quarterly Bulletin of Cocoa Statistics, International Cocoa Organization (London)
- Rubber Statistical Bulletin, International Rubber Study Group (London)
- Statistical Bulletin Volumes, Arab Gulf Cooperation Council (GCC) (Saudi Arabia)
- Sugar Yearbook, International Sugar Organization (ISO) (London)
- World Agriculture Assessments of Intergovernmental Groups, Food & Agriculture Organization of the United Nations (Rome)
- World Commodity Forecasts, Economist Intelligence Unit (London)
- World Cotton Statistics, International Cotton Advisory Committee (Washington, DC)
- World Metals Statistics, World Bureau of Metal Statistics (London)

2.5 CONTRACT CHARACTERISTICS

In order to decide whether a specific commodity contract is actually investable, the RICI® Committee screens volume and liquidity data of international exchanges, which is published on a regular basis by the Futures Industry Association (Washington DC, United States) or by the individual exchanges on which the contracts trade.

If a commodity contract trades on more than one exchange, generally the most liquid contract globally, in terms of volume and open interest combined, is then aimed to be selected for inclusion in the index, taking legal considerations into account. Beyond liquidity, the RICI® Committee generally seeks to include the contract representing the highest quality grade of a specific commodity.

RICI® commodity contracts reflect international liquidity and quality choice.

For example, Silver is traded on COMEX, on ICE Futures and on the Tokyo Commodity Exchange. The largest average volume and open interest is consistently transacted on COMEX, consequently this contract was selected to represent Silver in the Index.

2.6 INCLUDED RICI® CONTRACTS

Please find below the list of the futures contracts composing the Index, together with their respective codes, exchanges and currencies:

PRODUCT	CODE	EXCHANGE	CURRENCY	PRODUCT	CODE	EXCHANGE	CURRENCY
Aluminium	AH	LME ¹	USD	Oats	O	CBOT	USD
Brent	BRN	ICE ² EU	USD	Orange Juice	OJ	ICE US	USD
Cocoa	C	ICE EU	GBP	Palladium	PA	NYMEX	USD
Coffee	RC	ICE EU	USD	Platinum	PL	NYMEX	USD
Copper	CA	LME	USD	Rapeseed	ECO	EURONEXT	EUR
Corn	C	CBOT ³	USD	RBOB Gasoline	RB	NYMEX	USD
Cotton	CT	ICE US	USD	Rice	RR	CBOT	USD
Crude Oil	CL	NYMEX	USD	Rubber	81	TOCOM	JPY
Gas Oil	GAS	ICE EU	USD	Silver	SI	COMEX	USD
Gold	GC	COMEX	USD	Soybean Meal	SM	CBOT	USD
Heating Oil	HO	NYMEX	USD	Soybean Oil	BO	CBOT	USD
Lead	PB	LME	USD	Soybeans	S	CBOT	USD
Lean Hogs	LH	CME	USD	Sugar	SB	ICE US	USD
Live Cattle	LC	CME	USD	Tin	SN	LME	USD
Lumber	LB	CME	USD	Wheat	W	CBOT	USD
Milk Class III	DA	CME	USD	Wheat	KW	CME	USD
Milling Wheat	EBM	EURONEXT	EUR	Wheat	MWE	MGEX	USD
Natural Gas	NG	NYMEX	USD	White Sugar	W	ICE EU	USD
Nickel	NI	LME	USD	Zinc	ZS	LME	USD

¹ The London Metal Exchange Limited provides the pricing data for the LME components of the RICI®. All references to the LME pricing data are used with the permission of the LME and LME has no involvement with and accepts no responsibility for any RICI® product or any part of the Rogers International Commodity Index®, Rogers International Commodity Index®- Metals, Rogers International Commodity Index®- Industrial Metals, their suitability as the basis for an investment, or their future performance.

² The RICI® is based in part on the ICE Cotton, ICE Robusta Coffee, ICE London Cocoa, ICE Sugar No.11, ICE White Sugar, ICE FCOJ-A (Orange Juice), ICE Brent Crude Oil and ICE Gas Oil commodity futures contracts owned by ICE Data, LLP and its affiliates, and are used by Beeland Interests with permission under license by ICE Data, LLP.

The RICI®- AgricultureSM is based in part on the ICE Cotton, ICE Robusta Coffee, ICE London Cocoa, ICE Sugar No.11, ICE White Sugar and ICE FCOJ-A (Orange Juice) commodity futures contracts owned by ICE Data, LLP and its affiliates, and are used by Beeland Interests with permission under license by ICE Data, LLP.

The RICI®- EnergySM is based in part on the ICE Brent Crude Oil and ICE Gas Oil commodity futures contracts owned by ICE Data, LLP and its affiliates, and are used by Beeland Interests with permission under license by ICE Data, LLP.

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³ CME GROUP MARKET DATA IS USED UNDER LICENSE AS A SOURCE OF INFORMATION FOR CERTAIN BEELAND INTERESTS, INC. PRODUCTS. CME GROUP HAS NO OTHER CONNECTION TO BEELAND INTERESTS, INC. PRODUCTS AND SERVICES AND DOES NOT SPONSOR, ENDORSE, RECOMMEND OR PROMOTE ANY BEELAND INTERESTS, INC. PRODUCTS OR SERVICES. CME GROUP HAS NO OBLIGATION OR LIABILITY IN CONNECTION WITH THE BEELAND INTERESTS, INC. PRODUCTS AND SERVICES. CME GROUP DOES NOT GUARANTEE THE ACCURACY AND/OR THE COMPLETENESS OF ANY MARKET DATA LICENSED TO BEELAND INTERESTS, INC. AND SHALL NOT HAVE ANY LIABILITY FOR ANY ERRORS, OMISSIONS, OR INTERRUPTIONS THEREIN. THERE ARE NO THIRD PARTY BENEFICIARIES OF ANY AGREEMENTS OR ARRANGEMENTS BETWEEN CME GROUP AND BEELAND INTERESTS, INC.

III. RICI® WEIGHTS**3.1 INDEX WEIGHTS**

The Index Weights remain unchanged as of the end of the January 2019 roll period, which roll period began at the end of January 2019, and are as follows:

Crude Oil	15.00%	Gas Oil	1.20%
Brent	13.00%	Cocoa	1.00%
Natural Gas	6.00%	Lean Hogs	1.00%
Gold	5.00%	Nickel	1.00%
Corn	4.75%	Rapeseed	1.00%
Cotton	4.20%	Rubber	1.00%
Aluminium	4.00%	Sugar	1.00%
Copper	4.00%	Tin	1.00%
Silver	4.00%	Wheat (CME)	1.00%
Soybeans	3.50%	Wheat (MGEX)	1.00%
RBOB Gasoline	3.00%	White Sugar	1.00%
Wheat (CBOT)	2.75%	Lumber	0.90%
Coffee	2.00%	Rice	0.75%
Lead	2.00%	Soybean Meal	0.75%
Live Cattle	2.00%	Orange Juice	0.60%
Milling Wheat	2.00%	Oats	0.50%
Soybean Oil	2.00%	Palladium	0.30%
Zinc	2.00%	Milk Class III	0.20%
Heating Oil	1.80%		
Platinum	1.80%	TOTAL	100.00%

3.2 CHANGES IN WEIGHTS AND/OR INDEX COMPOSITION

Generally, the RICI® Committee reviews the selection and weights of the futures contracts in the index annually. Thus weights are potentially reassigned towards the end of the year for the following year, usually in November or December.

