



# CBOE EUROPE INDEX RULES AND METHODOLOGY

Version 9

March 2018

Cboe Europe Limited is a Recognised Investment Exchange regulated by the Financial Conduct Authority. Cboe Europe Limited is a wholly-owned subsidiary of Cboe Global Markets, Inc. and is a company registered in England and Wales with Company Number 6547680 and registered office at The Monument Building, 11 Monument Street, London EC3R 8AF. This has been established for information purposes only. None of the information concerning the services or products described in this document constitutes advice or a recommendation of any product or service. To the extent that the information provided in this document constitutes a financial promotion as defined by section 21 of the Financial Services and Markets Act 2000, it is only directed at persons who qualify as a Professional Client or Eligible Counterparty. Persons who do not qualify should not act on or rely upon it.

No part of this material may be copied, photocopied, duplicated or published in any form by any means or redistributed without the prior written consent of Cboe Global Limited.

## Contents

Contents .....	2
1.0 INTRODUCTION .....	7
1.1 Cboe Europe Index Rules and Methodology.....	7
1.2 Cboe Europe Indices .....	7
1.3 Index Objectives & Governance .....	7
2.0 CBOE’S RESPONSIBILITIES AS A BENCHMARK INDEX ADMINISTRATOR.....	9
2.1 Index Benchmark Administrator .....	9
2.2 Cboe Europe Index Advisory Committee And Regulatory Decisions Committee.....	9
3.0 INDEX CONSTITUENT SELECTION CRITERIA.....	10
3.1 Eligible Securities.....	10
3.2 Multiple Lines.....	10
3.3 Nationality.....	10
3.4 Free Float Weightings .....	11
3.5 Market Capitalisation.....	12
3.6 Partly Paid Shares .....	12
3.7 Price.....	12
3.8 Liquidity .....	12
4.0 INDEX CONSTITUENT MANAGEMENT .....	14
4.1 Constituent Period Review Timetable .....	14
4.2 Insertion and Deletion Of Constituents .....	14
4.3 Thresholds for Insertion and Deletion Of Constituents.....	15
4.3 Reserve Lists.....	16
4.4 Additions Outside Of A Review Period – Fast Entry Provision.....	16
5.0 CBOE EUROPE CALCULATION METHODOLOGY FOR MARKET CAP WEIGHTED INDICES .....	17
5.1 Capital/Price Return and Net Total Return Indices .....	17
5.2 Index Formula for Capital/Price Return and Net Total Return Indices.....	17

5.3	Index Divisor Calculation for Capital/Price Return and Net Total Return Indices.....	18
6.0	CORPORATE ACTIONS AND EVENTS.....	19
6.1	Cash Dividend .....	19
6.2	Special / Extraordinary Cash Dividend.....	20
6.3	Split and Reverse Split.....	20
6.4	Scrip Issues .....	21
6.5	Rights Issues.....	22
6.6	Mergers and Takeovers .....	23
6.7	Spin-Offs.....	24
6.8	Return of Capital .....	25
6.9	Repurchase of Shares/Self-Tender .....	25
6.10	Share Updates .....	26
6.11	Free Float Weighting Changes.....	26
6.12	Stock Conversion .....	26
6.13	In-Specie Distribution.....	27
6.14	Deletion of a Constituent Issuer.....	27
6.15	Suspended Issuers.....	27
6.16	The Use of Proxy Lines.....	27
7.	EXTREME MARKET AND COMPANY EVENTS.....	28
8.	CBOE EUROPE INDICES – FACTSET INDUSTRY CLASSIFICATION (RBICS).....	29
8.1	Industry Sector Structure .....	29
8.2	Cboe Europe Indices - Industry Classification Changes .....	30
9.	CBOE EUROPE INDICES - OPERATIONAL ELEMENTS.....	31
9.1	Changes to Cboe Europe Index Rules and Methodology .....	31
9.2	Recalculation of Cboe Europe Indices.....	31
9.3	Index Opening and Closing Hours.....	31
9.4	Status of Cboe Europe Indices .....	31

Available.....	31
Suspended.....	32
Indicative.....	32
9.5 Raising Objections.....	32
9.6 Further Information.....	32
SCHEDULE A – CBOE UK INDEX SERIES.....	33
A.1 Cboe UK Index Series Coverage.....	33
A.2 Specific Cboe UK Index Qualification Criteria.....	33
Cboe UK 100.....	33
Cboe UK 250.....	33
Cboe UK 350.....	33
Cboe UK Small Companies.....	34
Cboe UK All Companies.....	34
Cboe UK Alternative 100.....	34
Cboe UK All Companies Sector Indices.....	34
Cboe Brexit High 50.....	34
Cboe Brexit Low 50.....	34
A.3 Price Data Used to Value Cboe Europe Indices.....	34
A.4 Market Capitalisation.....	35
A.5 Liquidity.....	35
A.6 Measuring the Liquidity of Individual Securities.....	35
A.7 Constituent / Index Review Periods.....	35
Cboe UK Small Companies and Cboe UK All Companies Indices.....	36
Cboe Brexit High & Low 50 Indices.....	36
Cboe UK All Companies Sector Indices.....	36
A.8 Inclusion and Deletion of Securities.....	36
A.9 Fast Entry Provision.....	36

SCHEDULE B – CBOE EUROPE SINGLE COUNTRY INDEX SERIES.....	38
B.1 Cboe Europe Single Country Index Series Coverage.....	38
B.2 Specific Cboe Europe Single Country Qualification Criteria .....	38
Cboe AT 20 .....	38
Cboe BE 20 .....	38
Cboe CH 20.....	38
Cboe CHM 30 .....	38
Cboe DE 30.....	39
Cboe DEM 50.....	39
Cboe DES 30 .....	39
Cboe DK 25.....	39
Cboe ES 35 .....	39
Cboe FI 25.....	39
Cboe FR 40 .....	39
Cboe FRM 20.....	39
Cboe IE 20.....	39
Cboe IT 40.....	39
Cboe NL 25.....	39
Cboe NLM 25.....	40
Cboe NO 25 .....	40
Cboe PT 20 .....	40
B.3 Price Data Used to Value Cboe Europe Indices.....	40
B.4 Market Capitalisation.....	40
B.5 Liquidity.....	40
B.6 Measuring the Liquidity of Individual Securities .....	41
B.7 Constituent / Index Review Periods.....	41
B.8 Inclusion and Deletion of Securities .....	41

B.9	Fast Entry Provision .....	41
SCHEDULE C – CBOE EUROPE REGIONAL INDEX SERIES .....		42
C.1	Cboe Europe Regional Index Series Coverage .....	42
C.2	Specific Cboe Europe Regional Index Qualification Criteria .....	42
	Cboe Eurozone 50 .....	42
	Cboe Eurozone All Companies .....	42
	Cboe Europe 50 .....	42
	Cboe Europe All Companies .....	43
	Cboe Europe All Companies ex UK .....	43
	Cboe Nordic 40 .....	43
	Cboe Europe All Companies Sector Indices .....	43
C.3	Price Data Used to Value Cboe Europe Indices .....	43
C.4	Constituent / Index Review Periods .....	43
C.5	Inclusion and Deletion of Securities .....	44
C.6	Fast Entry Provision .....	44
APPENDIX I – CHRONOLOGY OF CHANGES TO RULES .....		45

## 1.0 INTRODUCTION

### 1.1 CBOE EUROPE INDEX RULES AND METHODOLOGY

The body of this document details the Cboe Europe Index Rules and Methodology (the “**Rules**”) that Cboe Europe (“**Cboe**”) applies consistently to all its indices listed in the Schedule(s). The Schedule(s) also stipulate for each index their specific criteria e.g. liquidity and size thresholds, as these can vary between indices.

These Rules include details related to:

- a) index construction and constituent management;
- b) index and index divisor calculation;
- c) the treatment of Corporate Actions, and
- d) specific index level details.

Customers using the Cboe Europe Indices should familiarise themselves with the Rules and consider taking independent advice before investing in products linked to a Cboe Europe Index.

Cboe disclaims any liability whether as a result of negligence or otherwise for any direct or indirect losses, damages, claims and expenses, as a result of:

- a) application or reliance on these Rules,
- b) inaccuracies in these Rules, or
- c) inaccuracies or errors in the composition of the Cboe Europe Indices or constituent data or their calculated values.

### 1.2 CBOE EUROPE INDICES

Cboe Europe Indices are constructed and managed to reflect the performance of the listed companies and industry sectors pertaining to the relevant national market or group of markets (collectively, the “**Cboe Europe Indices**” and individually the “**Cboe Index**”).

These companies, which have issued shares and listed them for trading on an exchange, are referred to in these Rules as Issuers.

Cboe Global Markets operates leading pan-European and US stock exchanges, as such Cboe will consider extending its national and regional market index coverage over time.

### 1.3 INDEX OBJECTIVES & GOVERNANCE

Cboe Europe Indices are designed to accurately reflect the performance of the market or market segment that the index represents. In order to achieve this, the underlying constituents of the index and their treatment under specific market events, particularly corporate actions, are defined in the Rules.

If these Rules are unable to deal with a specific corporate or industry event that would impact the value of an index, Cboe may, if appropriate, determine how such an event will be treated or present proposals in this regard to the **Cboe Europe Index Advisory Committee** (“**IAC**”) for discussion and then to the **Cboe Regulatory Decisions Committee** (“**RDC**”) for approval. Where a decision has to be taken within a timeframe that does not

permit such a consultation, a full description of the decision taken and outcome will be submitted to the IAC and RDC for their consideration and comment.

Cboe takes account of and follows the relevant International Organization of Securities Commission's ("IOSCO") Principles, published July 2013, [www.iosco.org/library/pubdocs/pdf/IOSCOPD415.pdf](http://www.iosco.org/library/pubdocs/pdf/IOSCOPD415.pdf).

Similarly, Cboe will ensure that its indices meet the requirements stipulated under the EU Council's forthcoming Benchmarks Regulation, and Cboe will obtain approval as a Benchmark Administrator, as will be required under these regulations.

Users of the Cboe Europe Indices should be aware that circumstances may arise that will require Cboe to amend or cease the calculation of one or more of its indices, see Rule 7 for details. As such, any products that reference the Cboe Europe Indices should recognise and cater for such a possibility.



## 2.0 CBOE'S RESPONSIBILITIES AS A BENCHMARK INDEX ADMINISTRATOR

### 2.1 INDEX BENCHMARK ADMINISTRATOR

Cboe is the Benchmark Administrator, as defined by the IOSCO Principles for Financial Benchmarks and as to be defined in the upcoming Benchmarks Regulation (“**BMR**”) once implemented.

Cboe is responsible for the design and maintenance of the Cboe Europe Indices and will adjust the index constituents and their market capitalisation weightings in accordance with these Rules and will publish all such changes.

Among its responsibilities as a Benchmark Administrator, Cboe will oversee the performance of its indices to ensure their ongoing accuracy (Rule 9.3).

### 2.2 CBOE EUROPE INDEX ADVISORY COMMITTEE AND REGULATORY DECISIONS COMMITTEE

The IAC advises Cboe in relation to its indices and its index business. Its members will have no access to price sensitive information. The responsibility for monitoring compliance with Cboe's obligations as a Benchmark Administrator lies with the RDC. The IAC comprises market practitioners and the RDC comprises Cboe senior management. Together they seek to ensure Cboe Europe Indices continue, through the Rules and their ongoing review of the Rules, to reflect their underlying markets and constituents and the needs of users of the index.

