THE **DIAPASON COMMODITIES INDEX®**
Index Manual

2021 Version
January 19th, 2021

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Table of Content

The Committee governing the DCI® has decided to do the following changes:

Weights have been adjusted to take into account new liquidity and world trade data.

Based on the new weights computation, TOCOM Gasoline, EEE Phelix DE Baseload Monthly and EURONEXT Corn are now excluded from the Index.

These changes will be implemented during the End February 2021 roll period.

1. Preface

The Diapason Commodities Index ("DCI®" or the "Index") is designed to provide a broad yet liquid representation of large, mid and small commodity futures inside the Organisation for Economic Cooperation and Development. The OECD region covers exchanges in Australia, Austria, Belgium, Canada, Chile, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israël, Italy, Japan, Korea (South), Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States. The Index was created by Diapason in July 2006.

The Index consists of 43 components that cover four major raw material divisions: agriculture products 23.14%, base metals 13.18%, precious metals 14.39%, and energy 49.29%.

2. DCI® Methodology

2.1. DCI® Construction

Diapason which created the DCI**®,** used two main principles in designing the Index:

- World Trade Significance (WTS)

- World Contract Liquidity (WCL)

(1)World Trade Significance

A commodity will be considered fit to be included in the Index if it plays a significant role (larger than 0.1% of total world trade) in international exports. Precious metals, petroleum distillates, ethanol and electricity weightings are excluded from this export screening process. Precious metals, petroleum distillates and ethanol are only included on the basis of corresponding world production shares. The weight of electricity is purely based on its WCL.

(2)World Contract Liquidity

WCL is defined as the most recent average combined market value and open interest (market value represents the daily aggregate volume of all the futures of a commodity times the contract size of its first nearby maturity in US Dollars and open interest represents the daily aggregate open interest of all the futures of a commodity). A commodity will be considered fit to be included if its WCL exceeds 25'000'000 USD. Worldwide, 67 contracts are for that reason currently eligible as of December 31st, 2020. All DCI® contracts have to pass the WCL threshold. Diapason reserves the right to adjust this threshold whenever identified as appropriate.

2.2. DCI® Weights

2.2.1 Primary Initial Weights (PIW)

Primary Initial Weights are defined as the sum of 33.33% of WTS Weights and 66.67% of WCL Weights.

2.2.2 Cap components with PIW exceeding 10 times WCL Weights

We cap the components for which PIW exceeds 10 times the WCL Weight. We reallocate the excess weight proportionally to the other components.

2.2.3 Cap components with IW (n) (IW) exceeding 2 times IW (n-1)

The Initial Weight in year n, IW (n), of a component can not exceed 2 times its Initial Weights in year n-1, IW (n-1):

So if $IW(n) \geq 2 \times IW(n-1)$ then $IW(n) = 2 \times IW(n-1)$ and the "excess weight" will be reallocated proportionally to the other components.

The resulting weights are the Initial Weights (IW) of the DCI®.

2.3. Definitions

IW   Initial Weight. The Percentage weight of each Index component, calculated according to the DCI® index methodology and ratified by the DCI® Committee.

DCP Daily Contract Price. It is the daily reference price used in the calculation of the Index.

FX   FX is the foreign currency exchange rate 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 standards and practices and adjusted by the CRY factor.

MCW Monthly Contract Weight. The nominal weight of each Index component, calculated so that, on the DCI® Business Day preceding the start of the roll period, the index respective exposure to each component relative to the Index overall exposure to all components is equal to each component's Initial Weights.

DCW Daily Component Weight. It 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 (DCW).

RW   Roll Weight, is for each component, the weight associated to the first and second DCI® nearby for each day of the roll period. During the roll period, the RW can take the values, 0.0, 1/3, 2/3 and 1.0. First and second DCI® nearbys are designated by the DCI® Committee.

TCWR Total Component Weight Ratio. For each rolling period, the TCWR is calculated by dividing the Total Component Weight calculated on the day prior to the first roll day using that day newly calculated MCW to the to the Total Component Weight calculated using the previous MCW. It is used in order to maintain continuity of the Total Component Weight during those transition periods.

CC   Continuity Constant. The constant used to maintain continuity of the Price Index during the re-balancing periods. For each rolling period, a new CC is calculated by multiplying the previous CC by the TCWR.

IRR   Interest Rate Return is the return reflecting the fixed income performance of the Index in its designated currency from one DCI® Business Day to the next.

ARR For any DCI® Business Day, the Available Reference Rate is the rate of interest associated with the reference price source to which the Available Reference Rate adjustment is added.

DRR	Daily Reference Rate. For any DCI® Business Day, the DRR is equal to 90% of that day ARR.
PI	Price Index or the simple measure of composite basket price level notwithstanding any adjustment due to rolls. The Price Index is only tradable at maturity and its forward price curve follows the forward price curve of its underlying constituents.
ER	Excess Return Index, measures the uncollateralized returns of the DCI® basket on a roll adjusted basis.
TR	Total Return Index, measures the collateralized returns of the DCI® basket.

3. The DCI® Calculation

Diapason calculates and publishes three indices:

- ➢ "Price Index" (DCI® PI),
- ➢ "Excess Return index" (DCI® ER),
- ➢ "Total Return index" (DCI® TR).