3.3 ROLLING OF THE RICI® INDEX CONTRACTS

The index rolls usually over 3 days, from the day prior to the last RICI® Business Day of the month to the first RICI® Business Day of the following month, following the rules defined in Appendix A.

In the event that at least one of the last 3 weekdays (excluding weekend) of the month is simultaneously a holiday in the US and a business day in Japan, the roll period will be shifted forward by the number of days meeting the preceding condition (i.e., holiday in the US and business day in Japan).

Generally, if the next calendar month of a futures contract includes a first notice day, a delivery day or historical evidence that liquidity migrates to a next contract month during this period, then the next contract month is intended to be applied to calculate the index – taking legal constraints into account.

See also Section 4.4.4.3 Adjustments for Very Small or Negative Contract Pricing.

For example, during the November roll period, the January Crude Oil contract is replaced by the February Crude Oil contract.

3.4 REBALANCING OF THE RICI® COMPONENTS

The Index is rebalanced monthly during each roll period using Index Weights, as explained in Section 4.4.

3.5 DATA SOURCE

The index calculation is based on the official commodity exchanges' prices of the futures contracts used.

3.6 EXCEPTIONAL COMMITTEE MEETING

If, for any reason, one of the index components ceases to exist or liquidity collapses to abnormal levels, or any other similar event with similar consequences as determined in the discretion of the Committee occurs, the Committee will call an exceptional meeting to assess the situation. In addition, any Index calculation issue that may arise, the treatment for which is not sufficiently documented in this Handbook, promptly shall be referred to the RICI® Committee for deliberation.

Following the fall of the Malaysian ringgit in 1998, the liquidity of the Palm Oil futures contract on the Kuala Lumpur Commodity Exchange collapsed to a point where it became impossible to trade it. In this case, the Palm Oil futures contract was replaced by the Soybean Oil contract that trades on the Chicago Board of Trade, United States.

IV. RICI® STANDARD CALCULATION**4.1 OUTLINE OF THE CALCULATION METHODOLOGY**

The Index calculation methodology is reviewed by the RICI® Committee during its annual meeting in November or December if and as necessary to consider changes.

4.2 INITIAL VALUE

The Initial Value of the RICI® Index was 1000.00 as of July 31, 1998.

4.3 DEFINITION

CC **Continuity Constant.** The constant used to maintain continuity of the Total Component Weight during the rebalancing periods.

MCW The **Monthly Contract Weight** is defined as the factor which, when applied to the second nearby prices on the business day preceding the start of the roll, would result in the index effective weights being equal to Index Weights were the second nearby at that time the referenced contract. Note that the second nearby is not at that time the referenced contract and so the effective weights are not necessarily ever equal to Index Weights.

IW **Index Weight.** The percentage index weight fixed for each component represented in the RICI® index methodology and ratified by the RICI® Committee.

DCP **Daily Contract Price** is the daily reference price, fixed at 4 p.m. New York time, that is used in the calculation of the index. First and second RICI® nearbys are designated by the RICI® Committee.

FX **FX** is the foreign currency rate, fixed at 4:00 p.m. London time, that is used to convert a futures contract value expressed in its original currency to the currency in which the index is quoted. The expression of FX is given according to market standard and practices and adjusted by the CRY factor. ¹

¹ Effective with the January 2021 roll period, which roll period begins at the end of January 2021, the Index uses WM/Refinitiv Closing Spot Rates fixed at 4 p.m. London as the FX source for settlement levels. The MCW calculated for the January 2021 roll period also uses WM/Refinitiv Closing Spot Rates fixed at 4 p.m. London on the MCW calculation day. TPI will continue to be the FX source used for Index intraday levels.

- CRY Factor** The **CRY Factor** is the adjusting factor used in the foreign currency conversion.
- DCW** The **Daily Component Weight** is the product of currency adjusted Daily Contract Prices (DCP) with Monthly Contract Weights (MCW).
- TCW** For an index, the **Total Component Weight** (TCW) is the sum of Daily Component Weights (DCWs) for all the components of that index.
- RW** **Roll Weight** is, for each component, the weight associated to the first and second RICI® nearby for each day of the roll period. During the roll period, the RW can take the values 1.0, 2/3, 1/3 and 0.0.
- TCWR** The **Total Component Weight Ratio** is the ratio of an index's Total Component Weight as calculated using second nearby prices and new MCWs to that index's Total Component Weight as calculated using second nearby prices and old MCWs.
- BDR** The **Basket Daily Return** is the daily composite basket return weighted appropriately by RWs and MCWs to reflect assets held from one RICI® Business Day to the next.
- IRR** **Interest Rate Return** is the return reflecting the fixed income performance of the index in its designated currency from one RICI® Business Day to the next.
- ARR** **The Available Reference Rate** is the rate of interest used as the source for the fixed income performance component of the TR indices.
- ER** **Excess Return Index** measures the uncollateralized returns of the RICI® basket on a roll adjusted basis.
- TR** **Total Return Index** measures the collateralized returns of the RICI® basket.
-

4.4 CALCULATION OF THE RICI® INDEXES

Two RICI® indexes are calculated:

- The “Excess Return” (RICI® - ER),
- The “Total Return” (RICI® - TR).

4.4.1 The Total Component Weight

4.4.1.1 Total Component Weight calculation during non roll periods

The TCW for any given non-roll date is calculated as the sum of adjusted Daily Contract Prices (DCP), multiplied by their respective Monthly Contract Weights (MCW). The DCP are adjusted by price scalars reflecting reference currency rates versus the U.S. Dollar such that all adjusted DCP are expressed in U.S. Dollars. For non-roll days we have:

$$TCW_t = \sum_{c=1,N} DCW_{c,t} \quad (1)$$

Where:

$$DCW_{c,t} = DCP_{c,t} \times MCW_{c,t} \times [FX_{c,t}]^{CRY \text{ Factor}} \quad (2)$$

MCW _{c,t}	is the Monthly Contract Weight for each Index component,
DCP _{c,t}	is the Daily Contract Price in the local currency,
FX _{c,t}	is the currency exchange rate between the quotation currency of the component instrument and the index reference currency. For official settlement price, the RICI® Indexes use a direct or USD cross fixing price
CRY Factor	is +1 or -1 (see below)

QUOTATION CURRENCIES AND CRY FACTORS

Quotation Currency	FX	Expression	CRY Factor	SETTLEMENT Rate Source
USD			1	
EUR	EURUSD	USD per EUR	1	WMRSPOT01: EURUSDFIX _z =WM (USA/EU)
GBP	GBPUSD	USD per GBP	1	WMRSPOT01: GBPUSDFIX _z =WM (USA/Great Britain)
JPY	USDJPY	JPY per USD	-1	WMRSPOT01: USDJPYFIX _z =WM (Japan/USA)

Quotation Currency	FX	Expression	CRY Factor	INTRADAY Rate Source
USD			1	
EUR	EURUSD	USD per EUR	1	TPI: EURUSDSPT (USA/EU)
GBP	GBPUSD	USD per GBP	1	TPI: GBPUSDSPT (USA/Great Britain)
JPY	USDJPY	JPY per USD	-1	TPI: USDJPYSPT (Japan /USA)

4.4.1.2 The roll period - Index Rebalancing and continuity

Normally, the 3 day RICI® roll period starts on the day prior to the last RICI® Business Day of the month and ends on the first RICI® Business Day of the following month.