The Terms of Reference of the IAC can be found here [www.cboe.com/indexeurope/governance](http://www.cboe.com/indexeurope/governance).

Cboe shall publish any changes to its Rules on the relevant index Rule of its website at the earliest opportunity.

## 3.0 INDEX CONSTITUENT SELECTION CRITERIA

This section defines which securities are eligible for inclusion in Cboe Indices. Eligible securities may be required to meet prescribed minimum levels of liquidity, size and free float before being included in a Cboe Index (Rule 3.5).

Whilst the criteria seek to avoid ambiguity, specific circumstances may arise on which the rules are silent / not clear, that would therefore require Cboe to seek the approval of the RDC to a specific course of action. The outcome of any such action would be notified to the market and discussed with the IAC.

All securities that meet the criteria and form a constituent of any Cboe Index will be assigned a nationality (Rule 3.3), and an industry sector (Rule 8).

### 3.1 ELIGIBLE SECURITIES

All classes of ordinary shares and preference shares of companies which are available for trading on Cboe, have been admitted to trading on a Recognised Investment Exchange (or equivalent), and are listed in the currency denomination of the country of listing (e.g. in the case of UK indices listed with a Sterling denominated price), are initially eligible to be included in a Cboe Index.

Securities are screened to exclude those primarily representing investment holdings. These include:

- a) All collective investment schemes whose price is derived from their underlying investments are considered ineligible. Such schemes include but are not limited to: non-Property related Investment Trusts, Unit Trusts, Open Ended Investment Companies (“**OEICs**”), Mutual Funds, Exchange Traded Funds/Products, currency funds.
- b) Depository Receipts (e.g. ADRs and GDRs) and Venture Capital Trusts (“**VCTs**”), loan stocks/notes and convertible preference shares.

### 3.2 MULTIPLE LINES

Issuers can list for trading more than one line of their company’s stock. Any such multiple lines of equity capital can be considered eligible as long as they are priced separately and satisfy the Rules’ eligibility criteria. For the less liquid share line to be considered eligible for inclusion in a national market indices its ratio of the six (6) month Average Daily Value (“ADV”) traded, with the company’s most liquid share class, must equal or exceed 75%.

For indices that combine constituents of two or more national markets, e.g. Cboe Europe Regional Indices, only the primary listing share class of the company will be eligible.

### 3.3 NATIONALITY

All Cboe Index constituent issuers are assigned a nationality and will retain their nationality in any Cboe multi country equity index that they may be included in.

An issuer will be assigned to the country that it is incorporated in or primary listing in, on the following basis:

- i) assigned to its country of incorporation, if it is primary listed in the same country and its free float is at least 25%, or
- ii) assigned to its country of incorporation, if it is not primary listed in the same country and its free float is at least 50%, or
- iii) assigned to its country of primary listing, if this is not its country of incorporation and if its free float is at least 25%

Table summarises the available scenarios:

Country of Incorporation	Country of Primary Listing	Free Float	Assigned Nationality
A	A	<25%	not eligible
A	A	≥ 25%	A
A	B	≥ 25%	B
A	B	≥ 50%	A & B

An issuer that lists the same line of shares on multiple markets and meets the relevant criteria, including the criteria above, would be assigned more than one nationality and would be eligible for inclusion in more than one national market index. However, where a Cboe Index combines national markets e.g. a Cboe Europe Regional Index, then only the Issuer's primary listed share class (Rule 3.2) would be included.

Where an issuer fails to meet the above criteria, Cboe will recommend the appropriate nationality for the issuer to the RDC and once assigned and implemented, present the rationale to the IAC for review. Consideration will be given to other salient factors like; the tax domicile of the issuer, where the issuer is most actively traded and the location of its headquarters.

Cboe, in consultation with the IAC may review the nationality of any Cboe Index constituent.

### 3.4 FREE FLOAT WEIGHTINGS

In listing on an exchange, an issuer decides what proportion of its share capital is made available for trading. This proportion is considered as the issuer's free float and can change over time. Whilst Cboe Europe Indices use an issuer's full market capitalisation to determine whether it is eligible for inclusion in an index, the issuer's weighting in the index is adjusted to take into account its actual free float.  $\text{Free Float \%} = \frac{\# \text{ of Float Shares}}{\# \text{ Shares Outstanding (share line level)}}$

To be eligible for inclusion in a Cboe Index, the issuer must make available the free float percentage of their issued share capital as defined in Rule 3.3 above. Cboe will use up to date publically available information to establish an issuer's actual free float. In applying this measure to the constituents weighting in its indices, Cboe Europe Indices will round the percentage up to the next whole number. Free float levels will be continuously reviewed to determine possible changes to the constituent's weighting in the index. Where such changes arise from a corporate event they are dealt with as described in Rule 6.11, otherwise, the change in the constituent's free float will be applied at the index's next review.

Where an issuer has "locked in" a number of shares, commonly around IPOs, and the details of which are known, these locked in shares would not be considered as part of the issuer's free float.

Where an ownership restriction applies that caps the amount of issuance that can be held by foreign owners, the market capitalisation of the issuer is adjusted through its free float weighting to reflect this. Should such a

restriction result in an issuer's free float differing between listing jurisdictions, Cboe will determine with RDC the free float percentages that should apply in associated national and regional indices.

### 3.5 MARKET CAPITALISATION

The full market capitalisation<sup>1</sup> of all eligible securities will be used to determine whether the issuer becomes a constituent of a Cboe Index. Issuers that are eligible, together with any multiple lines (Rule 3.2) will be ranked by their market capitalisation using data as at the close of business on the Tuesday before the first Friday of the review month, see Rule 4.

The market capitalisation thresholds that are applied may vary by market or by index and are provided in the appropriate Schedule(s).

In extreme circumstances, Cboe may relax certain eligibility criteria, including thresholds for a specific index, in order to ensure that there are at least a minimum number of issuers in a specific Cboe Index.

### 3.6 PARTLY PAID SHARES

The market capitalisation of Issuers issuing further shares in partly or nil paid form will include the number of newly issued shares and value these as having been fully paid, see Rule 6.5.

### 3.7 PRICE

The value of constituents comprising Cboe Europe Indices will be valued using accurate and reliable prices. Where Cboe uses its own price data, or NEX Exchange's data for the Cboe UK Alternative 100, such prices are deemed derived from a regulated market.

### 3.8 LIQUIDITY

An issuer's listed shares, when traded on an exchange, must attain specific levels of liquidity in order for the issuer to be included in a Cboe Index. Some Cboe Indices, for example Cboe UK Alternative 100 Index, may not attach such liquidity criteria; otherwise the following criteria will be used to determine whether a security can be considered:

Each security's liquidity will be measured at the time of their review by calculating its average daily value traded in its listing currency over the previous six months ("Liquidity Test Period").

Business days on which the issuer's securities fail to trade are included even if the security is suspended. In measuring liquidity, Cboe Europe Indices may aggregate data from Cboe, Turquoise and the national market (Rule 9.5).

Cboe Europe Indices will apply the above test results against the predefined liquidity thresholds detailed in the respective Schedule(s). Cboe Index liquidity thresholds are set as monetary value traded rather than as a percentage of the issuer's market capitalisation and are applied as follows:

---

<sup>1</sup> Full market capitalisation equals simple shares outstanding at a share class level multiplied by price. As such it excludes shares bought back by company and shares that could arise from the exercise of warrants or options.

- a) Securities eligible for inclusion in a Cboe Index are those whose average daily value traded in the Liquidity Test Period exceeds the threshold stipulated in the respective Schedule(s).
- b) Securities ineligible for inclusion in a Cboe Index are existing constituents whose average daily value traded in the Liquidity Test Period that does not exceed the threshold stipulated in the respective Schedule(s).
- c) With the exception of issuers added under the Fast Entry Rule (Rule 4.4), a recently listed security, including those arising from a demutualisation, must have a minimum trading record of 20 days and their pro-rated daily value traded in the Liquidity Test Period must meet the threshold stipulated in the respective Schedule(s) for the security to be eligible.
- d) All securities, newly listed or otherwise, that fail to meet the liquidity criteria will remain ineligible for inclusion in a Cboe Index until their liquidity is re-measured at the next annual review.
- e) Cboe may adjust liquidity thresholds by up to 25% at the annual review if Cboe believes that such action would better reflect the liquidity of the market. Any such change would be notified to the market in advance of its application and applied equally to all securities.
- f) The constituents of certain indices, for example Cboe UK Alternative 100 Index, do not need to meet any liquidity requirements, where stipulated in the appropriate Schedule.

Cboe considers any reduction in overall liquidity across market(s) in order to ensure that liquidity thresholds are appropriate and that issuers' retaining comparable liquidity with their peers remain eligible.

## 4.0 INDEX CONSTITUENT MANAGEMENT

### 4.1 CONSTITUENT PERIOD REVIEW TIMETABLE

Cboe Europe Indices will be reviewed either quarterly in March, June, September and December or, annually in June as outlined in this Rule 4 and the relevant Schedule(s).

**Quarterly reviews** focus on rebalancing the indices to update free float percentages and remove/add issuers that have fallen/risen significantly in value compared to the other constituents of the index and add new issuers meeting the criteria that have listed since the previous review. This keeps the indices current without overly adjusting them.

**Annual reviews** will, in addition to what is done at a quarterly review, review other criteria like liquidity, country of assignment, minimum market capitalisation and sector classification.

#### Timetable

On the Tuesday before the first Friday of the review month: Any changes to constituents; additions, deletions and changes to free float will be assessed by Cboe based on market data as at the close of business that day.

On the Tuesday before the second Friday in the review month: Any constituent changes will be presented to the RDC for review.

On the Tuesday before the third Friday in the review month: Any constituent changes, having been approved by the RDC, will be published.

On the third Friday of the review month: Any constituent and / or weighting changes will be implemented after the close of business using that day's closing prices, so affecting the performance of the index from Monday.

### 4.2 INSERTION AND DELETION OF CONSTITUENTS

Eligible securities whose market capitalisation warrants addition to an index can be inserted and, for similar reasons, existing constituents deleted at the periodic review in order for the Cboe Europe Indices to continue to represent the underlying market.

Eligible securities must meet the criteria set out in Rule 3 and associated relevant Schedule(s), the latter also detailing the review dates for each Cboe Index.

Indices intended to maintain a fixed number of constituents, moderate the number of changes when rebalanced by setting thresholds that need to be met before an issuer is eligible for deletion or addition. Such thresholds, which are defined for each index in their respective Schedule, operate in the following way:

- First, if an index at the time of its rebalance has fewer constituents than the intended fixed number, the highest ranking eligible issuer is added to the index,
- Then, an issuer qualifying for insertion by virtue of its sufficiently high ranking will be added to the index and, the issuer with the lowest ranking in the index will be removed,
- Then, any issuer still qualifying for deletion by virtue of its sufficiently low ranking will be deleted and the issuer with the highest ranking will be added to the index.

This one for one replacement exercise is performed until all such qualifying issuers have been added and deleted. As a result, fixed constituent indices may not always represent the largest issuers.