3.1 The DCI® Price Index (DCI® PI)

3.1.1 Price Index calculation during non roll periods

The DCI® Price Index (DCI® PI) tracks the price level of commodities represented in the Index.

The DCI® Price Index is equal to the Total Component Weight (TCW) divided by the Continuity Constant (CC).
The TCW for any given non-roll date is calculated as the sum of adjusted Daily Contract Prices (DCP), times respective Monthly Contract Weights (MCW). The DCP are adjusted by price scalars reflecting reference currency rates versus the U.S. Dollar such that all DCP adjusted are expressed in U.S. Dollars. For non-roll days we have:

$$\text{DCI®-PI}_t = \frac{\sum_{c=1,N} DCW_{c,t}}{CC} = \frac{\text{TCW}_t}{\text{CC}} \qquad (1)$$

where:

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

$MCW_{c,t}$ 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 DCI® index uses a direct or USD cross fixing price,

CRY Factor is +1 or –1 (see table I.A below)

TABLE I.A. EXCHANGE RATES AND CRY FACTORS

FX rate	Quotation	CRY Factor	Rate Source
USD-CAD	CAD per USD	-1	BB: CAD Curncy HP <GO>
EUR-USD	USD per EUR	1	BB: EUR Curncy HP <GO>
GBP-USD	USD per GBP	1	BB: GBP Curncy HP<GO>
USD-JPY	JPY per USD	-1	BB: JPY Curncy HP <GO>

3.1.2 The Roll period - Index Rebalancing and continuity

On the DCI®, the roll occurs during the last three DCI® Business Days of the month. During the roll period, the Index is shifted from the first to the second nearby basket at a rate of 33.33% per day.

On the last DCI® Business Day of the month, the roll is completed unless the roll period is extended for a component as a result of a Market Disruption Event.

During the roll period of each month, the Index is rebased towards Initial Weights (IW), as defined by the DCI® Committee.

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

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

$$\text{DCI®-PI}_t = \frac{\text{TCW}_t}{\text{CC}} \qquad (1)$$

where:

$$TCW_t = \frac{CC_{new}}{CC_{old}}\left[\sum_{c=1,N} MCW_{c,old} \times RW1_{c,t} \times DCP1_{c,t} \times \left[FX_{c,t}\right]^{\text{CRY Factor}}\right] \qquad (2)$$

$$+ \sum_{c=1,N} MCW_{c,new} \times RW2_{c,t} \times DCP2_{c,t} \times \left[FX_{c,t}\right]^{\text{CRY Factor}} \qquad , \qquad (3)$$

where RWs can take the following values

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

with

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

and

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

If there is a Market Disruption Event on any of the last 3 DCI® Business Days of the month, the amount to be rolled will be carried forward until the first DCI® Business Day following the end of the Market Disruption Event.

The calculation of the new MCWs and CC is effected monthly, at close of business on the DCI® Business Day immediately preceding the first roll day (i.e. the fourth to last DCI® Business Day of the month).

On that day, the new MCWs are solved such that the calculated effective weights match the Initial Weights (IW) defined by the DCI® Committee.

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

We then solve for each component i,

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

which have the following analytic solution:

$$MCW_1 = \frac{IW_1 \times DCP_R \times \left[FX_{R,t}\right]^{\text{CRY Factor}}}{IW_R \times DCP_1 \times \left[FX_{1,t}\right]^{\text{CRY Factor}}} x$$

$$MCW_2 = \frac{IW_2 \times DCP_R \times \left[FX_{R,t}\right]^{\text{CRY Factor}}}{IW_R \times DCP_2 \times \left[FX_{2,t}\right]^{\text{CRY Factor}}} x$$

$$(7)$$

$$MCW_3 = \frac{IW_3 \times DCP_R \times \left[FX_{R,t}\right]^{\text{CRY Factor}}}{IW_R \times DCP_3 \times \left[FX_{3,t}\right]^{\text{CRY Factor}}} x$$

$$. \quad . \quad .$$

$$MCW_R = x$$

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

3.2 The DCI® Excess Return Index (DCI® ER)

3.2.1 Calculation during non roll periods

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

Define BDR (Basket Daily Return) as:

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

with

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

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

where

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

The expression of the DCI® ER is:

$$DCI\text{®}-ER_t = DCI\text{®}-ER_{t-1} \times (1 + BDR_t) \qquad (11)$$

The DCI® ER was set equal to 1000 on 31st of July 1998.

3.2.2 Calculation during roll periods

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

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

During the roll period we have:

$$TCWI_{t-1} = \frac{CC_{new}}{CC_{old}}\left[\sum_{c=1,N} MCW_{c,old} \times RW1_{c,t-1} \times DCP1_{c,t-1} \times \left[FX_{c,t-1}\right]^{\text{CRY Factor}}\right.$$

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

and

$$TCWF_t = \frac{CC_{new}}{CC_{old}}\left[\sum_{c=1,N} MCW_{c,old} \times RW1_{c,t-1} \times DCP1_{c,t} \times \left[FX_{c,t}\right]^{\text{CRY Factor}}\right.$$

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

where 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

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

with

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

3.3 The DCI® Total Return Index (DCI® TR)

3.3.1 Calculation of the Total Return Index

The DCI® TR is calculated according to the following formula:

$$DCI\circledR{-}TR_t = DCI\circledR{-}TR_{t-1} \times (1 + BDR_t + IRR_t) \quad (15)$$

where

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

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

where "days" is the integer number of calendar days from the previous DCI® Business Day to the DCI® Business Day on which the calculation is made.

