

# **Breakwave Dry Freight Futures Index**

## Methodology

**Breakwave Dry Freight Futures Index.** *The index measures the return from a daily rolling long position in first calendar quarter dry bulk futures contract.*

### **Introduction**

Freight Futures are contracts that allow ship owners, charterers and speculators to express their view on the direction of freight rates. Freight Futures are listed and cleared through major exchanges such as the Nasdaq-OMX and the Singapore Exchange but are traded primarily off-exchange on a principal-to-principal basis. Freight Futures are cash settled against various spot indices published daily by the Baltic Exchange.

Freight Futures are monthly contracts that settle over the arithmetic average of the relevant spot index during the corresponding month. The settlement is in cash and there is no physical delivery.

Although all contracts are monthly, for trading purposes, in addition to trading individual months, the market practice is to combine three consecutive months to create a quarterly calendar strip (Q1, Q2, Q3, Q4) and to combine 12 months (on the next full year and thereafter) to create an annual calendar strip. Such strips are quoted and traded as one individual transaction.

### **Index Construction**

The Breakwave Dry Futures Index measures the return from rolling long positions in the next calendar quarter freight futures contract out of the current month. The index rolls continuously throughout each current month into the next calendar quarter, while maintaining positions in the other contracts.

Throughout the year the Index will hold positions as follows:

*January, April, July, October: M+1M+2M+1Q*

*February, May, August, November: M+1M +1Q*

*March, June, September, December: M+1Q*

*M= current month, 1M=next month, 2M=second month, 1Q=next calendar quarter 3-month strip*

Starting at the first trading day of the year, (and at the first trading day of each Calendar Quarter thereafter), the Index will hold positions in the three subsequent months at equal weights in dollar terms. Then, for every subsequent trading day, the Index buys a fraction ( $1/n^{\text{th}}$ ) of the position it holds in the current month to the first calendar quarter contract;  $n^{\text{th}}$  corresponds to the business days in the Roll Period (Roll Period defined as business days excluding freight trading holidays).

The quantity bought is proportional to the value of current month freight futures contracts as of the previous index roll day, and inversely proportional to the length of the current Roll Period. This way, the initial position in the current month contract is progressively moved to the next calendar contract over the course of the month, until the following Roll Period starts.

The current month position is not sold, rather it is maintained to the expiration of the contract, at which time it is settled in cash, per exchange rules. Given that freight futures settle against monthly averages, such methodology maintains a relatively constant average maturity in the Index.

For the Index, the Roll Period starts after the close of the Freight Futures Settlement Date, and runs through the last day of the subsequent month's Freight Futures Settlement Date. Thus, the Index is rolling on a continual basis. On the business date after the current Roll Period ends the following Roll Period begins.

Based on the roll methodology, the average term of the Index will remain constant at approximately 67 days forward, as the longer dated contracts will generally weight less than the near dated contracts.

<b>Index</b>	<b>Underlying contracts</b>	<b>Roll Out (Settle)</b>	<b>Roll In (Buy)</b>
Breakwave Dry Futures Index	1 <sup>st</sup> , 2 <sup>nd</sup> , 3 <sup>rd</sup> , 1Q	1 <sup>st</sup>	1Q

The Index will hold three types of contracts: Capesize 5TC, Panamax 4TC and Supramax 10TC. The corresponding weights are 50%, 40%, and 10%, respectively. The weighting remains constant at such levels to ensure that the change in total dollar exposure for the index is only due to the price change of each contract and not due to using a different weight for a contract trading at a higher price.

The Index is calculated on the end of day settlement prices as published by the Baltic Exchange and posted by the respective Exchanges.

This methodology was created by Breakwave Advisors LLC to achieve the aforementioned objective of measuring the underlying interest of each index governed by this methodology document. Any changes to or deviations from this methodology are made in the sole judgment and discretion of Breakwave Advisors LLC so that the index continues to achieve its objective.

### ***Base Date***

The base date of the Breakwave Dry Freight Futures Index is January 3, 2010 at base value of 3,070.

### ***Holiday Schedule***

The index is calculated daily when the Freight Futures market is open, excluding holidays and weekends. A complete holiday schedule for the year is available at the Baltic Exchange web site.

## **Index Dissemination**

The Index is calculated daily after market close by Solactive AG.

### Tickers

<b>Index</b>	<b>Bloomberg</b>	<b>Reuters</b>
Breakwave Dry Freight Futures Index	BDRYFF	.BDRYFF

### Index Calculation

$$\text{Index}^t = \text{Index}^{t-1} * (1 + \text{DR}^t)$$

Where

$$\text{DR}^t = \frac{\text{TWP}^t}{\text{TWP}^{t-1}} - 1$$

$$\text{TWP}^t = \sum_{i=m}^q \text{CRW}^{it} * \text{DCRP}^{it}$$

$$\text{CRW}^m = 100 * \frac{dr}{dt}$$

$\text{CRW}^k = 100$ , if  $m = \text{Jan, Feb, Apr, May, Jul, Aug, Oct, Nov}$

$\text{CRW}^q = 100$ , if  $m = \text{Jan, Apr, Jul, Oct}$

$$\text{CRW}^q = 100 * \left(1 - \frac{dr}{dt}\right)$$

$\text{Index}^{t-1}$  = The Index Excess Return on the preceding business day

$\text{DR}$  = Contract Daily Return

$\text{TWP}$  = Total Weighted Price

$\text{CRW}$  = Contract Roll Weight for the  $i$  futures contract

$\text{DCRP}$  = Daily Contract Reference Price for the  $i$  futures contract

$m$  = the monthly contract that is rolled out

$q$  = the quarterly futures contract that is rolled in