If during the review period an issuer, as a result of a corporate action, is deleted or becomes eligible for inclusion in an index, Cboe will replace the issuer and/or include the newly eligible issuer in the target index, as long as the change can be applied accurately and advised when the details of the index rebalance are published.

### 4.3 THRESHOLDS FOR INSERTION AND DELETION OF CONSTITUENTS

Cboe Europe Indices intended to maintain a fixed number of constituents, will adopt the following thresholds for insertion and deletion under Rule 4.2 above.

#### **Insertion**

An issuer will be introduced as a new constituent to an index at the time of the periodic review, if it meets all the relevant eligibility criteria and its full market capitalisation meets the following requirement:

All indices with:

- 20 issuers - Risen to 18<sup>th</sup> place or above
- 25 issuers - Risen to 22<sup>nd</sup> place or above
- 30 issuers - Risen to 27<sup>th</sup> place or above
- 35 issuers - Risen to 31<sup>st</sup> place or above
- 40 issuers - Risen to 36<sup>th</sup> place or above
- 50 issuers - Risen to 45<sup>th</sup> place or above
- 100 issuers - Risen to 90<sup>th</sup> place or above
- 250 issuers - Risen to 225<sup>th</sup> place or above

#### **Deletion**

An issuer will be deleted from an index at the time of the periodic review, if its full market capitalisation meets the following requirement:

All indices with:

- 20 issuers - Fallen to 23<sup>rd</sup> or below
- 25 issuers - Fallen to 28<sup>th</sup> or below
- 30 issuers - Fallen to 34<sup>th</sup> or below
- 35 issuers - Fallen to 39<sup>th</sup> or below
- 40 issuers - Fallen to 45<sup>th</sup> or below
- 50 issuers - Fallen to 56<sup>th</sup> or below
- 100 issuers - Fallen to 111<sup>th</sup> or below
- 250 issuers - Fallen to 276<sup>th</sup> or below

The threshold for associated mid cap and small cap indices is calculated by adding the number of constituents in the associated larger cap indices to the numbers above. For example, for an issuer to be inserted in the Cboe DEM 50, its full market capitalisation must have risen to 75<sup>th</sup> (30 + 45) place or above in the list of eligible German issuers.

Similarly, to be deleted from the Cboe DEM 50, the issuer's full market capitalisation must have fallen to 86<sup>th</sup> (30 + 56) place or below.

As a result of the above approach, Cboe's fixed constituent indices may not always represent the largest issuers.

When applying the above the following Rules will also be applied:

- a) Issuers promoted/deleted from an index on the above basis, can be included in any larger/smaller market capitalised index that may exist, e.g. an issuer deleted from the Cboe UK 100 could be included in the Cboe UK 250.
- b) Issuers added to an index on the above basis, would be deleted from any larger/smaller market capitalised index they may have been in, e.g. an issuer promoted into the Cboe DE 30 index from the Cboe DEM 50 would be deleted from the Cboe DEM 50 index.
- c) Where individual indices are used as “building blocks” for broader based indices then changes made to such individual indices will be reflected in the broader index, as necessary to maintain this symmetry. For example, an issuer deleted from the Cboe UK 250 index and inserted into the Cboe UK Smaller Companies index will result in its deletion from the Cboe UK 350 index but no change to the Cboe UK All Companies index or any Sector index it may be in.

#### 4.3 RESERVE LISTS

Cboe will not operate a Reserve List, rather where one or more issuers are deleted from a Cboe Index they will be replaced e.g. for a capitalisation weighted index, by the largest eligible issuer/issuers in order of their full market capitalisation. Such replacement will occur at the time of the index’s review as per Rule 4.1 or, if the index allows for a replacement prior to its review period, with effect from the day the issuer is deleted based on security’s prices at the close on the day prior to the issuer’s deletion from the index.

#### 4.4 ADDITIONS OUTSIDE OF A REVIEW PERIOD – FAST ENTRY PROVISION

In order to ensure specified Cboe Europe Indices can immediately reflect the listing of large issuers, a newly listed security (IPO) can be added to a Cboe Index away from the regular review periods under this Fast Entry provision. The respective index schedule(s) will indicate which Cboe Europe Indices apply this rule and the specified criteria that need to be met. Such criteria will relate to:

- a) the issuer’s total market capitalisation measured calculated from the closing price on the day it first trades positioning the issuer above a specified threshold e.g. in the top 50 securities in the Cboe UK 100 index;
- b) satisfying the eligibility criteria other than the liquidity measure.

Under this provision, a new issuer would be added to a Cboe Index after the close of business on its fifth trading day, unless this day falls within the relevant index review period (Rule 4.1), in which case Cboe will add the security at the index review date. Under this Fast Entry provision, the index constituent with the lowest market capitalisation will not be removed until the next review date.

As per Rule 6.15, an issuer will not be deemed a new security if it is reorganised, renamed, relisted following suspension, or arises as a result of a demerger or reorganisation of an issuer that is not already a constituent.



## 5.0 CBOE EUROPE CALCULATION METHODOLOGY FOR MARKET CAP WEIGHTED INDICES

Cboe Europe Indices operating under these Rules are free-float market capitalised weighted indices, and use either the Capital/Price Return Index or Net Total Return Index calculation methodologies described below. The relevant Schedule(s) will define which methodology is applied to the index.

### 5.1 CAPITAL/PRICE RETURN AND NET TOTAL RETURN INDICES

The formulae for Cboe Europe's Capital Return Indices (also referred to as Price Return Indices) and Cboe Europe's Net Total Return Indices is shown below. The management of Corporate Actions and Events as described in Rule 6.0, are the same for Net Total Return and Capital Return indices with the exception of the treatment of dividend payments.

A capital return index excludes the impact of dividends on the value of the index by not adjusting the divisor when the dividend is paid (i.e. when the stock goes ex-div). This approximates the result seen by an investor who takes dividends as cash. As such the value of a capital return index falls when the dividend affects the issuer's share price, reflecting the loss of the dividend capital from the value of the constituent.

A net total return index does, through the adjustment in the index's divisor, build back in the value of the dividend paid so as to reflect this value in the index, see Rule 6.1, approximating the result seen by an investor who automatically reinvests dividends back into his portfolio

### 5.2 INDEX FORMULA FOR CAPITAL/PRICE RETURN AND NET TOTAL RETURN INDICES

The indices are calculated using the Laspeyres formula, which measures price changes against a fixed base quantity weight. Each index has a unique index divisor, which is adjusted to maintain the continuity of the index's values across changes due to corporate actions.

$$\text{Index}_t = \frac{\sum_{i=1}^n (P_{it} \cdot S_{it} \cdot \text{FF}_{it} \cdot \text{WCF}_{it} \cdot \text{FX}_{it})}{D_t} = \frac{\text{MC}_t}{D_t}$$

Where:

t = Time the index is calculated

n = Number of constituents in the index

$P_{it}$  = Price of security (i) at time (t)

$S_{it}$  = Number of shares of security (i) at time (t)

$\text{FF}_{it}$  = Free float factor of security (i) at time (t)

$\text{WCF}_{it}$  = Weighting cap factor\* of security (i) at time (t)

$\text{FX}_{it}$  = Exchange rate from local currency into index currency for security (i) at time (t)

$\text{MC}_t$  = Free float market capitalisation of the index at time (t)

$D_t$  = Divisor of the index at time (t)

\* note that the Weighting Cap Factor may be used to cap the weight of an individual security in the index in order to, for example, comply with UCIT rules.

The Exchange rate used to convert from local currency into the index's base currency, during intra-day calculations of the index, is the prevailing mid-market spot rate on Thompson Reuters.

### 5.3 INDEX DIVISOR CALCULATION FOR CAPITAL/PRICE RETURN AND NET TOTAL RETURN INDICES

Each index has a unique index divisor that is adjusted to maintain the continuity of the index's values across changes due to corporate actions. Changes in weights due to corporate actions are distributed proportionally across all index components. The index divisors are calculated as follows:

$$D_{t+1} = D_t \cdot \left[ \frac{\sum_{i=1}^n (P_{it} \cdot S_{it} \cdot FF_{it} \cdot WCF_{it} \cdot FX_{it}) \pm \Delta MC_{t+1}}{\sum_{i=1}^n (P_{it} \cdot S_{it} \cdot FF_{it} \cdot WCF_{it} \cdot FX_{it})} \right]$$

Where:

t = Time the index is calculated

n = Number of securities in the index

$P_{it}$  = Price of security (i) at time (t)

$S_{it}$  = Number of shares of security (i) at time (t)

$FF_{it}$  = Free float factor of security (i) at time (t)

$WCF_{it}$  = Weighting cap factor of security (i) at time (t)

$FX_{it}$  = Exchange rate from local currency into index currency for security (i) at time (t)

$MC_t$  = Free float market capitalisation of the index at time (t)

$D_t$  = Divisor of the index at time (t)

$\Delta MC_{t+1}$  = The difference between the closing market capitalisation of the index and the adjusted closing market capitalisation of the index:

For securities with corporate actions effective at time (t+1), the free float market capitalisation is calculated with adjusted closing prices, the new number of shares at time (t+1) and the free float factor at time (t+1) minus the free float market capitalisation calculated with closing prices, number of shares at time (t) and free float factor at time (t).

If the index value is incorrect Cboe will:

- a) If discovered on the effective date, correct the value and/or index divisor, as required
- b) If discovered within seven (7) days of the effective date, and RDC deem the error material, correct the value and/or index divisors and calculate revised start-of-day and end-of-day index values

The Exchange rate used to convert end of day security values, and dividends, from local currency into the index's base currency is the WM fixing rate taken at 16:00 GMT.

## 6.0 CORPORATE ACTIONS AND EVENTS

Cboe Europe Indices are designed to reflect the investment performance that would be achieved by an investor building a portfolio mirroring the relevant index, excluding the effect of trading costs. As such, Cboe Indices' Corporate Actions and Events methodology is designed to ensure, where appropriate, that the index's value does not change when stocks are added or deleted or when constituents are affected by a corporate action that would change the market value of the stock. Such an approach allows the value and hence performance of the index to be compared through time.

Corporate Actions, when announced, identify the day on which the Corporate Action will take effect, the ex-date. Where the Corporate Action adjusts the issuer's share price on the ex-date, the change will be effective from the open, and Cboe will provide advanced notice advising how its Indices will account for such Corporate Actions at the same time:

Cboe will not issue Notices in relation to special nor ordinary cash dividends affecting the index, however, Cboe Index corporate action files, provided daily to licensees, will contain this information.

A Corporate Event relates to any news published by an issuer to the market that could affect the index in which it is a constituent. Such news can relate to number of different events, for example to a change in the issuer's free float, an intended or confirmed takeover or merger, or a rights issue.

The list of corporate actions that follow indicate the calculation of the adjusted prices and the impact (if any) on the index divisor. All corporate actions and dividends are implemented on the effective date (ex-date) with their impact on the index (e.g. the divisor) being registered in the index's opening file for that day. The change in an issuer's weight in the index due to a corporate action is distributed proportionally across all index components and as such essentially equate to an investment into the portfolio.

Where a corporate action results in a fractional share, the issuer's number of shares in the index is rounded to the nearest integer with half shares being rounded up.