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

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

where ARR_t is the Available Reference Rate.

The DCI® TR was set equal to 1000 on July 31st, 1998.

3.3.2 Available Reference Rate

The Available Reference Rate ARR used for the calculation of the DCI® 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 the Public Debt of the US Department of the Treasury and available on Bloomberg USB3MTA index <GO> or Reuters USAUCTION9.
The rate is generally published once per week on Monday and effective on the immediately following DCI® Business Day.

3.4 DCI® Business Day definition and Market Disruption Event

3.4.1 DCI® Business Day Definition

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

3.4.2 Adjustments for Market Disruption

A Market Disruption Event will be defined as 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 contract settles at the limit (up or down) price set by the exchange.
    b. The contract trades on exchange which is not open for trading on the specific day.
    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 does not reflect properly, in the opinion of the DCI® Committee, the fair price of that contract.

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 DCI® Business Day immediately preceding the Market Disruption Event day. The roll period and the rebalancing period will be extended for this or these particular components only until the next available DCI® Business Day upon which no Market Disruption Event occurs for that or those contracts.

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

The existence of a Market Disruption Event shall be determined by the DCI® Committee.

Outside of the roll period, the Index is calculated using the last trading price available. In particular the calculation of the MCWs will use the last price available regardless of whether a Market Disruption Event has occurred.

Example of values taken by RW1 and RW2 for a specific contract over the June 06 roll period if June 28th is a Market Disruption Event day:

Theoretical Roll			First Roll Day	Second Roll Day	Last Roll Day			
Effective Roll				First and Second Roll Day	Last Roll Day			
Index	Day	27.juin	28.juin	29.juin	30.juin	01.juil	02.juil	03.juil
Price Index	RW1	1.00	**1.00**	0.33	**0.00**	1.00	1.00	1.00
	RW2	0.00	**0.00**	0.67	**1.00**	0.00	0.00	0.00
Excess Return	RW1	1.00	1.00	**1.00**	0.33	0.00	1.00	1.00
	RW2	0.00	0.00	**0.00**	0.67	1.00	0.00	0.00

3.4.3 FX Market and Interest Rate Market disruption

In the unlikely event of a referenced price source failing to publish a valid fixing rate for a referenced currency exchange rate or a valid interest rate, the DCI® Committee can decide to replace it by a new source with immediate effect.

3.4.4 Market emergency

In cases of extraordinary circumstances making the calculation or the replication of the DCI® impossible or too complex, Diapason in consultation with the DCI® committee can decide to take any appropriate action.

Appendix A: DCI® Initial Weights

Name	Bloomberg Code	Exchange	Ccy	Weight IW
ICE Brent	CO	ICE	USD	14.8870%
COMEX Gold	GC	CMX	USD	11.6480%
NYMEX WTI	CL	NYM	USD	10.3450%
ICE Gas Oil	QS	ICE	USD	6.5750%
NYMEX Natural Gas	NG	NYM	USD	5.4300%
LME Copper	LP	LME	USD	5.3150%
NYMEX RBOB (gasoline blendstock)	XB	NYM	USD	4.7530%
NYMEX No. 2 Heating Oil	HO	NYM	USD	4.5160%
CBOT Soybeans	S	CBT	USD	3.7140%
LME Aluminium	LA	LME	USD	3.3910%
CBOT Corn	C	CBT	USD	3.0490%
LME Nickel	LN	LME	USD	2.1570%
COMEX Silver	SI	CMX	USD	2.0550%
CBOT Soybean Meal	SM	CBT	USD	1.6990%
CME live Cattle	LC	CME	USD	1.6780%
NYBOT Sugar #11	SB	NYB	USD	1.6700%
TOCOM Crude Oil	CP	TCM	JPY	1.6580%
LME Zinc	LX	LME	USD	1.5330%
CBOT Wheat	W	CBT	USD	1.0550%
NYBOT cotton #2	CT	NYB	USD	1.0030%
NYBOT Coffee C	KC	NYB	USD	0.9900%
CBOT Soybean oil	BO	CBT	USD	0.9860%
CME Lean Hogs	LH	CME	USD	0.9330%
EURONEXT Cocoa	QC	LIF	GBP	0.8620%
CME feeder Cattle	FC	CME	USD	0.8010%
EURONEXT Milling Wheat	CA	LIF	EUR	0.7660%
EURONEXT Robusta Coffee	DF	LIF	USD	0.7600%
LME Lead	LL	LME	USD	0.6010%
KCBT Wheat	KW	KCB	USD	0.5940%
ICE Natural Gas	FN	ICE	GBP	0.5860%
ICE Rotterdam Coal Monthly	XA	NYM	USD	0.5400%
NYBOT Cocoa	CC	NYB	USD	0.5400%
EURONEXT Rapeseed	IJ	EN	EUR	0.4880%
NYMEX Palladium	PA	NYM	USD	0.3650%
NYMEX Platinum	PL	NYM	USD	0.3210%
EURONEXT White Sugar	QW	LIF	USD	0.3060%
CBOT Rough Rice	RR	CBT	USD	0.2700%
NYBOT Orange Juice Frozen Concentrate	JO	NYB	USD	0.2530%
EURONEXT Feed Wheat	QK	LIF	GBP	0.2060%
MGEX Spring Wheat	MW	LIF	USD	0.1870%
LME Tin	LT	LME	USD	0.1860%
CME Random Lumber	LB	CME	USD	0.1680%
TOCOM Rubber	JN	TCM	JPY	0.1600%

