

GROUND RULES FOR THE MANAGEMENT OF THE FTSE/ATHEX 20 CAPPED INDEX



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1.0 INTRODUCTION

- 1.1 This paper sets out the Ground Rules for the Management of the FTSE/ATHEX 20 Capped Index. Copies of the Ground Rules are available from FTSE.
- 1.2 The FTSE/ATHEX 20 Capped Index is designed to reflect the performance of the largest 20 constituents in the FTSE/ATHEX Index Series review, but with a capping methodology implemented.
- 1.3 The FTSE/ATHEX 20 Capped Index is calculated in Euro and US dollar in real-time and published every 15 seconds.
- 1.4 Total Return Index is published at the end of each working day. The Total Return Indices are based on ex dividend adjustments.
- 1.5 All areas of the methodology regarding the management of the FTSE/ATHEX 20 Capped Index are similar to the FTSE/ATHEX Index Series Ground Rules. The FTSE/ATHEX 20 Capped Index Ground Rules should therefore be read in conjunction with these Ground Rules. These rules are available on www.ftse.com.



2.0 STATUS OF INDEX

2.1 The FTSE/ATHEX 20 Capped Index is calculated in real time and may exist in the following states:

a) Firm

The Index is being calculated during Official Market Hours (see Appendix A). No message will be displayed against the Index values.

The Official Closing Prices for the FTSE/ATHEX 20 Capped Index is will be the Official Closing Prices (see Appendix A).

b) **Closed**

When the index has ceased all calculations for the day, the message 'CLOSED' is displayed against the index value.

c) **Held**

During the firm period, the index has exceeded pre-set operating parameters and calculation has been suspended pending resolution of the problem. The message 'HELD' is displayed against the last index value calculated.

d) **Indicative**

If there is a system problem or a situation in the market that is judged to be affecting the quality of the constituent prices at any time when the index is being calculated, the index will be declared indicative. The message 'IND' will be displayed against the index value.

e) **Part**

If the index is being calculated during the normal Official Index Period hours, but there are less than 75% of the constituents by capitalisation available with firm prices, then the index will be displayed with the message 'PART' to indicate that only a proportion of the securities prices are included. With the exception of the message 'PART', the index will continue to be calculated and displayed as if it were firm.

- 2.2 The official opening and closing hours of the FTSE/ATHEX 20 Capped Index is set out in Appendix A. Variations to the official hours of the Indices will be published by FTSE.
- 2.3 The FTSE/ATHEX 20 Capped Index will not be calculated on Greek Public Holidays.



3.0 MANAGEMENT RESPONSIBILITIES

3.1 **FTSE**

- 3.1.1 FTSE is responsible for the calculation of the FTSE/ATHEX 20 Capped Index. FTSE will maintain records of the market capitalisation of all constituents and will make changes to the constituents and their weightings in accordance with the Ground Rules. FTSE will implement constituent changes resulting from the semi-annual review, or as otherwise required by this methodology.
- 3.1.2 Changes to constituent weightings will be made by FTSE in accordance with the Ground Rules. FTSE is responsible for publicising and keeping a record of all changes to constituent weightings.

3.2 Re-Calculations

3.2.1 The FTSE/ATHEX 20 Capped Index is recalculated whenever errors or distortions occur that are deemed to be significant. Users of the FTSE/ATHEX 20 Capped Index are notified through appropriate media.

3.3 Status of These Ground Rules

- 3.3.1 These Ground Rules are a guide to the policies and procedures applying at the date of publication to the operation and maintenance to the FTSE/ATHEX 20 Capped Index. They have been prepared and approved by FTSE. However, these policies and procedures, and their precise application, are subject to variation and periodic review.
- 3.3.2 The purpose of publishing this guide is to provide information about the general basis on which decisions relating to the calculation and publication of the FTSE/ATHEX 20 Capped Index are currently made.
- 3.3.3 In light of the intended purpose of this guide, and the likely variation and periodic review of the policies and procedures it contains, no liability whether as a result of negligence or otherwise is accepted by FTSE (or any person concerned with the preparation or publication of this guide) for any losses, damages, claims and expenses suffered by any person as a result of:
 - a) Any reliance on this guide, and/or
 - b) Any errors or inaccuracies in this guide, and/or
 - c) Any non-application or misapplication of the policies or procedures described in this guide, and/or
 - d) Any errors or inaccuracies in the compilation or any constituent data.