In the descriptions that follow:

The number of shares existing before the corporate action = A

The number of shares existing after the corporate action = B

The Adjustment Factor relates to the specific issuer affected by the Corporate Action

The Index Divisor Adjustment relates to the index as a whole

### 6.1 CASH DIVIDEND

A cash dividend is defined as a cash distribution that is within the scope of the regular dividend policy or that the issuer defines as a regular distribution.

Cboe Europe Indices calculated as a capital/price return index do not adjust for dividends or withholding tax.

Cboe Europe Indices calculated as a net total return index will adjust for dividends, with the dividends being applied to the index on their ex-date. The divisor will be decreased by the value of the dividend (see Example 1.1 below).

Where a Cboe Index calculates a net total return that includes securities from more than one national market, dividends will be included net of tax paid having applied the maximum withholding tax rate applicable to

institutional investors not residing in the country in which the dividend is paid. Hence, the Adjusted Price (net return) of the constituent = closing price – (dividend announced by the issuer × FX rate × (1 – withholding tax)).

The withholding tax rate matrix Cboe uses is available here <http://www.solactive.com/news/documents/>.

As per the formulae above, the Exchange rate used to convert any dividend from local currency into the index's currency is the WM fixing rate at 16:00 GMT.

Issuer shares issued that are not entitled to dividends can be included in Cboe Europe Indices if they meet the other set criteria.

**Example 6.1 - 1: Dividend of 6p per share paid on ex-date**

Current Price = 500p

Shares in Issue = 10 million

Dividend = 6p

Share's market value on  $T_0$  = GBP 50 million

Share's market value on  $T_1$  (all other elements remaining unchanged) must = GBP 50 million

Divisor Adjustment factor =  $[(50 \text{ million} - (10 \text{ million} \times 6p)) \div 50 \text{ million}] = 0.988$

## 6.2 SPECIAL / EXTRAORDINARY CASH DIVIDEND

An extraordinary cash dividend is defined as a cash distribution that is outside the scope of the regular dividend policy or that the issuer defines as an extraordinary distribution.

Cboe Europe Indices treat extraordinary cash dividends as special dividends. Special dividends are generally treated as capital repayments in both Total Return and Capital/Price Return indices and are adjusted for withholding tax, see Rule 6.8.

## 6.3 SPLIT AND REVERSE SPLIT

A split or reverse split in issued share capital gives rise to a pro-rata distribution of shares (a split) or a pro-rata consolidation of shares (a reverse split), respectively. Such corporate actions do not of themselves change the issuer's market capitalisation, to reflect such a change in the index, both the number of shares and the share price are adjusted according to the terms of the corporate action.

**Event Type:** Split / Reverse Split

**Adjustment Factor:** # of shares held before issue (A) ÷ # of shares held after issue (B)

**Index Divisor Adjustment:** No

**Change Applied:** On ex-date

**Example 6.3 - 1: Split (sub-division) of shares in a ratio of 2 shares for every 1 share (2-1) already held**

**Example 6.3 - 2: Reverse Split (consolidation) of shares in a ratio of 1 share for every 4 shares (1-4) already held**

<p>Current Price = 500p Shares in Issue = 10 million</p> <p>Post-Split Price = 250p Post-Split shares in Issue = 20 million</p> <p>Adjustment factor = 10 million ÷ 20 million = 0.5</p>	<p>Current Price = 400p Shares in Issue = 10 million</p> <p>Post-Split Price = 1600p Post-Split shares in Issue = 2.5 million</p> <p>Adjustment factor = 10 million ÷ 2.5 million = 4.0</p>
--	---

## 6.4 SCRIP ISSUES

A scrip issue involves the issue of additional company shares, free of any charge to existing shareholders. Sometimes referred to as a bonus or capitalisation issue, a scrip issue is applied on a pro rata basis to a shareholder's existing holdings and should result in no change to a security's market capitalisation. However, a scrip issue can involve the shareholder receiving a different line of shares, as such, the treatment of the different scenarios is explained below.

**Event Type:** Scrip Issue involving the same stock (Example 6.4 - 1)  
**Adjustment Factor:** # of shares held before issue (A) ÷ # of shares held after issue (B)  
**Index Divisor Adjustment:** No  
**Change Applied:** On ex-date

**Event Type:** Scrip Issue involving a different eligible stock (Example 6.4 - 2)  
**Adjustment Factor:** Price of stock after deducting the capital repayment ÷ Price of stock before the capital repayment)  
**Index Divisor Adjustment:** No  
**Change Applied:** On ex-date

**Event Type:** Scrip Issue involving a different ineligible stock (Note 6.4.1)  
**Adjustment Factor:** Price of stock after deducting the capital repayment ÷ Price of stock before the capital repayment)  
**Index Divisor Adjustment:** Yes  
**Change Applied:** On ex-date

<p><b>Example 6.4 - 1:</b> Scrip issue of the same stock in a ratio of 1 share for every 1 share already held</p> <p>Current Price = 500p Shares in Issue = 10 million</p> <p>Post Scrip Price = 250p Post Scrip Shares in Issue = 20 million</p> <p>Adjustment factor = 250p ÷ 500p = 0.5</p>	<p><b>Example 6.4 - 2:</b> Scrip issue involving a different eligible stock – terms 1 share in Issuer B for every 2 shares held in issuer A</p> <p>Current Price A = 400p Current Price B = 100p A Shares in Issue = 10 million New B shares being issued = 5 million</p> <p>Post-Split Price = [(10m x 400p) - (5m x 100p)] ÷ 10 = 350p Post-Split shares in Issue = 10 million</p>
--	--

Note 6.4.1: a scrip issue resulting in the receipt of shares that are not eligible securities will be treated as described below.

If the stock is not eligible but can be valued it will be added to the Cboe Europe Indices temporarily with a price adjustment on the ex-date and then deleted at its closing price after two days of trading.

If the stock is not eligible and cannot be valued but is scheduled to list, then no price adjustment will be applied on the ex-date and it will be added to the Cboe Europe Indices temporarily at value of zero and then deleted at its closing price after two days of trading. If, however, after 20 business days the new shares have not been listed or no date for such listing has been announced the ineligible stock will be deleted at a value of zero at the close on the 20th business day.

If the stock is not eligible, has no valuation, and is not going to be listed, then there will be no price adjustment applied at the ex-date and the stock will not be added to the Cboe Indices.

## 6.5 RIGHTS ISSUES

An issuer performs a Rights issue to raise funds and in doing so extends to existing shareholders the right to purchase additional shares at a published price (subscription price) and in proportion to their existing holdings.

Cboe Europe Indices will always assume that the right to purchase these new shares is exercised when the Strike Price is less than the Closing Price of the security at the close on the day prior to the ex-date, and will include new shares resulting from a rights issue as being fully paid from the ex-date.

<b>Event Type:</b>	Rights Issue where the subscription price is at a <b>discount</b> to the market price (Example 6.5 – 1 to 2)
<b>Adjustment Factor:</b>	Adjusted price = $(\text{closing price} \times A + \text{subscription price} \times B) \div (A + B)$ New number of shares = $\text{old number of shares} \times (A + B) \div A$
<b>Index Divisor Adjustment:</b>	Yes
<b>Change Applied:</b>	On ex-date
<b>Event Type:</b>	Rights Issue where any details are unavailable before the ex-date
<b>Adjustment Factor:</b>	No adjustment on ex-date. An adjustment will be made, the day after all details become available as long as the subscription price is at a discount to the closing cum-price on the day before the adjustment is made.
<b>Index Divisor Adjustment:</b>	Yes
<b>Change Applied:</b>	T+1 (the day following the subscription price announcement date)

### **Example 6.5 - 1:** Rights Issue

Current Price = 500p

Shares in Issue = 10 million

Rights issue terms: 1 new share for every 10 held @ 400p

Theoretical ex-rights =  $[(500p \times 10) + (400p \times 1)] \div 11 = 490.9p$

Price Adjustment factor =  $\text{ex-rights price} \div \text{cum-rights price} = 490.9 \div 500 = 0.9818$

Cboe Europe Indices will also adopt the approach above where the rights issue is highly dilutive.

**Example 6.5 - 2: Rights Issue where the newly issued shares are not entitled to the next dividend**

Current Price = 500p

Shares in Issue = 10 million

Next dividend = 8p

Rights issue terms: 1 new share for every 10 held @ 400p

Theoretical ex-rights =  $[(500p \times 10) + (400p \times 1) + 1 \times 8p] \div 11 = 491.6p$

Price Adjustment factor =  $\text{ex-rights price} \div \text{cum-rights price} = 491.6 \div 500 = 0.9832$

Ordinary line = 10 million shares at an adjusted price = 491.6p

Nil paid line = 1 million shares at a price of  $(491.6 - 400p - 8p) = 83.6p$

Call (proxy) line = 1 million shares at its 400p subscription price

In order to reflect the enlarged capitalisation of the issuer on a fully paid basis the new shares are included as a separate (proxy) line together with the value of the outstanding rights call price. Once this line trades on an equivalent basis to the existing ordinary line, usually once the existing ordinary shares trade ex-dividend, the nil-paid shares will be deleted (together with the fixed call) and merged with the ordinary line.

If the rights issue offers equity in a different stock, the index will apply a capital repayment adjustment on the ex-date equal to the difference between the closing price of the different stock and the subscription price of the rights issue.

If the value of the rights issue cannot be determined or comprises a non-equity security the index will make no adjustment to the parent stock on the ex-date. No further action will be taken until the rights line trades, at which point it will be included in the index on the ex-date at zero value and subsequently be deleted at its closing market price after 2 days trading.

If an issuer announces a rights issue to take effect on the same day (the ex-date), Cboe will adjust the index either before the market -opens for trading on ex-date or as soon as possible intra-day. The issuer's closing price of the previous day would be used in the adjustment factor with the new shares included in the index weighting at the subscription price. If deemed appropriate Cboe may temporarily suspend valuation of the index until the adjustment is applied.

Cboe will issue a notice providing all the relevant details as soon as possible on the day.

## 6.6 MERGERS AND TAKEOVERS

A merger or takeover is deemed successful if it has been declared wholly unconditional and has received the approval of all the regulatory agencies with jurisdiction over the transaction.

**Event Type:** Existing constituent - acquired for cash

**Adjustment Factor:** Yes, deleted from indices

<b>Index Divisor Adjustment:</b>	Yes
<b>Change Applied:</b>	As per Cboe Index Notice
<b>Event Type:</b>	<u>Existing constituent - acquired by another constituent for a combination of cash and shares or for shares (Note 6.6.1)</u>
<b>Adjustment Factor:</b>	Yes. Acquired constituent deleted. Shares of purchasing constituent increased in accordance with the offer terms
<b>Index Divisor Adjustment:</b>	Yes
<b>Change Applied:</b>	As per Cboe Index Notice
<b>Event Type:</b>	<u>Existing constituent - acquired by a quoted non- constituent for a combination of cash and shares or for shares (Note 6.6.1)</u>
<b>Adjustment Factor:</b>	Yes. Acquired constituent deleted. Purchasing issuer is added to the same indices as the acquired issuer, (if eligible in all other respects)
<b>Index Divisor Adjustment:</b>	Yes
<b>Change Applied:</b>	As per Cboe Index Notice

**Note 6.6.1:** The rules above are only applied if at least one issuer involved in the transaction is a constituent of the Cboe Index. Any surviving stock that does not qualify and the non-surviving stock(s) are deleted immediately.