Appendix B: DCI ® Agriculture Initial Weights

Name	Bloomberg Code	Exchange	Ccy	Weight IW
CBOT Soybeans	S	CBT	USD	16.0515%
CBOT Corn	C	CBT	USD	13.1775%
CBOT Soybean Meal	SM	CBT	USD	7.3429%
CME live Cattle	LC	CME	USD	7.2521%
NYBOT Sugar #11	SB	NYB	USD	7.2176%
CBOT Wheat	W	CBT	USD	4.5596%
NYBOT cotton #2	CT	NYB	USD	4.3349%
NYBOT Coffee C	KC	NYB	USD	4.2787%
CBOT Soybean oil	BO	CBT	USD	4.2614%
CME Lean Hogs	LH	CME	USD	4.0323%
EURONEXT Cocoa	QC	LIF	GBP	3.7255%
CME feeder Cattle	FC	CME	USD	3.4618%
EURONEXT Milling Wheat	CA	LIF	EUR	3.3106%
EURONEXT Robusta Coffee	DF	LIF	USD	3.2846%
KCBT Wheat	KW	KCB	USD	2.5672%
NYBOT Cocoa	CC	NYB	USD	2.3338%
EURONEXT Rapeseed	IJ	EN	EUR	2.1091%
EURONEXT White Sugar	QW	LIF	USD	1.3225%
CBOT Rough Rice	RR	CBT	USD	1.1669%
NYBOT Orange Juice Frozen Concentrate	JO	NYB	USD	1.0934%
EURONEXT Feed Wheat	QK	LIF	GBP	0.8903%
MGEX Spring Wheat	MW	LIF	USD	0.8082%
CME Random Lumber	LB	CME	USD	0.7261%
TOCOM Rubber	JN	TCM	JPY	0.6915%

Appendix C: DCI ® Metals Initial Weights

Name	Bloomberg Code	Exchange	Ccy	Weight IW
COMEX Gold	GC	CMX	USD	42.2458%
LME Copper	LP	LME	USD	19.2768%
LME Aluminium	LA	LME	USD	12.2987%
LME Nickel	LN	LME	USD	7.8232%
COMEX Silver	SI	CMX	USD	7.4532%
LME Zinc	LX	LME	USD	5.5600%
LME Lead	LL	LME	USD	2.1797%
NYMEX Palladium	PA	NYM	USD	1.3238%
NYMEX Platinum	PL	NYM	USD	1.1642%
LME Tin	LT	LME	USD	0.6746%

Appendix D: DCI ® Energy Initial Weights

Name	Bloomberg Code	Exchange	Ccy	Weight IW
ICE Brent	CO	ICE	USD	30.2029%
NYMEX WTI	CL	NYM	USD	20.9880%
ICE Gas Oil	QS	ICE	USD	13.3394%
NYMEX Natural Gas	NG	NYM	USD	11.0164%
NYMEX RBOB (gasoline blendstock)	XB	NYM	USD	9.6429%
NYMEX No. 2 Heating Oil	HO	NYM	USD	9.1621%
TOCOM Crude Oil	CP	TCM	JPY	3.3638%
ICE Natural Gas	FN	ICE	GBP	1.1889%
ICE Rotterdam Coal Monthly	XA	NYM	USD	1.0956%