In the event that at least one of the last 3 weekdays (excluding weekend) of the month is simultaneously a holiday in the US and a business day in Japan, the roll period will be shifted forward by the number of days meeting the preceding condition (i.e. holiday in the US and business day in Japan).

During the roll period, the index is shifted from the first to the second nearby baskets at a rate of 33.33% per day.

On the last roll day, the roll is completed unless the roll period is extended for a component as a result of a Market Disruption Event such as a limit day.

During the roll period of each month the index is rebased using Index Weights (IW), as defined by the RICI® Committee.

The RICI® will roll into new Monthly Contract Weights (MCWs) and Continuity Constants (CCs). On the day before the start of the roll period, the RICI® is calculated based on the old MCWs and CCs of the current RICI® period.

During the roll period the calculation of Total Component Weight takes the following expression:

$$TCW_t = \frac{CC_{new}}{CC_{old}} \left[\sum_{c=1,N} MCW_{c,old} \times RW1_{c,t} \times DCP1_{c,t} \times [FX_{c,t}]^{CRY \text{ Factor}} \right] + \sum_{c=1,N} MCW_{c,new} \times RW2_{c,t} \times DCP2_{c,t} \times [FX_{c,t}]^{CRY \text{ Factor}} \quad , \quad (3)$$

Where the RWs can take the following values:

$$RW_c = \{1, 1/3, 2/3, 0\} \quad ,$$

$$TCWR_t = \frac{\sum_{c=1,N} MCW_{c,new} \times DCP2_{c,t} \times [FX_{c,t}]^{CRY \text{ Factor}}}{\sum_{c=1,N} MCW_{c,old} \times DCP2_{c,t} \times [FX_{c,t}]^{CRY \text{ Factor}}} \quad , \quad (4)$$

In equation (4), $DCP_{c,t}$ is the price at time t of the new contract on which we are going to roll and t is the first business day preceding the first roll day.

And

$$CC_{new} = TCWR_t \times CC_{old}, \quad (5)$$

If there is a Market Disruption Event during one of the days of the roll period, the amount to be rolled will be carried forward until the next RICI® Business Day.

New MCWs and CC are calculated monthly using the settlement levels of the second nearby contracts on the RICI® Business Day prior to the first day of the roll.

On that day, the new MCWs are solved such that if applied to the second nearby prices the index effective weights would be equal to Index Weights, were the second nearby at that time the referenced contract. Note that the second nearby is not at that time the referenced contract and so the effective weights are not necessarily ever equal to Index Weights.

We define $MCW_{c=R,new} = x = 10000$, where R ($1 \leq R \leq N$) and 10000 is an arbitrary constant.

For each component i we then solve,

$$\frac{MCW_{i,new} \times DCP_{i,t} \times [FX_{i,t}]^{CRY \text{ Factor}}}{\sum_{c=1,N} MCW_{c,new} \times DCP_{c,t} \times [FX_{c,t}]^{CRY \text{ Factor}}} - IW_i = 0 \quad (6)$$

Which have the following analytic solution:

$$\begin{aligned} MCW_1 &= \frac{IW_1 \times DCP_R \times [FX_{R,t}]^{CRY \text{ Factor}}}{IW_R \times DCP_1 \times [FX_{1,t}]^{CRY \text{ Factor}}} x \\ MCW_2 &= \frac{IW_2 \times DCP_R \times [FX_{R,t}]^{CRY \text{ Factor}}}{IW_R \times DCP_2 \times [FX_{2,t}]^{CRY \text{ Factor}}} x \\ MCW_3 &= \frac{IW_3 \times DCP_R \times [FX_{R,t}]^{CRY \text{ Factor}}}{IW_R \times DCP_3 \times [FX_{3,t}]^{CRY \text{ Factor}}} x \\ &\vdots \\ MCW_R &= x \end{aligned} \quad (7)$$

Once the new MCWs are determined, the new Continuity Constant is calculated using equation (5) above.

4.4.2 The “RICI® - Excess Return” (RICI® - ER)

4.4.2.1 Calculation during non roll periods

The RICI® - ER is an Excess Return Index. It represents the uncollateralized return of the RICI® basket. The index is calculated according to the following formula:

Define BDR (Basket Daily Return) as:

$$BDR_t = \frac{TCWF_t}{TCWI_{t-1}} - 1 \quad (8)$$

With

$$TCWI_{t-1} = \sum_{c=1,N} DCP_{c,t-1} \times [FX_{c,t-1}]^{CRY \text{ Factor}} \times MCW_{c,t-1} \quad (9)$$

$$TCWF_t = \sum_{c=1,N} DCP_{c,t} \times [FX_{c,t}]^{CRY \text{ Factor}} \times MCW_{c,t-1} \quad (10)$$

Where

TCWF is the Total Component Weight Final
TCWI is the Total Component Weight Initial

The expression of the RICI® - ER is:

$$RICI^{\text{®}}-ER_t = RICI^{\text{®}}-ER_{t-1} \times (1 + BDR_t) \quad (11)$$

The RICI® - ER was set equal to 1000.00 on 31st of July 1998.

4.4.2.2 Calculation during roll periods

The Basket Daily Return is defined as the percentage change in the TCW of the RICI® from one RICI® Business Day to the next. It reflects the return that would have been realized by holding positions in the first and second RICI® nearby contracts appropriately weighted to reflect the MCWs (IWs), from the closing of the exchange on the prior RICI® Business Day to the closing of the exchange on the next RICI® Business Day.

The Roll Weights (RW) used to calculate TCWI and TCWF are the ones used to calculate the Total Component Weight on the Business Day immediately preceding the calculation date.