Cboe will announce changes immediately and seek to provide a minimum notice period of T+2 with changes being implemented two trading days later and becoming effective on the next trading day after implementation.

Similarly Cboe will issue Notices as required, and in advance of its standard notice periods, if it believes this to be in the interests of the market - e.g. in relation to how complex Corporate Actions will be managed, if an issuer delists immediately upon the completion of the merger or acquisition.

If as a result of the corporate action an issuer's industry classification changes, then any resulting Cboe Sector Index changes will be applied at their next regular review.

Where an index constituent is bought by another constituent and shares are issued equal to the acquired company's market capitalisation then there should be no requirement to adjust the divisor. If the acquiring company, whether it is a constituent issuer or not, already owns shares in the acquired company, Cboe will provide T+5 days' notice that index divisor will be changed to account for the increase in market capitalisation.

Where a constituent is deleted from the Cboe UK 100 or Cboe UK 250 (and Cboe UK350) indices index it will not be replaced until the next review period.

Constituents will be deleted from an index at its closing price unless Cboe Index Notice advises otherwise.

## 6.7 SPIN-OFFS

Where an index constituent splits to form two or more lines of issued shares, the resulting shares are allocated to existing shareholders. The issues arising from the split may remain constituents of the same indices as the original issuer. The spin-off issuer will be added to the Index and will remain in the Index until the index's next review.



The industry classification of the spin-off will be that of the original index constituent. Any changes to the industry classification will be reflected in the sector indices at the time of their periodic review.

If the spin-off issuer does not qualify based on the rules set out below, it will be deleted after the first trading day and will not be replaced until the index's next review.

Each spin-off stock qualifies for addition to its index, if it meets the eligibility criteria in Rule 3. No other stocks will be deleted from the index as a result of the inclusion of one or more spin-off issuers until the index's next review.

If the spin-off has no value then the parent company is deleted at its x-date price.

Changes are announced immediately, implemented two trading days later and become effective on the next trading day after implementation.

## 6.8 RETURN OF CAPITAL

A capital repayment is defined as a return of capital to shareholders.

<b>Event Type:</b>	Return of Capital (Example 6.8 -1)
<b>Adjustment Factor:</b>	Yes. $(\text{Issuer's closing price} - \text{Capital returned announced by the issuer}) \div \text{Issuer's closing price}$
<b>Index Divisor Adjustment:</b>	Yes – a reduction in the issuer's market capitalisation
<b>Change Applied:</b>	Ex-date

### Example 6.8 - 1: Capital Repayment

Current Price = 500p  
 Shares in Issue = 10 million  
 Capital Repayment terms: 50p per share

Post capital repayment price = 450p  
 Post Capital Repayment Shares in issue = 10 million

Adjustment factor =  $450 \div 500 = 0.90$

## 6.9 REPURCHASE OF SHARES/SELF-TENDER

A compulsory repurchase or share buy-back of shares is conducted at a set ratio and price.

<b>Event Type:</b>	Repurchase of Shares Example 6.9 - 1
<b>Adjustment Factor:</b>	Yes. $\text{Issuer's market cap post tender} \div \text{Issuer's market cap pre tender}$ .
<b>Index Divisor Adjustment:</b>	Yes – a reduction in the issuer's market capitalisation
<b>Change Applied:</b>	Ex-date

**Example 6.9 - 1: Compulsory repurchase of 33 shares out of every 100 shares held at 550p**

Current Price = 500p  
 Shares in Issue = 10 million  
 Market Capitalisation = BGP 50 million

Shares Tendered = 3.3 million (10 million x 33 ÷ 100)  
 Tender Price = 550p  
 Market Capitalisation of Tender = 18.15 million

Post Tender

Adjusted Shares in Issue = 10 million – 3.3 million = 6.7 million  
 Adjusted Price =  $(50 - 18.15) \div (10 - 3.3) = 475.37\text{p}$   
 Market Capitalisation = BGP 31.85 million

## 6.10 SHARE UPDATES

If the number of shares in issue for a constituent security changes then the total number of shares in issue used to weight the constituent in the index will change. This change together with any related free float change will be made in line with the normal review period for the index.

<b>Event Type:</b>	Share update resulting in a change
<b>Adjustment Factor:</b>	Yes. Issuer's market cap after change ÷ Issuer's market cap pre change.
<b>Index Divisor Adjustment:</b>	Yes – adjustment to number of shares
<b>Change Applied:</b>	After the close of business on the third Friday of relevant quarter (in line with index reviews)

## 6.11 FREE FLOAT WEIGHTING CHANGES

An issuer's free float represents the amount of stock the issuer makes available to the market. The weighting of each constituent in a Cboe Index only considers the issuer's free float when determining its market capitalisation in the index. Cboe Europe Indices will calculate such weightings based on published information.

A constituent's free float will be changed in line with the review period for the index.

Where a free float change occurs after any announcement by Cboe as to its periodic index changes but before these become effective, Cboe may implement the change with effect from the review data and will provide at least two days' notice to the market.

## 6.12 STOCK CONVERSION

In the situation where an issuer converts an existing constituent share class (B) into another existing share class (A) the market capitalisation of the A is increased based on the terms.

In the situation where an issuer converts an existing non-constituent share class (B) into an existing share class (A) the market capitalisation of the A will be changed in line with the Cboe Index periodic index review.

In both cases there will be no adjustment to the divisor.

### 6.13 IN-SPECIE DISTRIBUTION

In the situation where an issuer that is an existing constituent distributes its shareholding in another constituent issuer to its own shareholders, Cboe Europe Indices will adjust the parent issuer in the index by way of a capital repayment on the effective date.

### 6.14 DELETION OF A CONSTITUENT ISSUER

An issuer will be removed from a Cboe Index if declared bankrupt or insolvent applies for bankruptcy protection or equivalent, is liquidated or delisted from its stock exchange, changes its country of incorporation and in so doing fails to meet such criteria or fails to satisfy other relevant eligibility criteria.

Upon its deletion the index divisor will be adjusted and a new constituent will replace it at the next index review. Deletions will be conducted at the issuer's closing price either on the effective date, or if deletion arises from changes to the issuer's country of incorporation, the next review period, unless otherwise agreed to by the RDC.

### 6.15 SUSPENDED ISSUERS

If an issuer that is an index constituent is suspended from trading on the exchange on which it is listed Cboe will treat it as follows:

- a) If the issuer is declared bankrupt and there is no prospect that shareholders will receive any compensation, the issuer will be valued at zero and deleted from the Cboe index.
- b) If suspended the issuer it will remain in the index at its last traded price until such time as its securities recommence trading or the issuer is declared bankrupt. If the latter then the above provision will be applied. In any event a suspended issuer may, subject to the advice of the IAC and decision by RDC, be removed from the index at the review period closest to the 12 month anniversary of the suspension.
- c) Deleted securities which, on relisting after a period of suspension, are eligible for inclusion in any index including the index from which they were deleted shall be reinstated at the time of the index's periodic review at the price at which they were deleted.

### 6.16 THE USE OF PROXY LINES

Certain corporate events may present complexity or unique elements. Cboe may decide that temporary use of a proxy line would help to ensure that the index continues to best reflect the interests of its users and market participants. A proxy line would represent a non-tradable instrument and its use would be notified by Cboe in advance of its introduction.

## 7. EXTREME MARKET AND COMPANY EVENTS

If Cboe considers the valuation of, or investability and tradability in, its indices and index based products would be impaired by a market or a company event, Cboe may take whatever action it deems necessary to protect the interests of users of its indices. Cboe would seek to advise of any such action at least two full trading days in advance. Such action could include, inter alia; adjustment to constituent pricing data, deferral of pre-advised changes, change of weights of index constituents.

## 8. CBOE EUROPE INDICES – FACTSET INDUSTRY CLASSIFICATION (RBICS)

### 8.1 INDUSTRY SECTOR STRUCTURE

Cboe Sector Indices are classified by FactSet’s twelve Economy sectors and all constituents of Cboe Europe Indices are assigned to one of the FactSet Economic sectors.

<b>FactSet RBICS Economic Sector Number</b>	<b>NAME</b>	<b>DESCRIPTION</b>
10	Business Services	Services targeted toward businesses, including administrative, support, janitorial, and professional services
15	Consumer Services	Services targeted toward individuals, including accommodation; food and beverage retail; gaming, arts, entertainment and recreation; and television, radio, film, and print media
20	Consumer Cyclicals	Products targeted toward individual or household use, including apparel, toys, school and art supplies, and electronics; motor vehicle sales and rental, and automotive parts and services; building materials, garden supplies, furniture, appliances, cabinetry, window treatments, and carpets
25	Energy	Oil and gas exploration and production, pipeline transportation, refineries, and oil and gas equipment and services; leasing, mining and processing of coal and coke; uranium, radium, and vanadium mining
30	Finance	Financial products and services offered by institutions involved in banking, insurance, investment, specialty finance, and real estate
35	Healthcare	Products and services that are designed, developed, and utilized in the promotion of health and well-being, including medical services, health plans, medical devices, and biopharmaceuticals
40	Industrials	Products and services for industrial use or with applications in aero-space, defence or security; transportation, construction, and related infrastructure; or farming, including equipment and machinery manufacture, wholesale, rental, and distribution and related support activities
45	Non-Energy Materials	Basic and intermediate material products, including non-energy mining; forestry, timber logging, and lumber

		production; and chemical, plastic, paper, metal, and textile manufacturing
50	Consumer Non-Cyclicals	Products targeted toward individual and consumer needs, including groceries, beverages, health and personal care items, kitchenware, decorative items, and household cleaning products
55	Technology	Semiconductor, electronic, and optics based products and related software and services that directly or indirectly facilitate the creation, transfer, storage, manipulation, or interpretation of data, audio, and video
60	Telecommunications	Services designed to promote or enhance transmission of voice, data, and video over various communications mediums, including cable, satellite, terrestrial-based wireless, and wireline mediums
65	Utilities	Gas, electricity, and water services delivered directly to residential and commercial users

## 8.2 CBOE EUROPE INDICES - INDUSTRY CLASSIFICATION CHANGES

Where a Cboe Index constituent changes its sector/industry classification, the relevant Cboe Sector Indices will be updated to reflect the change at the sector index's next review date, unless otherwise defined in the relevant Schedule(s).

## 9. CBOE EUROPE INDICES - OPERATIONAL ELEMENTS

### 9.1 CHANGES TO CBOE EUROPE INDEX RULES AND METHODOLOGY

Changes to these Rules will be discussed with the IAC, and approved by RDC prior to being notified by Cboe e.g. via the Cboe website, before they are implemented.

Whilst certain rules may need to be changed or created quickly to react to a specific event, Cboe will seek to provide at least 30 days' notice of any Rule changes or changes to its index file formats.

### 9.2 RECALCULATION OF CBOE EUROPE INDICES

Cboe Europe Indices will be recalculated if Cboe believes the integrity or accuracy of the index calculation to be materially compromised. Where feasible such errors will be remedied intra-day with subsequent index valuations reflecting the change. In any event, end-of-day values for the indices will be retrospectively adjusted if necessary and if deemed to be significant. Users of the Cboe Europe Indices are notified of any such changes via the Cboe website.