Appendix E: DCI® Roll Matrix

Generic Code	Contract	Jan 1	Feb 2	Mar 3	Apr 4	May 5	Jun 6	Jul 7	Aug 8	Sep 9	Oct 10	Nov 11	Dec 12
CL	NYMEX WTI	H	J	K	M	N	Q	U	V	X	Z	F	G
NG	NYMEX Natural Gas	H	J	K	M	N	Q	U	V	X	Z	F	G
CO	ICE Brent	J	K	M	N	Q	U	V	X	Z	F	G	H
LP	LME Copper	H	J	K	M	N	Q	U	V	X	Z	F	G
LA	LME Aluminium	H	J	K	M	N	Q	U	V	X	Z	F	G
GC	COMEX Gold	J	J	M	M	Q	Q	Z	Z	Z	Z	G	G
HO	NYMEX No. 2 Heating Oil	H	J	K	M	N	Q	U	V	X	Z	F	G
QS	ICE Gas Oil	H	J	K	M	N	Q	U	V	X	Z	F	G
LB	CME Random Lumber	H	K	K	N	N	U	U	X	X	F	F	H
CP	TOCOM Crude Oil	K	M	N	Q	U	V	X	Z	F	G	H	J
JV	TOCOM Gasoline	M	N	Q	U	V	X	Z	F	G	H	J	K
S	CBOT Soybeans	H	K	K	N	N	X	X	X	X	F	F	H
C	CBOT Corn	H	K	K	N	N	U	U	Z	Z	Z	H	H
XB	NYMEX RBOB (gasoline blendstock)	H	J	K	M	N	Q	U	V	X	Z	F	G
SB	NYBOT Sugar #11	H	K	K	N	N	V	V	V	H	H	H	H
W	CBOT Wheat	H	K	K	N	N	U	U	Z	Z	Z	H	H
LC	CME live Cattle	J	J	M	M	Q	Q	V	V	Z	Z	G	G
LX	LME Zinc	H	J	K	M	N	Q	U	V	X	Z	F	G
JX	TOCOM Kerosene	M	N	Q	U	V	X	Z	F	G	H	J	K
SI	COMEX Silver	H	K	K	N	N	U	U	Z	Z	Z	H	H
KC	NYBOT Coffee C	H	K	K	N	N	U	U	Z	Z	Z	H	H
KW	KCBT Wheat	H	K	K	N	N	U	U	Z	Z	Z	H	H
CT	NYBOT cotton #2	H	K	K	N	N	Z	Z	Z	Z	Z	H	H
XA	ICE Rotterdam Coal Monthly	H	M	M	M	U	U	U	Z	Z	Z	H	H
FN	ICE Natural Gas	H	J	K	M	N	Q	U	V	X	Z	F	G
LN	LME Nickel	H	J	K	M	N	Q	U	V	X	Z	F	G
SM	CBOT Soybean Meal	H	K	K	N	N	Z	Z	Z	Z	Z	F	H
DET	EEE Phelix DE Baseload Monthly	H	J	K	M	N	Q	U	V	X	Z	F	G
LH	CME Lean Hogs	J	J	M	M	Q	Q	V	V	Z	Z	G	G
JN	TOCOM Rubber	K	M	N	Q	U	V	X	Z	F	G	H	J
BO	CBOT Soybean oil	H	K	K	N	N	Z	Z	Z	Z	Z	F	H
QW	EURONEXT White Sugar	H	K	K	Q	Q	V	V	V	Z	Z	H	H
FC	CME feeder Cattle	H	H	J	K	Q	Q	Q	U	V	X	F	F
QC	EURONEXT Cocoa	H	K	K	N	N	U	U	Z	Z	Z	H	H
DF	EURONEXT Robusta Coffee	H	K	K	N	N	U	U	X	X	F	F	H
RR	CBOT Rough Rice	H	K	K	N	N	U	U	X	X	F	F	H
LY	LME Aluminium Alloy	H	J	K	M	N	Q	U	V	X	Z	F	G
CC	NYBOT Cocoa	H	K	K	N	N	U	U	Z	Z	Z	H	H
LL	LME Lead	H	J	K	M	N	Q	U	V	X	Z	F	G
DL	Ethanol CBOT	H	J	K	M	N	Q	U	V	X	Z	F	G
JO	NYBOT Orange Juice Frozen Concer	H	K	K	N	N	U	U	X	X	F	F	H
PL	NYMEX Platinum	J	J	N	N	N	V	V	V	F	F	F	J
LT	LME Tin	H	J	K	M	N	Q	U	V	X	Z	F	G
PA	NYMEX Palladium	H	M	M	M	U	U	U	Z	Z	Z	H	H
IJ	Rapeseed	K	K	K	Q	Q	Q	X	X	X	G	G	G
JS	TGE Soybeans	V	Z	Z	G	G	J	J	M	M	Q	Q	V
CA	Euronext Milling Wheat	H	K	K	U	U	U	U	Z	Z	Z	H	H
EP	EURONEXT Corn	H	M	M	M	Q	Q	X	X	X	F	F	H
MW	MGEX Spring Wheat	H	K	K	N	N	U	U	Z	Z	Z	H	H
QK	EURONEXT Feed Wheat	K	X	X	X	X	X	X	X	K	K	K	K