During the roll period we have:

$$TCWI_{t-1} = \frac{CC_{new}}{CC_{old}} \left[\sum_{c=1,N} MCW_{c,old} \times RW1_{c,t-1} \times DCP1_{c,t-1} \times [FX_{c,t-1}]^{CRY \text{ Factor}} \right] + \sum_{c=1,N} MCW_{c,new} \times RW2_{c,t-1} \times DCP2_{c,t-1} \times [FX_{c,t-1}]^{CRY \text{ Factor}} \quad , \quad (12)$$

and

$$TCWF_t = \frac{CC_{new}}{CC_{old}} \left[\sum_{c=1,N} MCW_{c,old} \times RW1_{c,t-1} \times DCP1_{c,t} \times [FX_{c,t}]^{CRY \text{ Factor}} \right] + \sum_{c=1,N} MCW_{c,new} \times RW2_{c,t-1} \times DCP2_{c,t} \times [FX_{c,t}]^{CRY \text{ Factor}} \quad , \quad (13)$$

Where the RWs can take the following values:

$$RW1_{c,t-1} = \{1, 2/3, 1/3, 0\}, \quad RW2_{c,t-1} = \{0, 1/3, 2/3, 1\}$$

And then

$$RICI^{\circledR} - ER_t = RICI^{\circledR} - ER_{t-1} \times (1 + BDR_t) \quad (14)$$

With

$$BDR_t = \frac{TCWF_t}{TCWI_{t-1}} - 1$$

4.4.3 The “RICI® - Total Return” (RICI® - TR)

4.4.3.1 Calculation of the Total Return Index

The RICI® - TR Index is calculated according to the following formula:

$$RICI^{\circledR}-TR_t = RICI^{\circledR}-TR_{t-1} \times (1 + BDR_t + IRR_t) \times (1 + IRR_t)^{\text{days}} \quad (15)$$

Where

IRR: **Interest Rate Return**, is the compounding factor defined as

$$IRR_t = \left[\frac{1}{1 - \frac{91}{360} \times DRR_{t-1}} \right]^{\frac{1}{91}} - 1, \quad (16)$$

Where “days” is the integer number of non RICI® Business Days since the immediately preceding RICI® Business Day.

DRR: **Daily Reference Rate**, is a function of the rate available on the immediately preceding RICI® Business Day (ARR).

$$DRR_t = 0.9 * ARR_t \quad (17)$$

In the event that a new ARR is published on day s such that $t_1 < s < t$ with t, the date of the RICI® calculation and t1, the first RICI® Business Day preceding t, the calculation is as below:

$$RICI^{\circledR}-TR_t = RICI^{\circledR}-TR_{t-1} \times (1 + BDR_t + IRR_t) \times (1 + IRR_t)^{\text{days1}} \times (1 + IRR_s)^{\text{days2}} \quad (15 \text{ bis})$$

Where Days1 is the number of days between s and t (including t and excluding s) and Days2 is the number of days between t1 and s (including t and including s).

Ex: if $t= 28/03/2007$, $t_1=23/03/2007$, $s=26/03/2007$, then Days1 = 1 and Days2 = 3

The RICI® - TR was set equal to 1000.00 on July 31st, 1998.

4.4.3.2 Available Reference Rates

The Available Reference Rate ARR used for the calculation of the RICI® Total Return index is defined below:

ARR is the 91-Day U.S. Treasury Bill (3 Months) auction rate, designated as “High Rate” as published in the “Treasury Security Auction Results” report, published by the Bureau of Public Debt and available on Bloomberg USB3MTA Index <GO> or Reuters USAUCTION9.

The rate is generally published once per week on Monday and effective on the RICI® Business Day immediately following.

4.4.4 RICI® Business Day definition and Market Disruption Event

4.4.4.1 RICI® Business Day Definition

A RICI® Business Day is a day on which all United States-based exchanges that list futures contracts included in the RICI® are open for business (including half-day opening).

4.4.4.2 Adjustments for Market Disruption Event

A “Market Disruption Event” will be deemed to have occurred on any day upon which the trading of a contract involved in the index calculation is disrupted or the fair determination of its price is interfered with subject to the following:

- a. The settlement price for the contract as determined by the exchange is at the limit of its permissible trading range.
- b. No settlement price for that contract is determined by midnight on the day of trading in the time zone in which the exchange is located.
- c. The exchange upon which the contract trades closes trading in that contract at a time prior to the published closing time, unless the altered closing time was brought to public attention by the closing time on the trading day prior to the day in question.
- d. The settlement closing price published by the exchange is not deemed, in the opinion of the RICI® Committee, to properly reflect the fair price of that contract as determined by its free and fair trading on that exchange.
- e. A local holiday or an exceptional exchange closure day is deemed a Market Disruption Event.

If a Market Disruption Event occurs during the roll or rebalancing period for one or more commodities, the specific contracts involved are neither rolled nor rebalanced on that day. For those contracts, the RWs and the MCWs remain identical to the values they had on the RICI® Business Day immediately preceding the Market Disruption Event day. However, conversion of non-USD prices will use the current RICI® Business Day’s FX close. The roll period and the rebalancing period will be extended for this or these particular commodities only until the next available business day upon which no Market Disruption Event occurs for that or those commodities. On such day, the roll will accelerate to the ratios that would be used on said date if there were no Market Disruption Event in the prior business day.

Outside of the roll and rebalancing period, the Index is calculated using the last trading price available on the exchange. In particular the calculation of the MCWs will, in the normal course of events, take place using the last price available regardless of whether a Market Disruption Event has occurred.

However, under exceptional conditions the RICI® Committee reserves the right to adjust any prices used in the index calculation. This may occur if the settlement price is deemed to materially differ from the fair price for that commodity determined by trading on that day and that use of the official settlement price would not be in the interest of RICI® Index investors. In this case an alternative settlement price or prices may be determined and used for the index calculation until fair trading is resumed and the exchange quoted settlement price can again be relied upon. In this case the prices used in the calculation of the index and the calculation of MCWs will be published along with the mechanism for their determination.

Should any exchange amend the settlement price for a contract involved in the RICI® calculation and do so in a timely manner the RICI® Committee may, if deemed appropriate, reflect this change by adjusting the published level of the index.

Example of values taken by RW1 and RW2 for a specific contract over the June 2008 roll period if June 30th is a Market Disruption Event day:

Example of RW1 and RW2 for a specific contract over June 2008

Figure 1. Standard Roll, no Market Disruption Event

Theoretical Roll	MCW Reference	First Roll Day	Second Roll Day	Third Roll Day	
	Thursday	Friday	Monday	Tuesday	Wednesday
Date	26-Jun 2008	27-Jun 2008	30-Jun 2008	1-Jul 2008	2-Jul 2008
RW1	1.00	1.00	0.67	0.33	0.00
RW2	0.00	0.00	0.33	0.67	1.00

Figure 2. Hypothetical Market Disruption Event on June 30, 2008

Theoretical Roll	MCW Reference	First Roll Day	Second Roll Day	Third Roll Day	
	Thursday	Friday	Monday	Tuesday	Wednesday
Date	26-Jun 2008	27-Jun 2008	30-Jun 2008	1-Jul 2008	2-Jul 2008
RW1	1.00	1.00	1.00	0.33	0.00
RW2	0.00	0.00	0.00	0.67	1.00

N.B. The Roll Weights (RW1 and RW2) apply to each Total Return and Excess Return indexes containing the disrupted component.

If, after a period of five business days, no settlement price has been made available by the exchange, the RICI® Committee will determine, in good faith, the settlement prices necessary for the rolling of the contracts and for the calculation of the index.

4.4.4.3 Adjustments for Very Small or Negative Contract Pricing

In extraordinary circumstances in which a contract's pricing has become very small or negative, or in which it is reasonably foreseeable that pricing would become very small or negative, the RICI Committee may determine that such contract will next roll prior to the then-next scheduled roll period and/or to a month other than the month prescribed in the roll matrix. Such contract may depart from its prescribed roll matrix until such time as the extraordinary circumstances have abated sufficiently to return a contract reasonably to its prescribed roll matrix.