### 9.3 INDEX OPENING AND CLOSING HOURS

On days when Cboe is open for trading and when any of the underlying constituents of the Cboe Index are available to be traded, and unless specified in the relevant Schedule(s), the Cboe Index value will be calculated from the start to the end of Cboe official market hours. For European equities the calculation period starts at 08:00 and finishes at 16:30, London time (GMT or BST).

Cboe's trading calendar can be found here <http://markets.cboe.com/newsroom/hours/europe/>.

Cboe Indexdata files will also be produced when all the constituents of the index are closed for trading e.g. a public holiday.

### 9.4 STATUS OF CBOE EUROPE INDICES

Cboe Europe Indices are calculated and published in real time. However, problems may arise that prevent or affect the valuation of the indices and such the status of Cboe Europe Indices may vary:

#### AVAILABLE

Cboe Europe Indices are calculated during Cboe's official market hours using actual trades on Cboe .

The Official Closing Price for a Cboe Index will be calculated using Cboe's official closing prices.

Cboe Europe Indices will also be calculated when some, but not all constituents, are available for trading on Cboe, e.g. national market holidays and stock suspensions.

At the end of Cboe's official market hours the indices will cease to be calculated and will be deemed closed.

Cboe will not publish its indices as being open or closed or being calculated in part, but draws customers' attention to Cboe's official market hours and market holiday calendar published on its website at <http://markets.cboe.com/newsroom/hours/europe/>.

Where Cboe Europe Indices use prices from a source other than Cboe this will be defined in the relevant Schedule(s).

## SUSPENDED

In order to ensure that Cboe Europe Indices are performing correctly, Cboe will monitor their valuations against pre-set parameters. If the indices breach these parameters, Cboe may suspend their calculation until the reasons for the breach are established and, if required, resolved. If Cboe takes such action it will advise the market via the Cboe website that the relevant index or indices are "SUSPENDED".

## INDICATIVE

In order to ensure that Cboe Europe Indices are performing correctly, Cboe will monitor their operational performance against pre-set parameters. If the indices breach these parameters to the extent that Cboe considers them to affect the quality or accuracy of the index calculations, then Cboe will advise the market via the Cboe website that the relevant index or indices are 'INDICATIVE'.

## 9.5 RAISING OBJECTIONS

A constituent issuer, its advisor or any licensed user of a Cboe Index may query or appeal decisions taken by Cboe in relation to the construction or management of its indices by emailing [IndexDataEu@cboe.com](mailto:IndexDataEu@cboe.com).

## 9.6 FURTHER INFORMATION

For further information see <https://markets.cboe.com/account/login/> or contact Cboe Index client services at [IndexDataEu@cboe.com](mailto:IndexDataEu@cboe.com).



## SCHEDULE A – CBOE UK INDEX SERIES

### A.1 CBOE UK INDEX SERIES COVERAGE

Cboe UK Index Series comprises free-float market capitalised weighted capital/price return indices, designed to represent the performance of UK listed issuers and industry sectors. The Nationality criteria in Rule 3.3 is used to determine the nationality of the issuer and hence whether the issuer is eligible for a UK index.

Cboe UK Index Series includes the following indices:

Cboe UK 100

Cboe UK 250

Cboe UK 350

Cboe UK All Companies

Cboe UK Small Companies

Cboe UK Alternative 100

Cboe UK All Companies Sector Indices (up to 12) based on FactSet's Economic Sector Classifications

Cboe Brexit High 50

Cboe Brexit Low 50

### A.2 SPECIFIC CBOE UK INDEX QUALIFICATION CRITERIA

#### CBOE UK 100

The Cboe UK 100 index aims to represent the performance of the largest 100 UK issuers ranked by their full market capitalisation. Such issuers need to meet the eligibility criteria defined in Rule 3 and will be included or excluded at their review date as per the criteria defined in A.8 below.

#### CBOE UK 250

The Cboe UK 250 index aims to represent the performance of the next 250 largest UK issuers ranked by full market capitalisation i.e. companies ranked 101 to 350 by their market capitalisation. Such companies need to meet the eligibility criteria defined in Rule 3 and will be included or excluded at their review date as per the criteria defined in A.8 below.

#### CBOE UK 350

The Cboe UK 350 index will be comprised of all the issuers in the Cboe UK 100 and Cboe UK 250.

## CBOE UK SMALL COMPANIES

The Cboe UK Small Companies index will be comprised of the UK issuers included in the Cboe UK All Companies index but which are not constituents of the Cboe UK 350.

## CBOE UK ALL COMPANIES

The Cboe UK All Companies index will be comprised of all securities meeting the criteria in Rule 3.

## CBOE UK ALTERNATIVE 100

The Cboe UK Alternative 100 index aims to represent the performance of the 100 largest assigned AIM market issuers that are quoted in Sterling on NEX Exchange, measured by their full market capitalisation.

## CBOE UK ALL COMPANIES SECTOR INDICES

Cboe UK All Companies Sector Indices will be defined by FactSet's twelve (12) Economic Sectors. These 12 sector indices will comprise of all the issuers within the Cboe UK All Companies index.

## CBOE BREXIT HIGH 50

The Cboe Brexit High 50 Index will be comprised of the 50 issuers in the Cboe UK 100 with the highest exposure to GBP revenues, as determined by FactSet's Geographic Revenue Exposure (GeoRevtm) data at the time of the index's review.

## CBOE BREXIT LOW 50

The Cboe Brexit Low 50 Index will be comprised of the 50 issuers in the Cboe UK 100 with the lowest exposure to GBP revenues, as determined by FactSet's Geographic Revenue Exposure (GeoRevtm) data at the time of the index's review.

## A.3 PRICE DATA USED TO VALUE CBOE EUROPE INDICES

All the Cboe Europe Indices in this Schedule, with the exception of the Cboe UK Alternative 100 Index, will be valued intra-day using Cboe's traded prices. The indices' end-of-day closing value will be calculated using Cboe Europe's official closing prices.

Given the lower level of liquidity in constituents comprising the Cboe UK Alternative 100 index, this index will be valued using the mid-price of firm quotes on NEX Exchange. This index's end-of-day closing value will be calculated using the official closing quote of the security on NEX Exchange.

Cboe's order books operate in line with the prevailing national markets. As such Cboe Europe Indices will not calculate an index when all the constituents of that index are closed for trading. Where a Cboe Index comprises constituents from more than one national market, it will be calculated if any constituents of the index are trading.

## A.4 MARKET CAPITALISATION

In accordance with Rule 3.5, issuers with a full market capitalisation greater than £100 million will be included in the Cboe UK All Companies index, providing they meet all the relevant eligibility criteria.

Issuers with a full market capitalisation less than £65 million will be deleted from the Cboe UK All Companies index at the annual review.

Cboe may alter these market capitalisation thresholds in order to ensure that there are least 500 issuers in the Cboe UK All Companies index.

## A.5 LIQUIDITY

In accordance with Rule 3.5, the following liquidity thresholds will apply to the Cboe UK Index Series:

- a) Securities with an average daily value traded over the six month test period of over £100k will be eligible for inclusion provided that they meet all the relevant eligibility criteria in Rule 3.
- b) An existing constituent which does not have an average daily value traded over the six month test period of over £75k will be removed at the annual index review and will not be eligible for inclusion until the next annual review.
- c) New issues must have a minimum 20 day trading record and an average daily value traded over the period of over £100k. This rule will not apply to new issues added under the Fast Entry Rule
- d) There is no liquidity requirement for constituents of the Cboe UK Alternative 100 Index.

## A.6 MEASURING THE LIQUIDITY OF INDIVIDUAL SECURITIES

Cboe will use aggregated and published volume and value trade data from Cboe, the primary listing exchange and Turquoise to measure issuers' compliance with Cboe Index liquidity criteria.

## A.7 CONSTITUENT / INDEX REVIEW PERIODS

Indices comprising the Cboe UK Index Series operate to the following review period schedule:

Indices Reviewed Quarterly in March, June, September and December:

- Cboe UK 100
- Cboe UK 250
- Cboe UK 350
- Cboe UK Small Companies\*
- Cboe UK All Companies\*
- Cboe UK Sector Indices

- Cboe Brexit High 50
- Cboe Brexit Low 50

At the quarterly review all criteria will be assessed and measured as set out in Rule 3 and Rule 6.10.

Indices Reviewed Annually in June:

- Cboe UK Alternative 100

## CBOE UK SMALL COMPANIES AND CBOE UK ALL COMPANIES INDICES

A constant number of constituents will not be maintained in the Cboe UK Small Companies and Cboe All Companies indices. At the quarterly rebalance the Cboe UK Small Companies index will comprise of all the issuers in the Cboe All Companies index minus those that are in the Cboe UK 350 index.

If an issuer becomes ineligible for inclusion as a result of it being suspended or delisted after the periodic review changes have been announced but before they have been implemented, Cboe will replace the issuer with the highest ranking non-constituent eligible issuer (Rule 3).

## CBOE BREXIT HIGH & LOW 50 INDICES

Any changes in the constituents of the Cboe UK 100 index will be reflected in these indices at their regular review.

## CBOE UK ALL COMPANIES SECTOR INDICES

Cboe UK All Companies Sector Indices will, collectively, comprise all of the constituents of the Cboe UK All Companies index. As such the number of constituents in each Sector index will vary and change over time.

A new security will be introduced as a new constituent, or an existing security deleted as a constituent, of a Sector index, at their quarterly review and subject to the criteria set out in Rule 3.

If the industry classification of an existing constituent security changes, it will be moved from the Sector it is in to the appropriate sector at their quarterly review, subject to the criteria set out in Rule 3.

## A.8 INCLUSION AND DELETION OF SECURITIES

As defined in Rule 4.3.

## A.9 FAST ENTRY PROVISION

Of the indices contained in the Cboe UK Index Series, only the Cboe UK 100 Index operates under the Fast Entry provision described in Rule 4.4. An issuer can be added to the Cboe UK 100 Index under this provision if it meets the following criteria:

- d) Its full market capitalisation using the closing price on the first day of trading would position it in the top 50 securities in the Cboe UK 100 index, and
- e) The security satisfies the eligibility criteria and the screens other than the liquidity screen.

The new security will be added to the Cboe UK 100 index after the close of business on its fifth day of trading. Under this provision, however, the security which is the lowest ranking constituent of the index will not be removed until the next review date.

If the fifth day of trading is close to the index's review, Cboe may include the security at the index review date and will provide such notice to the market.

## SCHEDULE B – CBOE EUROPE SINGLE COUNTRY INDEX SERIES

### B.1 CBOE EUROPE SINGLE COUNTRY INDEX SERIES COVERAGE

Cboe Europe Single Country Index Series comprises free-float market capitalised weighted capital/price return indices, designed to represent the performance of European listed issuers in their respective markets.

The Nationality criteria in Rule 3.3 is used to determine the nationality of the issuer and hence whether the issuer is eligible for inclusion in a Europe Single Country Index and, if so, which market.