Appendix F: DCI® Liquidity Weights and Fundamental Weights

Name	Bloomberg Code	2021 World Trade Significance Weights	2021 World Contract Liquidity Weights
ICE Brent	CO	10.1943%	15.6696%
ICE Gas Oil	QS	7.6284%	5.2240%
NYMEX Natural Gas	NG	7.5840%	3.6723%
NYMEX RBOB (gasoline blendstocl	XB	7.0341%	3.1138%
TOCOM Crude Oil	CP	6.0740%	0.1635%
NYMEX No. 2 Heating Oil	HO	5.6680%	3.4655%
CME Random Lumber	LB	5.1990%	0.0166%
TOCOM Gasoline	JV	4.5813%	0.0083%
COMEX Gold	GC	4.1530%	13.9363%
CJCE Kerosene	JX	3.4581%	0.0041%
ICE Rotterdam Coal Monthly	XA	2.9171%	0.2924%
LME Copper	LP	2.3947%	6.1085%
EURONEXT Robusta Coffee	DF	1.7247%	0.1829%
CBOT Corn	C	1.5853%	3.3989%
NYBOT Sugar #11	SB	1.5555%	1.5177%
NYMEX WTI	CL	1.4919%	13.6848%
CME live Cattle	LC	1.4627%	1.5758%
CME feeder Cattle	FC	1.4627%	0.3700%
CBOT Soybean Meal	SM	1.4088%	1.6315%
NYBOT cotton #2	CT	1.2984%	0.7293%
EURONEXT Milling Wheat	CA	1.2955%	0.4055%
NYBOT Orange Juice Frozen Concer	JO	1.2748%	0.0250%
CBOT Soybeans	S	1.2537%	4.4785%
TGE Soybeans	JS	1.2537%	0.0001%
LME Aluminium	LA	1.2044%	4.0588%
LME Aluminium Alloy	LY	1.2044%	0.0021%
CME Lean Hogs	LH	1.1000%	0.7329%
CME Pork Bellies	PB	1.1000%	0.0000%
TOCOM Rubber	JN	1.0776%	0.0158%
EURONEXT Cocoa	QC	1.0638%	0.6531%
CBOT Rough Rice	RR	1.0566%	0.0266%
EURONEXT Rapeseed	IJ	0.9226%	0.2101%
EURONEXT Feed Wheat	QK	0.8637%	0.0203%
CBOT Ethanol	DL	0.8442%	0.0025%
LME Nickel	LN	0.7452%	2.5922%
ICE Natural Gas	FN	0.6875%	0.4615%
CBOT Soybean oil	BO	0.6387%	1.0362%
EURONEXT White Sugar	QW	0.4894%	0.1764%
LME Zinc	LX	0.4703%	1.8717%
COMEX Silver	SI	0.3972%	2.6268%
NYMEX Palladium	PA	0.3150%	0.3438%
NYBOT Coffee C	KC	0.2545%	1.2342%
CBOT Wheat	W	0.2477%	1.3269%
KCBT Wheat	KW	0.2477%	0.6928%
TGE Corn	JC	0.2410%	0.0026%
LME Lead	LL	0.2153%	0.7188%
LME Tin	LT	0.1568%	0.1779%
MGEX Spring Wheat	MW	0.1421%	0.1860%
EEE Phelix DE Baseload Monthly	DET	0.1341%	0.0614%
NYMEX Platinum	PL	0.1232%	0.3797%
NYBOT Cocoa	CC	0.1032%	0.6912%
EURONEXT Corn	EP	0.0004%	0.0233%

Appendix G: DCI® High Liquid

In June 2012, Diapason launched the DCI® High Liquid index. This Index is a sub-index of the DCI® including only the most liquid US Dollar components of the DCI®.

The DCI® High Liquid is designed to provide a broad yet liquid representation of the largest US Dollar commodity futures inside the OECD region.

The DCI® High Liquid provides greater liquidity for investors and structured product providers.

In 2021, the DCI® High Liquid consists of 29 components that cover four major raw material divisions: agriculture 22.36%, base metals 14.23%, precious metals 15.76%, and energy 47.65%.

Methodology:

- First, non-US dollar commodities have been either aggregated to their most similar US dollar commodities or simply removed from the DCI®.
- Next, the less tradable commodities have been removed from the DCI® in order to preserve a high level of liquidity throughout the whole DCI® High Liquid index.
- The Initial Weights have been scaled proportionally to obtain a 100%-sum.

2021 DCI® High Liquid Initial Weights

Name	Bloomberg Code	Exchange	Ccy	Weight IW
ICE Brent	CO	ICE	USD	14.8870%
COMEX Gold	GC	CMX	USD	12.7549%
NYMEX WTI	CL	NYM	USD	10.3450%
ICE Gas Oil	QS	ICE	USD	7.1998%
NYMEX Natural Gas	NG	NYM	USD	5.9460%
LME Copper	LP	LME	USD	5.8201%
NYMEX RBOB (gasoline blendstock)	XB	NYM	USD	4.7530%
NYMEX No. 2 Heating Oil	HO	NYM	USD	4.5160%
CBOT Soybeans	S	CBT	USD	4.0669%
LME Aluminium	LA	LME	USD	3.7132%
CBOT Corn	C	CBT	USD	3.3387%
LME Nickel	LN	LME	USD	2.3620%
COMEX Silver	SI	CMX	USD	2.2503%
NYBOT Sugar #11	SB	NYB	USD	2.1638%
NYBOT Coffee C	KC	NYB	USD	1.9163%
CBOT Soybean Meal	SM	CBT	USD	1.8604%
CME live Cattle	LC	CME	USD	1.8375%
LME Zinc	LX	LME	USD	1.6787%
CBOT Wheat	W	CBT	USD	1.5856%
NYBOT cotton #2	CT	NYB	USD	1.0983%
CBOT Soybean oil	BO	CBT	USD	1.0797%
CME Lean Hogs	LH	CME	USD	1.0217%
CME feeder Cattle	FC	CME	USD	0.8771%
LME Lead	LL	LME	USD	0.6581%
KCBT Wheat	KW	KCB	USD	0.6504%
NYBOT Cocoa	CC	NYB	USD	0.5913%
NYMEX Palladium	PA	NYM	USD	0.3997%
NYMEX Platinum	PL	NYM	USD	0.3515%
NYBOT Orange Juice Frozen Concentrate	JO	NYB	USD	0.2770%

Appendix H: DCI® Light Energy

The DCI® Light Energy

In October 2012, Diapason launched the DCI® Light Energy. This Index is a sub-index of the DCI® including only the most liquid US Dollar components of the DCI® and including a capping procedure on the oil complex.