5.1 RICI® - ASM DEFINITION

The Rogers International Commodity Index® - Agriculture ("RICI® - ASM") is a composite total return index and is a sub-index of the Rogers International Commodity Index® ("RICI®") designed by James B. Rogers, Jr. in the late 1990s. The RICI® - ASM index represents the value of a basket of 22 agricultural futures contracts for commodities consumed in the global economy.

5.2 RICI® - ASM REFERENCE CURRENCY

The RICI® - ASM index is based in USD. The non-USD components of the Index are not hedged when calculating the Index in USD.

5.3 RICI® - ASM INDEX COMPOSITION

The RICI® - ASM index is based on 22 commodity futures contracts. Individual components qualify for inclusion in the index on the basis of liquidity and weighting in their respective underlying world-wide consumption. If a commodity contract trades on more than one exchange, then generally the most liquid, in terms of volume and open interest combined, is selected for inclusion in the index.

Please find below the list of the futures contracts composing the Index together with their respective exchanges and currencies:

Cocoa	C	ICE EU	GBP
Coffee	RC	ICE EU	USD
Corn	C	CBOT	USD
Cotton	CT	ICE US	USD
Lean Hogs	LH	CME	USD
Live Cattle	LC	CME	USD
Lumber	LB	CME	USD
Milk Class III	DA	CME	USD
Milling Wheat	EBM	EURONEXT	EUR
Oats	O	CBOT	USD
Orange Juice	OJ	ICE US	USD

Rapeseed	ECO	EURONEXT	EUR
Rice	RR	CBOT	USD
Rubber	81	TOCOM	JPY
Soybean Meal	SM	CBOT	USD
Soybean Oil	BO	CBOT	USD
Soybeans	S	CBOT	USD
Sugar	SB	ICE US	USD
Wheat	W	CBOT	USD
Wheat	KW	CME	USD
Wheat	MWE	MGEX	USD
White Sugar	W	ICE EU	USD

5.4 RICI® - ASM INDEX WEIGHTS

Being a sub-index of the Rogers International Commodity Index® ("RICI®") the exact weight of each of the Rogers International Commodity Index® - Agriculture ("RICI® - ASM") components is the weight of the index component in the RICI® divided by the weight of the Agriculture segment in the RICI® (34.90%).

Upon completion of the January 2019 roll period, which roll period began at the end of January 2019, the Index Weights for RICI® - ASM are:

Corn	4.75% / 34.90% ≈ 13.610%	Rubber	1.00% / 34.90% ≈ 2.865%
Cotton	4.20% / 34.90% ≈ 12.034%	Sugar	1.00% / 34.90% ≈ 2.865%
Soybeans	3.50% / 34.90% ≈ 10.029%	Wheat (CME)	1.00% / 34.90% ≈ 2.865%
Wheat (CBOT)	2.75% / 34.90% ≈ 7.880%	Wheat (MGEX)	1.00% / 34.90% ≈ 2.865%
Coffee	2.00% / 34.90% ≈ 5.731%	White Sugar	1.00% / 34.90% ≈ 2.865%
Live Cattle	2.00% / 34.90% ≈ 5.731%	Lumber	0.90% / 34.90% ≈ 2.579%
Milling Wheat	2.00% / 34.90% ≈ 5.731%	Rice	0.75% / 34.90% ≈ 2.149%
Soybean Oil	2.00% / 34.90% ≈ 5.731%	Soybean Meal	0.75% / 34.90% ≈ 2.149%
Cocoa	1.00% / 34.90% ≈ 2.865%	Orange Juice	0.60% / 34.90% ≈ 1.719%
Lean Hogs	1.00% / 34.90% ≈ 2.865%	Oats	0.50% / 34.90% ≈ 1.433%
Rapeseed	1.00% / 34.90% ≈ 2.865%	Milk Class III	0.20% / 34.90% ≈ 0.573%
		TOTAL	≈ 100%

5.5 RICI® - ASM CALCULATION METHODOLOGY

The Index calculation methodology is the same as the one defined for the RICI®. The Initial Value of the RICI® - ASM Index was 1000.00 as of November 30, 2004.

6.1 RICI® - ESM DEFINITION

The Rogers International Commodity Index® - Energy ("RICI® - ESM") is a composite total return index and is a sub-index of the Rogers International Commodity Index® ("RICI®") designed by James B. Rogers, Jr. in the late 1990s. The RICI® - ESM index represents the value of a basket of 6 energy commodities consumed in the global economy.

6.2 RICI® - ESM REFERENCE CURRENCY

The RICI® - ESM index is based in USD. The non-USD components of the Index (if any) are not hedged when calculating the Index in USD.

6.3 RICI® - ESM INDEX COMPOSITION

The RICI® - ESM index is based on 6 commodity futures contracts. Individual components qualify for inclusion in the index on the basis of liquidity and weighting in their respective underlying worldwide consumption.

Brent	BRN	ICE EU	USD
Crude Oil	CL	NYMEX	USD
Gas Oil	GAS	ICE EU	USD

Heating Oil	HO	NYMEX	USD
Natural Gas	NG	NYMEX	USD
RBOB Gasoline	RB	NYMEX	USD

6.4 RICI® - ESM INDEX WEIGHTS

Being a sub-index of the Rogers International Commodity Index® ("RICI®") the exact weight of each of the Rogers International Commodity Index® - Energy ("RICI® - ESM") components is the weight of the index component in the RICI® divided by the weight of the Energy segment in the RICI® (40.00%). Hence the Index Weights for RICI® - ESM are:

Crude Oil	15.00% / 40.00% = 37.500%	RBOB Gasoline	3.00% / 40.00% = 7.500%
Brent	13.00% / 40.00% = 32.500%	Heating Oil	1.80% / 40.00% = 4.500%
Natural Gas	6.00% / 40.00% = 15.000%	Gas Oil	1.20% / 40.00% = 3.000%
		TOTAL	= 100%

6.5 RICI® - ESM CALCULATION METHODOLOGY

The Index calculation methodology is the same as the one defined for the RICI®. The Initial Value of the RICI® - ESM Index was 1000.00 as of November 30, 2004.

7.1 RICI® - MSM DEFINITION

The Rogers International Commodity Index® - Metals ("RICI® - MSM") is a composite total return index and is a sub-index of the Rogers International Commodity Index® ("RICI®") designed by James B. Rogers, Jr. in the late 1990s. The RICI® - MSM index represents the value of a basket of 10 metals commodities consumed in the global economy.

7.2 RICI® - MSM REFERENCE CURRENCY

The RICI® - MSM index is based in USD. The non-USD components of the Index (if any) are not hedged when calculating the Index in USD.

7.3 RICI® - MSM INDEX COMPOSITION

The RICI® - MSM index is based on 10 commodity futures contracts. Individual components qualify for inclusion in the index on the basis of liquidity, weighting in their respective underlying worldwide consumption as well as legal and trading constraints.

