



# MSCI World Ricardo Comparative Advantage Select Index with Risk Control

## Benchmark Statement

February 6<sup>th</sup>, 2024

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## 1 General Information

**Index Name :** MSCI World Ricardo Comparative Advantage Select Index with Risk Control

**Initial Date of Publication :** February 7<sup>th</sup>, 2024

**Index Sponsor :** MSCI

**Index Administrator :** Compass Financial Technologies (France)

**Index Calculation Agent :** Compass Financial Technologies (France)

## 2 Index Description

The MSCI World Ricardo Comparative Advantage Select Index with Risk Control (the *Index*) is an index which provides exposure to the MSCI World Ricardo Comparative Advantage Select EUR Net Return Index (the *Parent Index*) while controlling the volatility of the strategy.

The Index leverages on index engineering expertise to offer investors a risk controlled exposure to the MSCI World Ricardo Comparative Advantage Select EUR Net Return Index. Index methodology of the *Parent index* is available at [www.msci.com/documents/10199/6b6b7c4b-d547-e1cd-8f38-9f11ed959479](http://www.msci.com/documents/10199/6b6b7c4b-d547-e1cd-8f38-9f11ed959479)

## 3 Regulatory Information

The MSCI World Ricardo Comparative Advantage Select Index with Risk Control is a non-significant benchmarks according to EU Regulation 2016/1011 given:

1. it is not used directly or indirectly within a combination of benchmarks as a reference for financial instruments or financial contracts or for measuring the performance of investments funds having a total average value of at least EUR 50 billion on the basis of all the range of maturities or tenors of the benchmark, where applicable, over a period of six months; and
2. it has market-led substitutes and, in the event that the benchmark ceases to be provided or is provided on the basis of input data no longer fully representative of the underlying market or economic reality or unreliable input data, the benchmark administrator do not anticipate a significant and adverse impact on market integrity, financial stability, consumers, the real economy or the financing of households or businesses in the EU.

## 4 Index Methodology

### 4.1 Index composition

The Index invests simultaneously in EUREX MSCI World Index Futures contracts and in the MSCI World Ricardo Comparative Advantage Select EUR Net Return Index. Before October 18<sup>th</sup> 2023, EUREX MSCI World Index Futures are replaced by CME E-Mini SP500 Futures for backtesting purposes. Please refer to the index methodology for more details.

### 4.2 Index Computation

The Index computation follows the steps below:

## Uncapped Final Index computation

For each index business day  $t$ , the Uncapped Final Index daily return is computed such that:

$$\text{UncappedFinalIndexDailyReturn}_t = \text{Delta1UnderlyingIndexDailyReturn}_t + \text{FuturesOverlayDailyReturn}_t \times \text{DailyFXratio}_t$$

Where:

- $\text{Delta1UnderlyingIndexDailyReturn}_t$  represents the daily excess return of the MSCI World Ricardo Comparative Advantage Select EUR Net Return Index over the Euro short-term rate (ESTR)
- $\text{DailyFXRatio}_t$  is defined as the EURUSD WMCO 4pm London Time Fixing on current business day  $t$  divided by the EURUSD WMCO 4pm London Time Fixing on the previous business day
- $\text{FuturesOverlayDailyReturn}_t$  is the daily return of the Futures Overlay computed for each hourly observation  $k$  as,

$$\text{FuturesOverlayDailyReturn}_k = \text{HourlyFuturesExpo}_k \times \text{HourlyFuturesReturn}_k - \text{TransactionCost}_k$$

- Futures contracts are the EUREX MSCI World Index Futures contracts as defined in the Index methodology
- $\text{HourlyFuturesReturn}_k$  are based on the hourly futures contract price references defined for the observation periods as the 7 VWAPs 10:00-10:10 LDN, 11:00-11:10 LDN ... 15:00-15:10 LDN and then 16:20-16:30 LDN
- $\text{HourlyFuturesExpo}_k$  is defined as the hourly exposure to the relevant futures contract and is computed as:

$$\text{HourlyFuturesExpo}_k = (\text{IndexExposure}_k - 1) \times \text{Beta}_{t_k-1}$$

It is adjusted from hour to hour only if it changes by more than 10% compared to the previous computed hourly exposure.

with,

$$\text{IndexExposure}_k = VT / (\text{IntradayVol}_k \times \text{Beta}_{t_k-1})$$

$$VT = \text{VolTarget} = 12.5\%$$

and for any index business day  $l$ ,

$$\text{Beta}_l = \text{IndexDailyVol}_l / \text{FutDailyVol}_l$$

with,

- $\text{IndexDailyVol}_l = \max(\theta_{0.90,l}^{\text{Index}}, \theta_{0.94,l}^{\text{Index}})$ ,  $\theta_{0.90,l}^{\text{Index}}$  being the exponentially weighted volatility of Index at  $l$  with  $\lambda = 0.9$
- $\text{FutDailyVol}_l = \max(\theta_{0.90,l}^{\text{Futures}}, \theta_{0.94,l}^{\text{Futures}})$ ,  $\theta_{0.90,l}^{\text{Futures}}$  being the exponentially weighted volatility of the relevant futures contract at  $l$  with  $\lambda = 0.9$
- $\text{IntradayVol}_k = \max(\theta_{0.90,k}, \theta_{0.94,k})$ ,  $\theta_{0.90,k}^{\text{Index}}$  being the exponentially weighted volatility of the relevant futures contract for hourly observation  $k$  with  $\lambda = 0.9$
- $\text{TransactionCost} = 0.005\% \times \text{AbsoluteChange of HourlyFuturesExposure}$

Note: Before October 18<sup>th</sup> 2023, EUREX MSCI World Index Futures are replaced by CME E-Mini SP500 Futures for backtesting purposes. Please refer to the index methodology for more details.

### **Capped Final Index computation**

From the Uncapped Final Index calculated above, Cap Level Indices are computed by capping the monthly return of the Uncapped Final Index at 4% with a monthly reset reference point defined as the end of month business day – i business days.

### **Final Index computation**

The Final Index is then computed as the average of the 20 Capped Final Index computed in the previous step for  $i=1, \dots, 20$ .

## **5 Technical Rectification of Index Rules**

The Index Rules may be amended from time to time, consistent with the economic strategy of the Index, by the Index Sponsor acting in good faith and a commercially reasonable manner to cure ambiguities, errors, and omissions, if any.

For convenience, the Index Sponsor may from time to time replace a data provider, publisher or source of Market Data or Index Data (a “Data Provider”), provided that the relevant data content remains equivalent. In any case where the Index Sponsor reasonably determines that the replacement of a Data Provider is necessary or desirable whilst the data content may not remain strictly equivalent, the Index Sponsor shall select such replacement Data Provider (a) in a commercially reasonable manner; (b) consistent with the objectives of the Index; and (c) in compliance with the Index Sponsor’s internal procedures for Index modification.

## **6 Cessation of the Index**

The Index Administrator has established procedures to be followed for termination of the Index. Any termination of the Index must be approved in advance by the Index Sponsor and the Index Committee. A notice to licensees will be published in advance of the termination. Before deactivating the Index, the Index Administrator always determines whether there are any listed financial products issued on that index as the underlying. The Index Administrator terminates indices only provided that:

- All existing commercial customers have been consulted, and commercial relationships have been terminated or transitioned accordingly.
- Consultations with stakeholders have not led to the decision to continue the index.

The Index Administrator is not responsible for determining or offering an alternative index to its subscribers or other stakeholders when the Index is terminated. However, the Index Administrator may recommend an alternative index if it considers, based on various criteria, that this alternative index could be a credible substitute index.

## 7 Disclaimer

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