The DCI® Light Energy is designed to provide a broad yet liquid representation of the largest US Dollar commodity futures inside the OECD region.

The DCI® Light Energy provides greater diversification for investors and structured product providers.

In 2021 the DCI® Light Energy consists of 29 components that cover four major raw material divisions: agriculture 26.85%, base metals 17.09%, precious metals 18.92%, and energy 37.14%.

Methodology:

- First, non-US dollar commodities have been either aggregated to their most similar US dollar commodities or simply removed from the DCI®.
- Next, the less tradable commodities have been removed from the DCI® in order to preserve a high level of liquidity throughout the whole DCI® Light Energy index.
- Then, the aggregated weight of the oil complex is capped at 30%. Finally, the Initial Weights of the remaining components have been scaled proportionally to obtain a 70%-sum.

2021 DCI® Light Energy Initial Weights

Name	Bloomberg Code	Exchange	Ccy	Weight IW
COMEX Gold	GC	CMX	USD	15.3148%
ICE Brent	CO	ICE	USD	10.7099%
NYMEX WTI	CL	NYM	USD	7.4423%
NYMEX Natural Gas	NG	NYM	USD	7.1394%
LME Copper	LP	LME	USD	6.9882%
ICE Gas Oil	QS	ICE	USD	5.1796%
CBOT Soybeans	S	CBT	USD	4.8832%
LME Aluminium	LA	LME	USD	4.4585%
CBOT Corn	C	CBT	USD	4.0088%
NYMEX RBOB (gasoline blendstock)	XB	NYM	USD	3.4194%
NYMEX No. 2 Heating Oil	HO	NYM	USD	3.2489%
LME Nickel	LN	LME	USD	2.8360%
COMEX Silver	SI	CMX	USD	2.7019%
NYBOT Sugar #11	SB	NYB	USD	2.5980%
NYBOT Coffee C	KC	NYB	USD	2.3009%
CBOT Soybean Meal	SM	CBT	USD	2.2338%
CME live Cattle	LC	CME	USD	2.2062%
LME Zinc	LX	LME	USD	2.0156%
CBOT Wheat	W	CBT	USD	1.9038%
NYBOT cotton #2	CT	NYB	USD	1.3187%
CBOT Soybean oil	BO	CBT	USD	1.2964%
CME Lean Hogs	LH	CME	USD	1.2267%
CME feeder Cattle	FC	CME	USD	1.0532%
LME Lead	LL	LME	USD	0.7902%
KCBT Wheat	KW	KCB	USD	0.7810%
NYBOT Cocoa	CC	NYB	USD	0.7100%
NYMEX Palladium	PA	NYM	USD	0.4799%
NYMEX Platinum	PL	NYM	USD	0.4221%
NYBOT Orange Juice Frozen Concentrate	JO	NYB	USD	0.3326%

Appendix I: DCI® Light Energy Ex-Agriculture

The DCI® Light Energy Ex. Agriculture

In October 2012, Diapason launched the DCI® Light Energy. The DCI® Light Energy Ex. Agriculture is a sub-index of the DCI® Light Energy including only the energy and metals components.

In 2021 the DCI® Light Energy Ex. Agriculture consists of 15 components that cover three major raw material divisions: base metals 23.36%, precious metals 25.86%, and energy 50.77%.

2021 DCI® Light Energy Ex. Agriculture Initial Weights

Name	Bloomberg Code	Exchange	Ccy	Weight IW
COMEX Gold	GC	CMX	USD	20.9372%
ICE Brent	CO	ICE	USD	14.6417%
NYMEX WTI	CL	NYM	USD	10.1745%
NYMEX Natural Gas	NG	NYM	USD	9.7604%
LME Copper	LP	LME	USD	9.5537%
ICE Gas Oil	QS	ICE	USD	7.0811%
LME Aluminium	LA	LME	USD	6.0953%
NYMEX RBOB (gasoline blendstock)	XB	NYM	USD	4.6747%
NYMEX No. 2 Heating Oil	HO	NYM	USD	4.4416%
LME Nickel	LN	LME	USD	3.8772%
COMEX Silver	SI	CMX	USD	3.6938%
LME Zinc	LX	LME	USD	2.7556%
LME Lead	LL	LME	USD	1.0803%
NYMEX Palladium	PA	NYM	USD	0.6561%
NYMEX Platinum	PL	NYM	USD	0.5770%

Appendix J: DCI® Composite Metals & Energy

In April 2009, Diapason created the Diapason Commodities Index® Composite Metals & Energy which is defined as a composite of the DCI® Metals and the DCI® Energy.