Cboe Europe Single Country Index Series includes the following indices:

Austrian: Cboe AT 20

Irish: Cboe IE 20

Belgian: Cboe BE 20

Italian: Cboe IT 40

Danish: Cboe DK 20

Norwegian: Cboe NO 25

Dutch: Cboe NL 25, Cboe NLM 25

Portuguese: Cboe PT 20

Finnish: Cboe FI 20

Spanish: Cboe ES 35

French: Cboe FR 40, Cboe FRM 20

Swedish: Cboe SE 30

German: Cboe DE 30, Cboe DEM 50, Cboe DES 50

Swiss: Cboe CH 20, Cboe CHM 30

### B.2 SPECIFIC CBOE EUROPE SINGLE COUNTRY QUALIFICATION CRITERIA

For an issuer to comprise part of any Cboe Europe Single Country Index, it must meet the eligibility criteria defined in Rule 3 and will be included or excluded at their review date as per the criteria defined in B.8 below.

In the following list of indices, issuers are ranked by their full market capitalisation.

#### CBOE AUSTRIA 20

The Cboe AT 20 index aims to represent the performance of the largest 20 Austrian issuers.

#### CBOE BE 20

The Cboe BE 20 index aims to represent the performance of the largest 20 Belgian issuers.

#### CBOE CH 20

The Cboe CH 20 index aims to represent the performance of the largest 20 Swiss issuers.

#### CBOE CHM 30

The Cboe CHM 30 index aims to represent the performance of the next 30 largest Swiss issuers i.e. companies ranked 21 to 50 by their market capitalisation.

### CBOE DE 30

The Cboe DE 30 index aims to represent the performance of the largest 30 German issuers.

### CBOE DEM 50

The Cboe DEM 50 index aims to represent the performance of the next 50 largest German issuers i.e. companies ranked 31 to 80 by their market capitalisation.

### CBOE DES 30

The Cboe DES 30 index aims to represent the performance of the next 30 largest German issuers i.e. companies ranked 81 to 110 by their market capitalisation.

### CBOE DK 25

The Cboe DK 25 index aims to represent the performance of the largest 25 Danish issuers. Prior to the index's rebalance in December 2016 the index contained 20 issuers.

### CBOE ES 35

The Cboe ES 35 index aims to represent the performance of the largest 35 Spanish issuers.

### CBOE FI 25

The Cboe FI 25 index aims to represent the performance of the largest 25 Finnish issuers.

### CBOE FR 40

The Cboe FR 40 index aims to represent the performance of the largest 40 French issuers.

### CBOE FRM 20

The Cboe FRM 20 index aims to represent the performance of the next 20 largest French issuers i.e. companies ranked 41 to 60 by their market capitalisation.

### CBOE IE 20

The Cboe IE 20 index aims to represent the performance of the largest 20 Irish issuers.

### CBOE IT 40

The Cboe IT 40 index aims to represent the performance of the largest 40 Italian issuers.

### CBOE NL 25

The Cboe NL 25 index aims to represent the performance of the largest 25 Dutch issuers.

### CBOE NLM 25

The Cboe NLM 25 index aims to represent the performance of the next 25 largest Dutch issuers, i.e. companies ranked 26 to 50 by their market capitalisation.

### CBOE NO 25

The Cboe NO 25 index aims to represent the performance of the largest 20 Norwegian issuers.

### CBOE PT 20

The Cboe PT 20 index aims to represent the performance of the largest 20 Portuguese issuers.

### CBOE SE 30

The Cboe SE 30 index aims to represent the performance of the largest 30 Swedish issuers.

## B.3 PRICE DATA USED TO VALUE CBOE EUROPE INDICES

All the Cboe Europe Indices in this Schedule will be valued intra-day using Cboe's traded prices. The indices' end-of-day closing value will be calculated using Cboe Europe's official closing prices.

Cboe's order books operate in line with the prevailing national markets. As such Cboe Europe Indices will not calculate an index when all the constituents of that index are closed for trading. Where a Cboe Index comprises constituents from more than one national market, it will be calculated if any constituents of the index are trading.

## B.4 MARKET CAPITALISATION

In accordance with Rule 3.5, issuers with a full market capitalisation greater than €100 million (or equivalent in the issuer's currency of listing) can be included in a Cboe Europe Single Country Index, providing they meet all the relevant Cboe Index eligibility criteria.

Issuers with a full market capitalisation less than €65 million (or equivalent in the issuer's currency of listing) will be deleted from the Cboe Europe Single Country Index at the annual review.

Cboe may alter these market capitalisation thresholds in order to ensure that there are a sufficient number of issuers in the Cboe Europe Single Country Index.

## B.5 LIQUIDITY

In accordance with Rule 3.5, the following liquidity thresholds will apply to the Cboe Europe Single Country Index Series:



- a) Securities with an average daily value traded over the six month test period of over €100k (or equivalent in the issuer's currency of listing) will be eligible for inclusion provided that they meet all the relevant eligibility criteria in Rule 3.
- b) An existing constituent which does not have an average daily value traded over the six month test period of over €75k (or equivalent in the issuer's currency of listing) will be removed at the annual index review and will not be eligible for inclusion until the next annual review.
- c) New issues must have a minimum 20 day trading record and an average daily value traded over the period of over €100k (or equivalent in the issuer's currency of listing). This rule will not apply to new issues added under the Fast Entry Rule

## B.6 MEASURING THE LIQUIDITY OF INDIVIDUAL SECURITIES

Cboe will use aggregated and published volume and value trade data from Cboe, the primary listing exchange and Turquoise to measure issuers' compliance with Cboe Index liquidity criteria.

## B.7 CONSTITUENT / INDEX REVIEW PERIODS

All Indices comprising the Cboe Europe Single Country Index Series will be reviewed quarterly in March, June, September and December.

## B.8 INCLUSION AND DELETION OF SECURITIES

As defined in Rule 4.3.

## B.9 FAST ENTRY PROVISION

All the Cboe Europe Single Country Indices operate under the Fast Entry provision described in Rule 4.4. An issuer can be added to a Cboe Europe Single Country Index under this provision if it meets the following criteria:

- a) Its full market capitalisation using the closing price on the first day of trading would position it in the top 50% of issuers in the relevant most highly capitalised national market index, and
- b) The issuer satisfies the eligibility criteria and the screens other than the liquidity screen.

The new issuer will be added to the Cboe Europe Single Country Index after the close of business on its fifth day of trading. Under this provision, however, the issuer which is the lowest ranking constituent of the index will not be removed until the next review date.

If the fifth day of trading is close to the index's review, Cboe may include the issuer at the index review date and will provide such notice to the market.

## SCHEDULE C – CBOE EUROPE REGIONAL INDEX SERIES

### C.1 CBOE EUROPE REGIONAL INDEX SERIES COVERAGE

Cboe Europe Regional Index Series comprises free-float market capitalised weighted capital/price return indices, designed to represent the performance of European regional markets and industry sectors as related to European listed issuers.

The base currency of all the indices comprising Cboe Europe Regional Index Series is Euros:

Cboe Eurozone 50

Cboe Eurozone All Companies

Cboe Europe 50

Cboe Europe All Companies

Cboe Europe All Companies ex UK

Cboe Nordic 40

Cboe Europe All Companies Sector Indices, 12 based on FactSet's Economic Sector Classifications

### C.2 SPECIFIC CBOE EUROPE REGIONAL INDEX QUALIFICATION CRITERIA

A constituent of a Cboe Europe Regional Index has to first be a constituent of a Cboe Europe Single Country Index. As such no other or further Nationality, Liquidity or Market Capitalisation criteria tests are performed to determine eligibility for a Cboe Europe Regional Index. The issuer will be included or excluded at their review date as per the criteria defined in C.5 below.

Where an issuer exists in more than one national market index then only one line of this issuer would be included in any Cboe Europe Regional Index, as defined in Rule 3.2 and Rule 3.3.

#### CBOE EUROZONE 50

The Cboe Eurozone 50 index aims to represent the performance of the largest 50 European issuers ranked by their full Euro denominated market capitalisation whose primary listing is in Euro.

#### CBOE EUROZONE ALL COMPANIES

The Cboe Eurozone All Companies index is comprised of all the issuers resident in all Cboe Europe Single Country Indices in which the issuers are primary listed in Euro. Issuers in Mid-Cap and Small Cap indices, e.g. Cboe FRM 20 and Cboe DES 50, are ineligible for inclusion in this index.

#### CBOE EUROPE 50

The Cboe Europe 50 index aims to represent the performance of the largest 50 European issuers ranked by their full Euro denominated market capitalisation, regardless of the currency of issuers' primary listing.

## CBOE EUROPE ALL COMPANIES

The Cboe Europe All Companies index is comprised of all the issuers resident in all Cboe Europe Single Country Indices regardless of the currency of issuers' primary listing. Issuers in Mid-Cap and Small Cap indices, e.g. Cboe DEM 50, Cboe UK 250 and Cboe UK Small Companies, are ineligible for inclusion in this index.

## CBOE EUROPE ALL COMPANIES EX UK

The Cboe Europe All Companies ex UK index is comprised of all the issuers resident in all Cboe Europe All Companies index excluding all Cboe UK Index Series constituents.

## CBOE NORDIC 40

The Cboe Nordic 40 index aims to represent the performance of all the largest 40 issuers from Finland, Sweden, Denmark or Norway when ranked by their full Euro denominated market capitalisation.

## CBOE EUROPE ALL COMPANIES SECTOR INDICES

Cboe Europe Sector Indices will be defined by FactSet's twelve (12) Economic Sectors. These 12 sector indices will collectively comprise of all the issuers in the Cboe Europe All Companies index.

### C.3 PRICE DATA USED TO VALUE CBOE EUROPE INDICES

As with all of Cboe Europe Single Country Indices, all the Cboe Europe Indices in this Schedule will be valued intra-day using Cboe Europe's traded prices. The indices' end-of-day closing value will be calculated using Cboe's official closing prices.

Cboe's order books operate in line with the prevailing national markets. As such Cboe Europe Indices will not calculate an index when all the constituents of that index are closed for trading. Where a Cboe Index comprises constituents from more than one national market, it will be calculated if any constituents of the index are trading.

All the indices in this scheduled will be valued in Euro, with a multi-currency index valued intra-day at the Thomson Reuters real-time spot FX rate and at the close using the WM/TR fixed spot rate taken at 16:00 GMT.

As Per Rule 6.1, where Cboe Cboe calculates a net total return index that includes issuers from more than one national market, dividends will be included net of tax paid having applied the maximum withholding tax rate applicable to institutional investors not residing in the country in which the dividend is paid. Hence, the Adjusted Price (net return) of the constituent = closing price - dividend announced by the issuer  $\times (1 - \text{withholding tax})$ .

The withholding tax rate matrix Cboe uses is available here <http://www.solactive.com/news/documents/>.

### C.4 CONSTITUENT / INDEX REVIEW PERIODS

All Indices comprising the Cboe Europe Regional Index Series will be reviewed quarterly in March, June, September and December.

## C.5 INCLUSION AND DELETION OF SECURITIES

As defined in Rule 4.3.

## C.6 FAST ENTRY PROVISION

Only the Cboe Eurozone 50 and Cboe Europe 50 indices operate under the Fast Entry provision described in Rule 4.4. An issuer can be added to one of these indices under this provision if it meets the following criteria:

- a) its full market capitalisation using the closing price on the first day of trading would position it in the top 50% of issuers in the index; and
- b) the issuer satisfies the eligibility criteria and the screens other than the liquidity screen.