4.0 PERIODIC REVIEW OF CONSTITUENT COMPANIES

4.1 Review Dates

- 4.1.1 The FTSE/ATHEX 20 Capped Index will be reviewed semi-annually in June and December using market data at the close of the last trading day in March and September respectively in line with the FTSE/ATHEX Index Series review. However, the FTSE/ATHEX 20 Capped Index will use all data provided from FTSE (including shares, free float, etc) for index constituents.
- 4.1.2 Changes to the index will be implemented after close of business on the third Friday in June and December respectively.
- 4.1.3 FTSE will be responsible for publicising the outcome of the periodic review.

4.2 Capping Dates

4.2.1 The constituents of the FTSE/ATHEX 20 Capped Index are capped quarterly at the close of business on the second Friday in March, June, September and December. The capping is implemented using prices adjusted for corporate events as at the close of business on the third Friday in March, June, September and December based on the constituents, shares in issue and free float.

4.3 Capping Methodology

4.3.1 The constituents of the FTSE/ATHEX 20 Capped Index are capped quarterly.

Step 1

No individual company in the Index can be greater than 20%. A company with a weight greater than 20% is capped at 20% capping weight. *

Step 2

Reweight and rerank all companies by resulting weights largest to smallest. Find the highest ranked company by accumulated weight that is greater than 48%. This company and the companies ranked before it form the top capping group.

If the lowest ranked company in the top capping group is less than 5%, no further capping is needed. Otherwise proportionately cap the uncapped companies in the top capping group such that top capping group has an aggregate weight of 48% in the index. **

If the result of this round of capping causes any issues in the top capping group to fall below 4.75%, the weights of those companies will be capped at 4.75%.

Step 3

If the individual weights of the remaining lower ranking uncapped companies are greater than 4.75%, they will be capped at 4.75%.

^{*} In the case more than two companies require 20% capping, then the top capping weight will be revaluated.

^{**} Companies capped at 20% will not be capped further.



5.0 CHANGES TO CONSTITUENT COMPANIES

5.1 **New Issues**

5.1.1 A new constituent will be added to the FTSE/ATHEX 20 Capped Index intra review in line with the FTSE/ATHEX Index Series. The addition of the new constituent will be implemented after the close of business on the fifth day of trading.

5.2 **Deletions and Replacements**

5.2.1 A constituent will be deleted from the FTSE/ATHEX 20 Capped Index when the constituent is removed from the FTSE/ATHEX Index Series. Any replacements will follow the FTSE/ATHEX Index Series.

5.3 Mergers, Restructuring and Complex Takeovers

5.3.1 If an index constituent have a merger or takeover, the FTSE/ATHEX 20 Capped Index will be in line with the FTSE/ATHEX Index Series.

5.4 **Splits / Demergers**

5.4.1 If an index constituent has a complex reorganisation or demerger, the FTSE/ATHEX 20 Capped Index will be in line with the FTSE/ATHEX Index Series.

5.5 **Suspension of Dealing**

- 5.5.1 If a constituent is suspended it may remain in the FTSE/ATHEX 20 Capped Index, at the price at which it is suspended, for up to 20 business days. During this time on advice from FTSE may agree to delete the constituent immediately at zero value in cases where it is expected that the constituent will not commence trading. This change will be effected after the close of the index calculation and prior to the start of the index calculation on the following day. Removing a constituent at zero indicates that the stock is believed to be valueless.
- 5.5.2 Where a suspension of a constituent lasts beyond noon on the twentieth business day (and the option to remove the constituent has not been exercised), the constituent will normally be deleted from the index on the twenty-first trading day at zero value. Where suspension is for a reason not to the detriment of the constituent and its suspension is expected to be short-term, it may be retained at its suspension price.