The Initial Weights of the DCI® Composite Metals & Energy will be defined as 45% of the DCI® Metals Initial Weights + 55% of the DCI® Energy Initial Weights:

For each component i of the DCI®M&E index, the Initial Weight of the DCI® Composite Metals & Energy component i will be defined as below:

$$IW_i \text{-} DCI®M\&E = 0.45 * IW_i - DCI®ME + 0.55 * IW_i \text{-} DCI®EN$$

where,

$IW_i \text{-} DCI®M\&E$ is the Initial Weight of component i in the DCI®M&E index

$IW_i \text{-} DCI®ME$ is the Initial Weight of component i in the DCI® ME index

$IW_i \text{-} DCI®EN$ is the Initial Weight of component i in the DCI®EN index

2021 DCI® Composite Metals & Energy Initial Weights

Name	Bloomberg Code	Exchange	Ccy	Weight IW
COMEX Gold	GC	CMX	USD	19.0106%
ICE Brent	CO	ICE	USD	16.6116%
NYMEX WTI	CL	NYM	USD	11.5434%
LME Copper	LP	LME	USD	8.6746%
ICE Gas Oil	QS	ICE	USD	7.3367%
NYMEX Natural Gas	NG	NYM	USD	6.0590%
LME Aluminium	LA	LME	USD	5.5344%
NYMEX RBOB (gasoline blendstock)	XB	NYM	USD	5.3036%
NYMEX No. 2 Heating Oil	HO	NYM	USD	5.0392%
LME Nickel	LN	LME	USD	3.5204%
COMEX Silver	SI	CMX	USD	3.3539%
LME Zinc	LX	LME	USD	2.5020%
TOCOM Crude Oil	CP	TCM	JPY	1.8501%
LME Lead	LL	LME	USD	0.9809%
ICE Natural Gas	FN	ICE	GBP	0.6539%
ICE Rotterdam Coal Monthly	XA	NYM	USD	0.6026%
NYMEX Palladium	PA	NYM	USD	0.5957%
NYMEX Platinum	PL	NYM	USD	0.5239%
LME Tin	LT	LME	USD	0.3036%

Appendix K: DCI® Heavy Energy

In September 2008, Diapason created the Diapason Commodities Index® Heavy Energy. The index is a global diversified index with a concentration in the energy sector.

The Initial Weights of the index will be defined as 70% of the DCI® Initial Weights + 30% of the DCI® Energy Initial Weights:

For each component i of the DCI® index, the Initial Weight of the DCI® Heavy Energy component i will be defined as below:

$$IW_i - DCI® HE = 0.7 * IW_i - DCI® + 0.3 * IW_i - DCI® EN$$

Where,

$IW_i - DCI® HE$ is the Initial Weight of component i in the DCI®HE

$IW_i - DCI®$ is the Initial Weight of component i in the DCI®

$IW_i - DCI® EN$ is the Initial Weight of component i in the DCI®EN:

2021 DCI® Heavy Energy Initial Weights

Name	Bloomberg Code	Ccy	Weight IW	Name	Bloomberg Code	Ccy	Weight IW
ICE Brent	CO	USD	19.4818%	EURONEXT Robusta Coffee	DF	USD	0.5320%
NYMEX WTI	CL	USD	13.5379%	LME Lead	LL	USD	0.4207%
ICE Gas Oil	QS	USD	8.6043%	KCBT Wheat	KW	USD	0.4158%
COMEX Gold	GC	USD	8.1536%	NYBOT Cocoa	CC	USD	0.3780%
NYMEX Natural Gas	NG	USD	7.1059%	EURONEXT Rapeseed	IJ	EUR	0.3416%
NYMEX RBOB (gasoline blendstock)	XB	USD	6.2200%	NYMEX Palladium	PA	USD	0.2555%
NYMEX No. 2 Heating Oil	HO	USD	5.9098%	NYMEX Platinum	PL	USD	0.2247%
LME Copper	LP	USD	3.7205%	EURONEXT White Sugar	QW	USD	0.2142%
CBOT Soybeans	S	USD	2.5998%	CBOT Rough Rice	RR	USD	0.1890%
LME Aluminium	LA	USD	2.3737%	NYBOT Orange Juice Frozen	JO	USD	0.1771%
TOCOM Crude Oil	CP	JPY	2.1697%	EURONEXT Feed Wheat	QK	GBP	0.1442%
CBOT Corn	C	USD	2.1343%	MGEX Spring Wheat	MW	USD	0.1309%
LME Nickel	LN	USD	1.5099%	LME Tin	LT	USD	0.1302%
COMEX Silver	SI	USD	1.4385%	CME Random Lumber	LB	USD	0.1176%
CBOT Soybean Meal	SM	USD	1.1893%	TOCOM Rubber	JN	JPY	0.1120%
CME live Cattle	LC	USD	1.1746%				
NYBOT Sugar #11	SB	USD	1.1690%				
LME Zinc	LX	USD	1.0731%				
ICE Natural Gas	FN	GBP	0.7669%				
CBOT Wheat	W	USD	0.7385%				
ICE Rotterdam Coal Monthly	XA	USD	0.7067%				
NYBOT cotton #2	CT	USD	0.7021%				
NYBOT Coffee C	KC	USD	0.6930%				
CBOT Soybean oil	BO	USD	0.6902%				
CME Lean Hogs	LH	USD	0.6531%				
EURONEXT Cocoa	QC	GBP	0.6034%				
CME feeder Cattle	FC	USD	0.5607%				
EURONEXT Milling Wheat	CA	EUR	0.5362%				