The new issuer will be added to the relevant index after the close of business on its fifth day of trading. Under this provision, however, the issuer which is the lowest ranking constituent of the index will not be removed until the next review date.

If the fifth day of trading is close to the index's review, Cboe may include the issuer at the index review date and will provide such notice to the market.

In the above scenario the issuer would also meet the Fast Entry provision for its national market index and would be added to this index at the same time.

## APPENDIX I – CHRONOLOGY OF CHANGES TO RULES

Since first published in June 2016, the following changes have been made to Cboe Europe Index Rules and Methodology.

<b>Rule Changes - applied 19 Dec 2016</b>
<p><b>Rule 3.1 – language added</b></p> <p>All classes of ordinary shares <u>and preference shares</u> of companies which have been admitted to trading on a Recognised Investment Exchange.</p>
<p><b>Rule 3.2 – language added</b></p> <p><u>To ensure Cboe Europe’s indices are as representative as possible, Cboe will only include one of the issuer’s listed lines in any index. The line included will either be the issuer’s line with the largest market capitalisation or, if a different line is more than twice as liquid (as measured in Rule 3.8), the more liquid line.</u></p>
<p><b>Rule 3.3 – table added</b></p> <p>Table summarising possible country of assignment scenarios added</p>
<p><b>Rule 3.4 – language amended</b></p> <p>...the change in the constituent’s free float will be applied at the index’s next <u>annual review period</u>.</p>
<p><b>Rule 4.1 – language added</b></p> <p>...compared to the other constituents of the index <u>and add new issuers meeting the criteria that have listed since the previous review</u>. This keeps...</p>
<p><b>Annual reviews</b> will, in addition to what is done at a quarterly review, review other criteria like liquidity, country of assignment, <u>minimum market capitalisation</u> and sector classification.</p>
<p><b>Rule 4.2 – new paragraph added (moved from Schedule A and amended)</b></p> <p><u>Indices intended to maintain a fixed number of constituents, moderate the number of changes when rebalanced by setting thresholds that need to be met before an issuer is eligible for deletion or addition. Such thresholds, which are defined for each index in their respective Schedule, operate in the following way:</u></p> <ul style="list-style-type: none"> <li>• <u>First, if an index at the time of its rebalance has less constituents than the intended fixed number, the highest ranking eligible issuer is added to the index,</u></li> <li>• <u>Then, an issuer qualifying for insertion by virtue of its sufficiently high ranking will be added to the index and, the issuer with the lowest ranking in the index will be removed,</u></li> <li>• <u>Then, any issuer still qualifying for deletion by virtue of its sufficiently low ranking will be deleted and the issuer with the highest ranking will be added to the index.</u></li> </ul> <p><u>This one for one replacement exercise is performed until all such qualifying issuers have been added and deleted. As a result, fixed constituent indices may not always represent the largest issuers.</u></p>

**Rule 4.2 – new paragraph added**

If during the review period an issuer, as a result of a corporate action, is deleted or becomes eligible for inclusion in an index, Cboe will replace the issuer and/or include the newly eligible issuer in the target index, as long as the change can be applied accurately and advised when the details of the index rebalance are published.

**Rule 5.2 – sentence added**

The Exchange rate used to convert from local currency into the index's base currency, during intra-day calculations of the index, is the prevailing mid-market spot rate on Thompson Reuters.

**Rule 5.3 – language added**

The Exchange rate used to convert end of day security values, and dividends, from local currency into the index's base currency is the WM fixing rate taken at 16:00 GMT.

**Rule 6.0 – sentence added**

Where a corporate action results in a fractional share, the issuer's number of shares in the index is rounded to the nearest integer with half shares being rounded up.

**Rule 6.1 – amended formula to capture potential FX rate conversion of dividend**

Adjusted Price (net return) of the constituent = closing price – (dividend announced by the issuer × FX rate × (1 – withholding tax)).

**Example 6.1 – 1, example corrected**

GBP 500m changed to GBP 50m.

**Rule 6.2 – language added**

Cboe Europe Indices treat extraordinary cash dividends as special dividends. Special dividends are generally treated as capital repayments in both Total Return and Capital/Price Return indices and are adjusted for withholding tax, see Rule 6.8.

**Rule 6.11 – language amended**

A constituent's free float will be changed in line with Cboe's ~~periodic~~ annual index review.

**Rule A.7 – sentence amended to clarify rebalancing process**

Indices Reviewed Quarterly in March, June, September and December:

- Cboe UK 100
- Cboe UK 250
- Cboe UK 350
- Cboe UK Small Cap\*

- Cboe UK All Companies\*

At the quarterly review new issuers can be added to the Cboe UK 100 or Cboe UK 250 (and hence the Cboe UK 350) indices.

\* No new issuers will be added to the Cboe UK Small Cap index other than those falling out of the Cboe UK 350 and any issuers moving from the Cboe UK Small Cap index into one or other of the larger cap indices will be removed from the Cboe UK Small Cap index. This approach helps to maintain the Cboe UK 350 + Cboe UK Small Cap = Cboe UK All Companies structure whilst leaving the wholesale review of the indices to the annual review in June, see Rule 4.1.

Indices Reviewed Annually in June:

- All of the above
- Cboe UK Alternative 100
- Cboe Sector Indices

#### **Schedule B - added**

### **Rule Changes - applied 16 March 2017**

#### **Rule 4.3 – Thresholds for the Insertion and Deletion of Constituents - language added**

Language amended in order to detail more clearly the generic approach taken to the insertion and deletion of constituent issuers, with associated language removed from Schedules A.8 and B.8.

**Schedule A** – Cboe Brexit High 50 & Cboe Brexit Low 50 Indices added

### **Rule Changes - applied 4 April 2017**

**Schedule B** – Indices added covering ten (10) additional European national markets

### **Rule Changes - applied 30 May 2017**

#### **Rule 1.3 – Index Objectives and Governance - language added**

Where a decision has to be taken within a timeframe that does not permit such a consultation, a full description of the decision taken and outcome will be submitted to the IAC and RDC for their consideration and comment.

#### **Rule 2.1 – Index Benchmark Administrator – language amended**

Cboe is the Benchmark Administrator, as defined by the IOSCO Principles for Financial Benchmarks *and as to be defined in the upcoming Benchmarks Regulation (BMR) once implemented.*

**Rule 2.2 – Cboe Europe Index Advisory Committee and Regulatory Decisions Committee** – language added

The IAC advises Cboe in relation to its indices and its index business. *Its members will have no access to price sensitive information.*

**Rule 3.0 – Index Selection and Eligibility Criteria** – paragraph amended to read

*Whilst the criteria seek to avoid ambiguity, specific circumstances may arise on which the rules are silent / not clear, that would therefore require Cboe to seek the approval of the RDC to a specific course of action. The outcome of any such action would be notified to the market and discussed with the IAC.*

**Rule 3.1 – Eligible Securities** – language added

All classes of ordinary shares and preference shares of companies *which are available for trading on Cboe*, have been admitted to trading on...

**Rule 3.2 – Multiple Lines** – language added

*Any such multiple lines of equity capital can be considered eligible as long as they are priced separately and satisfy Cboe's eligibility criteria. For the less liquid share line to be considered eligible for inclusion in a national market indices its ratio of the six (6) month Average Daily Value (ADV) traded, with the company's most liquid share class, must equal or exceed 75%.*

*For indices that combine constituents of two or more national markets, e.g. Cboe European indices, only the primary listing share class of the company will be eligible.*

**Rule 3.3 – Nationality** – language amended

However, where a Cboe Index combines national markets e.g. a Cboe Europe Regional Index, then only the Issuer's *primary listed share class (Rule 3.2)* would be included.

*Where an issuer fails to meet the above criteria, Cboe will recommend the appropriate nationality for the issuer to the RDC and once assigned and implemented, present the rationale to the IAC for review.*

**Rule 3.4 – Free Float** - language added

*Free Float % = # of Float Shares / # Shares Outstanding (share line level),*

*Should such a restriction result in an issuer's free float differing between listing jurisdictions, Cboe will determine with RDC the free float percentages that should apply in associated national and regional indices.*

**Rule 3.5 – Market Capitalisation** – language amended

*In extreme circumstances, Cboe may relax certain eligibility criteria, including thresholds for a specific index, in order to ensure that there are at least a minimum number of issuers in a specific Cboe Index.*

**Rule 3.8 – Liquidity** - language added



*Cboe considers any reduction in overall liquidity across market(s) in order to ensure that liquidity thresholds are appropriate and that issuers' retaining comparable liquidity with their peers remain eligible.*

**Rule 4.4 – Fast Entry Provision** – penultimate paragraph amended to prescribe more clearly when an issuer would be introduced to an index between review periods.

*Under this provision, a new issuer would be added to a Cboe Index after the close of business on its fifth trading day, unless this day falls within the relevant index review period (Rule 4.1), in which case Cboe will add the security at the index review date. Under this Fast Entry provision, the index constituent with the lowest market capitalisation will not be removed until the next review date.*

**Rule 6.0 – Corporate Actions** – language added at the start of the first paragraph

*Cboe Indices are designed to reflect the investment performance that would be achieved by an investor building a portfolio mirroring the relevant index, excluding the effect of trading costs. As such,*

**Rule 6.11 – Free Float Weighting Changes** – language amended

A constituent's free float will be changed in line with *the review period for the index* ~~Cboe Europe annual index review~~.

**Rule 6.14 – Deletion of a Constituent Issuer** – last sentence amended

*Deletions will be conducted at the issuer's closing price either on the effective date, or if deletion arises from changes to the issuer's country of incorporation, the next review period, unless otherwise agreed to by the RDC.*

**Schedule A - Constituent / Index Review Periods** – language amended to reflect all indices, with the exception of the Cboe UK Alternative 100, are rebalanced quarterly.

**Schedule B** – language amended, indices renamed from “National Market” to “Single Country”

**Schedule C** – Indices added to cover Cboe Europe Regional Indices and associated Sector Indices

### **Rule Changes – non-material, applied at September 2017 rebalance**

**Rule 3.8 – Liquidity** – language amended

Some Cboe Indices, for example ~~Cboe UK Small Cap Index and Cboe UK Alternative 100 Index~~, may not attach such liquidity criteria...

Each security's liquidity will be measured at the time of their ~~annual~~ review by calculating....

**Rule 3.8 (f) – Liquidity** – language amended

The constituents of certain indices, for example ~~Cboe UK Small Cap Index and Cboe UK Alternative 100 Index~~, do not need to meet any liquidity requirements, where stipulated in the appropriate Schedule.

**Schedule A – A.5 – Liquidity** – language amended

There is no liquidity requirement for constituents of the ~~Cboe UK Small Cap Index~~ or the Cboe UK Alternative 100 Index.

**Rule Changes - non-material, applied January 2018**

Rebranding changes to reflect the change of name from Bats Europe to Cboe Europe as the index provider, with the indices themselves retaining the Bats Index branding.

**Rule Changes - non-material, applied March 2018**

Rebranding changes to reflect the change of name of the index service from Bats Indices to Cboe Europe Indices, and the indices themselves from e.g. Bats UK 100 Index to Cboe UK 100 Index.