6.0 CHANGES TO CONSTITUENT WEIGHTINGS

- 6.1 For the purposes of computing the FTSE/ATHEX 20 Capped Index and to prevent a large number of insignificant weighting changes, the number of shares in issue for each constituent security is amended only when the total shares in issue held within the index system changes by more than 1% on a cumulative basis.
- 6.2 If a corporate action is applied to a constituent of the index which involves a change in the number of shares in issue, the change in shares will be applied simultaneously with the corporate action.
- 6.3 Changes of shares in issue not arising from corporate actions, amounting to less than 10% of the number of shares in issue but more than 1% will be made quarterly after the close of business on the third Friday of March, June, September and December.
- 6.4 If accumulated changes in the number of shares in issue add up to 10% or more or when an accumulated share change represents USD 2bn of a company's total market capitalisation, they are implemented between quarters. A minimum of 4 days notice will be given to users of the index. WM/Reuters Spot Rates will be used to convert the market capitalisation into USD. The USD 2bn threshold may be adjusted annually in December by FTSE. If an adjustment is made, it will be applied for the first time at the next review in September of the following year.
- 6.5 All adjustments are made before the start of the index calculations on the day concerned, unless market conditions prevent this.



7.0 INDEX CALCULATION

7.1 Prices

7.1.1 The FTSE/ATHEX 20 Capped Index uses actual trade prices for securities with local stock exchange quotations. Reuter's real-time spot currency rates are used in the index calculation.

7.2 **Calculation Frequency**

7.2.1 The FTSE/ATHEX 20 Capped Index will be calculated in real-time and published every 15 seconds during their opening hours using real time prices.

7.3 **Index Calculation**

- 7.3.1 The FTSE/ATHEX 20 Capped Index will be displayed to two decimal points.
- 7.3.2 The FTSE/ATHEX 20 Capped Index is calculated using the following formula:

$$\sum_{i=1}^{N} \frac{\left(p_i \times e_i \times s_i \times f_i \times c_i\right)}{d}$$

Where,

- i = 1, 2, ..., N
- N is the number of securities in the Index.
- p_i is the latest trade price of the component security (or the price at the close of the Index on the previous day).
- ullet e_i is the exchange rate required to convert the security's currency into the Index's base currency.
- s_i is the number of shares in issue used by FTSE for the security, as defined in these Ground Rules.
- f_i is the Investability Weighting Factor to be applied to a security to allow amendments to its weighting, expressed as a number between 0 and 1, where 1 represents a 100% free float. This factor is published by FTSE for each security in the underlying index.
- c_i is the Capping Factor to be applied to a security to correctly weight that security in the index. This factor maps the investable market capitalisation of each stock to a notional market capitalisation for inclusion in the Index.
- d is the divisor, a figure that represents the total issued share Capital of the Index at the base date. The divisor can be adjusted to allow changes in the issued share Capital of individual securities to be made without distorting the Index.



APPENDIX A

INDEX OPENING AND CLOSING HOURS

Index	Open	Close
FTSE/ATHEX 20 Capped Index (in Euro)	08:30 (GMT)	15:20 (GMT)
FTSE/ATHEX 20 Capped Index (in US dollar)	08:30 (GMT)	21:10 (GMT)

APPENDIX B

CAPPING METHODOLOGY

The algorithm is applied to each constituent of the FTSE/ATHEX 20 Capped that requires capping.

The Constituent Capping Factor c_i is given by:

$$c_{i} = \frac{Z}{I \times (p_{i} \times s_{i} \times f_{i})} \sum_{j \in J} (p_{j} \times s_{j} \times f_{j})$$

Where,

- *i* denotes the security to be capped.
- *j* denotes an uncapped security.
- *J* is the subset of securities that are uncapped.
- p_k is the official closing price of the k^{th} security.
- s_k is the number of shares in of the k^{th} security.
- f_k is the free float factor of the k^{th} security.
- *I* is the percentage of the index represented by all uncapped constituents.
- ullet Z is the percentage capping level.



APPENDIX C

FURTHER INFORMATION

For further information and enquiries log on to: www.ftse.com

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