Please find below the list of the futures contracts composing the Index together with their respective exchanges and currencies:

Aluminium	AH	LME	USD
Copper	CA	LME	USD
Gold	GC	COMEX	USD
Lead	PB	LME	USD
Nickel	NI	LME	USD

Palladium	PA	NYMEX	USD
Platinum	PL	NYMEX	USD
Silver	SI	COMEX	USD
Tin	SN	LME	USD
Zinc	ZS	LME	USD

7.4 RICI® - MSM INDEX WEIGHTS

Being a sub-index of the Rogers International Commodity Index® ("RICI®") the exact weight of each of the Rogers International Commodity Index® - Metals ("RICI® - MSM") components is the weight of the index component in the RICI® divided by the weight of the Metals segment in the RICI® (25.10%). Hence the Index Weights for RICI® - MSM are:

Gold	5.00% / 25.10% ≈ 19.920%	Zinc	2.00% / 25.10% ≈ 7.968%
Aluminium	4.00% / 25.10% ≈ 15.936%	Platinum	1.80% / 25.10% ≈ 7.171%
Copper	4.00% / 25.10% ≈ 15.936%	Nickel	1.00% / 25.10% ≈ 3.984%
Silver	4.00% / 25.10% ≈ 15.936%	Tin	1.00% / 25.10% ≈ 3.984%
Lead	2.00% / 25.10% ≈ 7.968%	Palladium	0.30% / 25.10% ≈ 1.195%
		TOTAL	≈ 100%

7.5 RICI® - MSM CALCULATION METHODOLOGY

The Index calculation methodology is the same as the one defined for the RICI®. The Initial Value of the RICI® - MSM Index was 1000.00 as of November 30, 2004.

8.1 RICI® - IMSM DEFINITION

The Rogers International Commodity Index® - Industrial Metals ("RICI® - IMSM") is a composite total return index and is a sub-index of the Rogers International Commodity Index® ("RICI®") designed by James B. Rogers, Jr. in the late 1990s. The RICI® - IMSM index represents the value of a basket of 6 industrial metals commodities consumed in the global economy.

8.2 RICI® - IMSM REFERENCE CURRENCY

The RICI® - IMSM index is based in USD. The non-USD components of the Index (if any) are not hedged when calculating the Index in USD.

8.3 RICI® - IMSM INDEX COMPOSITION

The RICI® - IMSM index is based on 6 commodity futures contracts. Individual components qualify for inclusion in the index on the basis of liquidity, weighting in their respective underlying worldwide consumption as well as legal and trading constraints.

Please find below the list of the futures contracts composing the Index together with their respective exchanges and currencies:

Aluminium	AH	LME	USD	Nickel	NI	LME	USD
Copper	CA	LME	USD	Tin	SN	LME	USD
Lead	PB	LME	USD	Zinc	ZS	LME	USD

8.4 RICI® - IMSM INDEX WEIGHTS

Being a sub-index of the Rogers International Commodity Index® ("RICI®") the exact weight of each of the Rogers International Commodity Index® - Industrial Metals ("RICI® - IMSM") components is the weight of the index component in the RICI® divided by the weight of the Industrial Metals segment in the RICI® (14%). Hence the Index Weights for RICI® - IMSM are:

Aluminium	4.00% / 14.00% ≈ 28.571%	Zinc	2.00% / 14.00% ≈ 14.286%
Copper	4.00% / 14.00% ≈ 28.571%	Nickel	1.00% / 14.00% ≈ 7.143%
Lead	2.00% / 14.00% ≈ 14.286%	Tin	1.00% / 14.00% ≈ 7.143%
		TOTAL	≈ 100 %

8.5 RICI® - IMSM CALCULATION METHODOLOGY

The Index calculation methodology is the same as the one defined for the RICI®. The value of the RICI® - IMSM Index was 1764.76 as of March 31, 2008.

9.1 RICI® - PMSM DEFINITION

The Rogers International Commodity Index® - Precious Metals ("RICI® - PMSM") is a composite total return index and is a sub-index of the Rogers International Commodity Index® ("RICI®") designed by James B. Rogers, Jr. in the late 1990s. The RICI® - PMSM index represents the value of a basket of 4 metals commodities consumed in the global economy.

9.2 RICI® - PMSM REFERENCE CURRENCY

The RICI® - PMSM index is based in USD. The non-USD components of the Index (if any) are not hedged when calculating the Index in USD.

9.3 RICI® - PMSM INDEX COMPOSITION

The RICI® - PMSM index is based on 4 commodity futures contracts. Individual components qualify for inclusion in the index on the basis of liquidity, weighting in their respective underlying worldwide consumption as well as legal and trading constraints.

Please find below the list of the futures contracts composing the Index together with their respective exchanges and currencies:

Gold	GC	COMEX	USD	Platinum	PL	NYMEX	USD
Palladium	PA	NYMEX	USD	Silver	SI	COMEX	USD

9.4 RICI® - PMSM INDEX WEIGHTS

Being a sub-index of the Rogers International Commodity Index® ("RICI®") the exact weight of each of the Rogers International Commodity Index® - Metals ("RICI® - PMSM") components is the weight of the index component in the RICI® divided by the weight of the Precious Metals segment in the RICI® (11.10%). Hence the Index Weights for RICI® - PMSM are:

Gold	5.00% / 11.10% ≈ 45.045%	Platinum	1.80% / 11.10% ≈ 16.216%
Silver	4.00% / 11.10% ≈ 36.036%	Palladium	0.30% / 11.10% ≈ 2.703%
		TOTAL	≈ 100 %

9.5 RICI® - PMSM CALCULATION METHODOLOGY

The Index calculation methodology is the same as the one defined for the RICI®. The value of the RICI® - PMSM Index was 1703.35 as of March 31, 2008.

APPENDIX A

Rolling rules RICI®

Please find below the valid maturity for the rolling of the index contracts components:

CONTRACT	01-JAN	01-FEB	01-MAR	01-APR	01-MAY	01-JUN	01-JUL	01-AUG	01-SEP	01-OCT	01-NOV	01-DEC
Aluminium*	H	J	K	M	N	Q	U	V	X	Z	F	G
Brent	J	K	M	N	Q	U	V	X	Z	F	G	H
Cocoa	H	K	K	N	N	U	U	Z	Z	Z	H	H
Coffee	H	K	K	N	N	U	U	X	X	F	F	H
Copper*	H	J	K	M	N	Q	U	V	X	Z	F	G
Corn	H	K	K	N	N	U	U	Z	Z	Z	H	H
Cotton	H	K	K	N	N	Z	Z	Z	Z	Z	H	H
Crude Oil	H	J	K	M	N	Q	U	V	X	Z	F	G
Gas Oil	H	J	K	M	N	Q	U	V	X	Z	F	G
Gold	J	J	M	M	Q	Q	Z	Z	Z	Z	G	G
Heating Oil	H	J	K	M	N	Q	U	V	X	Z	F	G
Lead*	H	J	K	M	N	Q	U	V	X	Z	F	G
Lean Hogs	J	J	M	M	Q	Q	V	V	Z	Z	G	G
Live Cattle	J	J	M	M	Q	Q	V	V	Z	Z	G	G
Lumber	H	K	K	N	N	U	U	X	X	F	F	H
Milk Class III	G	H	J	K	M	N	Q	U	V	X	Z	F
Milling Wheat	H	K	K	U	U	U	U	Z	Z	Z	H	H
Natural Gas	H	J	K	M	N	Q	U	V	X	Z	F	G
Nickel*	H	J	K	M	N	Q	U	V	X	Z	F	G
Oats	H	K	K	N	N	U	U	Z	Z	Z	H	H
Orange Juice	H	K	K	N	N	U	U	X	X	F	F	H
Palladium	H	M	M	M	U	U	U	Z	Z	Z	H	H
Platinum	J	J	N	N	N	V	V	V	F	F	F	J
Rapeseed	K	K	K	Q	Q	Q	X	X	X	G	G	G
RBOB Gasoline	H	J	K	M	N	Q	U	V	X	Z	F	G
Rice	H	K	K	N	N	U	U	X	X	F	F	H
Rubber	M	N	Q	U	V	X	Z	F	G	H	J	K
Silver	H	K	K	N	N	U	U	Z	Z	Z	H	H
Soybean Meal	H	K	K	N	N	Z	Z	Z	Z	Z	F	H
Soybean Oil	H	K	K	N	N	Z	Z	Z	Z	Z	F	H
Soybeans	H	K	K	N	N	X	X	X	X	F	F	H
Sugar	H	K	K	N	N	V	V	V	H	H	H	H
Tin*	H	J	K	M	N	Q	U	V	X	Z	F	G
Wheat (CBOT)	H	K	K	N	N	U	U	Z	Z	Z	H	H
Wheat (CME)	H	K	K	N	N	U	U	Z	Z	Z	H	H
Wheat (MGEX)	H	K	K	N	N	U	U	Z	Z	Z	H	H
White Sugar	H	K	K	Q	Q	Q	V	V	Z	Z	H	H
Zinc*	H	J	K	M	N	Q	U	V	X	Z	F	G

* The prompt date used for LME contracts shall be the third Wednesday of the appropriate month.

Rolling rules RICI® - ASM

Please find below the valid maturity for the rolling of the index contracts components:

CONTRACT	01-JAN	01-FEB	01-MAR	01-APR	01-MAY	01-JUN	01-JUL	01-AUG	01-SEP	01-OCT	01-NOV	01-DEC
Cocoa	H	K	K	N	N	U	U	Z	Z	Z	H	H
Coffee	H	K	K	N	N	U	U	X	X	F	F	H
Corn	H	K	K	N	N	U	U	Z	Z	Z	H	H
Cotton	H	K	K	N	N	Z	Z	Z	Z	Z	H	H
Lean Hogs	J	J	M	M	Q	Q	V	V	Z	Z	G	G
Live Cattle	J	J	M	M	Q	Q	V	V	Z	Z	G	G
Lumber	H	K	K	N	N	U	U	X	X	F	F	H
Milk Class III	G	H	J	K	M	N	Q	U	V	X	Z	F
Milling Wheat	H	K	K	U	U	U	U	Z	Z	Z	H	H
Oats	H	K	K	N	N	U	U	Z	Z	Z	H	H
Orange Juice	H	K	K	N	N	U	U	X	X	F	F	H
Rapeseed	K	K	K	Q	Q	Q	X	X	X	G	G	G
Rice	H	K	K	N	N	U	U	X	X	F	F	H
Rubber	M	N	Q	U	V	X	Z	F	G	H	J	K
Soybean Meal	H	K	K	N	N	Z	Z	Z	Z	Z	F	H
Soybean Oil	H	K	K	N	N	Z	Z	Z	Z	Z	F	H
Soybeans	H	K	K	N	N	X	X	X	X	F	F	H
Sugar	H	K	K	N	N	V	V	V	H	H	H	H
Wheat (CBOT)	H	K	K	N	N	U	U	Z	Z	Z	H	H
Wheat (CME)	H	K	K	N	N	U	U	Z	Z	Z	H	H
Wheat (MGEX)	H	K	K	N	N	U	U	Z	Z	Z	H	H
White Sugar	H	K	K	Q	Q	Q	V	V	Z	Z	H	H

Rolling rules RICI® - ESM

Please find below the valid maturity for the rolling of the index contracts components:

CONTRACT	01-JAN	01-FEB	01-MAR	01-APR	01-MAY	01-JUN	01-JUL	01-AUG	01-SEP	01-OCT	01-NOV	01-DEC
Brent	J	K	M	N	Q	U	V	X	Z	F	G	H
Crude Oil	H	J	K	M	N	Q	U	V	X	Z	F	G
Gas Oil	H	J	K	M	N	Q	U	V	X	Z	F	G
Heating Oil	H	J	K	M	N	Q	U	V	X	Z	F	G
Natural Gas	H	J	K	M	N	Q	U	V	X	Z	F	G
RBOB Gasoline	H	J	K	M	N	Q	U	V	X	Z	F	G

Rolling rules RICI® - MSM

Please find below the valid maturity for the rolling of the index contracts components:

CONTRACT	01-JAN	01-FEB	01-MAR	01-APR	01-MAY	01-JUN	01-JUL	01-AUG	01-SEP	01-OCT	01-NOV	01-DEC
Aluminium*	H	J	K	M	N	Q	U	V	X	Z	F	G
Copper*	H	J	K	M	N	Q	U	V	X	Z	F	G
Gold	J	J	M	M	Q	Q	Z	Z	Z	Z	G	G
Lead*	H	J	K	M	N	Q	U	V	X	Z	F	G
Nickel*	H	J	K	M	N	Q	U	V	X	Z	F	G
Palladium	H	M	M	M	U	U	U	Z	Z	Z	H	H
Platinum	J	J	N	N	N	V	V	V	F	F	F	J
Silver	H	K	K	N	N	U	U	Z	Z	Z	H	H
Tin*	H	J	K	M	N	Q	U	V	X	Z	F	G
Zinc*	H	J	K	M	N	Q	U	V	X	Z	F	G

* The prompt date used for LME contracts shall be the third Wednesday of the appropriate month.

Rolling rules RICI® - IMSM

Please find below the valid maturity for the rolling of the index contracts components:

CONTRACT	01-JAN	01-FEB	01-MAR	01-APR	01-MAY	01-JUN	01-JUL	01-AUG	01-SEP	01-OCT	01-NOV	01-DEC
Aluminium*	H	J	K	M	N	Q	U	V	X	Z	F	G
Copper*	H	J	K	M	N	Q	U	V	X	Z	F	G
Lead*	H	J	K	M	N	Q	U	V	X	Z	F	G
Nickel*	H	J	K	M	N	Q	U	V	X	Z	F	G
Tin*	H	J	K	M	N	Q	U	V	X	Z	F	G
Zinc*	H	J	K	M	N	Q	U	V	X	Z	F	G

* The prompt date used for LME contracts shall be the third Wednesday of the appropriate month.

Rolling rules RICI® - PMSM

Please find below the valid maturity for the rolling of the index contracts components:

CONTRACT	01-JAN	01-FEB	01-MAR	01-APR	01-MAY	01-JUN	01-JUL	01-AUG	01-SEP	01-OCT	01-NOV	01-DEC
Gold	J	J	M	M	Q	Q	Z	Z	Z	Z	G	G
Palladium	H	M	M	M	U	U	U	Z	Z	Z	H	H
Platinum	J	J	N	N	N	V	V	V	F	F	F	J
Silver	H	K	K	N	N	U	U	Z	Z	Z	H	H

ROLLING RULES CODES

Month	Code
1	F
2	G
3	H
4	J
5	K
6	M
7	N
8	Q
9	U
10	V
11	X
12	Z

APPENDIX B

RICI® Index Composition

(Effective as of the January 2019 roll period, which roll period began at the end of January 2019.)

CONTRACT	WEIGHT	CODE	EXCHANGE	CURRENCY
Crude Oil	15.00%	CL	NYMEX	USD
Brent	13.00%	BRN	ICE EU	USD
Natural Gas	6.00%	NG	NYMEX	USD
Gold	5.00%	GC	COMEX	USD
Corn	4.75%	C	CBOT	USD
Cotton	4.20%	CT	ICE US	USD
Aluminium	4.00%	AH	LME	USD
Copper	4.00%	CA	LME	USD
Silver	4.00%	SI	COMEX	USD
Soybeans	3.50%	S	CBOT	USD
RBOB Gasoline	3.00%	RB	NYMEX	USD
Wheat	2.75%	W	CBOT	USD
Coffee	2.00%	RC	ICE EU	USD
Lead	2.00%	PB	LME	USD
Live Cattle	2.00%	LC	CME	USD
Milling Wheat	2.00%	EBM	EURONEXT	EUR
Soybean Oil	2.00%	BO	CBOT	USD
Zinc	2.00%	ZS	LME	USD
Heating Oil	1.80%	HO	NYMEX	USD
Platinum	1.80%	PL	NYMEX	USD
Gas Oil	1.20%	GAS	ICE EU	USD
Cocoa	1.00%	C	ICE EU	GBP
Lean Hogs	1.00%	LH	CME	USD
Nickel	1.00%	NI	LME	USD
Rapeseed	1.00%	ECO	EURONEXT	EUR
Rubber	1.00%	81	TOCOM	JPY
Sugar	1.00%	SB	ICE US	USD
Tin	1.00%	SN	LME	USD
Wheat	1.00%	KW	CME	USD
Wheat	1.00%	MWE	MGEX	USD
White Sugar	1.00%	W	ICE EU	USD
Lumber	0.90%	LB	CME	USD
Rice	0.75%	RR	CBOT	USD
Soybean Meal	0.75%	SM	CBOT	USD
Orange Juice	0.60%	OJ	ICE US	USD
Oats	0.50%	O	CBOT	USD
Palladium	0.30%	PA	NYMEX	USD
Milk Class III	0.20%	DA	CME	USD
TOTAL	100.00%			

RICI® - ASM Index Composition

(Effective as of the January 2019 roll period, which roll period began at the end of January 2019.)

CONTRACT	WEIGHT	CODE	EXCHANGE	CURRENCY
Corn	4.75% / 34.90%	C	CBOT	USD
Cotton	4.20% / 34.90%	CT	ICE US	USD
Soybeans	3.50% / 34.90%	S	CBOT	USD
Wheat	2.75% / 34.90%	W	CBOT	USD
Coffee	2.00% / 34.90%	RC	ICE EU	USD
Live Cattle	2.00% / 34.90%	LC	CME	USD
Milling Wheat	2.00% / 34.90%	EBM	EURONEXT	EUR
Soybean Oil	2.00% / 34.90%	BO	CBOT	USD
Cocoa	1.00% / 34.90%	C	ICE EU	GBP
Lean Hogs	1.00% / 34.90%	LH	CME	USD
Rapeseed	1.00% / 34.90%	ECO	EURONEXT	EUR
Rubber	1.00% / 34.90%	81	TOCOM	JPY
Sugar	1.00% / 34.90%	SB	ICE US	USD
Wheat	1.00% / 34.90%	KW	CME	USD
Wheat	1.00% / 34.90%	MWE	MGEX	USD
White Sugar	1.00% / 34.90%	W	ICE EU	USD
Lumber	0.90% / 34.90%	LB	CME	USD
Rice	0.75% / 34.90%	RR	CBOT	USD
Soybean Meal	0.75% / 34.90%	SM	CBOT	USD
Orange Juice	0.60% / 34.90%	OJ	ICE US	USD
Oats	0.50% / 34.90%	O	CBOT	USD
Milk Class III	0.20% / 34.90%	DA	CME	USD
TOTAL	100.00%			

RICI® - ESM Index Composition

(Effective as of the February 2018 roll period, which roll period began at the end of February 2018.)

CONTRACT	WEIGHT	CODE	EXCHANGE	CURRENCY
Crude Oil	15.00% / 40.00%	CL	NYMEX	USD
Brent	13.00% / 40.00%	BRN	ICE EU	USD
Natural Gas	6.00% / 40.00%	NG	NYMEX	USD
RBOB Gasoline	3.00% / 40.00%	RB	NYMEX	USD
Heating Oil	1.80% / 40.00%	HO	NYMEX	USD
Gas Oil	1.20% / 40.00%	GAS	ICE EU	USD
TOTAL	100.00%			

RICI® - MSM Index Composition

(Effective as of the February 2014 roll period, which roll period began at the end of February 2014.)

CONTRACT	WEIGHT	CODE	EXCHANGE	CURRENCY
Gold	5.00% / 25.10%	GC	COMEX	USD
Aluminium	4.00% / 25.10%	AH	LME	USD
Copper	4.00% / 25.10%	CA	LME	USD
Silver	4.00% / 25.10%	SI	COMEX	USD
Lead	2.00% / 25.10%	PB	LME	USD
Zinc	2.00% / 25.10%	ZS	LME	USD
Platinum	1.80% / 25.10%	PL	NYMEX	USD
Nickel	1.00% / 25.10%	NI	LME	USD
Tin	1.00% / 25.10%	SN	LME	USD
Palladium	0.30% / 25.10%	PA	NYMEX	USD
TOTAL	100.00%			

RICI® - IMSM Index Composition

(Effective as of the February 2014 roll period, which roll period began at the end of February 2014.)

CONTRACT	WEIGHT	CODE	EXCHANGE	CURRENCY
Aluminium	4.00% / 14.00%	AH	LME	USD
Copper	4.00% / 14.00%	CA	LME	USD
Lead	2.00% / 14.00%	PB	LME	USD
Zinc	2.00% / 14.00%	ZS	LME	USD
Nickel	1.00% / 14.00%	NI	LME	USD
Tin	1.00% / 14.00%	SN	LME	USD
TOTAL	100.0%			

RICI® - PMSM Index Composition

(Effective as of the February 2014 roll period, which roll period began at the end of February 2014.)

CONTRACT	WEIGHT	CODE	EXCHANGE	CURRENCY
Gold	5.00% / 11.10%	GC	COMEX	USD
Silver	4.00% / 11.10%	SI	COMEX	USD
Platinum	1.80% / 11.10%	PL	NYMEX	USD
Palladium	0.30% / 11.10%	PA	NYMEX	USD
TOTAL	100.0%			

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